



Nassau County
Office of Purchasing

Staff Summary A-39-2019

Subject: Software Licenses & Support (maintenance) for the assessment system (RQIT19000069)
Department: Office of Purchasing
Department Head Name: Melissa Gallucci
Department Head Signature <i>Melissa Gallucci</i>

Date: May 09, 2019
Vendor Name: Tyler Technologies, Inc.
Contract Number A-39-2019
Contract Manager Name Timothy Funaro

Proposed Legislative Action					
	To	Date	Approval	Info	Other
	Assgn Comm				
	Rules Comm				
	Full Leg				

Internal Approvals			
Date & Init.	Approval	Date & Init.	Approval
	Dept. Head		
<i>CM 7/8/19</i>	Budget	<i>7/8/19</i>	County Atty.
	Deputy C.E.	<i>7/8/19</i>	County Exec.

Narrative

Purpose: To authorize and award a purchase order for the annual software licenses, support and maintenance of the assessment IAS/ADAPT system for the Department of Information Technology and the Department of Assessment.

Discussion: This request is a sole source purchase as Tyler Technologies, Inc. is the proprietary owner/supplier of this software and it is necessary to maintain the current technology. This is a maintenance agreement for modules related to tax billing, collections, delinquent tax, appeals management and EDMS interface. The period of this agreement runs from January 01, 2019 to December 31, 2019.

Impact on Funding: The maximum amount authorized under this purchase order shall be Five Hundred and Eighty-One Thousand Seven Hundred and Thirty Dollars. (\$581,730.00) from general funds

Recommendation: Office of Purchasing recommends an award be given to Tyler Technologies, Inc. as a sole source for this purchase order.

APPROVED:

J. Imati 6/7/19
(DATE)

INSURANCE SECTION

ALL STATE INSURANCE AND
PROPERTY SECTION

2019 JUL -8 P 12:32

RECEIVED
OFFICE OF PURCHASING
JUL 10 2019

COUNTY OF NASSAU
INTER – DEPARTMENTAL MEMO

TO: CLERK OF THE COUNTY LEGISLATURE

A-39-2019

FROM: MELISSA GALLUCCI -COMMISSIONER OF SHARED SERVICES

DATE: MAY 9, 2019

SUBJECT: RESOLUTION–THE DEPARTMENT OF INFORMATION TECHNOLOGY AND THE DEPARTMENT OF ASSESSMENT.

THIS RESOLUTION IS RECOMMENDED BY THE DIRECTOR, OFFICE OF PURCHASING TO AUTHORIZE AN AWARD AND TO EXECUTE A PURCHASE ORDER IN THE MAXIMUM AMOUNT OF FIVE HUNDRED EIGHTY ONE THOUSAND, SEVEN HUNDRED AND THIRTY DOLLARS (\$581,730.00) ON BEHALF OF THE DEPARTMENT OF INFORMATION TECHNOLOGY AND THE DEPARTMENT OF ASSESSMENT TO TYLER TECHNOLOGIES, INC. FOR SOFTWARE LICENSES & SUPPORT (MAINTENANCE) FOR THE ASSESSMENT SYSTEM FOR THE DEPARTMENT OF INFORMATION TECHNOLOGY AND THE DEPARTMENT OF ASSESSMENT.

THE ABOVE DESCRIBED DOCUMENT ATTACHED HERETO IS FORWARDED FOR YOUR REVIEW AND APPROVAL AND SUBSEQUENT TRANSMITTAL TO THE RULES COMMITTEE FOR INCLUSION IN ITS AGENDA.


MELISSA GALLUCCI
COMMISSIONER OF SHARED SERVICES

MS: gb

ENCL: (1) STAFF SUMMARY
(2) DISCLOSURE STATEMENT
(3) RESOLUTION
(4) SOLE SOURCE DOCUMENTS
(5) QUOTAITON
(6) CERTIFICATE OF LIABILITY INSURANCE
(7) POLITICAL CONTRIBUTION FORM



A RESOLUTION AUTHORIZING THE DIRECTOR OF NASSAU COUNTY OFFICE OF PURCHASING TO AWARD AND EXECUTE A CONTRACT BETWEEN THE COUNTY OF NASSAU ACTING ON BEHALF OF THE DEPARTMENT OF INFORMATION TECHNOLOGY AND THE DEPARTMENT OF ASSESSMENT AND TYLER TECHNOLOGIES, INC.

WHEREAS, the Director is representing to the Rules Committee that the firm, TYLER TECHNOLOGIES, INC. is a sole source provider and meets all specifications for the product described in the said contract as determined by the Director of the Office of Purchasing.

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the Director, Office of Purchasing to award and execute the said Purchase Order with TYLER TECHNOLOGIES, INC.



COUNTY OF NASSAU

POLITICAL CAMPAIGN CONTRIBUTION DISCLOSURE FORM

1. Has the vendor or any corporate officers of the vendor provided campaign contributions pursuant to the New York State Election Law in (a) the period beginning April 1, 2016 and ending on the date of this disclosure, or (b), beginning April 1, 2018, the period beginning two years prior to the date of this disclosure and ending on the date of this disclosure, to the campaign committees of any of the following Nassau County elected officials or to the campaign committees of any candidates for any of the following Nassau County elected offices: the County Executive, the County Clerk, the Comptroller, the District Attorney, or any County Legislator?

YES ☐ NO ☒ If yes, to what campaign committee?

2. VERIFICATION: This section must be signed by a principal of the consultant, contractor or Vendor authorized as a signatory of the firm for the purpose of executing Contracts.

The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her knowledge, true and accurate.

The undersigned further certifies and affirms that the contribution(s) to the campaign committees identified above were made freely and without duress, threat or any promise of a governmental benefit or in exchange for any benefit or remuneration.

Electronically signed and certified at the date and time indicated by:
Abigail Diaz [ABIGAIL.DIAZ@TYLERTECH.COM]

Dated: 06/05/2019 10:12:14 AM

Vendor: Tyler Technologies, Inc.

Title: Chief Legal Officer



COUNTY OF NASSAU

LOBBYIST REGISTRATION AND DISCLOSURE FORM

1. Name, address and telephone number of lobbyist(s)/lobbying organization. The term "lobbyist" means any and every person or organization retained, employed or designated by any client to influence - or promote a matter before - Nassau County, its agencies, boards, commissions, department heads, legislators or committees, including but not limited to the Open Space and Parks Advisory Committee and Planning Commission. Such matters include, but are not limited to, requests for proposals, development or improvement of real property subject to County regulation, procurements. The term "lobbyist" does not include any officer, director, trustee, employee, counsel or agent of the County of Nassau, or State of New York, when discharging his or her official duties.

James F. Capalino & Associates, Inc.
233 Broadway, Suite 710
New York, NY 10279
212-616-5810

2. List whether and where the person/organization is registered as a lobbyist (e.g., Nassau County, New York State):

Registered with New York State Joint Commission on Public Ethics and New York City Office of the City Clerk

3. Name, address and telephone number of client(s) by whom, or on whose behalf, the lobbyist is retained, employed or designated:

Tyler Technologies, Inc.
5101 Tennyson Parkway
Plano, TX 75024
800-772-2260 x4642

4. Describe lobbying activity conducted, or to be conducted, in Nassau County, and identify client(s) for each activity listed. See the last page for a complete description of lobbying activities.

Representation of Tyler Technologies in connection with achieving an innovative technology solutions portfolio with Tyler Technologies' Courts & Justice and Data & Insights divisions and developing relationships with government agencies listed on Question 5 below.

5. The name of persons, organizations or governmental entities before whom the lobbyist expects to lobby:

New York State Unified Court System
New York City Office of the Comptroller
New York City Department of Information Technology & Telecommunications
New York State Office of General Services
New York State Office of Technology

6. If such lobbyist is retained or employed pursuant to a written agreement of retainer or employment, you must attach a copy of such document; and if agreement of retainer or employment is oral, attach a written statement of the substance thereof. If the written agreement of retainer or employment does not contain a signed authorization from the client by whom you have been authorized to lobby, separately attach such a written authorization from the client.

7. Has the lobbyist/lobbying organization or any of its corporate officers provided campaign contributions pursuant to the New York State Election Law in (a) the period beginning April 1, 2016 and ending on the date of this disclosure, or (b), beginning April 1, 2018, the period beginning two years prior to the date of this disclosure and ending on the date of this disclosure, to the campaign committees of any of the following Nassau County elected officials or to the campaign committees of any candidates for any of the following Nassau County elected offices: the County Executive, the County Clerk, the Comptroller, the District Attorney, or any County Legislator?

YES ☐ NO ☒ If yes, to what campaign committee? If none, you must so state:

I understand that copies of this form will be sent to the Nassau County Department of Information Technology ("IT") to be posted on the County's website.

I also understand that upon termination of retainer, employment or designation I must give written notice to the County Attorney within thirty (30) days of termination.

VERIFICATION: The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her knowledge, true and accurate.

The undersigned further certifies and affirms that the contribution(s) to the campaign committees listed above were made freely and without duress, threat or any promise of a governmental benefit or in exchange for any benefit or remuneration.

Electronically signed and certified at the date and time indicated by:
Abigail Diaz [ABIGAIL.DIAZ@TYLERTECH.COM]

Dated: 06/05/2019 10:15:08 AM

Vendor: Tyler Technologies, Inc.

Title: Chief Legal Officer

The term lobbying shall mean any attempt to influence: any determination made by the Nassau County Legislature or any member thereof, with respect to the introduction, passage, defeat, or substance of any local legislation or resolution; any determination by the County Executive to support, oppose, approve or disapprove any local legislation or resolution, whether or not such legislation has been introduced in the County Legislature; any determination by an elected County official or an officer or employee of the County with respect to the procurement of goods, services or construction, including the preparation of contract specifications, including but not limited to the preparation of requests for proposals, or solicitation, award or administration of a contract or with respect to the solicitation, award or administration of a grant, loan, or agreement involving the disbursement of public monies; any determination made by the County Executive, County Legislature, or by the County of Nassau, its agencies, boards, commissions department heads or committees, including but not limited to the Open Space and Parks Advisory Committee, the Planning Commission with respect to the zoning, use, development or improvement of real property subject to County regulation or any agencies, boards, commissions, department heads or committees with respect to requests for proposals, bidding, procurement or contracting for services for the County; any determination made by an elected county official or an officer or employee of the county with respect to the terms of the acquisition or disposition by the county of any interest in real property, with respect to a license or permit for the use of real property of or by the county, or with respect to a franchise, concession or revocable consent; the proposal, adoption, amendment or rejection by an agency of any rule having the force and effect of law; the decision to hold, timing or outcome of any rate making proceeding before an agency; the agenda or any determination of a board or commission; any determination regarding the calendaring or scope of any legislature oversight hearing; the issuance, repeal, modification or substance of a County Executive Order; or any determination made by an elected county official or an officer or employee of the county to support or oppose any state or federal legislation, rule or regulation, including any determination made to support or oppose that is contingent on any amendment of such legislation, rule or regulation, whether or not such legislation has been formally introduced and whether or not such rule or regulation has been formally proposed.

The term "lobbying" or "lobbying activities" does not include: Persons engaged in drafting legislation, rules, regulations or rates; persons advising clients and rendering opinions on proposed legislation, rules, regulations or rates where such professional services are not otherwise connected with legislative or executive action on such legislation or administrative action on such rules, regulations or rates; newspapers and other periodicals and radio and television stations and owners and employees thereof, provided that their activities in connection with proposed legislation, rules, regulations or rates are limited to the publication or broadcast of news items, editorials or other comment, or paid advertisements; persons who participate as witnesses, attorneys or other representatives in public rule-making or rate-making proceedings of a County agency, with respect to all participation by such persons which is part of the public record thereof and all preparation by such persons for such participation; persons who attempt to influence a County agency in an adjudicatory proceeding, as defined by § 102 of the New York State Administrative Procedure Act.

PRINCIPAL QUESTIONNAIRE FORM

All questions on these questionnaires must be answered by all officers and any individuals who hold a ten percent (10%) or greater ownership interest in the proposer. Answers typewritten or printed in ink. If you need more space to answer any question, make as many photocopies of the appropriate page(s) as necessary and attach them to the questionnaire.

COMPLETE THIS QUESTIONNAIRE CAREFULLY AND COMPLETELY. FAILURE TO SUBMIT A COMPLETE QUESTIONNAIRE MAY MEAN THAT YOUR BID OR PROPOSAL WILL BE REJECTED AS NON-RESPONSIVE AND IT WILL NOT BE CONSIDERED FOR AWARD

1. Principal Name: John S. Marr, Jr.
Date of birth: 03/07/1960
Home address: 5 Orchard Lane
City: Falmouth State: ME Zip Code: 04105
Business Address: One Tyler Drive
City: Yarmouth State: ME Zip Code: 04096
Telephone: (207) 772-2260
Other present address(es): _____
City: _____ State: _____ Zip Code: _____
Telephone: _____
List of other addresses and telephone numbers attached _____

2. Positions held in submitting business and starting date of each (check all applicable)

President	<u>07/01/2004</u>	Treasurer	_____
Chairman of Board	<u>01/01/2017</u>	Shareholder	_____
Chief Exec. Officer	<u>07/01/2004</u>	Secretary	_____
Chief Financial Officer	_____	Partner	_____
Vice President	_____		
(Other)	_____		

Type	Description	Start Date
Other	Chief Operating Officer	07/01/2003
Other	Executive Chairman of the Board	05/09/2018
Other	President of Munis	01/01/1994
Other	Director, Board of Directors	05/01/2002

3. Do you have an equity interest in the business submitting the questionnaire?

YES ☒ NO ☐ If Yes, provide details.

See attached. John S. Marr, Jr. is a holder of Tyler Technologies stock. As of June 5, 2019, only 1.79% of shares are held by insiders.

4. Are there any outstanding loans, guarantees or any other form of security or lease or any other type of contribution made in whole or in part between you and the business submitting the questionnaire?

YES ☐ NO ☒ If Yes, provide details.

5. Within the past 3 years, have you been a principal owner or officer of any business or notfor-profit organization other than the one submitting the questionnaire?

YES ☒ NO ☐ If Yes, provide details.

Handy Boat (Boat Yard and Restaurant)
215 Foreside Road
Falmouth, ME 04105
Co-Owner with wife, Rebecca Marr

6. Has any governmental entity awarded any contracts to a business or organization listed in Section 5 in the past 3 years while you were a principal owner or officer?
YES ☐ NO ☒ If Yes, provide details.

NOTE: An affirmative answer is required below whether the sanction arose automatically, by operation of law, or as a result of any action taken by a government agency. Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

7. In the past (5) years, have you and/or any affiliated businesses or not-for-profit organizations listed in Section 5 in which you have been a principal owner or officer:

a. Been debarred by any government agency from entering into contracts with that agency?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

b. Been declared in default and/or terminated for cause on any contract, and/or had any contracts cancelled for cause?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

c. Been denied the award of a contract and/or the opportunity to bid on a contract, including, but not limited to, failure to meet pre-qualification standards?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

d. Been suspended by any government agency from entering into any contract with it; and/or is any action pending that could formally debar or otherwise affect such business's ability to bid or propose on contract?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

8. Have any of the businesses or organizations listed in response to Question 5 filed a bankruptcy petition and/or been the subject of involuntary bankruptcy proceedings during the past 7 years, and/or for any portion of the last 7 year period, been in a state of bankruptcy as a result of bankruptcy proceedings initiated more than 7 years ago and/or is any such business now the subject of any pending bankruptcy proceedings, whenever initiated?
YES ☐ NO ☒ If 'Yes', provide details for each such instance. (Provide a detailed response to all questions check "Yes". If you need more space, photocopy the appropriate page and attached it to the questionnaire.)

9. a. Is there any felony charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

b. Is there any misdemeanor charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

c. Is there any administrative charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- d. In the past 10 years, have you been convicted, after trial or by plea, of any felony, or of any other crime an element of which relates to truthfulness or the underlying facts of which related to the conduct of business? YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- e. In the past 5 years, have you been convicted, after trial or by plea, of a misdemeanor? YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- f. In the past 5 years, have you been found in violation of any administrative or statutory charges? YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
10. In addition to the information provided in response to the previous questions, in the past 5 years, have you been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency and/or the subject of an investigation where such investigation was related to activities performed at, for, or on behalf of the submitting business entity and/or an affiliated business listed in response to Question 5? YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
11. In addition to the information provided, in the past 5 years has any business or organization listed in response to Question 5, been the subject of a criminal investigation and/or a civil anti-trust investigation and/or any other type of investigation by any government agency, including but not limited to federal, state, and local regulatory agencies while you were a principal owner or officer? YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
12. In the past 5 years, have you or this business, or any other affiliated business listed in response to Question 5 had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held? YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
13. For the past 5 tax years, have you failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges? YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

I, John S. Marr, Jr., hereby acknowledge that a materially false statement willfully or fraudulently made in connection with this form may result in rendering the submitting business entity and/or any affiliated entities non-responsible, and, in addition, may subject me to criminal charges.

I, John S. Marr, Jr., hereby certify that I have read and understand all the items contained in this form; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this form; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this form as additional inducement to enter into a contract with the submitting business entity.

CERTIFICATION

A MATERIALLY FALSE STATEMENT WILLFULLY OR FRAUDULENTLY MADE IN CONNECTION WITH THIS QUESTIONNAIRE MAY RESULT IN RENDERING THE SUBMITTING BUSINESS ENTITY NOT RESPONSIBLE WITH RESPECT TO THE PRESENT BID OR FUTURE BIDS, AND, IN ADDITION, MAY SUBJECT THE PERSON MAKING THE FALSE STATEMENT TO CRIMINAL CHARGES.

Tyler Technologies, Inc.

Name of submitting business

Electronically signed and certified at the date and time indicated by:

John S. Marr, Jr. [JOHN.MARRJR@TYLERTECH.COM]

Executive Chairman of the Board

Title

06/05/2019 10:08:13 AM

Date

Tyler Technologies, Inc. (TYL)

NYSE - Nasdaq Real Time Price. Currency in USD

☆ Add to watchlist

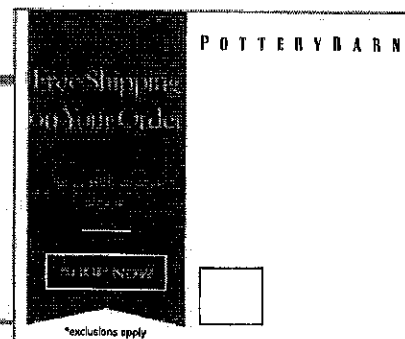
212.55 +1.05 (+0.50%)

As of 9:32AM EDT, Market open.

Buy

Sell

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JUST FOR YOU:
GET \$3,000 PRIVATE
 CASH OFFER!
 ON TOP OF ALL OTHER PUBLIC OFFERS.

GET YOUR \$3,000

People Also Watch

Symbol	Last Price	Change	% Change
ULTI	331.36	0.00	0.00%
The Ultimate Software Group, Inc.			
MANH	65.50	0.00	0.00%
Manhattan Associates, Inc.			
BLKB	74.44	-0.17	-0.23%
Blackbaud, Inc.			
CSGP	513.01	+7.01	+1.39%
CoStar Group, Inc.			
SSNC	56.81	+0.30	+0.53%
SS&C Technologies Holdings, Inc.			

[Major Holders](#)
[Insider Roster](#)
[Insider Transactions](#)

Major Holders Breakdown

1.79%	% of Shares Held by All Insider
91.96%	% of Shares Held by Institutions
93.63%	% of Float Held by Institutions
465	Number of Institutions Holding Shares

Currency in USD

Top Institutional Holders

Holder	Shares	Date Reported	% Out	Value
Blackrock Inc.	3,805,249	Mar 30, 2019	9.92%	777,792,895
Vanguard Group, Inc. (The)	3,408,692	Mar 30, 2019	8.89%	696,736,644
Brown Capital Management, Inc.	2,022,685	Mar 30, 2019	5.28%	413,436,814
Janus Henderson Group PLC	1,431,181	Mar 30, 2019	3.73%	292,533,396
Neuberger Berman Group, LLC	1,107,718	Mar 30, 2019	2.89%	226,417,559
Franklin Resources, Inc	957,395	Mar 30, 2019	2.50%	195,691,538
State Street Corporation	913,668	Mar 30, 2019	2.38%	186,753,739
DF Dent & Co Inc	758,329	Mar 30, 2019	1.98%	155,002,447
Praesidium Investment Management Company LLC	603,931	Mar 30, 2019	1.58%	123,443,496
Times Square Capital Management, LLC	593,503	Mar 30, 2019	1.55%	121,312,013

Top Mutual Fund Holders

Holder	Shares	Date Reported	% Out	Value
iShares Core S&P Midcap ETF	1,111,898	Apr 29, 2019	2.90%	257,860,265
Brown Capital Management Small Company Fund	1,073,976	Sep 29, 2018	2.80%	263,188,558
Vanguard Small-Cap Index Fund	949,513	Dec 30, 2018	2.48%	176,438,505
Vanguard Total Stock Market Index Fund	920,868	Sep 29, 2018	2.40%	225,667,912
Neuberger & Berman Genesis Fund	771,260	Mar 30, 2019	2.01%	157,645,544



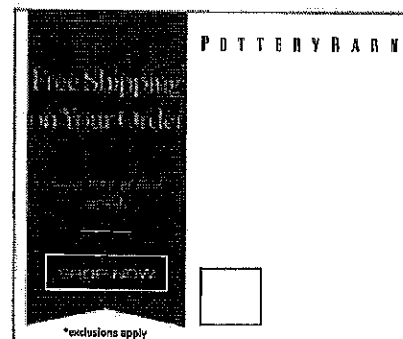
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Janus Henderson Research Fund	537,731	Mar 30, 2019	1.40%	109,912,216
Vanguard Small-Cap Growth Index Fund	535,683	Dec 30, 2018	1.40%	99,540,615
Vanguard Extended Market Index Fund	532,829	Dec 30, 2018	1.39%	99,010,284
SPDR S&P Mid Cap 400 ETF Trust	449,542	Apr 29, 2019	1.17%	104,253,285
iShares S&P Mid Cap 400 Growth ETF	333,529	Mar 30, 2019	0.87%	68,173,327



People Also Watch

Symbol	Last Price	Change	% Change
ULTI The Ultimate Software Group, Inc.	331.36	0.00	0.00%
MANH Manhattan Associates, Inc.	65.50	0.00	0.00%
BLKB Blackbaud, Inc.	74.44	-0.17	-0.23%
CSGP CoStar Group, Inc.	513.01	+7.01	+1.39%
SSNC SS&C Technologies Holdings, Inc.	56.81	+0.30	+0.53%



Yahoo Small Business

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PRINCIPAL QUESTIONNAIRE FORM

All questions on these questionnaires must be answered by all officers and any individuals who hold a ten percent (10%) or greater ownership interest in the proposer. Answers typewritten or printed in ink. If you need more space to answer any question, make as many photocopies of the appropriate page(s) as necessary and attach them to the questionnaire.

COMPLETE THIS QUESTIONNAIRE CAREFULLY AND COMPLETELY. FAILURE TO SUBMIT A COMPLETE QUESTIONNAIRE MAY MEAN THAT YOUR BID OR PROPOSAL WILL BE REJECTED AS NON-RESPONSIVE AND IT WILL NOT BE CONSIDERED FOR AWARD

1. Principal Name: H. Lynn Moore, Jr.
Date of birth: 09/20/1967
Home address: 5634 Purdue Avenue
City: Dallas State: TX Zip Code: 75209
Business Address: 5101 Tennyson Parkway
City: Plano State: TX Zip Code: 75024
Telephone: (972) 713-3770
Other present address(es): _____
City: _____ State: _____ Zip Code: _____
Telephone: _____
List of other addresses and telephone numbers attached

2. Positions held in submitting business and starting date of each (check all applicable)

President	<u>01/01/2017</u>	Treasurer	_____
Chairman of Board	_____	Shareholder	_____
Chief Exec. Officer	<u>05/09/2018</u>	Secretary	<u>10/01/2000</u>
Chief Financial Officer	_____	Partner	_____
Vice President	<u>10/01/2000</u>		
(Other)			

Type	Description	Start Date
Other	Executive Vice President	02/01/2008
Other	General Counsel	09/01/1998

3. Do you have an equity interest in the business submitting the questionnaire?

YES ☒ NO ☐ If Yes, provide details.

H. Lynn Moore, Jr. holds less than a 10% interest. Please see attached document.

4. Are there any outstanding loans, guarantees or any other form of security or lease or any other type of contribution made in whole or in part between you and the business submitting the questionnaire?

YES ☐ NO ☒ If Yes, provide details.

5. Within the past 3 years, have you been a principal owner or officer of any business or notfor-profit organization other than the one submitting the questionnaire?

YES ☐ NO ☒ If Yes, provide details.

6. Has any governmental entity awarded any contracts to a business or organization listed in Section 5 in the past 3 years while you were a principal owner or officer?

YES ☐ NO ☒ If Yes, provide details.

NOTE: An affirmative answer is required below whether the sanction arose automatically, by operation of law, or as a result of any action taken by a government agency. Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

7. In the past (5) years, have you and/or any affiliated businesses or not-for-profit organizations listed in Section 5 in which you have been a principal owner or officer:
- a. Been debarred by any government agency from entering into contracts with that agency?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
 - b. Been declared in default and/or terminated for cause on any contract, and/or had any contracts cancelled for cause?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
 - c. Been denied the award of a contract and/or the opportunity to bid on a contract, including, but not limited to, failure to meet pre-qualification standards?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
 - d. Been suspended by any government agency from entering into any contract with it; and/or is any action pending that could formally debar or otherwise affect such business's ability to bid or propose on contract?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
8. Have any of the businesses or organizations listed in response to Question 5 filed a bankruptcy petition and/or been the subject of involuntary bankruptcy proceedings during the past 7 years, and/or for any portion of the last 7 year period, been in a state of bankruptcy as a result of bankruptcy proceedings initiated more than 7 years ago and/or is any such business now the subject of any pending bankruptcy proceedings, whenever initiated?
YES ☐ NO ☒ If 'Yes', provide details for each such instance. (Provide a detailed response to all questions check "Yes". If you need more space, photocopy the appropriate page and attached it to the questionnaire.)
- 9.
- a. Is there any felony charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
 - b. Is there any misdemeanor charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
 - c. Is there any administrative charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
 - d. In the past 10 years, have you been convicted, after trial or by plea, of any felony, or of any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business? Y
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action

taken.

- e. In the past 5 years, have you been convicted, after trial or by plea, of a misdemeanor?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- f. In the past 5 years, have you been found in violation of any administrative or statutory charges?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

10. In addition to the information provided in response to the previous questions, in the past 5 years, have you been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency and/or the subject of an investigation where such investigation was related to activities performed at, for, or on behalf of the submitting business entity and/or an affiliated business listed in response to Question 5?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

11. In addition to the information provided, in the past 5 years has any business or organization listed in response to Question 5, been the subject of a criminal investigation and/or a civil anti-trust investigation and/or any other type of investigation by any government agency, including but not limited to federal, state, and local regulatory agencies while you were a principal owner or officer?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

12. In the past 5 years, have you or this business, or any other affiliated business listed in response to Question 5 had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

13. For the past 5 tax years, have you failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

I, H. Lynn Moore, Jr. , hereby acknowledge that a materially false statement willfully or fraudulently made in connection with this form may result in rendering the submitting business entity and/or any affiliated entities non-responsible, and, in addition, may subject me to criminal charges.

I, H. Lynn Moore, Jr. , hereby certify that I have read and understand all the items contained in this form; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this form; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this form as additional inducement to enter into a contract with the submitting business entity.

CERTIFICATION

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Tyler Technologies, Inc.

Name of submitting business

Electronically signed and certified at the date and time indicated by:

H. Lynn Moore, Jr. [LYNN.MOORE@TYLERTECH.COM]

President & Chief Executive Officer

Title

05/31/2019 12:13:11 PM

Date

Tyler Technologies, Inc. (TYL)

NYSE - Nasdaq Real Time Price. Currency in USD

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Quote Lookup

215.01 +1.78 (+0.83%)

As of 12:07PM EDT. Market open.

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[Major Holders](#)
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Major Holders Breakdown

Currency in USD

1.79%	% of Shares Held by All Insider
91.96%	% of Shares Held by Institutions
93.63%	% of Float Held by Institutions
465	Number of Institutions Holding Shares

Top Institutional Holders

Holder	Shares	Date Reported	% Out	Value
Blackrock Inc.	3,805,249	Mar 30, 2019	9.92%	777,792,895
Vanguard Group, Inc. (The)	3,408,692	Mar 30, 2019	8.89%	696,738,644
Brown Capital Management, Inc.	2,022,685	Mar 30, 2019	5.28%	413,436,814
Janus Henderson Group PLC	1,431,181	Mar 30, 2019	3.73%	292,533,396
Neuberger Berman Group, LLC	1,107,718	Mar 30, 2019	2.88%	226,417,559
Franklin Resources, Inc	957,395	Mar 30, 2019	2.50%	195,691,538
State Street Corporation	913,668	Mar 30, 2019	2.38%	186,753,739
Df Dent & Co Inc	758,329	Mar 30, 2019	1.98%	155,002,447
Praesidium Investment Management Company LLC	603,931	Mar 30, 2019	1.58%	123,443,496
Times Square Capital Management, LLC	593,503	Mar 30, 2019	1.55%	121,312,013

Top Mutual Fund Holders

Holder	Shares	Date Reported	% Out	Value
iShares Core S&P Midcap ETF	1,101,630	Mar 30, 2019	2.87%	225,152,732
Brown Capital Management Small Company Fund	1,073,976	Sep 29, 2018	2.80%	263,188,558
Vanguard Small-Cap Index Fund	936,111	Sep 29, 2018	2.45%	229,893,481
Vanguard Total Stock Market Index Fund	920,868	Sep 29, 2018	2.40%	225,667,912
Neuberger & Berman Genesis Fund	771,280	Mar 30, 2019	2.01%	157,645,544

Travel is experiential. Booking travel can be, too.

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People Also Watch

Symbol	Last Price	Change	% Change
ULTI The Ultimate Software Group, Inc.	331.36	0.00	0.00%
MANH Manhattan Associates, Inc.	66.05	+0.28	+0.43%
BLKB Blackbaud, Inc.	77.69	+1.23	+1.61%
CSGP CoStar Group, Inc.	509.17	-4.02	-0.78%
ANSS ANSYS, Inc.	181.08	+0.39	+0.22%

Yahoo Small Business

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[Vanguard Extended Market Index Fund](#)
[SPDR S&P Mid Cap 400 ETF Trust](#)
[Janus Henderson Research Fund](#)
[Federated Kaufmann Fund](#)

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Federated Kaufmann Fund	392,951	Dec 30, 2018	1.02%	73,018,154

PRINCIPAL QUESTIONNAIRE FORM

All questions on these questionnaires must be answered by all officers and any individuals who hold a ten percent (10%) or greater ownership interest in the proposer. Answers typewritten or printed in ink. If you need more space to answer any question, make as many photocopies of the appropriate page(s) as necessary and attach them to the questionnaire.

COMPLETE THIS QUESTIONNAIRE CAREFULLY AND COMPLETELY. FAILURE TO SUBMIT A COMPLETE QUESTIONNAIRE MAY MEAN THAT YOUR BID OR PROPOSAL WILL BE REJECTED AS NON-RESPONSIVE AND IT WILL NOT BE CONSIDERED FOR AWARD

1. Principal Name: Mark Hawkins
Date of birth: 07/23/1975
Home address: 2125 Stags Leap
City: Celina State: TX Zip Code: 75009
Business Address: 5101 Tennyson Parkway
City: Plano State: TX Zip Code: 75024
Telephone: (972) 713-3770
Other present address(es): _____
City: _____ State: _____ Zip Code: _____
Telephone: _____
List of other addresses and telephone numbers attached

2. Positions held in submitting business and starting date of each (check all applicable)

President	_____	Treasurer	_____
Chairman of Board	_____	Shareholder	_____
Chief Exec. Officer	_____	Secretary	_____
Chief Financial Officer	_____	Partner	_____
Vice President	_____		
(Other)	_____		

Type	Description	Start Date
Other	President, Appraisal & Tax Division	02/18/2019
Other	Senior Vice President of Operations, Appraisal & Tax Division	08/01/2015

3. Do you have an equity interest in the business submitting the questionnaire?

YES ☒ NO ☐ If Yes, provide details.

Mark Hawkins owns less than a 10% interest. Please see attached document.

4. Are there any outstanding loans, guarantees or any other form of security or lease or any other type of contribution made in whole or in part between you and the business submitting the questionnaire?

YES ☐ NO ☒ If Yes, provide details.

5. Within the past 3 years, have you been a principal owner or officer of any business or notfor-profit organization other than the one submitting the questionnaire?

YES ☐ NO ☒ If Yes, provide details.

6. Has any governmental entity awarded any contracts to a business or organization listed in Section 5 in the past 3 years while you were a principal owner or officer?

YES ☐ NO ☒ If Yes, provide details.

NOTE: An affirmative answer is required below whether the sanction arose automatically, by operation of law, or as a result of any action taken by a government agency. Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

7. In the past (5) years, have you and/or any affiliated businesses or not-for-profit organizations listed in Section 5 in which you have been a principal owner or officer:
- a. Been debarred by any government agency from entering into contracts with that agency?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- b. Been declared in default and/or terminated for cause on any contract, and/or had any contracts cancelled for cause?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- c. Been denied the award of a contract and/or the opportunity to bid on a contract, including, but not limited to, failure to meet pre-qualification standards?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- d. Been suspended by any government agency from entering into any contract with it; and/or is any action pending that could formally debar or otherwise affect such business's ability to bid or propose on contract?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
8. Have any of the businesses or organizations listed in response to Question 5 filed a bankruptcy petition and/or been the subject of involuntary bankruptcy proceedings during the past 7 years, and/or for any portion of the last 7 year period, been in a state of bankruptcy as a result of bankruptcy proceedings initiated more than 7 years ago and/or is any such business now the subject of any pending bankruptcy proceedings, whenever initiated?
YES ☐ NO ☒ If 'Yes', provide details for each such instance. (Provide a detailed response to all questions check "Yes". If you need more space, photocopy the appropriate page and attached it to the questionnaire.)
- 9.
- a. Is there any felony charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- b. Is there any misdemeanor charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- c. Is there any administrative charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- d. In the past 10 years, have you been convicted, after trial or by plea, of any felony, or of any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business? Y
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action

taken.

- e. In the past 5 years, have you been convicted, after trial or by plea, of a misdemeanor?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

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YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

10. In addition to the information provided in response to the previous questions, in the past 5 years, have you been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency and/or the subject of an investigation where such investigation was related to activities performed at, for, or on behalf of the submitting business entity and/or an affiliated business listed in response to Question 5?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

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YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

12. In the past 5 years, have you or this business, or any other affiliated business listed in response to Question 5 had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

13. For the past 5 tax years, have you failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

I, Mark Hawkins , hereby acknowledge that a materially false statement willfully or fraudulently made in connection with this form may result in rendering the submitting business entity and/or any affiliated entities non-responsible, and, in addition, may subject me to criminal charges.

I, Mark Hawkins , hereby certify that I have read and understand all the items contained in this form; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this form; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this form as additional inducement to enter into a contract with the submitting business entity.

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Tyler Technologies, Inc.

Name of submitting business

Electronically signed and certified at the date and time indicated by:

Mark Hawkins [MARK.HAWKINS@TYLERTECH.COM]

President, Appraisal & Tax Division

Title

05/31/2019 01:26:42 PM

Date

Tyler Technologies, Inc. (TYL)

NYSE - Nasdaq Real Time Price. Currency in USD

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Quote Lookup

215.01 +1.78 (+0.83%)

As of 12:07PM EDT, Market open.

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Major Holders Breakdown

Currency in USD

1.79%	% of Shares Held by All Insider
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Top Institutional Holders

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People Also Watch

Symbol	Last Price	Change	% Change
ULTI The Ultimate Software Group, Inc	331.36	0.00	0.00%
MANH Manhattan Associates, Inc.	66.05	+0.28	+0.43%
BLKB Blackbaud, Inc.	77.69	+1.23	+1.61%
CSGP CoStar Group, Inc.	509.17	-4.02	-0.78%
ANSS ANSYS, Inc.	181.08	+0.39	+0.22%

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Vanguard Mid Cap Growth Fund	Vanguard Mid Cap Growth Fund	Vanguard Mid Cap Growth Fund	Vanguard Mid Cap Growth Fund	Vanguard Mid Cap Growth Fund	Vanguard Mid Cap Growth Fund	Vanguard Mid Cap Growth Fund	Vanguard Mid Cap Growth Fund
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Federated Kaufmann Fund			392,951	Dec 30, 2018	1.02%	73,018,154	

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1. Principal Name: Greg Sebastian
Date of birth: 04/22/1963
Home address: 5734 Sovereign Dr
City: Rochester State: MI Zip Code: 48306
Business Address: 840 W Long Lake Rd
City: Troy State: MI Zip Code: 48098
Telephone: (248) 269-1000
Other present address(es): _____
City: _____ State: _____ Zip Code: _____
Telephone: _____
List of other addresses and telephone numbers attached

2. Positions held in submitting business and starting date of each (check all applicable)

President	_____	Treasurer	_____
Chairman of Board	_____	Shareholder	_____
Chief Exec. Officer	_____	Secretary	_____
Chief Financial Officer	_____	Partner	_____
Vice President	_____		
(Other)	_____		

Type	Description	Start Date
Other	President, Public Safety Division	11/15/2015

3. Do you have an equity interest in the business submitting the questionnaire?
YES ☒ NO ☐ If Yes, provide details.
Less than 10% interest. Only 1.79% % of Tyler Technologies, Inc. shares are held by insiders. See attached.
4. Are there any outstanding loans, guarantees or any other form of security or lease or any other type of contribution made in whole or in part between you and the business submitting the questionnaire?
YES ☐ NO ☒ If Yes, provide details.

5. Within the past 3 years, have you been a principal owner or officer of any business or notfor-profit organization other than the one submitting the questionnaire?
YES ☐ NO ☒ If Yes, provide details.

6. Has any governmental entity awarded any contracts to a business or organization listed in Section 5 in the past 3 years while you were a principal owner or officer?
YES ☐ NO ☒ If Yes, provide details.

NOTE: An affirmative answer is required below whether the sanction arose automatically, by operation of law, or as a result of any action taken by a government agency. Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

7. In the past (5) years, have you and/or any affiliated businesses or not-for-profit organizations listed in Section 5 in which you have been a principal owner or officer:
- a. Been debarred by any government agency from entering into contracts with that agency?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- b. Been declared in default and/or terminated for cause on any contract, and/or had any contracts cancelled for cause?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- c. Been denied the award of a contract and/or the opportunity to bid on a contract, including, but not limited to, failure to meet pre-qualification standards?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
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YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
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YES ☐ NO ☒ If 'Yes', provide details for each such instance. (Provide a detailed response to all questions check "Yes". If you need more space, photocopy the appropriate page and attached it to the questionnaire.)
- 9.
- a. Is there any felony charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- b. Is there any misdemeanor charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- c. Is there any administrative charge pending against you?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
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YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

e. In the past 5 years, have you been convicted, after trial or by plea, of a misdemeanor?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

f. In the past 5 years, have you been found in violation of any administrative or statutory charges?
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

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YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

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YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

12. In the past 5 years, have you or this business, or any other affiliated business listed in response to Question 5 had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

13. For the past 5 tax years, have you failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

I, Greg Sebastian , hereby acknowledge that a materially false statement willfully or fraudulently made in connection with this form may result in rendering the submitting business entity and/or any affiliated entities non-responsible, and, in addition, may subject me to criminal charges.

I, Greg Sebastian , hereby certify that I have read and understand all the items contained in this form; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this form; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this form as additional inducement to enter into a contract with the submitting business entity.

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Tyler Technologies, Inc.

Name of submitting business

Electronically signed and certified at the date and time indicated by:

Greg Sebastian [GREG.SEBASTIAN@TYLERTECH.COM]

President, Public Safety Division

Title

05/31/2019 02:15:29 PM

Date

Tyler Technologies, Inc. (TYL)
NYSE - Nasdaq Real Time Price. Currency in USD

☆ Add to watchlist

Quote Lookup

214.35 +1.12 (+0.53%)

As of 1:51PM EDT, Market open.

Buy

Sell

Summary Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability



Major Holders Insider Roster Insider Transactions

Major Holders Breakdown

Currency in USD

1.79% % of Shares Held by All Insider

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93.63% % of Float Held by Institutions

465 Number of Institutions Holding Shares

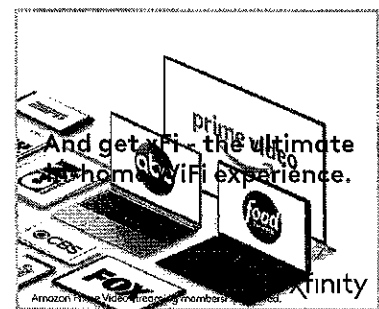
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Neuberger Berman Group, LLC	1,107,718	Mar 30, 2019	2.89%	226,417,559
Franklin Resources, Inc	957,395	Mar 30, 2019	2.50%	195,691,538
State Street Corporation	913,668	Mar 30, 2019	2.38%	186,753,739
Df Dent & Co Inc	758,329	Mar 30, 2019	1.98%	155,002,447
Praesidium Investment Management Company LLC	603,931	Mar 30, 2019	1.58%	123,443,496
Times Square Capital Management, LLC	593,503	Mar 30, 2019	1.55%	121,312,013

Top Mutual Fund Holders

Holder	Shares	Date Reported	% Out	Value
iShares Core S&P Midcap ETF	1,101,530	Mar 30, 2019	2.87%	225,162,732
Brown Capital Management Small Company Fund	1,073,976	Sep 29, 2018	2.80%	263,188,558
Vanguard Small-Cap Index Fund	938,111	Sep 29, 2018	2.45%	229,893,481
Vanguard Total Stock Market Index Fund	920,868	Sep 29, 2018	2.40%	225,667,912
Neuberger & Berman Genesis Fund	771,260	Mar 30, 2019	2.01%	157,845,544
Vanguard Small-Cap Growth Index Fund	542,714	Sep 29, 2018	1.42%	132,997,492
Janus Henderson Research Fund	537,731	Mar 30, 2019	1.40%	109,912,216

Holder	Shares	Date Reported	% Out	Value
Vanguard Extended Market Index Fund	484,913	Sep 29, 2018	1.26%	118,832,779
SPDR S&P Mid Cap 400 ETF Trust	447,571	Mar 30, 2019	1.17%	91,483,512
Federated Kaufmann Fund	392,951	Dec 30, 2018	1.02%	73,018,154



People Also Watch

Symbol	Last Price	Change	% Change
ULTI	331.38	0.00	0.00%
The Ultimate Software Group, Inc.			
MANH	65.49	-0.28	-0.43%
Manhattan Associates, Inc.			
BLKB	78.03	+1.57	+2.05%
Blackbaud, Inc.			
CSGP	512.75	-0.44	-0.09%
CoStar Group, Inc.			
ANSS	180.76	+0.07	+0.04%
ANSYS, Inc.			

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Business History Form

The contract shall be awarded to the responsible proposer who, at the discretion of the County, taking into consideration the reliability of the proposer and the capacity of the proposer to perform the services required by the County, offers the best value to the County and who will best promote the public interest.

In addition to the submission of proposals, each proposer shall complete and submit this questionnaire. The questionnaire shall be filled out by the owner of a sole proprietorship or by an authorized representative of the firm, corporation or partnership submitting the Proposal.

NOTE: All questions require a response, even if response is "none" or "not-applicable." No blanks.

(USE ADDITIONAL SHEETS IF NECESSARY TO FULLY ANSWER THE FOLLOWING QUESTIONS).

Date: 06/05/2019

- 1) Proposer's Legal Name: Tyler Technologies, Inc.
- 2) Address of Place of Business: 5101 Tennyson Parkway
City: Plano State: TX Zip Code: 75024
- 3) Mailing Address (if different): _____
City: _____ State: _____ Zip Code: _____
Phone: _____
Does the business own or rent its facilities? Own If other, please provide details:

- 4) Dun and Bradstreet number: 041089293
- 5) Federal I.D. Number: 752303920
- 6) The proposer is a: Corporation (Describe) _____
- 7) Does this business share office space, staff, or equipment expenses with any other business?
YES ☐ NO ☒ If yes, please provide details:

- 8) Does this business control one or more other businesses?
YES ☒ NO ☐ If yes, please provide details:
Tyler Technologies A&T Services, LLC (Delaware LLC) - wholly owned subsidiary of Tyler Technologies, Inc.
Socrata, Inc. - wholly owned subsidiary of Tyler Technologies, Inc.
Micropact, Inc. - wholly owned subsidiary of Tyler Technologies, Inc.
Tyler Technologies Australia PTY LTD - wholly owned subsidiary of Tyler Technologies, Inc.
- 9) Does this business have one or more affiliates, and/or is it a subsidiary of, or controlled by, any other business?
YES ☒ NO ☐ If yes, please provide details:
Tyler Technologies A&T Services, LLC (Delaware LLC) - wholly owned subsidiary of Tyler Technologies, Inc.
Socrata, Inc. - wholly owned subsidiary of Tyler Technologies, Inc.
Micropact, Inc. - wholly owned subsidiary of Tyler Technologies, Inc.
Tyler Technologies Australia PTY LTD - wholly owned subsidiary of Tyler Technologies, Inc.
- 10) Has the proposer ever had a bond or surety cancelled or forfeited, or a contract with Nassau County or any other government entity terminated?
YES ☒ NO ☐ If yes, state the name of bonding agency, (if a bond), date, amount of bond

and reason for such cancellation or forfeiture; or details regarding the termination (if a contract).

Please see attached file titled Tyler Technologies Terminations.

- 11) Has the proposer, during the past seven years, been declared bankrupt?
YES ☐ NO ☒ If yes, state date, court jurisdiction, amount of liabilities and amount of assets
- 12) In the past five years, has this business and/or any of its owners and/or officers and/or any affiliated business, been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency? And/or, in the past 5 years, have any owner and/or officer of any affiliated business been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency, where such investigation was related to activities performed at, for, or on behalf of an affiliated business.
YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.
- 13) In the past 5 years, has this business and/or any of its owners and/or officers and/or any affiliated business been the subject of an investigation by any government agency, including but not limited to federal, state and local regulatory agencies? And/or, in the past 5 years, has any owner and/or officer of an affiliated business been the subject of an investigation by any government agency, including but not limited to federal, state and local regulatory agencies, for matters pertaining to that individual's position at or relationship to an affiliated business.
YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.
- 14) Has any current or former director, owner or officer or managerial employee of this business had, either before or during such person's employment, or since such employment if the charges pertained to events that allegedly occurred during the time of employment by the submitting business, and allegedly related to the conduct of that business:
- a) Any felony charge pending?
YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.
- b) Any misdemeanor charge pending?
YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.
- c) In the past 10 years, you been convicted, after trial or by plea, of any felony and/or any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business?
YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.
- d) In the past 5 years, been convicted, after trial or by plea, of a misdemeanor?
YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.
- e) In the past 5 years, been found in violation of any administrative, statutory, or regulatory provisions?
YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.
- 15) In the past (5) years, has this business or any of its owners or officers, or any other affiliated business had any

sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held?

YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.

- 16) For the past (5) tax years, has this business failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges?

YES ☐ NO ☒ If yes, provide details for each such year. Provide a detailed response to all questions checked 'YES'. If you need more space, photocopy the appropriate page and attach it to the questionnaire.

- 17 Conflict of Interest:

a) Please disclose any conflicts of interest as outlined below. NOTE: If no conflicts exist, please expressly state "No conflict exists."

(i) Any material financial relationships that your firm or any firm employee has that may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No conflict exists.

(ii) Any family relationship that any employee of your firm has with any County public servant that may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No conflict exists.

(iii) Any other matter that your firm believes may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No conflict exists.

b) Please describe any procedures your firm has, or would adopt, to assure the County that a conflict of interest would not exist for your firm in the future.

Please see attached Tyler Technologies' Code of Business Conduct and Ethics.

- A. Include a resume or detailed description of the Proposer's professional qualifications, demonstrating extensive experience in your profession. Any prior similar experiences, and the results of these experiences, must be identified.

Have you previously uploaded the below information under in the Document Vault?

YES ☐ NO ☒

Is the proposer an individual?

YES ☐ NO ☒ Should the proposer be other than an individual, the Proposal MUST include:

i) Date of formation;

03/14/1990

ii) Name, addresses, and position of all persons having a financial interest in the company, including shareholders, members, general or limited partner. If none, explain.

Please see attached file titled Stockholders.

iii) Name, address and position of all officers and directors of the company. If none, explain.

Please see attached file titled Directors and Officers.

iv) State of incorporation (If applicable);

DE

v) The number of employees in the firm;

4525

vi) Annual revenue of firm;

1790963

vii) Summary of relevant accomplishments

Please see attached file titled Tyler Technologies Accomplishments.

B. Indicate number of years in business.

29

C. Provide any other information which would be appropriate and helpful in determining the Proposer's capacity and reliability to perform these services.

Please see attached 2018 Annual Report.

D. Provide names and addresses for no fewer than three references for whom the Proposer has provided similar services or who are qualified to evaluate the Proposer's capability to perform this work.

Company	Fairfax County, Virginia		
Contact Person	Mr. Howard Goodie, Director Real Estate Division		
Address	Department of Tax Administration, 1200 Government Center Parkway 357		
City	Fairfax	State	VA
Telephone	(703) 324-4803		
Fax #	(703) 324-4935		
E-Mail Address	howard.goodie@fairfaxcounty.gov		

Company	Clermont County, Ohio		
Contact Person	Ms. Linda Fraley, Auditor		
Address	101 East Main Street		
City	Batavia	State	OH
Telephone	(513) 732-7150		
Fax #	(513) 732-7226		
E-Mail Address	lfraley@clermontcountyohio.gov		

Company	Leon County, Florida		
Contact Person	Ms. Kathy Doolin, Assistant Property Appraiser		
Address	Courthouse Annex, 315 South Calhoun Street		
City	Tallahassee	State	FL
Telephone	(850) 488-6102		
Fax #	(850) 922-7238		
E-Mail Address	kdoolin@leonpa.org		

I, Abigail Diaz, hereby acknowledge that a materially false statement willfully or fraudulently made in connection with this form may result in rendering the submitting business entity and/or any affiliated entities non-responsible, and, in addition, may subject me to criminal charges.

I, Abigail Diaz, hereby certify that I have read and understand all the items contained in this form; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this form; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this form as additional inducement to enter into a contract with the submitting business entity.

CERTIFICATION

A MATERIALLY FALSE STATEMENT WILLFULLY OR FRAUDULENTLY MADE IN CONNECTION WITH THIS QUESTIONNAIRE MAY RESULT IN RENDERING THE SUBMITTING BUSINESS ENTITY NOT RESPONSIBLE WITH RESPECT TO THE PRESENT BID OR FUTURE BIDS, AND, IN ADDITION, MAY SUBJECT THE PERSON MAKING THE FALSE STATEMENT TO CRIMINAL CHARGES.

Name of submitting business: Tyler Technologies, Inc.

Electronically signed and certified at the date and time indicated by:
Abigail Diaz [ABIGAIL.DIAZ@TYLERTECH.COM]

Chief Legal Officer
Title

06/05/2019 11:08:01 AM
Date

On average, Tyler Technologies adds eleven (11) new clients each week and has a ninety-eight percent (98%) client retention rate.

Tyler Technologies' Appraisal & Tax Division has in the past five years had one (1) Appraisal & Tax Division software client that has opted to terminate its relationship with Tyler Technologies for reasons other than non-appropriation or non-renewal. That decision was mutually agreed to by Tyler Technologies without either party admitting liability. That client, and the year in which the termination took effect is:

- 2014
 - Adams County, NE (Orion) - Adams County had multiple contracts with Tyler. In 2014, the County pursued termination under the contractual "termination for cause" provision. Tyler did not concede that a for-cause termination was appropriate, but agreed to the termination. The County remains a Tyler customer on other Orion modules.

In the past five years, three (3) New World Public Safety clients have opted to terminate their relationship with Tyler for reasons other than non-appropriation or non-renewal. That decision was mutually agreed to by Tyler without either party admitting liability. Those clients, and the year in which the termination took effect, are:

- 2016
 - Great Falls, MT (remains an EnerGov & NWERP Customer)
 - O'Fallon, IL (remains a Tyler Customer on other software)
- 2019
 - Anthony, NM (remains an LGD Customer)

Out of an abundance of caution, Tyler Technologies is also reporting an anticipated termination, the terms of which have not been reached.

- 2019
 - Sacramento Regional Public Safety Communications Center ("SacFire")
 - In June 2018, SacFire filed a lawsuit against Tyler relating to a proposal submitted by Tyler's predecessor-in-interest, New World Systems Corporation, and a contract arising out of that proposal. The lawsuit is baseless, one of SacFire's claims has been dismissed and Tyler expects to file a motion for summary judgment as to the remaining claims.

Code of Business Conduct and Ethics of Tyler Technologies, Inc.

Tyler Technologies, Inc. ("Tyler") expects all officers, directors, and employees to exercise the highest degree of professional business ethics in all actions they undertake on behalf of Tyler. Accordingly, Tyler expects its officers, directors, and employees to act at all times in accordance with the policies outlined herein. These policies apply to all officers, directors, and employees, including, without limitation, Tyler's principal executive officer, principal financial officer, principal accounting officer, and all persons performing similar functions.

Any employee who has questions regarding these policies should contact their HR representative or Tyler's chief human resources officer. An employee should immediately report any violations of these policies to Tyler's chief human resources officer. The policies in this Code of Business Conduct and Ethics will be strictly enforced. Tyler will take appropriate disciplinary action with respect to those involved in any violations of these policies, including, where appropriate, dismissal. Tyler will not retaliate against an employee for reporting violations. This Code of Business Conduct and Ethics is not intended to affect the status of any employee or to enhance or diminish any employee's contract rights or rights under otherwise applicable law.

Anonymous Reporting of Accounting or Auditing Concerns

If any employee has any concerns about any accounting, auditing, internal audit controls, or related matter, they are encouraged to bring the matter to the attention of Tyler's audit committee chairperson. The audit committee is composed of three (3) or more members of Tyler's board of directors and assists the board in fulfilling its oversight responsibility to Tyler's stockholders, potential stockholders, the investment community, and others relating to Tyler's financial statements, financial reporting, and processes. The audit committee chairperson can be contacted in any of the following ways:

1. By phone at (866) 376-4128
2. By Internet at <http://www.openboard.info/tyl>
3. By mail at Tyler Technologies, Inc., Board of Directors, Audit Committee Chairperson, 5101 Tennyson Parkway, Plano, TX 75024.

Reports regarding accounting, auditing, or related matters will be kept strictly confidential. In addition, the employee or other person raising the issue is under no obligation to reveal their identity in connection with the reporting process. Please reference Tyler's Whistleblower Policy for additional information, including how to maintain anonymity in reporting.

Introduction and Purpose

This Code of Business Conduct and Ethics is designed to deter wrongdoing and promote the following:

- Honest and ethical conduct, including ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
- Avoidance of conflicts of interest, including disclosure to the appropriate person identified herein of any material transaction or relationship that reasonably could be expected to give rise to such a conflict;
- Full, fair, accurate, timely, and understandable disclosure in reports and documents that Tyler files with, or submits to, the Securities and Exchange Commission and in other public communications by Tyler;
- Compliance with applicable governmental laws, rules, and regulations;
- Prompt internal reporting to the appropriate person identified herein of any violations of this Code of Business Conduct and Ethics; and
- Accountability for adherence to the policies contained in this Code of Business Conduct and Ethics.

General Principles for Business Conduct

- Tyler and its employee shall comply with all applicable legal requirements of any federal, state, local, or foreign jurisdiction where Tyler conducts business.
- The use of any Tyler assets for any unlawful or improper purpose is strictly prohibited.
- No undisclosed fund or asset shall be established or maintained for any purpose.

No false or misleading entries shall be made for any reason in Tyler's books, records, or other financial documents, or in any materials prepared for or submitted to Tyler's accountants or independent auditors, and no employee shall engage in any arrangement that results in such prohibited act. In addition, all employees dealing with or providing information or documentation to Tyler's accountants or independent auditors must provide complete and accurate information, and must immediately report any request, suggestion, or threat that they do otherwise to the chairperson of the Tyler audit committee, as outlined above under "Anonymous Reporting of Accounting or Auditing Concerns."

Just as Tyler expects all employees to speak honestly to clients, potential clients, and vendors, Tyler also expects all employees to display the same integrity in anything they write, whether for internal or external use. Therefore, all internal records, memoranda, and other documents must be accurate, complete, and truthful and must be maintained in that condition without any alteration, falsification, omission, or other change that would mislead someone reviewing the record about its original contents or meaning. Any employee who is asked or directed to engage in such prohibited conduct should immediately report it to their HR representative or Tyler's chief human resources officer, or if it concerns questionable accounting or auditing

matters, to the chairperson of the Tyler audit committee, as outlined above under "Anonymous Reporting of Accounting or Auditing Concerns."

Retaliation against any employee as a result of their bringing forward any questions, concerns, or complaints about accounting or auditing matters, recording of information, record retention, or any other matter concerning the honesty and integrity of Tyler's operations or financial reporting is strictly prohibited. Similarly, retaliation is prohibited against any employee who provides accurate information to any law enforcement agency about the commission of any state or federal offense. Any employee who feels that they have been retaliated against or threatened with retaliation for these reasons should immediately report it to Tyler's chief human resources officer, or if it concerns questionable accounting or auditing matters, to the chairperson of the Tyler audit committee, as outlined above under "Anonymous Reporting of Accounting or Auditing Concerns."

No payment on behalf of Tyler shall be approved without adequate supporting documentation or made with the intention or understanding that any part of such payment is to be used for any purpose other than as described by the documentation supporting the payment.

No Tyler confidential information shall be used or revealed within or outside of Tyler without proper authorization and purpose.

The use of Tyler employees, materials, or equipment for personal purposes is strictly prohibited, unless specifically authorized.

Compliance with established internal control procedures is required at all times.

Political Activities and Contributions

Tyler will not make any contribution to or for any political party, committee, or candidate for any public office. Any employee requested by another employee to contribute Tyler funds to a political party, committee, or candidate for public office should decline to do so and promptly notify their human resources representative or Tyler's chief human resources officer of the details of any such request.

Payments to Government Officials and Personnel

Tyler's relationships with governmental agencies and their personnel in any federal, state, local, or foreign jurisdiction where Tyler conducts business shall be conducted so that full disclosure of the conduct will not impugn or jeopardize Tyler's integrity or reputation. Accordingly, payments to government personnel, including gifts of substantial value or lavish entertainment, is strictly prohibited, whether the payment is made from personal funds or assets or those of Tyler, and whether made directly or indirectly through consultants, advisors, suppliers, clients, or other third parties.

Use of Agents and Others to Assist in Obtaining and Performing Contracts

From time to time, Tyler may elect to use special consultants, distributors, representatives, and agents to assist in obtaining or performing contracts. These representatives must be *bona fide* professional individuals or organizations, they must render *bona fide* services, and their compensation must be limited to a reasonable fee for their services. A representative may not be employed by Tyler if they are connected directly or indirectly to the prospective client or to an official or agent of a prospective client.

Conflicts of Interest

Tyler expects the undivided loyalty of its employees in the conduct of business. It is important that employees be free from any financial interests or other relationships that might conflict with the best interests of Tyler. Accordingly, each employee shall avoid any investment or other interest in any business that would conflict with the proper performance of their duties or responsibilities for Tyler, or which might interfere with their independence of judgment with respect to the transactions between Tyler and such other business.

While it is impossible to enumerate all situations in which possible conflicts might arise, the following are some examples:

- To give or receive gifts of more than token value that are in any way connected with the business relationship;
- To lend or borrow money or other assets from individuals or concerns that do business with or compete against Tyler, except banks and other financial institutions;
- To serve as an officer, director, employee, or consultant of, or receive any income from any enterprise doing business with or competing against Tyler, or seeking to do so, or to own an interest in or engage in the management of an organization providing services or products to Tyler, or to which Tyler sells, or with which Tyler competes, except when such interest (1) comprises publicly traded securities listed on a national securities exchange, NASDAQ, or the OTC margin list and (2) is not in excess of 5% of the securities of such company;
- To accept compensation from outsiders for services for which the employee is being paid by Tyler;
- To speculate or deal in materials, equipment, supplies, products, lands, leases, or property purchased or sold by Tyler, or for which negotiations to purchase, acquire, or sell are pending or may reasonably be anticipated, or to receive (other than from Tyler) any compensation, bonus, or commission in connection with any transaction relating to Tyler's business;
- To knowingly cause, directly or indirectly, Tyler to enter into a business transaction with a close relative of a Tyler employee or business enterprise of such relative;
- To knowingly buy or sell for the employee's own account or the account of a relative of a Tyler employee any security or other interest which Tyler may be considering buying or selling, or has decided to buy or sell, until Tyler's decision has been completely executed and publicly announced; and/or

- To transmit any knowledge of any consideration or decisions of any information that might be prejudicial to the interests of Tyler to any person, except as may be necessary for the proper discharge of the employee's responsibilities on behalf of Tyler.

If an employee finds that they have, or are considering the assumption of, a financial interest or outside relationship that might involve a conflict of interest, or if the employee has any doubt as to the proper application of this policy, they should promptly make all facts known to Tyler's chief human resources officer and refrain from any exercise of responsibility in any manner that might reasonably be considered to be affected by such adverse interest.

Protection of Confidential or Proprietary Information

Tyler's confidential and proprietary information is vital to its current operations and future success. Each employee shall use reasonable care to protect or otherwise prevent the unauthorized disclosure of such information. In no event shall confidential information be disclosed or revealed within or outside Tyler without proper authorization or a permitted purpose. If an employee is uncertain whether certain information should be treated as confidential, the employee should presume that such information is confidential and not disclose it without confirmation that there is proper authorization or a permitted purpose.

By way of example, confidential or proprietary information includes information relating to Tyler's business methods, business plans, research, development, inventions, databases, systems, systems designs, technology, intellectual property, know-how, management, business development, operations, products, services, pricing strategies, client sources, employee records, terms and conditions of arrangements of any business or clients, client lists, methods of competing, financial statements, financial projections, financing methods, and other proprietary information.

Prohibition Against Insider Trading

Insider trading is the trading of Tyler stock while in possession of material "inside" or nonpublic information. This includes the purchase or sale of Tyler stock on the open market through a stockbroker of your choice or through an online brokerage account, the exercise of stock options and corresponding sale of the underlying stock, the sale of stock acquired through Tyler's Employee Stock Purchase Plan (following the applicable holding periods), or the short sale of Tyler stock. *The prohibition against trading other than during the trading window also encompasses the fulfillment of "limit orders" placed with a broker, and the brokers with whom any such limit order is placed must be so instructed at the time it is placed.* The prohibition does not, however, include the purchase of stock under the Employee Stock Purchase Plan pursuant to previously authorized payroll deductions.

In addition to the prohibition against trading, it is also a violation of the federal securities laws to disclose (or tip) material nonpublic information to another person who subsequently uses that information to their profit.

What is "material nonpublic information?"

In general, information is “material” if its disclosure to the public would affect an investor’s decision to purchase or sell Tyler stock. It is difficult to describe all the types of material nonpublic information a Tyler employee may possess that could cause problems with trading or tipping others to trade Tyler stock. Some examples of material nonpublic information about Tyler include information or knowledge about the following events:

- Tyler’s quarterly or annual earnings or other important financial information;
- Changes in previously disclosed financial information, including earnings estimates;
- Tyler has suffered, or is about to suffer, extraordinary losses or costs;
- Tyler has realized, or is about to realize, extraordinary earnings;
- Tyler is making changes in previously disclosed financial information;
- Tyler has entered into, or is about to enter into, an important contract with a client, or that such a contract has been terminated or is about to be terminated;
- A merger, acquisition, or takeover;
- Acquisition or sale of a company, a division, or a significant amount of assets;
- Tyler plans to declare stock splits, stock dividends, or cash dividends;
- Tyler becomes a party to major litigation;
- Tyler is making significant changes in management;
- Tyler plans to make significant changes in operations; and/or
- Tyler has achieved a milestone.

In most cases, employees should presume that information concerning any of these events is material. If an employee has any questions about what information is material, or whether the information has been disclosed to the public, they should contact Tyler’s chief legal officer.

General Trading Limitations

All employees, officers, and directors must comply with the following restrictions:

1. They may not buy or sell Tyler stock during the period beginning on the first business day after the end of each fiscal quarter through the close of trading on the second full business day after release of the quarter’s operating results to the public. This blackout period is intended to remove any appearance that you may have traded based on material nonpublic information concerning the financial results.
2. If, during times other than the blackout period referred to above, they possess material information (good or bad) that is unknown to the general public (in other words, information that they have not read in the newspaper, Tyler’s press releases, or annual or quarterly reports, or seen publicly displayed on the bulletin boards around Tyler’s facilities), then they are prohibited from buying or selling Tyler stock until after the close of trading on the second full business day after such material information has been released to the public.
3. They are prohibited from sharing material nonpublic information with others (friends, family, stock brokers, strangers) that buy or sell our stock or recommending that they trade or hold Tyler stock based on the material nonpublic information or at any time when the employee, officer, or director possesses material nonpublic information.

4. They may not give material nonpublic information to others, even if they are not buying or selling Tyler stock, without Tyler's permission. In other words, they may not give this information except where it is required in the performance of duties as an employee, officer, or director of Tyler and they have permission to do so.

These restrictions also apply to family members and others living in the household of the employee, officer, or director.

These general trading limitations are based upon U.S. securities laws. Compliance with these general rules should mean compliance with applicable U.S. laws, as well as the regulations of the New York Stock Exchange.

Property Rights

During and subsequent to employment by Tyler, an employee must disclose to Tyler all ideas, concepts, inventions, improvements, and discoveries, including those related to software, and any and all writings including those related to software, regardless of the media that are conceived, made, or reduced to practice by the employee, provided that such ideas, concepts, inventions, improvements, and discoveries arise from or relate to work done for or on behalf of Tyler, relate to Tyler's business, involve the employee's use of Tyler equipment, facilities, or time, or arise out of any information received regarding Tyler's business. It is each employee's responsibility to fully disclose to Tyler as promptly as available all information known or possessed by the employee concerning these property rights. Where appropriate, ideas or questions should be directed to Tyler's chief legal officer for patent, copyright, trademark, or trade secret protection.

Tyler Technologies, Inc. (TYL)
 NYSE - Nasdaq Real Time Price. Currency in USD

☆ Add to watchlist

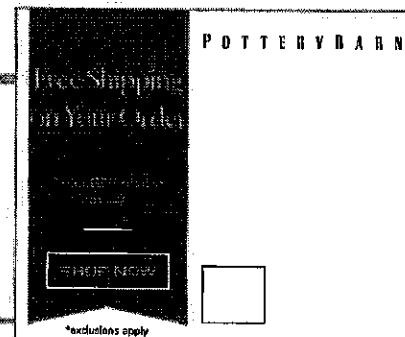
212.55 +1.05 (+0.50%)

As of 9:32AM EDT, Market open.

Buy

Sell

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JUST FOR YOU:
GET \$3,000 PRIVATE CASH OFFER*
 ON TOP OF ALL OTHER PUBLIC OFFERS.

GET YOUR OFFER

People Also Watch

Symbol	Last Price	Change	% Change
ULTI	331.36	0.00	0.00%
The Ultimate Software Group, Inc.			
MANH	65.50	0.00	0.00%
Manhattan Associates, Inc.			
BLKB	74.44	-0.17	-0.23%
Blackbaud, Inc.			
CSGP	513.01	+7.01	+1.39%
CoStar Group, Inc.			
SSNC	56.81	+0.30	+0.53%
SS&C Technologies Holdings, Inc.			

[Major Holders](#)
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[Insider Transactions](#)

Major Holders
 Breakdown

Currency in USD

1.79%	% of Shares Held by All Insider
91.96%	% of Shares Held by Institutions
93.63%	% of Float Held by Institutions
465	Number of Institutions Holding Shares

Top Institutional Holders

Holder	Shares	Date Reported	% Out	Value
Blackrock Inc.	3,805,249	Mar 30, 2019	9.92%	777,792,895
Vanguard Group, Inc. (The)	3,408,692	Mar 30, 2019	8.89%	696,736,644
Brown Capital Management, Inc.	2,022,685	Mar 30, 2019	5.28%	413,436,814
Janus Henderson Group PLC	1,431,181	Mar 30, 2019	3.73%	292,533,396
Neuberger Berman Group, LLC	1,107,718	Mar 30, 2019	2.89%	226,417,559
Franklin Resources, Inc	957,395	Mar 30, 2019	2.50%	195,691,538
State Street Corporation	913,668	Mar 30, 2019	2.38%	186,753,739
Df Dent & Co Inc	758,329	Mar 30, 2019	1.98%	155,002,447
Praxis Investment Management Company LLC	603,931	Mar 30, 2019	1.58%	123,443,496
Times Square Capital Management, LLC	593,503	Mar 30, 2019	1.55%	121,312,013

Top Mutual Fund Holders

Holder	Shares	Date Reported	% Out	Value
iShares Core S&P Midcap ETF	1,111,898	Apr 29, 2019	2.90%	257,860,265
Brown Capital Management Small Company Fund	1,073,976	Sep 29, 2018	2.80%	263,188,558
Vanguard Small-Cap Index Fund	949,513	Dec 30, 2018	2.48%	176,438,505
Vanguard Total Stock Market Index Fund	920,868	Sep 29, 2018	2.40%	225,667,912
Neuberger & Berman Genesis Fund	771,260	Mar 30, 2019	2.01%	157,645,544



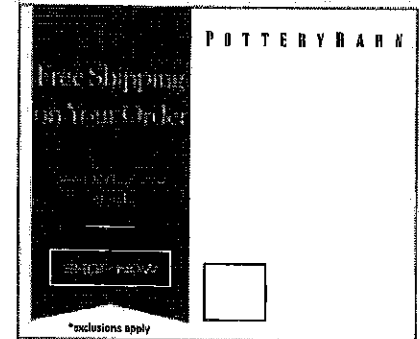
Yahoo Small Business

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Janus Henderson Research Fund	537,731	Mar 30, 2019	1.40%	109,912,216
Vanguard Small-Cap Growth Index Fund	535,683	Dec 30, 2018	1.40%	99,540,615
Vanguard Extended Market Index Fund	532,629	Dec 30, 2018	1.39%	99,010,284
SPDR S&P Mid Cap 400 ETF Trust	449,642	Apr 29, 2019	1.17%	104,253,285
iShares S&P Mid Cap 400 Growth ETF	333,529	Mar 30, 2019	0.87%	68,173,327



People Also Watch

Symbol	Last Price	Change	% Change
ULTI The Ultimate Software Group, Inc.	331.36	0.00	0.00%
MANH Manhattan Associates, Inc.	65.50	0.00	0.00%
BLKB Blackbaud, Inc.	74.44	-0.17	-0.23%
CSGP CoStar Group, Inc.	513.01	+7.01	+1.39%
SSNC SS&C Technologies Holdings, Inc.	56.81	+0.30	+0.53%



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Tyler Technologies, Inc. Directors as of 04/01/2019

<http://investors.tylertech.com/profiles/investor/Directors.asp?BzID=499>

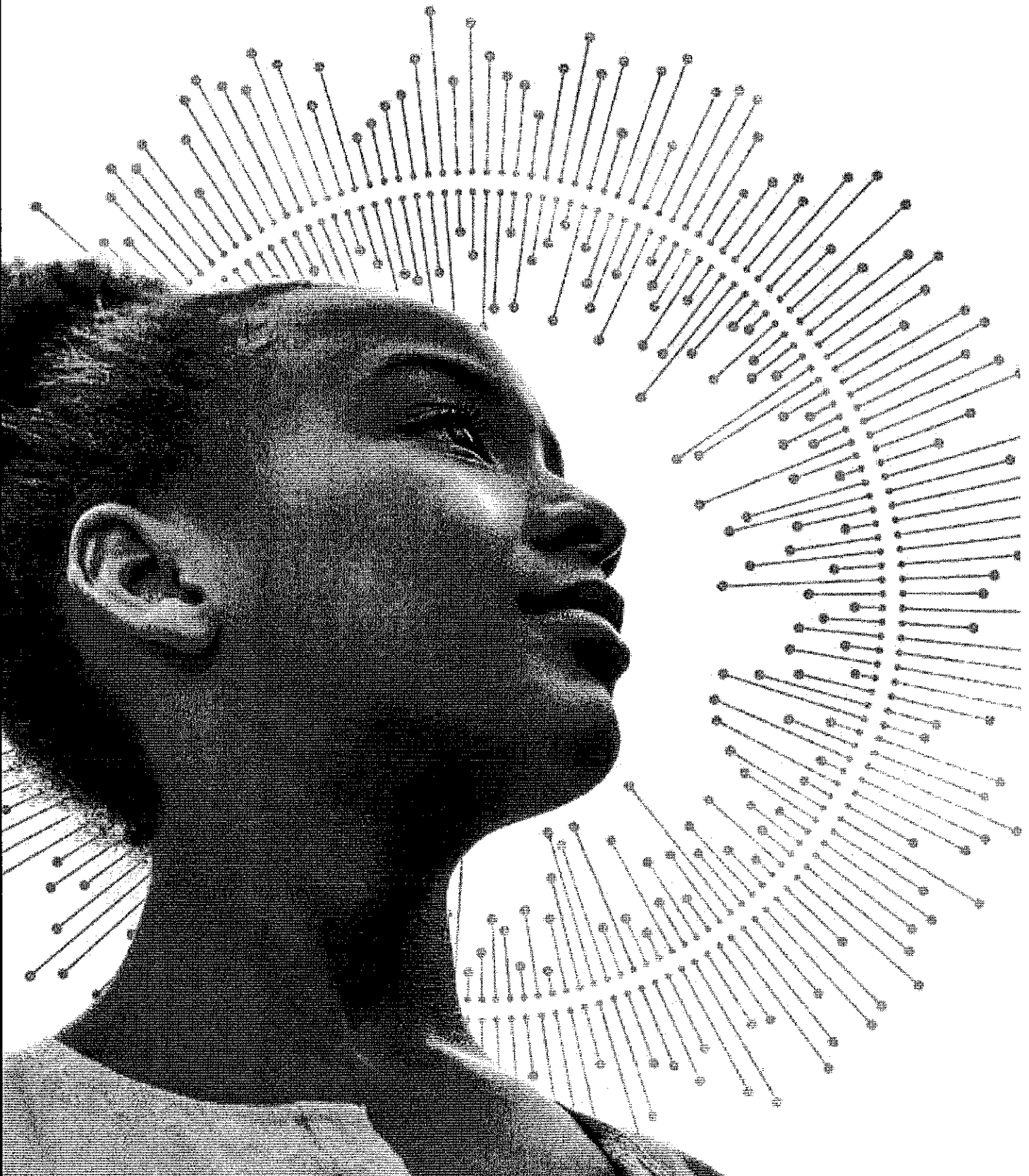
- Donald R. Brattain – 5101 Tennyson Parkway, Plano TX 75024
- Glenn A. Carter – 5101 Tennyson Parkway, Plano TX 75024
- Brenda A. Cline – 5101 Tennyson Parkway, Plano TX 75024
- J. Luther King, Jr. – 5101 Tennyson Parkway, Plano TX 75024
- John S. Marr, Jr. – One Tyler Drive, Yarmouth, ME 04096
- Daniel Pope – 5101 Tennyson Parkway, Plano TX 75024
- Dustin R. Womble – 5519 53rd Street, Lubbock, TX 79414
- H. Lynn Moore, Jr. – 5101 Tennyson Parkway, Plano TX 75024

Tyler Technologies, Inc. Officers as of 04/01/2019

<http://www.tylertech.com/about-us/our-leadership>

- John S. Marr Jr. – One Tyler Drive, Yarmouth, ME 04096
Executive Chairman of the Board
- Brian K. Miller – 5101 Tennyson Parkway, Plano TX 75024
**Executive Vice President,
Chief Financial Officer and Treasurer**
- H. Lynn Moore Jr. – 5101 Tennyson Parkway, Plano TX 75024
**Chief Executive Officer,
President**
- Matthew B. Bieri – 5101 Tennyson Parkway, Plano TX 75024
Chief Information Officer
- Samantha B. Crosby – 5101 Tennyson Parkway, Plano TX 75024
Chief Marketing Officer
- Bruce Graham – 5101 Tennyson Parkway, Plano TX 75024
**Chief Strategy Officer,
President, Courts & Justice Division**
- Kelly Shimansky – One Tyler Drive, Yarmouth, ME 04096
Chief Human Resources Officer

- W. Michael Smith – 5101 Tennyson Parkway, Plano TX 75024
Chief Accounting Officer
- Brett Cate - 5519 53rd Street, Lubbock, TX 79414
Chief Sales Officer
- Abigail Diaz - One Tyler Drive, Yarmouth, ME 04096
**Chief Legal Officer,
Secretary**
- Jeff Green – 1601 East Valley Rd., Ste. 200, Renton, WA 98057
Chief Technology Officer
- Andrew D. Teed – One Tyler Way, Moraine, OH 45439
President, Enterprise Group
- Christopher P. Hepburn - One Tyler Drive, Yarmouth, ME 04096
President, ERP & School Division
- Dane Womble – 5519 53rd Street, Lubbock, TX 79414
President, Local Government Division
- Mark Hawkins – One Tyler Way, Moraine, OH 45439
President, Appraisal & Tax Division
- Bret Dixon - 5101 Tennyson Parkway, Plano, TX 75024
President, Justice Group
- Bruce Graham - 5101 Tennyson Parkway, Plano, TX 75024
President, Courts & Justice Division
- Greg Sebastian – 840 West Long Lake Rd., Troy MI 48098
President, Public Safety Division



Connecting the Data That Connects Us All

Meet the data-driven community

From the youngest school student to the everyday resident to community leaders, we all create and consume data as part of our daily lives.

For the public sector, this data can be a valuable tool to better understand the needs of constituents, focus limited resources where they can do the most good, and improve the way services are delivered.

As the leading software provider for the public sector, Tyler has solutions that collect, create, and manage data to power the performance of governing agencies and departments. In 2016, we made a significant investment in the ability of our clients to maximize their use of data. By taking data analysis, process integration, and citizen engagement to the next level, we're able to help our clients drive deeper insights, greater efficiency, and smarter outcomes.

20 years

In 1998, Tyler began executing its strategy to build the leading company focused on the unique software needs of local government.

To our fellow shareholders

A MESSAGE FROM PRESIDENT & CEO LYNN MOORE JR.

Tyler experienced another year of double-digit growth and strong financial results, with 2018 being notable as a year with a high level of strategic investment in acquisitions, research and development, and stock repurchases. Our steady growth continues to validate our long-term strategy of providing best-in-class software solutions for the public sector backed by investments that solidify and expand our market leadership.

Tyler's revenue topped \$900 million for the first time, while the fourth quarter represented our 29th consecutive quarter of double-digit growth. GAAP revenue rose 11.2 percent to \$935 million, while non-GAAP revenue increased 11.6 percent to \$940 million. GAAP net income for the year was \$147 million, or \$3.68 per diluted share, down 13 percent. The decline was primarily due to the one-time tax benefit associated with the Tax Cuts and Jobs Act that was recognized in the fourth quarter of 2017. Non-GAAP net income for the year was \$193 million, or \$4.80 per diluted share, up 24.6 percent. Even as we increased our R&D spend by 33.7 percent, cash provided from operations grew 27.8 percent over 2017 to reach a new high of \$250 million, while free cash flow grew 45.9 percent. We ended the year with a record high backlog of \$125 billion, up 1.7 percent.



Our win rates were strong across our solution suites, with many of the year's most significant deals composed of multiple Tyler solutions or existing clients deepening their Tyler relationship. Among these were Lubbock County, Texas, with a \$10 million multi-suite contract including our ERP, public safety, and courts & justice solutions; Loudoun County, Virginia, a long-time client who added EnerGov™ civic services solutions for \$7 million; and Anchorage, Alaska, upgrading its tax system to the lastWorld® Integrated CAVA and tax billing and collections solution for \$3.6 million.



Consecutive quarters of double-digit growth



Increase in R&D spend



Cash provided by operations

Comprehensive solutions, comprehensive results

Tyler's approach to delivering software continues to distinguish us from competitors by offering clients the choice for accessing solutions in the way that makes the most sense for them, whether through on-premises, software as a service, or hybrid arrangements. In 2018, our software revenue was split between license and maintenance revenues of \$478 million and subscription revenue of \$221 million.

We continue to see a long-term shift to the cloud by the public sector, albeit at a slower pace than the private sector.

Software Revenues



License & maintenance revenue



Subscription revenue

New Cloud Contracts



Percent of total contract value of new software arrangements

Up 4% over 2017

Investing in the future

Our balance sheet has never been healthier, as we finished the year with \$232 million in cash and investments and zero debt, even after investing a total of \$328 million in cash for acquisitions and stock repurchases. Thanks to our financial strength, Tyler remains ideally positioned to make a variety of investments designed to deliver future growth and long-term shareholder value.

We remain diligent in proactively seeking out strategic acquisitions of market leaders to broaden our capabilities, strengthen our competitive position, and expand our addressable market. As we approach a billion dollars in annual revenues, our target of double-digit revenue growth becomes increasingly challenging, and continued achievement of our targets depends on healthy growth supplemented by strategic acquisitions. We completed five acquisitions during 2018, highlighted by the addition of Socrata, Inc. for \$150 million in cash — our second largest acquisition on record — along with four much smaller acquisitions that strengthen our product offerings.

Last year was also a year of elevated internal investment, with our R&D spend increasing 33.7 percent to \$63.3 million. These product development efforts span our product suites as we add a number of new features and applications that will further solidify our market leadership, while responding to the ever-changing needs of our clients.

We also utilized our balance sheet to resume our stock buyback activity, repurchasing approximately 781,000 shares in 2018 for an aggregate purchase price of approximately \$150 million. This exceeded the amount spent on buybacks in the prior six years combined and reflects our confidence in the company's future.

Total Growth

\$935 million 2018 OAP revenues



Through smart investments, fiscal discipline, great products and people, and unparalleled client service, we continue to fulfill our mission of empowering the people who serve the public, while continuously strengthening our market leadership.

Leading experience

In May, John Marr assumed the role of executive chairman of the board, while I was appointed chief executive officer. My added responsibilities continue the transition of day-to-day operational oversight that began in January 2017 with my appointment as president. Since that time, my role has grown in working with operational groups, division leadership, and all aspects of Tyler operations.

As executive chairman, John continues to be actively involved in the company's management, engaging with Tyler's leadership team, as well as investors and clients. These new roles are a natural extension resulting from 19 years of a strong working partnership.

Looking ahead

This year's success was the result of the commitment Tyler made 20 years ago to singularly focus on the needs of the public sector. Through smart investments, fiscal discipline, great products and people, and unparalleled client service, we continue to fulfill our mission of empowering the people who serve the public, while continuously strengthening our market leadership. All of us at Tyler look forward to working together to make this year only the beginning of much greater success.

H. Lynn Moore Jr.
President & Chief Executive Officer
March 21, 2019

GAAP REVENUE
\$935 million

+11.2%
from 2017

NON-GAAP REVENUE
\$940 million

+11.6%
from 2017

SUBSCRIPTION REVENUE
\$221 million

+28.1%
from 2017

23.6% revenue from subscriptions

GAAP OPERATING MARGIN

16.3%

NON-GAAP OPERATING MARGIN

26.6%

2018

Financial Year in Review

BACKLOG
\$1.25 billion

+1.7%
from 2017

2018 BOOKINGS
\$960 million

GAAP NET INCOME
\$147 million
\$3.68 per diluted share

NON-GAAP NET INCOME
\$193 million
\$4.80 per diluted share

+24.6%
from 2017

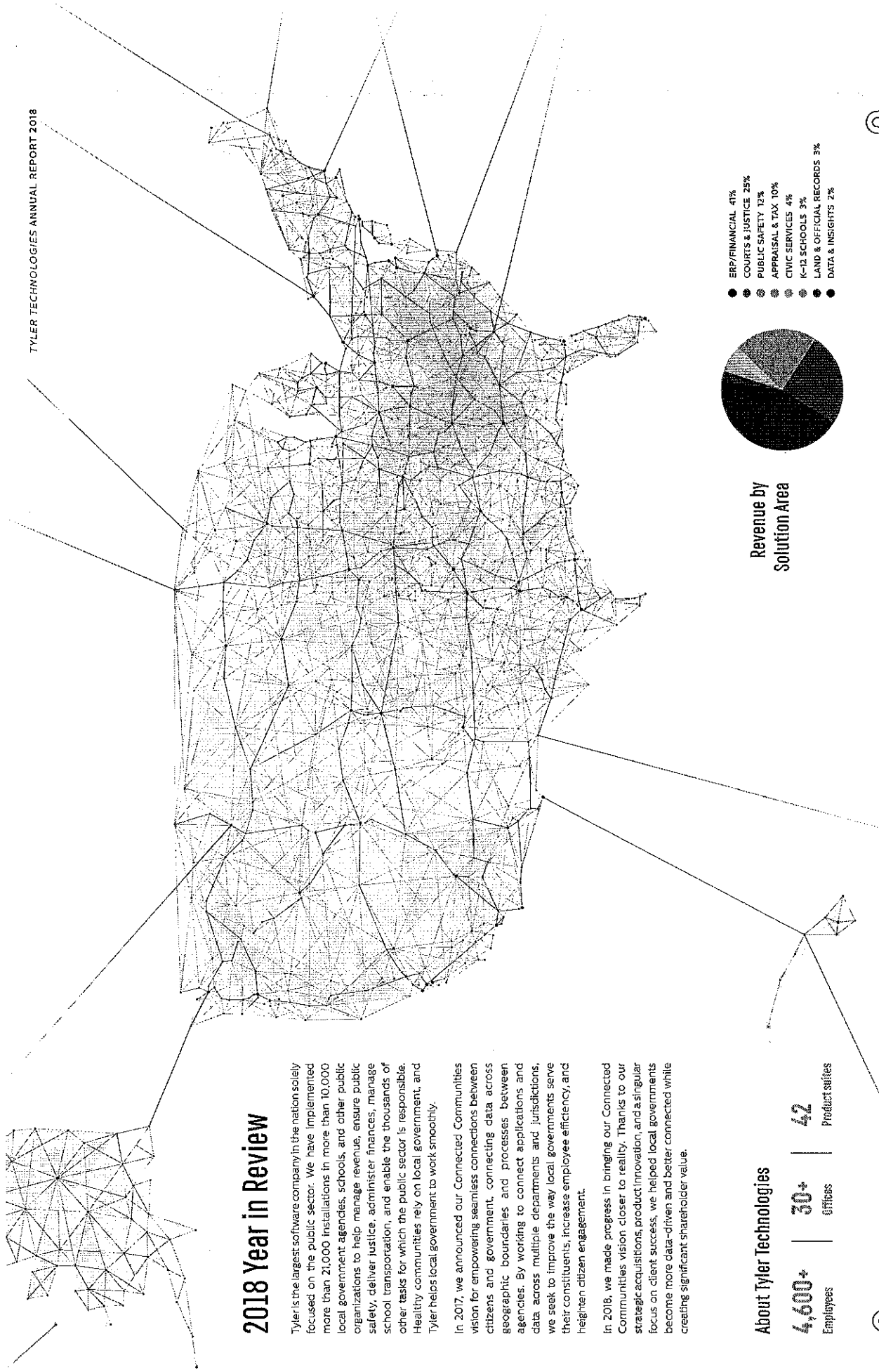
ANNUAL EARNINGS
PER DILUTED SHARE

	2016	2017	2018
GAAP	\$3.58	\$3.94	\$4.80
NON-GAAP	\$2.92	\$3.68	\$4.80

ANNUAL EARNINGS
PER DILUTED SHARE

	2016	2017	2018
GAAP	\$3.58	\$3.94	\$4.80
NON-GAAP	\$2.92	\$3.68	\$4.80

GAAP • NON-GAAP



2018 Year in Review

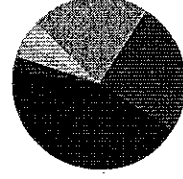
Tyler is the largest software company in the nation solely focused on the public sector. We have implemented more than 21,000 installations in more than 10,000 local government agencies, schools, and other public organizations to help manage revenue, ensure public safety, deliver justice, administer finances, manage school transportation, and enable the thousands of other tasks for which the public sector is responsible. Healthy communities rely on local government, and Tyler helps local government to work smoothly.

In 2017, we announced our Connected Communities vision for empowering seamless connections between citizens and government, connecting data across geographic boundaries and processes between agencies. By working to connect applications and data across multiple departments and jurisdictions, we seek to improve the way local governments serve their constituents, increase employee efficiency, and heighten citizen engagement.

In 2018, we made progress in bringing our Connected Communities vision closer to reality. Thanks to our strategic acquisitions, product innovation, and a singular focus on client success, we helped local governments become more data-driven and better connected while creating significant shareholder value.

About Tyler Technologies

4,600+ Employees | **30+** Offices | **42** Product Suites



Revenue by
Solution Area

- ERP/FINANCIAL 41%
- COURTS & JUSTICE 25%
- PUBLIC SAFETY 12%
- APPRAISAL & TAX 10%
- CIVIC SERVICES 4%
- K-12 SCHOOLS 3%
- LAND & OFFICIAL RECORDS 3%
- DATA & INSIGHTS 2%

Accelerating innovation through acquisitions

The future of a community will be determined, in part, by the way it uses data to power and improve its services. The more it can bring data together, the better it can understand the story the data is trying to tell, using the data to make smarter decisions and drive desired outcomes.

To further meet the public sector's growing need for connected data, we made five acquisitions, four of which provide native cloud applications. Each uses data in different ways to help the public sector improve performance, protect citizens, gain valuable insights, and extend citizen engagement. While this year represented a heightened level of M&A activity for Tyler, we continue to seek acquisition opportunities, as our strong financial position gives us the ability to act when we find companies that fit our strategic vision at reasonable valuations.

In April, we acquired Seattle-based Socrata, Inc. for \$150 million in cash, representing our second-largest acquisition until being surpassed by MicroPact in February 2019. Socrata is the industry leader in open data and data-as-a-service solutions for government, providing cloud-based data integration, visualization, analysis, and reporting solutions. With this acquisition, Tyler created a new Data & Insights Division that will work across all Tyler solutions so that our broad footprint of clients can make data discoverable, actionable, and meaningful. The data sharing and analytical capabilities of the Socrata® platform will play a key role in accelerating and advancing our

Connected Communities vision in the years ahead. Our combined offerings are enabling public sector leaders to use data to improve program outcomes at the city, county, and state levels, in addition to the prominent federal clients served by the Data & Insights team.

In the time since we acquired Socrata, the team has been hard at work launching new products and integrating its technology into Tyler's other solutions to help clients get more out of data. For example, the Socrata Connected Government Cloud™ lets clients collect data from different departments or jurisdictions to create a single source of business intelligence, while Open Finance™ integrates with Tyler's financial solutions to help citizens understand how their government is collecting and spending revenues.

In April, we acquired cybersecurity firm Sage Data Security LLC, whose unique cybersecurity services are being used to further protect our clients' investments in Tyler solutions. Sage's nDiscovery™ gives us the ability to help the public sector manage data security issues as cybersecurity threats grow in scope and sophistication. Prior to the acquisition, we were greatly impressed by Sage as one of its customers. Since acquiring Sage,



Tyler continued acquisition activity into 2019 with the February 2019 acquisition of MicroPact, a leading provider of specialized, vertically-oriented case management and business process management applications for government, and Mybrie, a growing provider of citizen engagement applications.

We have successfully piloted a new cybersecurity offering with several public sector clients and expect to begin to expand its usage throughout our client base in 2019.

In August, we acquired CaseloadPRO, whose comprehensive probation case management system is being used to help strengthen Tyler Alliance — our suite of applications connecting public safety and justice processes from dispatch through disposition. The product, now known as Tyler Supervision™, helps probation and other judicial departments efficiently track and manage probationers and parolees, filling an important gap in our portfolio.

In October, we acquired MobileEyes, whose solution for fire suppression and fire prevention strengthens our public safety and civic services solutions. MobileEyes™ is used by fire prevention agencies, building departments, and sprinkler and alarm contractors to perform custom inspections.

produce professional reports, and quickly communicate findings to the right constituents.

In December, we acquired SceneDoc, whose solution enables mobile-powered field reporting for law enforcement agencies through the field capture of data, electronic notes, and multimedia from smartphones, tablets, wearables, and task-specific apps, along with secure storage and access to and from the cloud.

We continue to use our ongoing whitespace analysis to guide our priorities for expanding our product offerings and growing our addressable market, either through internal product development efforts or by acquiring best-in-breed products that complement and strengthen offerings in our portfolio. We then further invest in these businesses to integrate their products with our existing solutions while leveraging our sales team and client base.

Supporting the people who support our communities

So much of what makes a community run smoothly is the work of public administration. These are the people and departments that help build, finance, manage resources, and provide civic services to our communities. Our products act as the operating systems for local government, with solutions like Munis® managing core functions like financial, human resources, and procurement; EnerGov™ managing land use, business, and regulatory processes; and iasWorld managing property valuations and tax collections. As an example, this year more than 1,800 clients used Munis to work smarter while better serving their constituents.

4.3 million

users of Tyler e-services to submit payments, apply for permits, file court documents, or perform other online functions.

12

Tyler gives local government the tools and data it needs to keep our communities moving.

13

New products, new opportunities

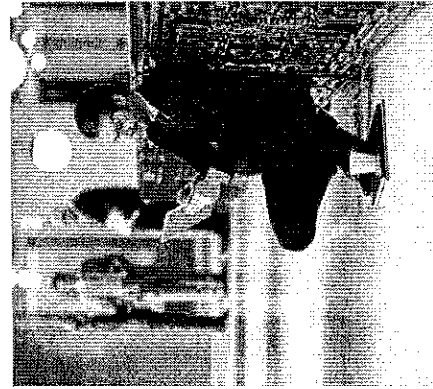
Our core ERP applications continue to provide the foundation for our success, accounting for more than 40 percent of our revenue. The strength of these more mature products gives us the flexibility to nurture our R&D investments and give them the time needed to grow. This year we spent more than \$63 million — a 34 percent increase over 2017 — on projects spanning across our verticals. While our R&D spending has contributed to short-term pressure on our margins in the past two years, this record level of investment allowed us to further develop the new features and applications necessary to remain a leader across our verticals while extending into new markets. As with our acquisitions, much of our R&D reflects our long-term focus on the cloud and connecting Tyler products more closely together.

\$63 million R&D expense

17



Notable project
launches in
2018 included:



Tyler EAM

Launched in April, our enterprise asset management (EAM) solution provides public sector organizations a complete view of its assets from procurement to maintenance to retirement. Tyler EAM™ is the only EAM system available today that integrates seamlessly with our enterprise resource planning (ERP), community development, utility billing customer information system (CIS), and incident management systems, increasing the overall value of a community's investment in Tyler products.

Socrata Connected Government Cloud

In May, we launched the Socrata Connected Government Cloud to give government workers a single source of trusted data they can use to measure and analyze performance across multiple departments and programs, including financial, civic services, and public safety solutions.

Traversa Multi-District Model

In July, we announced the Multi-District Model version of our popular transportation management software, enabling large student transportation service providers to easily centralize operations for all of their locations or regions within one app.

New World Enterprise Records for Public Safety

Also in July, we added a browser-based records management solution to our New World public safety solution, enabling public safety agencies to capture, process, analyze, and act on information quickly. Enterprise Records shares mission-critical data between applications with fully integrated workflow.

New World ShieldForce

Launched in October, this mobile-first application gives first responders, command staff, and patrol officers access to real-time, mission-critical computer-aided dispatch (CAD) data at the scene through smartphones, tablets, and watches.

15

Today's investments drive long-term growth

Unlike some other technology companies, our acquisitions and R&D investments are focused on our long-term success. Because of the time required to fully incorporate investments into our portfolio, along with a sales and RFP process for the public sector that can take months or even years, many investments we make today may not generate a return for several years. While we look forward to celebrating the success of this year's investments in future reports, we should also take the opportunity to appreciate past investments that began to bear fruit in 2018.

- Since the acquisition of ExecuTime in mid-2016, efforts have been focused on improving integration with the Tyler portfolio to provide a more comprehensive offering to clients. In 2018, 30 percent of all new Munis Human Capital Management™ agreements included ExecuTime™.
- Acquired in 2017, our online dispute resolution solution Modria® went live with an implementation that represented its first integration with the Odyssey® court case management system. In April, Clark County, Nevada, added Modria to give its citizens and courts an alternative option for completing divorce mediation requirements. More than 50 percent of litigants used the Modria solution as a part of a pilot project, with half of those using Modria all the way through the final mediation process. This sped up the resolution of these cases while allowing the courts' mediators to spend more time facilitating more complex or contentious cases. The success of this pilot led to a decision for mandatory use in 2019.
- New World CrewForce® and ShieldForce™ are Tyler's latest mobile-first applications designed and developed for fire and law enforcement. Each product brings the power of computer-aided dispatch (CAD) information into the hands of first responders via smartphones, tablets, and watches. Since being released in the spring of 2017 and fall of 2018, respectively, more than 2,500 individual user licenses have been sold for CrewForce and ShieldForce.
- Launched in 2017, our case records portal re:Search® provides attorneys, judges, and constituents a more efficient way to access important case records and documents at any time and on any device. This year, the re:Search solution was added by the states of Texas, New Mexico, and Georgia, joining the initial launch by courts in Illinois.



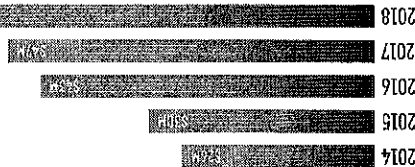
Building products and relationships in equal measure

Our financial success is directly connected to the operational success of the local governments across the country and around the world that rely on our products. Our 98 percent client retention rate speaks to the value of both our products and our expertise.

Not only do our clients stay, but they are often a source for growth. New business frequently comes from cross-sell or add-on sales opportunities, while many clients are users of more than one Tyler solution.

Time and again, we've found that a client who trusts us to manage one process, such as fund accounting, 911 dispatch, or school transportation, is more likely to trust us with another, like student records, appraisals, or court case management, opening the door for future growth. As we continue to more closely integrate our products and provide comprehensive tools for managing and analyzing client data, our clients will have more incentive to continue to invest with Tyler and add other Tyler solutions to their technology portfolio. Expanding our relationships with our existing clients and increasing the number of multiproduct clients represent a major growth opportunity in the coming years as we continue to build out our common digital infrastructure.

146% increase in R&D expense from 2014 to 2018



Protecting communities by connecting data and processes

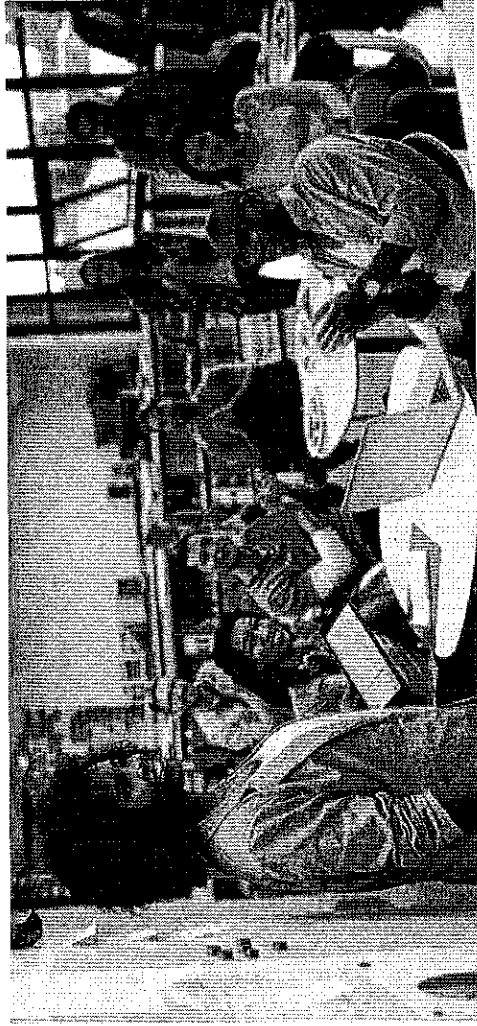
To help keep our communities safe, our courts and public safety solutions are used by judges, prosecutors, defenders, jails, police and fire departments, and probation officers to share data, minimize errors, eliminate redundancies, and provide citizens with greater access to justice. Even if it's just for a speeding ticket. For example, this year we implemented our Odyssey Case Manager™ software at Los Angeles Traffic Court for 850 users at 20 locations — one of our largest go-lives ever.

COURTS & PUBLIC SAFETY SOLUTIONS



Tyler provides jurisdictions the information and access required to deliver justice swiftly.

- 40% U.S. population in jurisdictions using Odyssey to manage courts
- 40% Odyssey users (excluding e-filing)
- 167 Pages filed electronically annually using Odyssey File & Serve
- 49.3% 911 dispatch centers in Pennsylvania using New World Enterprise CAG



Improving our connection to our clients

In addition to investing in strategic acquisitions, new products, and creating a common foundation for our solutions, we continually invest in other areas of our business that can help us better serve our current and prospective clients.

This year our user-driven support portal, Tyler Community, grew to more than 55,000 members as users from jurisdictions across North America crowdsourced best practices and solutions. Tyler University, our online education and training tool, added 1,104 new modules of content to help users improve skills and learn about new features, while in November we expanded the Socrata Data Academy to teach government leaders and data specialists how to gain insights from data to affect change in their communities.

Along with our client support platform, we made a significant investment this year in our external support and outreach platform through the

development and launch of a new corporate website. The new site helps current and prospective clients and investors navigate the site more easily, accessing content that is relevant to their interests.

Each year we reinforce client connections through our annual Tyler Connect user conference, and in 2018 we met in Boston. With 54 educational tracks and more than 1,000 training classes over a three-day period, clients engaged in discussions on a number of industry topics, such as citizen transparency, privacy and security, cloud solutions, and data analysis. The 2018 conference hosted more than 4,600 clients from all 50 states and D.C., as well as six Canadian provinces.

4,600
Connect 2018
client attendance

55,179
Tyler Community
members

147,735
Tyler University online
courses completed

Community is always a smart investment

Our commitment to local communities extends far beyond our products. One in every three Tyler employees worked in the public sector before joining our team. Our passion for public service not only informs the work we do for our clients, but inspires us to invest back into the community whenever possible.

Tyler employees generously contributed their time and money this year to nonprofit organizations in the communities where we live and work. Thanks to our employees, charities were able to feed the hungry, fund STEM education for at-risk children, support families in need, and more. In addition, our nonprofit Tyler Foundation provided funding for organizations across the country to improve health, human services, and technology education.

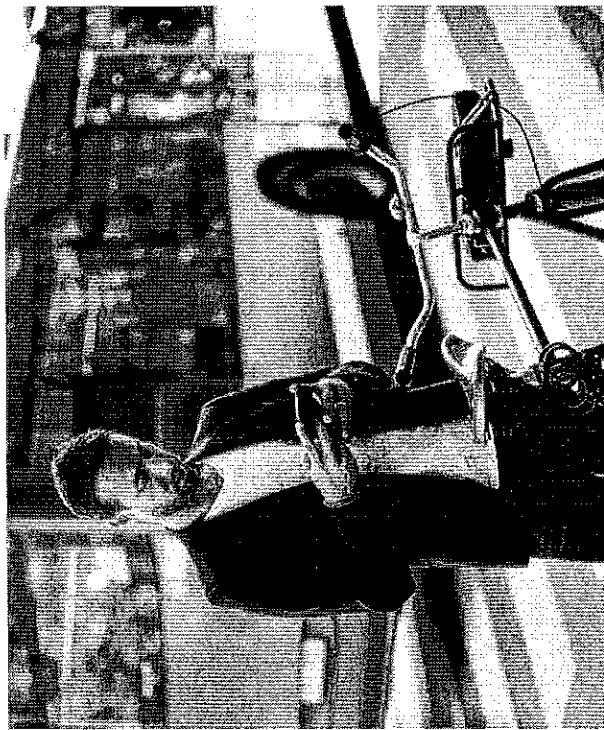
Due to natural disasters, 2018 was an especially challenging year for many of the clients we serve. We worked with hundreds of communities facing hurricanes, wildfires, tornadoes, flooding, and other disasters to ensure they had the data and support needed to coordinate services, inform constituents, and save lives. For example, our engineers developed a real-time map showing the locations of emergency shelters and other free lodging in response to Hurricane Michael, which devastated large portions of the southeastern United States, while our disaster recovery team ensured stricken communities were able to access their data even when government offices were damaged or destroyed.

\$1.1 million
Tyler Foundation
charitable contributions
over the past 5 years

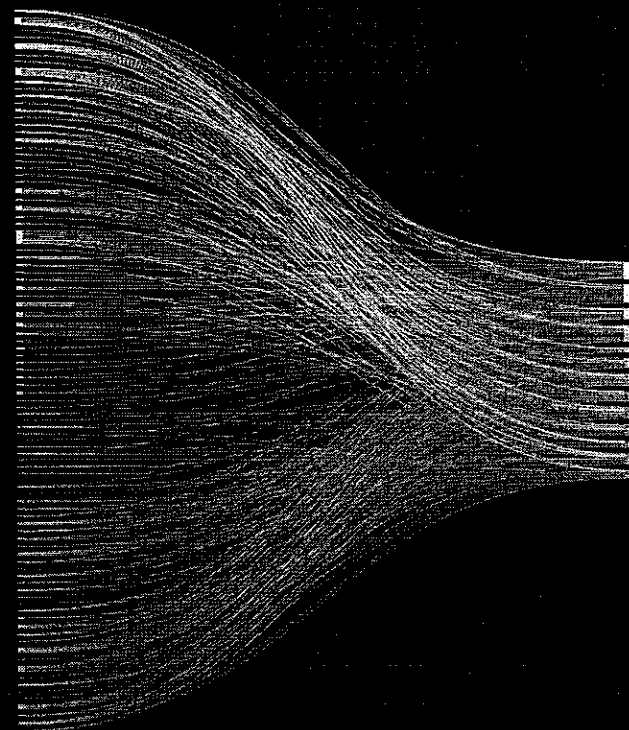


Empowering insight from outside the jurisdiction

Our Data & Insights solutions are integrated across our solution areas to empower communities with a single source for financial, performance, and human data. An example of the potential of connected data can be seen with the recent adoption of the Socrata Connected Government Cloud by the Metropolitan Transportation Commission (MTC) in San Francisco, California. The MTC will be able to deliver data from more than 100 jurisdictions around the Bay Area into a single, self-service website that employees and residents can use to analyze the impact of transportation on affordable housing, climate change, and more.



Tyler brings data together from across departments for a true picture of the community.



TYLER TECHNOLOGIES ANNUAL REPORT 2018

3 million

Massachusetts state financial transparency site reached 3 million pageviews in December, a 3x increase over 2017

629

New York City published 629 datasets from 36 city agencies on its open data portal

100%

The City of Cincinnati published 100% of datasets listed in the Sunlight Foundation's Open Data Census, the benchmark for municipal transparency

\$17.2 million

Hawaii launched a first-of-its-kind election spending dashboard, which showed the public details on candidate contributions and fees, and expenditures totaling \$17.2 million

Building the team that builds our business

In addition to naming Lynn Moore Jr. as CEO and John Marr Jr. as executive chairman of the board, another notable change to our leadership team was the addition of Kelley Shimansky as our new chief human resources officer. Kelley assumed the role from Bob Sansone, who retired after 23 years with Tyler.

Part of Kelley's mission will be continuing to provide the best environment for our people to serve our clients. In a highly competitive job market, our talented team members continue to see Tyler as a top employer, with an average employee tenure of more than 7.5 years. This tenure means our clients continue to be served by experienced professionals who are familiar with meeting the challenges of the public sector.



Lynn Moore Jr. and John Marr Jr.

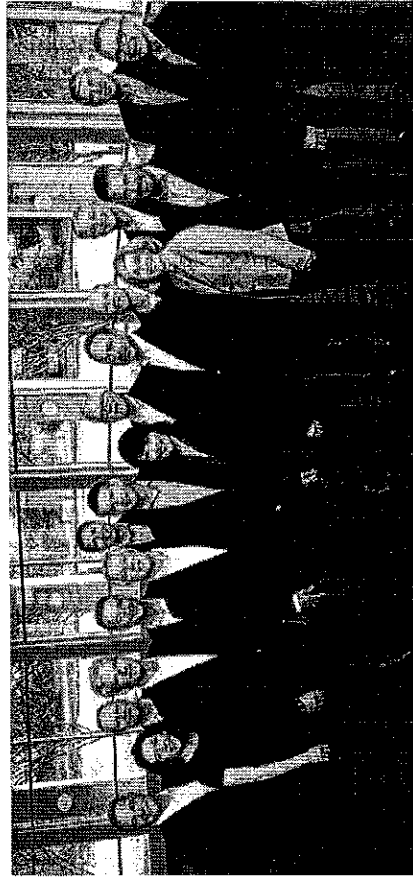


New team members added in 2018

11.3% increase over 2017

Finding and attracting talented employees is a challenge for every company in today's economy, and while Tyler is no different, we work hard to attract great people to power Tyler's continued success. As always, a key part of our recruiting strategy is to provide great benefits and a top work environment. This year, Tyler was again recognized on multiple "Best Places to Work" lists. In addition to being named to *Forbes'* "Best Employers for Women" and "Best Employers for Diversity" lists, our robust

internship program helps us source talent from top schools in markets across the country, while our improved careers page on our new website makes it easier than ever for job seekers to explore open positions. Finally, our employee referral program helps us identify candidates who will be compatible with our culture and passion for serving the public sector. As a result of our efforts, we were able to grow our workforce by 11.3 percent in 2018, adding more than 460 new team members.



Front left to right: Bert Dixon, Abigail Diaz, Dana Wamble, John Marr Jr., Lynn Moore Jr., Brian Miller, Chris Hopburn, Jeff Green, Samantha Crosby, Brett Cate, Greg Sebastian, Andy Tard, Kelley Shimansky, Bruce Graham, Michael Smith, Matt Bari, Kevin Merritt

RECOGNITION

Voted Best Places to Work

Lubbock, TX | Dallas-Fort Worth, TX | Troy, MI | Wayne

Top 100

2018 *GovTech* 100 List

Finalist

2018 Tech Titans Award for Corporate Innovation

#93

Fortune's "2018 Fastest-Growing Companies" List for 2018

9

Years on *Forbes'* "Best Small Companies" List

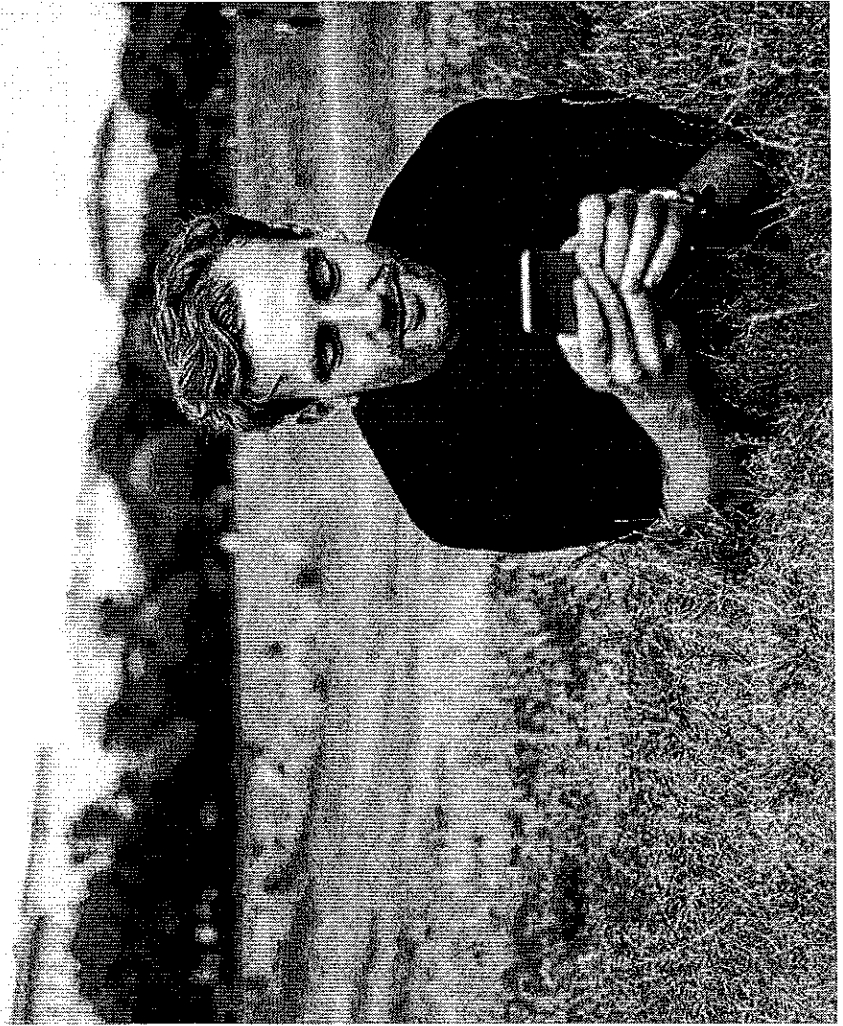
8

Years on *Entrepreneur's* "Most Promising Companies in America" List

Connection makes a community

Data-driven innovation has the ability to fundamentally change the way our communities work, but only if people have the support and tools they need to analyze, understand, and act on this data. Public sector leaders, their employees, and their constituents can now interact with information in a way that improves service, reduces frustration, and increases transparency. We're proud to be the company that is leading the public sector toward a world powered by data-driven insights.

Our investments, our solutions, and our people combined to make 2018 our strongest year yet. As pleased as we are with the success we experienced this year, we believe that the people, products, and strategy we have in place will allow us to look back at the investments we made in 2018 as valuable contributions to the foundation for greater success to come.



2018

Financial
Information

Reconciliation of GAAP to NON-GAAP Financial Measures (Unaudited)

	2018	2017 ^(a)	2016 ^(a)	2015	2014
Reconciliation of non-GAAP total revenues					
GAAP total revenues	\$35,282	\$840,899	\$793,880	\$591,022	\$483,101
Non-GAAP adjustments:					
Add: Write-downs of acquisition-related deferred revenue	4,000	653	15,053	3,186	—
Add: Amortization of acquired leases	426	444	444	37	—
Non-GAAP total revenues	\$39,708	\$842,006	\$775,387	\$594,245	\$483,101
Reconciliation of non-GAAP gross profit and margin					
GAAP gross profit	\$439,578	\$399,377	\$359,188	\$277,187	\$233,371
Non-GAAP adjustments:					
Add: Write-downs of acquisition-related deferred revenue	4,000	653	15,053	3,186	—
Add: Amortization of acquired leases	426	444	444	37	—
Add: Share-based compensation expense included in cost of revenues	13,588	9,415	6,548	3,380	2,177
Add: Amortization of acquired software	22,972	21,896	22,235	4,440	1,858
Non-GAAP gross profit	\$480,564	\$431,385	\$403,478	\$288,230	\$237,406
GAAP gross margin	47.0%	47.5%	47.5%	46.9%	47.5%
Non-GAAP gross margin	51.1%	51.3%	52.0%	48.5%	48.1%
Reconciliation of non-GAAP operating income and margin					
GAAP operating income	\$152,482	\$182,758	\$137,656	\$108,043	\$ 94,822
Non-GAAP adjustments:					
Add: Write-downs of acquisition-related deferred revenue	4,000	663	15,053	3,186	—
Add: Amortization of acquired leases	426	444	444	37	—
Add: Share-based compensation expense	32,740	37,348	29,747	20,182	14,819
Add: Employer portion of payroll tax related to employee stock transactions	1,412	1,102	1,001	1,506	514
Add: Acquisition-related costs	—	—	—	5,875	—
Add: Amortization of acquired software	22,372	21,686	22,235	4,440	1,858
Add: Amortization of customer and trade name intangibles	16,217	13,381	13,202	5,905	4,546
Non-GAAP operating income	\$ 97,767	\$ 74,624	\$ 81,692	\$ 41,131	\$ 21,737
Non-GAAP adjustments subtotal	\$250,259	\$237,382	\$219,348	\$149,174	\$116,559
GAAP operating income	16.3%	19.4%	18.1%	18.3%	19.2%
Non-GAAP operating margin	26.6%	28.2%	28.3%	25.1%	23.6%
Reconciliation of non-GAAP net income and earnings per share					
GAAP net income	\$147,462	\$169,571	\$113,701	\$ 64,859	\$ 58,940
Non-GAAP adjustments:					
Add: Total non-GAAP adjustments to operating income	97,767	74,624	81,692	41,131	21,737
Less: Tax impact related to non-GAAP adjustments	(32,464)	(89,440)	(56,045)	(13,318)	(6,658)
Non-GAAP net income	\$112,765	\$154,755	\$139,348	\$ 92,682	\$ 74,019
GAAP earnings per diluted share	\$ 3.68	\$ 4.32	\$ 2.92	\$ 1.77	\$ 1.66
Non-GAAP earnings per diluted share	\$ 4.30	\$ 3.94	\$ 3.58	\$ 2.54	\$ 2.09
Detail of share-based compensation expense					
Cost of software services, maintenance and subscriptions	\$13,588	\$ 9,415	\$ 6,548	\$ 3,380	\$ 2,177
Selling, general and administrative expense	39,152	27,933	23,199	16,802	12,642
Total share-based compensation expense	\$ 52,740	\$ 37,348	\$ 29,747	\$ 20,182	\$ 14,819

(a) Reconciled to reflect the impact of the adoption of Accounting Standards Update ("ASU") ASU No. 2014-09, Revenue from Contracts with Customers in fiscal year 2018. Refer to Note — 1, "Summary of Significant Accounting Policies" for further discussion.

Stock Market Data

Our common stock is traded on the New York Stock Exchange under the symbol "TYL." At December 31, 2018, we had approximately 1262 stockholders of record. Most of our stockholders hold their shares in street name; therefore, there are substantially more than 1262 beneficial owners of our common stock.

The following table shows, for the calendar periods indicated, the high and low sales price per share of our common stock as reported on the New York Stock Exchange.

	High	Low
2017		
First Quarter	\$168.86	\$142.75
Second Quarter	178.09	152.00
Third Quarter	182.49	165.14
Fourth Quarter	188.22	166.12
2018		
First Quarter	\$214.33	\$176.95
Second Quarter	240.35	201.91
Third Quarter	252.47	213.59
Fourth Quarter	246.62	173.26

We did not pay any cash dividends in 2018 or 2017. Our bank credit agreement contains restrictions on the payment of cash dividends. We intend to retain earnings for use in the operation and expansion of our business and do not anticipate paying a cash dividend in the foreseeable future.

Selected Financial Data

Years Ended December 31	2018	2017 ^(a)	2016 ^(a)	2015 ^(a)	2014
(In thousands, except per share data)					
STATEMENT OF OPERATIONS DATA:					
Revenues	\$ 935,292	\$ 840,899	\$ 755,890	\$ 591,022	\$ 493,101
Cost and expenses:					
Cost of revenues	495,704	441,522	400,692	313,835	259,730
Selling, general and administrative expenses	207,805	175,914	155,176	133,317	108,260
Research and development expenses	63,264	47,324	43,154	29,922	25,743
Amortization of customer and trade name intangibles	16,217	13,381	13,202	5,905	4,346
Operating income	152,492	162,758	137,656	108,043	94,822
Other income (expense), net	3,378	698	(1,998)	381	(359)
Income before income taxes	155,870	163,456	135,658	108,424	94,467
Income tax (benefit) provision ^(b)	8,408	(6,115)	21,957	43,555	35,527
Net income	147,462	169,571	113,701	64,869	58,940
Net earnings per diluted share	\$ 3.68	\$ 4.32	\$ 2.92	\$ 1.77	\$ 1.66
Weighted average diluted shares ^(c)	40,123	39,246	38,951	36,552	35,491
STATEMENT OF CASH FLOWS DATA:					
Cash flows provided by operating activities ^(a)	\$ 250,203	\$ 193,755	\$ 191,859	\$ 134,327	\$ 142,899
Cash flows used by investing activities	(298,259)	(65,395)	(50,720)	(398,458)	(11,555)
Cash flows (used) provided by financing activities ^(a)	(63,595)	39,415	138,075	91,052	(3,933)
BALANCE SHEET DATA:					
Total assets	\$ 1,750,463	\$ 1,611,351	\$ 1,374,592	\$ 1,356,570	\$ 569,812
Revolving line of credit	—	—	10,000	66,000	—
Shareholders' equity	1,324,846	1,191,735	934,540	858,857	335,973

(a) Reflects the impact of the adoption of Accounting Standards Update ("ASU") ASU No. 2014-09, *Revenue from Contracts with Customers* in fiscal year 2018. Refer to Note 1 "Summary of Significant Accounting Policies" for further discussion.

(b) 2017 includes the significant impact of the enactment of the Tax Cuts and Jobs Act ("Tax Act"). The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision is a \$26.0 million (tax adjusted) tax benefit due to the remeasurement of deferred tax assets and liabilities. Refer to Note 7 "Income Tax" for further discussion on the impact of the Tax Act.

(c) During 2016, we early adopted ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting* requiring the recognition of excess tax benefits or tax deficiencies as a component of income tax expense; these benefits or deficiencies were historically recognized in equity. As this standard requires a prospective method of adoption, our net income in 2016 includes a \$29.6 million income tax benefit due to the adoption that did not occur in the comparable prior periods presented above. In 2016, ASU No. 2016-09 updated the method of calculating diluted shares resulting in the inclusion of 519,000 additional shares in our diluted earnings per share calculation, which is not comparable to the other prior periods presented. The adoption of ASU No. 2016-09 also required excess tax benefits, previously presented as financing activities, to be classified as operating activities. As retrospective adoption for this component of the standard is allowable, we have adjusted all periods presented above to reflect this change in classification.

(d) On November 16, 2015, we completed the acquisition of New World Systems Corporation ("NWS"). Operating results for the twelve months ended December 31, 2015, include \$4.9 million for non-recurring financial advisory, legal, accounting, due diligence, valuation and other expenses necessary to complete the NWS acquisition.

Management's Discussion and Analysis of Financial Condition and Results of Operations

FORWARD-LOOKING STATEMENTS

In addition to historical information, this Annual Report contains forward-looking statements. The forward-looking statements are made in reliance upon safe harbor provisions of the Private Securities Litigation Reform Act of 1995. The forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those reflected in the forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's opinion only as of the date hereof. We undertake no obligation to revise or publicly release the results of any revisions to these forward-looking statements. Readers should carefully review the risk factors described in documents we file from time to time with the Securities and Exchange Commission.

When used in this Annual Report, the words "believes," "expects," "anticipates," "foresees," "forecasts," "plans," "intends," "continues," "may," "will," "should," "projects," "might," "could" or other similar words or phrases are intended to identify forward-looking statements. Similarly, statements that describe our business strategy, outlook, objectives, plans, intentions or goals also are forward-looking statements.

OVERVIEW

General

We provide integrated information management solutions and services for the public sector, with a focus on local governments. We develop and market a broad line of software products and services to address the IT needs of cities, counties, schools and other local government entities. In addition, we provide professional IT services to our clients, including software and hardware installation, data conversion, training and for certain clients, product modifications, along with continuing maintenance and support for clients using our systems. We also provide subscription-based services such as software as a service ("SaaS"), which primarily utilize the Tyler private cloud, and electronic document filing solutions ("e-filing"), which simplify the filing and management of court-related documents. Revenues for e-filing are derived from transaction fees and, in some cases, fixed fee arrangements. We also provide property appraisal outsourcing services for taxing jurisdictions.

Our products generally automate seven major functional areas: (1) financial management and education, (2) courts and justice, (3) public safety (4) property appraisal and tax, (5) planning, regulatory and maintenance (6) land and vital records management and (7) data and insights. We report our results in two segments. The Enterprise Software ("ES") segment provides municipal and county governments and schools with software systems and services to meet their information technology and automation needs for mission-critical "back-office" functions such as financial management; court and justice processes; public safety, planning, regulatory and maintenance; land and vital records management; and data analytics. The Appraisal and Tax ("A&T") segment provides systems and software that automate the appraisal and assessment of real and personal property as well as property appraisal outsourcing services for local governments and taxing authorities. Property appraisal outsourcing services include: the physical inspection of commercial and residential properties; data collection and processing; computer analysis for property valuation; preparation of tax rolls; community education; and arbitration between taxpayers and the assessing jurisdiction.

Our total employee count increased to 4,525 at December 31, 2018, from 4,069 at December 31, 2017.

For the twelve months ended December 31, 2018, total revenues increased 11% compared to the prior year. Organic revenue growth was 9% for the twelve months ended December 31, 2018, compared to the prior year period and revenues from acquisitions contributed 2% of growth for the twelve months ended December 31, 2018.

Subscriptions revenue grew 28% for the twelve months ended December 31, 2018, due to a gradual shift toward cloud-based, software as a service business, as well as continued strong growth in our e-filing revenues from courts and the addition of new subscription revenues from the acquisition of Sociata. Organic subscriptions revenue increased 21% for the twelve months ended December 31, 2018.

Our backlog at December 31, 2018 was \$125 billion, a 2% increase from last year.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Recent Acquisitions

On December 7, 2018, we acquired certain assets and intellectual property of SceneDoc, Inc. ("SceneDoc"), a company that provides mobile-first, software-as-a-service (SaaS) field reporting for law enforcement agencies. The total purchase price was approximately \$6.2 million, of which \$5.4 million was paid in cash and approximately \$759,000 accrued for a working capital holdback. As of December 31, 2018, the purchase price allocation for SceneDoc is not yet complete. The preliminary estimates of fair value assumed at the acquisition date for intangible assets, receivables and deferred revenue and related deferred taxes are subject to change as valuations are finalized.

On October 1, 2018, we acquired all of the equity interests of TradeMaster, Inc. dba MobileEyes ("MobileEyes"), a company that develops software to improve public safety by supporting fire prevention and suppression, emergency response, and structural safety. The total purchase price was approximately \$5.3 million in cash.

On August 31, 2018, we acquired all of the assets of CaseloadPRO, L.P. ("CaseloadPRO"), a company that provides a fully featured probation case management system. The purchase price of \$3.3 million was paid in cash.

On April 30, 2018, we acquired all of the capital stock of Socrata, Inc. ("Socrata"), a company that provides open data and data-as-a-service solutions including cloud-based data integration, visualization, analysis, and reporting solutions for federal, state and local government agencies. The purchase price, net of cash acquired of \$1.7 million, was \$47.6 million in cash.

On April 30, 2018, we acquired all of the equity interests of Sage Data Security, LLC ("Sage"), a cybersecurity company offering a suite of services that supports an entire cybersecurity lifecycle, including program development, education and training, technical testing, advisory services, and digital forensics. The total purchase price was \$11.6 million paid in cash.

As of December 31, 2018, the purchase price allocations for Sage, Socrata, CaseloadPRO, and MobileEyes are complete.

The operating results of all 2018 acquisitions are included with the operating results of the Enterprise Software segment since their date of acquisition. Revenues from Socrata included in Tyler's results of operations totaled approximately \$13.9 million and the net loss was \$11.5 million for the twelve months ended December 31, 2018. The impact of the Sage, CaseloadPRO, MobileEyes and SceneDoc acquisitions, individually and in the aggregate, on our operating results, assets and liabilities is not material.

Our balance sheet as of December 31, 2018, reflects the allocation of the purchase price to the assets acquired based on their fair value at the date of each acquisition. The fair value of the assets and liabilities acquired are based on valuations using Level III, unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

We monitor and analyze several key performance indicators in order to manage our business and evaluate our financial and operating performance. These indicators include the following:

Revenues — We derive our revenues from five primary sources: sale of software licenses and royalties; subscription-based arrangements; software services; maintenance; and appraisal services. Subscriptions and maintenance are considered recurring revenue sources and comprised approximately 65% of our revenue in 2018. The number of new SaaS clients and the number of existing clients who convert from our traditional software arrangements to our SaaS model are a significant driver to our business, together with new software license sales and maintenance rate increases. In addition, we also monitor our customer base and churn as we historically have experienced very low customer turnover. During 2018, based on our number of customers, turnover was approximately 2%.

Cost of Revenues and Gross Margins — Our primary cost component is personnel expenses in connection with providing software implementation, subscription-based services, maintenance and support, and appraisal services to our clients. We can improve gross margins by controlling headcount and related costs and by expanding our revenue base, especially from those products and services that produce incremental revenue with minimal incremental cost, such as software licenses and royalties, subscription-based services, and maintenance and support. Our appraisal projects are cyclical in nature, and we often employ appraisal personnel on a short-term basis to coincide with the life of a project. As of December 31, 2018, our total employee count increased to 4,525 from 4,069 at December 31, 2017.

Selling, General and Administrative ("SG&A") Expenses — The primary components of SG&A expenses are administrative and sales personnel salaries and commissions, share-based compensation expense, marketing expense, rent and professional fees. Sales commissions typically fluctuate with revenues and share-based compensation expense generally increases as the market price of our stock increases. Other administrative expenses tend to grow at a slower rate than revenues.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Liquidity and Cash Flows — The primary driver of our cash flows is net income. Uses of cash include acquisitions, capital investments in property and equipment, and discretionary purchases of treasury stock. Our working capital needs are fairly stable throughout the year with the significant components of cash outflows being payment of personnel expenses offset by cash inflows representing collection of accounts receivable and cash receipts from clients in advance of revenue being earned. In recent years, we have also received significant amounts of cash from employees exercising stock options and contributing to our Employee Stock Purchase Plan.

Balance Sheet — Cash, accounts receivable and days sales outstanding and deferred revenue balances are important indicators of our business.

Adoption of New Revenue Accounting Standard

On January 1, 2018, we adopted ASU No. 2014-09, using the full retrospective method of transition, which requires that the new standard be applied to all periods presented. The impacts of adoption are reflected in the financial information herein. For additional details, see Note 1—"Summary of Significant Accounting Policies" to our consolidated financial statements in this report.

Recent Accounting Guidance not yet Adopted

Leases. On February 25, 2016, the FASB issued its new lease accounting guidance in ASU No. 2016-02, *Leases* ("Topic 842"). Under the new guidance, lessees will be required to recognize the following for all leases (with the exception of short-term leases) at the commencement date:

- A lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and
- A right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term.

Topic 842 is effective for fiscal years beginning after December 15, 2018, including interim periods therein. Early application is permitted for all business entities upon issuance. Upon adoption, entities will be required to use a modified retrospective approach with an option to use certain practical expedients. We expect to adopt ASU 2016-02 when effective, using the transition method that allows us to initially apply the guidance at the adoption date of January 1, 2019, and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. We expect to use the package of practical expedients that allows us to not reassess: (i) lease classification for any expired or existing leases and (2) initial direct costs for any expired or existing leases. We expect ASU 2016-02 will impact our consolidated financial statements and related disclosures. We are currently evaluating the extent of the impact and expect that most of our lease commitments will be subject to the updated guidance and recognized as lease liabilities and right-of-use assets on our consolidated balance sheets upon adoption. Based on our current portfolio of leases, we estimate a range of \$15.5 million to \$17.8 million of lease assets and liabilities to be recognized on our balance sheet, primarily relating to office facilities.

Outlook

The local government software market continues to be active, and our backlog at December 31, 2018 reached \$1.25 billion, a 2% increase from last year. We expect to continue to achieve solid growth in revenue and earnings. With our strong financial position and cash flow, we plan to continue to make significant investments in product development to better position us to continue to expand our competitive position in the public sector software market over the long term.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analysis of financial condition and results of operations is based upon our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP"). The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities at the date of the financial statements, the reported amounts of revenues, cost of revenues and expenses during the reporting period, and related disclosure of contingencies. The Notes to the Financial Statements included as part of this Annual Report describe our significant accounting policies used in the preparation of the financial statements. Significant items subject to such estimates and assumptions include the application of the progress toward completion methods of revenue recognition, estimated standalone selling price ("SSP") for distinct performance obligations, the carrying amount and estimated useful lives of intangible assets, determination of share-based compensation expense and valuation allowance for receivables. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Management's Discussion and Analysis of Financial Condition and Results of Operations

We believe the following critical accounting policies require significant judgments and estimates used in the preparation of our financial statements.

Revenue Recognition. We earn revenue from software licenses, royalties, subscription-based services, software services, post-contract customer support ("PCS" or "maintenance"), hardware, and appraisal services. Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We determine revenue recognition through the following steps:

- Identification of the contract or contracts, with a customer
- Identification of the performance obligations in the contract
- Determination of the transaction price
- Allocation of the transaction price to the performance obligations in the contract
- Recognition of revenue when, or as, we satisfy a performance obligation

Most of our software arrangements with customers contain multiple performance obligations that range from software licenses, installation, training, and consulting to software modification and customization to meet specific customer needs (services), hosting, and PCS. For these contracts, we account for individual performance obligations separately when they are distinct. We evaluate whether separate performance obligations can be distinct or should be accounted for as one performance obligation. Arrangements that include software services, such as training or installation, are evaluated to determine whether those services are highly interdependent or highly interrelated to the product's functionality. Many of our software arrangements involve "off-the-shelf" software. We recognize the revenue allocable to "off-the-shelf" software licenses and specified upgrades at a point in time when control of the software license transfers to the customer, unless the software is not considered distinct. We consider off-the-shelf software to be distinct when it can be added to an arrangement with minor changes in the underlying code. It can be used by the customer for the customer's purpose upon installation, and remaining services such as training are not considered highly interdependent or highly interrelated to the product's functionality.

For arrangements that involve significant production, modification or customization of the software, or where software services are otherwise not considered distinct, we recognize revenue over time by measuring progress-to-completion. We measure progress-to-completion primarily using labor hours incurred as it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. These arrangements are often implemented over an extended period and occasionally require us to revise total cost estimates. Amounts recognized in revenue are calculated using the progress-to-completion measurement after giving effect to any changes in our cost estimates. Changes to total estimated contract costs, if any, are recorded in the period they are determined. Estimated losses on uncompleted contracts are recorded in the period in which we first determine that a loss is apparent. When software services are distinct, the fee allocable to the service element is recognized over the time we perform the services and is billed on a time and material basis.

Subscription-based services consist of revenues derived from SaaS arrangements, which primarily utilize the Tyler private cloud, and electronic filing transactions. Revenue from subscription-based services is generally recognized over time on a ratable basis over the contract term, beginning on the date that our service is made available to the customer. For SaaS arrangements, we evaluate whether the customer has the contractual right to take possession of our software at any time during the hosting period without significant penalty and whether the customer can feasibly maintain the software on the customer's hardware or enter into another arrangement with a third-party to host the software. We allocate contract value to each performance obligation of the arrangement that qualifies for treatment as a distinct element based on estimated SSP. When it is determined that software is distinct and the customer has the ability to take control of the software, we recognize revenue allocable to the software license fee when access to the software license is made available to the customer. We recognize hosting services ratably over the term of the arrangement, which range from one to ten years but are typically for a period of three to five years. For software services associated with certain SaaS arrangements, we have concluded that the services are not distinct, and we recognize that revenue ratably over the remaining contractual period once we have provided the customer access to the software. We record amounts that have been invoiced in accounts receivable and in deferred revenue or revenues, depending on whether the revenue recognition criteria have been met.

The transaction price is allocated to the separate performance obligations on a relative SSP basis. We determine the SSP based on our overall pricing objectives, taking into consideration market conditions and other factors, including the value of our contracts, the applications sold, customer demographics, and the number and types of users within our contracts. We use a range of amounts to estimate SSP when we sell each of the products and services separately and need to determine whether there is a discount to be allocated based on the relative SSP

Management's Discussion and Analysis of Financial Condition and Results of Operations

of the various products and services. In instances where SSP is not directly observable, such as when we do not sell the product or service separately, we determine SSP using the expected cost-plus margin approach. Revenue is recognized net of allowances for sales adjustments and any taxes collected from customers, which are subsequently remitted to governmental authorities.

Typically, the structure of our arrangements does not give rise to variable consideration. However, in those instances whereby variable consideration exists, we include in our estimates additional revenue for variable consideration when we believe we have an enforceable right, the amount can be estimated reliably and its realization is probable.

We maintain allowances for doubtful accounts, which are provided at the time the revenue is recognized. Since most of our customers are domestic governmental entities, we rarely incur a loss resulting from the inability of a customer to make required payments. Events or changes in circumstances that indicate that the carrying amount for the allowances for doubtful accounts may require revision include, but are not limited to, deterioration of a customer's financial condition, failure to manage our customer's expectations regarding the scope of the services to be delivered, and defects or errors in new versions or enhancements of our software products. The allowance for doubtful accounts reflects our best estimate of probable losses inherent in the accounts receivable balance. We determine the allowance based on known troubled accounts, historical experience, and other currently available evidence.

In connection with certain of our contracts, we have recorded retentions receivable or unbilled receivables consisting of costs and estimated profit in excess of billings as of the balance sheet date. Many of the contracts which give rise to unbilled receivables at a given balance sheet date are subject to billings in the subsequent accounting period. We review unbilled receivables and related contract provisions to ensure we are justified in recognizing revenue prior to billing the customer and that we have objective evidence which allows us to recognize such revenue. In addition, we have a sizable amount of deferred revenue, which represents billings in excess of revenue earned. The majority of this liability consists of maintenance billings for which payments are made in advance and the revenue is ratably earned over the maintenance period, generally one year. We also have deferred revenue for those contracts in which we receive a deposit and the conditions in which to record revenue for the service or product have not been met. On a periodic basis, we review by customer the detail components of our deferred revenue to ensure our accounting remains appropriate.

Intangible Assets and Goodwill. Our business acquisitions typically result in the creation of goodwill and other intangible asset balances, and these balances affect the amount and timing of future period amortization expense, as well as expense we could possibly incur as a result of an impairment charge. The cost of acquired companies is allocated to identifiable tangible and intangible assets based on estimated fair value, with the excess allocated to goodwill. Accordingly, we have a significant balance of acquisition date intangible assets, including software, customer related intangibles, trade name, leases and goodwill. These intangible assets (other than goodwill) are amortized over their estimated useful lives. We currently have no intangible assets with indefinite lives other than goodwill.

When testing goodwill for impairment quantitatively, we first compare the fair value of each reporting unit with its carrying amount. If the carrying amount of a reporting unit exceeds its fair value, a second step is performed to measure the amount of potential impairment. In the second step, we compare the implied fair value of reporting unit goodwill with the carrying amount of the reporting unit's goodwill. If the carrying amount of reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized. The fair values calculated in our impairment tests are determined using discounted cash flow models involving several assumptions. The assumptions that are used are based upon what we believe a hypothetical marketplace participant would use in estimating fair value. We base our fair value estimates on assumptions we believe to be reasonable but that are unpredictable and inherently uncertain. We evaluate the reasonableness of the fair value calculations of our reporting units by comparing the total of the fair value of all of our reporting units to our total market capitalization. Our annual goodwill impairment analysis, which we performed quantitatively during the second quarter of 2018, did not result in an impairment charge. During 2018, we did not identify any triggering events that would require an update to our annual impairment review.

All intangible assets (other than goodwill) are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of other intangible assets is measured by comparison of the carrying amount to estimated undiscounted future cash flows. The assessment of recoverability or of the estimated useful life for amortization purposes will be affected if the timing or the amount of estimated future operating cash flows is not achieved. Such indicators may include, among others: a significant decline in expected future cash flows; a sustained, significant decline in stock price and market capitalization; a significant adverse change in legal factors or in the business climate; unanticipated competition; and reductions in growth rates. In addition, products, capabilities, or technologies developed by others may render our software products obsolete or non-competitive. Any adverse change in these factors could have a significant impact on the recoverability of goodwill or other intangible assets.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Share-Based Compensation. We have a stock incentive plan that provides for the grant of stock options, restricted stock units and performance stock units to key employees, directors and non-employee consultants. We estimate the fair value of share-based awards on the date of grant. Share-based compensation expense includes the estimated effects of forfeitures, which will be adjusted over the requisite service period to the extent actual forfeitures differ or are expected to differ from such estimates. Changes in estimated forfeitures are recognized in the period of change and will also impact the amount of expense to be recognized in future periods. Forfeiture rate assumptions are derived from historical data.

We estimate stock price volatility at the date of grant based on the historical volatility of our common stock. Estimated option life is determined using the weighted-average period the stock options are expected to be outstanding based primarily on the options' vesting terms, remaining contractual life and the employees' expected exercise based on historical patterns. Determining the appropriate fair-value model and calculating the fair value of share-based awards at the grant date requires considerable judgment, including estimating stock price volatility, expected option life and forfeiture rates.

ANALYSIS OF RESULTS OF OPERATIONS AND OTHER

The following discussion compares the historical results of operations on a basis consistent with GAAP for the years ended December 31, 2018, 2017 and 2016.

Years Ended December 31,	Percentage of Total Revenues		
	2018	2017	2016
As Adjusted			
Revenues:			
Software licenses and royalties	10.0%	10.3%	11.0%
Subscriptions	23.6	20.5	18.3
Software services	20.5	21.5	22.6
Maintenance	41.1	42.5	42.2
Appraisal services	2.3	3.0	3.5
Hardware and other	2.5	2.1	1.9
Total revenues	100.0	100.0	100.0
Operating expenses:			
Cost of software licenses, royalties and acquired software	2.9	3.0	3.3
Cost of software services, maintenance and subscriptions	46.9	46.1	45.8
Cost of appraisal services	1.5	1.9	2.2
Cost of hardware and other	1.7	1.5	1.3
Selling, general and administrative expenses	22.2	20.9	21.7
Research and development expense	6.8	5.6	5.7
Amortization of customer and trade name intangibles	1.7	1.6	1.7
Operating income	15.3	19.4	18.3
Other income (expense), net	0.4	0.1	(0.3)
Income before income taxes	16.7	19.5	18.0
Income tax (benefit) provision	0.9	(0.7)	2.9
Net income	15.8%	20.2%	15.1%

Management's Discussion and Analysis of Financial Condition and Results of Operations

2018 Compared to 2017

Revenues

On April 30, 2018, we acquired Socrata, a company that provides open data and data-as-a-service solutions for federal, state and local government agencies including cloud-based data integration, visualization, analysis, and reporting solutions. The following table details revenue for Socrata for the periods presented as of December 31, 2018, which is included in our consolidated statements of income:

	2018
Revenues:	
Software licenses and royalties	\$ —
Subscriptions	12,106
Software services	1,751
Maintenance	—
Appraisal services	—
Hardware and other	20
Total revenues	\$13,877

On December 7, 2018, we acquired SceneDoc, Inc., a company that provides mobile-first, software-as-a-service (SaaS) field reporting for law enforcement agencies. On October 1, 2018, we acquired MobileEyes, a company that develops software to improve public safety by supporting fire prevention and suppression, emergency response, and structural safety. On August 31, 2018, we acquired CaseloadPRO, a company that provides a fully featured probation case management system. On April 30, 2018, we also acquired Sage, a cybersecurity company offering a suite of services that supports an entire cybersecurity lifecycle. The impact of these acquisitions on our operating results is not considered material, individually and in the aggregate, and is not included in the table above. The results of these acquisitions are included with the operating results of the ES segment from their dates of acquisition. For comparative purposes, we have provided explanations for changes in operations to exclude results of operations for these acquisitions noting the exclusion.

Software licenses and royalties.

The following table sets forth a comparison of our software licenses and royalties revenue for the years ended December 31:

	2018		2017		Change
	As Adjusted		As Adjusted		
(\$ in thousands)					
ES	\$85,735	\$78,388	\$5,347	7%	
A&T	1,706	7,854	1,852	24	
Total software licenses and royalties revenue	\$85,441	\$86,242	\$7,199	8%	

Software license and royalties revenue grew 8% compared to the prior year. The majority of this growth was due to an active marketplace as the result of generally positive local government economic conditions, as well as our increasingly strong competitive position, which we attribute in part to our investment in product development in recent years. An increase in the number of larger contracts related to our planning, regulatory and maintenance solutions and public safety solutions also contributed to the growth in license revenue.

Although the mix of new contracts between subscription-based and perpetual license arrangements may vary from quarter to quarter and year to year, we expect our longer-term software license growth rate to be negatively impacted by a growing number of customers choosing subscription-based options, rather than purchasing the software under a traditional perpetual software license arrangement. Subscription-based arrangements result in lower software license revenue in the initial year as compared to perpetual software license arrangements but generate higher overall revenue over the term of the contract. Our new client mix in 2018 was approximately 47% selecting perpetual software license arrangements and approximately 53% selecting subscription-based arrangements compared to a client mix in 2017 of approximately 53% selecting perpetual software license arrangements and approximately 47% selecting subscription-based arrangements.

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Subscriptions.

The following table sets forth a comparison of our subscriptions revenue for the years ended December 31:

(\$ in thousands)	2018		2017		Change	
			As Adjusted		\$	%
ES	\$210,740		\$164,317		\$ 46,423	28%
A&T	9,807		7,859		1,948	25
Total subscriptions revenue	\$220,547		\$172,176		\$ 48,371	28%

Subscription-based revenue primarily consists of revenue derived from our SaaS arrangements, which generally utilize the Tyler private cloud. As part of our subscription-based services, we also provide electronic document filing solutions ("e-filing") that simplify the filing and management of court related documents for courts and law offices. E-filing revenue is derived from transaction fees and fixed fee arrangements.

Excluding the results of acquisitions, subscription-based revenue increased 21% compared to 2017. New SaaS clients as well as existing clients who converted to our SaaS model provided the majority of the subscription revenue increase. In 2018, we added 410 new SaaS clients and 97 existing clients elected to convert to our SaaS model. Also, e-filing services contributed approximately \$6.2 million of the subscription revenue increase in 2018. The increase in e-filing revenue is attributed to new e-filing clients, as well as increased volume as the result of several existing clients mandating e-filing. The acquisition of Socrata, which primarily has a subscription revenue model, also contributed to the increase in subscription revenues.

Software services.

The following table sets forth a comparison of our software services revenue for the years ended December 31:

(\$ in thousands)	2018		2017		Change	
			As Adjusted		\$	%
ES	\$166,921		\$161,245		\$ 5,676	4%
A&T	24,348		19,215		5,133	27
Total software services revenue	\$191,269		\$180,460		\$ 10,809	6%

Software services revenue primarily consists of professional services billed in connection with implementing our software, converting client data, training client personnel, custom development activities and consulting. New clients who purchase our proprietary software licenses generally also contact with us to provide for the related software services. Existing clients also periodically purchase additional training, consulting and minor programming services. Excluding the results of acquisitions, software services revenue grew 3% compared to the prior year period. This growth is due to a higher level of new software sales, through both our license and subscription models.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Maintenance.

The following table sets forth a comparison of our maintenance revenue for the years ended December 31:

(\$ in thousands)	2018		2017		Change	
			As Adjusted		\$	%
ES	\$339,904		\$337,701		\$ 22,203	7%
A&T	24,617		21,618		2,999	14
Total maintenance revenue	\$364,521		\$359,319		\$ 5,202	7%

We provide maintenance and support services for our software products and certain third-party software. Maintenance revenue grew 7% compared to the prior year. Maintenance and support revenue increased mainly due to growth in our installed customer base from new software license sales as well as annual maintenance rate increases.

Appraisal services.

The following table sets forth a comparison of our appraisal services revenue for the years ended December 31:

(\$ in thousands)	2018		2017		Change	
			As Adjusted		\$	%
ES	\$ —		\$ —		\$ —	—%
A&T	21,845		25,023		(3,177)	(13)
Total appraisal services revenue	\$21,845		\$25,023		\$(3,177)	(13)%

In 2018, appraisal services revenue decreased 13% compared to the prior year primarily due to the successful completion of several large revaluation projects in mid-2017. The appraisal services business is somewhat cyclical and driven in part by statutory revaluation cycles in various states.

Cost of Revenues and Gross Margins

The following table sets forth a comparison of the key components of our cost of revenues for the years ended December 31:

(\$ in thousands)	2018		2017		Change	
			As Adjusted		\$	%
Software licenses and royalties	\$ 3,802		\$ 3,321		\$ 481	14%
Acquired software	22,972		21,686		1,286	6
Software services, maintenance and subscriptions	438,923		387,634		51,289	13
Appraisal services	14,939		16,286		(1,347)	(7)
Hardware and other	15,708		12,595		3,113	25
Total cost of revenues	\$496,344		\$441,522		\$ 54,822	12%

Management's Discussion and Analysis of Financial Condition and Results of Operations

The following table sets forth a comparison of gross margin percentage by revenue type for the years ended December 31:

Gross margin percentage	Change	
	2018	2017
		As Adjusted
Software licenses, royalties and acquired software	71.3%	71.0%
Software services, maintenance and subscriptions	44.9	45.6
Appraisal services	34.5	34.9
Hardware and other	33.6	28.8
Overall gross margin	47.0%	47.5%

Software licenses, royalties and acquired software. Cost of software licenses, royalties and acquired software is primarily comprised of amortization expense for acquired software and third-party software costs. We do not have any direct costs associated with royalties. The gross margin increase of 0.3% is due to higher software license revenues offset by an increase in amortization expense for acquired software attributed to new acquisitions completed in 2018.

Software services, maintenance and subscriptions. Cost of software services, maintenance and subscriptions primarily consists of personnel costs related to installation of our software, conversion of client data, training client personnel and support activities and various other services such as custom client development and on-going operation of SaaS and e-filing arrangements. In 2018, the software services, maintenance and subscriptions gross margin decreased 0.7% compared to the prior year. Excluding employees added through acquisitions, our implementation and support staff has grown by 57 employees since December 31, 2017 as we accelerated hiring to ensure that we are well-positioned to deliver our current backlog and anticipated new business. Recognition of acquisition-related deferred revenue associated with subscriptions and maintenance also resulted in lower gross margins.

Appraisal services. Appraisal services revenue comprised approximately 2.3% of total revenue. The appraisal services gross margin decreased 0.2% compared to 2017 due to the reduction in higher margin projects substantially complete by early 2017 and lower volume of revenues in the current period to cover relatively fixed costs.

Our 2018 blended gross margin slightly decreased by 0.5% compared to 2017. Our overall gross margin decrease is mainly attributed to additions to our implementation staff and lower margin revenues from appraisal services, offset by improved margin on revenues from software licenses.

Selling, General and Administrative Expenses

Selling, general and administrative ("SG&A") expenses consist, primarily of salaries, employee benefits, travel, share-based compensation expense, commissions and related overhead costs for administrative and sales and marketing employees, as well as, professional fees, trade show activities, advertising costs and other marketing related costs. The following table sets forth a comparison of our SG&A expenses for the years ended December 31:

(\$ in thousands)	Change	
	2018	2017
		As Adjusted
Selling, general and administrative expenses	\$207,695	\$175,914

SG&A as a percentage of revenue was 22.2% in 2018 compared to 20.9% in 2017. SG&A expense increased approximately 18% compared to the prior year period. In 2018, our operating results include \$91 million of SG&A expenses for Socrata from the date of acquisition. The remaining SG&A expense increase is mainly due to compensation cost related to increased staff levels, higher stock compensation expense and increased commission expense as a result of higher sales. Excluding employees added with acquisitions, we have added 47 employees mainly to our sales and finance teams since December 31, 2017. In addition, our 2018 stock compensation expense rose \$11.2 million, mainly due to increases in our stock price over the last few years.

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Research and Development Expense

Research and development expense consists primarily of salaries, employee benefits and related overhead costs associated with new product development. The following table sets forth a comparison of our research and development expense for the years ended December 31:

(\$ in thousands)	Change	
	2018	2017
		As Adjusted
Research and development expense	\$63,284	\$47,324

Research and development expense increased 34% in 2018 compared to the prior year period, mainly due to a number of new Tyler product development initiatives across our product suites, including increased investments in research and development at recently acquired businesses. To support these initiatives, our research and development staff has grown by 159 since December 31, 2017.

Amortization of Customer and Trade Name Intangibles

Acquisition intangibles are comprised of the excess of the purchase price over the fair value of net tangible assets acquired that is allocated to acquired software, leases and customer and trade name intangibles. The remaining excess purchase price is allocated to goodwill that is not subject to amortization. Amortization expense related to acquired software is included with cost of revenues, while amortization expense of customer and trade name intangibles is recorded as operating expense. The estimated useful lives of both customer and trade name intangibles range from five to 25 years. The following table sets forth a comparison of amortization of customer and trade name intangibles for the years ended December 31:

(\$ in thousands)	Change	
	2018	2017
		As Adjusted
Amortization of customer and trade name intangibles	\$16,217	\$13,381

Amortization of customer and trade name intangibles increased due to the impact of intangibles added with several acquisitions completed in 2017 and 2018.

Estimated annual amortization expense relating to customer and trade name acquisition intangibles, excluding acquired software for which the amortization expense is recorded as cost of revenues, for the next five years is as follows (in thousands):

2019	\$16,459
2020	15,350
2021	15,232
2022	14,740
2023	14,665
Thereafter	95,419

Amortization expense relating to acquired leases will be recorded as a reduction to hardware and other revenue and is expected to be \$372,000 in 2019, \$313,000 in 2020, \$312,000 in 2021, \$312,000 in 2022, \$312,000 in 2023 and \$723,000 thereafter.

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Software services.

The following table sets forth a comparison of our software services revenue for the years ended December 31:

(\$ in thousands)	As Adjusted		Change	
	2017	2016	\$	%
ES	\$161,245	\$155,322	\$5,923	4%
A&T	19,215	16,326	2,889	18
Total software services revenue	\$180,460	\$171,648	\$8,812	5%

Software services revenue primarily consists of professional services billed in connection with implementing our software, converting client data, training client personnel, custom development activities and consulting. New clients who purchase our proprietary software licenses generally also contract with us to provide for the related software services. Existing clients also periodically purchase additional training, consulting and minor programming services. Software services revenue grew 5% compared to the prior year period. This growth is partly due to additions to our implementation and support staff, which increased our capacity to deliver backlog and partially due to completing recognition of a majority of the acquisition-related deferred service revenue that was fair valued at rates below Tyler's average service rate in prior periods.

Maintenance.

The following table sets forth a comparison of our maintenance revenue for the years ended December 31:

(\$ in thousands)	As Adjusted		Change	
	2017	2016	\$	%
ES	\$337,701	\$302,409	\$35,292	12%
A&T	21,618	18,589	3,029	16
Total maintenance revenue	\$359,319	\$320,998	\$38,321	12%

We provide maintenance and support services for our software products and certain third-party software. Maintenance revenue grew 12% compared to the prior year. Maintenance and support revenue increased mainly due to growth in our installed customer base from new software license sales as well as annual maintenance rate increases. In addition, the increase is partially due to completing recognition of a majority of the acquisition-related deferred maintenance revenue that was fair valued at rates below Tyler's average maintenance rate in prior periods.

Appraisal services.

The following table sets forth a comparison of our appraisal services revenue for the years ended December 31:

(\$ in thousands)	As Adjusted		Change	
	2017	2016	\$	%
ES	\$ —	\$ —	\$ —	—%
A&T	25,023	26,287	(1,264)	(5)
Total appraisal services revenue	\$25,023	\$26,287	\$(1,264)	(5)%

Management's Discussion and Analysis of Financial Condition and Results of Operations

In 2017, appraisal services revenue decreased 5% compared to the prior year primarily due to the successful completion of several large valuation projects in mid-2017. The appraisal services business is somewhat cyclical and driven in part by statutory revaluation cycles in various states.

COST OF REVENUES AND GROSS MARGINS

The following table sets forth a comparison of the key components of our cost of revenues for the years ended December 31:

(\$ in thousands)	As Adjusted		Change	
	2017	2016	\$	%
Software licenses and royalties	\$ 3,321	\$ 2,564	\$ 757	12%
Acquired software	21,666	22,736	(1,070)	(5)%
Software services, maintenance and subscriptions	387,634	348,939	38,695	11
Appraisal services	16,286	16,411	(125)	(1)
Hardware and other	12,595	10,143	2,452	24
Total cost of revenues	\$441,522	\$400,692	\$40,830	10%

The following table sets forth a comparison of gross margin percentage by revenue type for the years ended December 31:

Gross margin percentage	As Adjusted		Change
	2017	2016	
Software licenses, royalties and acquired software	71.0%	69.9%	1.1%
Software services, maintenance and subscriptions	45.6	45.1	0.5
Appraisal services	34.9	37.6	(2.7)
Hardware and other	28.8	30.3	(1.5)
Overall gross margin	47.5%	47.5%	0.2%

Software licenses, royalties and acquired software. Cost of software licenses, royalties and acquired software is primarily comprised of amortization expense for acquired software and third-party software costs. We do not have any direct costs associated with royalties. The gross margin increase of 1.1% is due to higher incremental margins on software license revenues, in part due to slightly lower amortization expense for acquired software resulting from acquisitions.

Software services, maintenance and subscriptions. Cost of software services, maintenance and subscriptions primarily consists of personnel costs related to installation of our software, conversion of client data, training client personnel and support activities and various other services such as custom client development and on-going operation of SaaS and e-filing arrangements. In 2017, the software services, maintenance and subscriptions gross margin increased 0.5% compared to the prior year. Our implementation and support staff grew by 220 employees in 2017. Many of these additions occurred in early to mid-2017 and are contributing to revenue in 2017. Costs related to maintenance and various other services such as SaaS and e-filing typically grow at a slower rate than related revenue due to leverage in the utilization of support and maintenance staff and economies of scale. Reduced recognition of acquisition-related deferred revenue associated with software services and maintenance obligations completed in prior periods also resulted in higher gross margins.

Appraisal services. Appraisal services revenue comprised approximately 3.0% of total revenue. The appraisal services gross margin decreased 2.7% compared to 2016 due to the reduction in higher margin projects substantially complete by early 2017 and lower volume of revenues in the current period to cover relatively fixed costs.

Our 2017 blended gross margin slightly increased 0.2% compared to 2016. Our overall gross margin was positively impacted by a product mix that included more higher-margin recurring revenues from subscriptions and maintenance and improved margin on revenues from software licenses offset by the lower-margin revenues from appraisal services as described above.

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Selling, General and Administrative Expenses

The following table sets forth a comparison of selling, general and administrative expenses for the years ended December 31:

(\$ in thousands)	Change		
	2017	2016	%
	As Adjusted		
Selling, general and administrative expense	\$175,314	\$165,176	7%

SG&A as a percentage of revenue was 20.9% in 2017 compared to 21.7% in 2016. SG&A expense increased approximately 7% mainly due to compensation costs related to increased staff levels, merit increases and higher stock compensation expense. We added 28 SG&A employees, mainly to our sales and finance teams in 2017. In addition, our 2017 stock compensation expense rose \$4.7 million, mainly due to increases in our stock price over the last few years.

Research and Development Expense

The following table sets forth a comparison of our research and development expense for the years ended December 31:

(\$ in thousands)	Change		
	2017	2016	%
Research and development expense	\$47,324	\$43,154	10%

Research and development expense consists mainly of costs associated with development of new products and technologies from which we do not currently generate revenue, as well as costs related to the ongoing development efforts for Microsoft Dynamics AX. Our contractual research and development commitment to develop public sector functionality for Microsoft Dynamics AX was amended in March 2016, which significantly reduced our development commitment through March 2018. However, we continue to provide sustained engineering and technical support for the public sector functionality within Dynamics AX License and maintenance royalties for all applicable domestic and international sales of Dynamics AX to public sector entities will continue under the terms of the contract.

Research and development expense increased 10% in 2017 compared to the prior year period, mainly due to research and development efforts related to new Tyler product development initiatives, primarily in our public safety solutions, offset by reduced development efforts for Microsoft Dynamics AX. As a result of the Microsoft Dynamics AX amendment, we have redeployed certain development resources to enhance functionality on several existing solutions and these costs are being recorded in cost of revenues – software services, maintenance and subscriptions.

Amortization of Customer and Trade Name Intangibles

The following table sets forth a comparison of amortization of customer and trade name intangibles for the years ended December 31:

(\$ in thousands)	Change		
	2017	2016	%
Amortization of customer and trade name intangibles	\$13,381	\$13,202	1%

Amortization of customer and trade name intangibles increased due to the impact of intangibles added with several small acquisitions completed in 2016 and 2017.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Other

The following table sets forth a comparison of other income (expense), net for the years ended December 31:

(\$ in thousands)	Change		
	2017	2016	%
Other income (expense), net	\$638	\$(1,598)	\$2,596
			M/A

Other income (expense) is comprised of interest expense and non-usage and other fees associated with our revolving credit agreement, as well as interest income from invested cash. Other income (expense), net increased compared to the prior period is attributed to significantly lower debt levels in the current period, as we repaid all borrowings under the revolving line of credit in January 2017, and correspondingly higher levels of cash investments.

Income Tax (Benefit) Provision

The following table sets forth a comparison of our income tax provision for the years ended December 31:

(\$ in thousands)	Change		
	2017	2016	%
	As Adjusted		
Income tax provision	\$6,115	\$21,557	\$28,072
Effective income tax rate	(3.7)%	16.2%	(128)%

The decrease in the income tax provision during 2017 was primarily driven by the enactment of the Tax Act which reduced the statutory U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision is a \$26.0 million (as adjusted) tax benefit due to the remeasurement of deferred tax assets and liabilities. See Note 7 – "Income Tax" for additional information related to the Tax Act. The income tax provision is also lower due to the increase in the excess tax benefits from stock option exercises as compared to prior period. We experienced significant stock option exercise activity in 2017 and 2016 that generated excess tax benefits of \$40.6 million and \$29.6 million, respectively.

The change in the effective income tax rate in 2017 compared to 2016 is also primarily attributable to the impact of the Tax Act and the changes in excess tax benefits related to stock option exercises realized. Excluding the impact of the Tax Act and the excess tax benefits, our income tax provision and effective tax rate in 2017 would have been \$60.5 million (as adjusted) and 37.0%, respectively. Excluding the excess tax benefits, our income tax provision and effective tax rate in 2016 would have been \$51.5 million (as adjusted) and 38.0%, respectively.

The effective income tax rates in both 2017 and 2016 differed from the statutory United States federal corporate income tax rate of 35% due to state income taxes, the domestic production activities deduction, the research tax credit, non-deductible share-based compensation expense, disqualifying incentive stock option dispositions, and other non-deductible business expenses.

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FINANCIAL CONDITION AND LIQUIDITY

As of December 31, 2018, we had cash and cash equivalents of \$134.3 million compared to \$185.9 million at December 31, 2017. We also had \$977 million invested in investment grade corporate bonds, municipal bonds and asset-backed securities as of December 31, 2018 compared to \$62.8 million at December 31, 2017. These investments mature between 2018 through 2022 and we intend to hold these investments until maturity. Cash and cash equivalents consist of cash on deposit with several domestic banks and money market funds. As of December 31, 2018, we had no outstanding borrowings and no outstanding letters of credit. We believe our revolving line of credit, cash from operating activities, cash on hand and access to the credit markets provide us with sufficient flexibility to meet our long-term financial needs.

The following table sets forth a summary of cash flows for the years ended December 31:

(\$ in thousands)	2018	2017	2016
Cash flows provided (used) by:			
Operating activities	\$ 250,205	\$ 195,755	\$ 191,859
Investing activities	(238,255)	(85,395)	(50,720)
Financing activities	(63,593)	39,415	(138,073)
Net (decrease) increase in cash and cash equivalents	\$ (51,643)	\$ 149,775	\$ 3,064

Net cash provided by operating activities continues to be our primary source of funds to finance operating needs and capital expenditures. Other potential capital resources include cash on hand, public and private issuances of debt or equity securities, and bank borrowings. It is possible that our ability to access the capital and credit markets in the future may be limited by economic conditions or other factors. We currently believe that cash provided by operating activities, cash on hand and available credit are sufficient to fund our working capital requirements, capital expenditures, income tax obligations, and share repurchases for at least the next twelve months.

In 2018, operating activities provided cash of \$250.2 million compared to \$195.8 million in 2017. Operating activities that provided cash were primarily comprised of net income of \$142.5 million, non-cash depreciation and amortization charges of \$61.8 million and non-cash share-based compensation expense of \$52.7 million. Working capital, excluding cash, increased approximately \$14.0 million due to higher accounts receivable because of an increase in unbilled receivables attributed to revenues recognized from prior billings, higher accounts receivable related to annual maintenance and subscription billings, and the deferred taxes associated with stock option activity during the period. These increases were offset slightly by the growth in deferred revenue balances and timing of income tax payments.

In general, changes in the balance of deferred revenue are cyclical and primarily driven by the timing of our maintenance and subscription billings. Our renewal dates occur throughout the year, but our largest maintenance renewal cycles occur in the second and fourth quarters.

Days sales outstanding in accounts receivable were 111 days at December 31, 2018, compared to 102 days at December 31, 2017. The increase in our DSO is mainly due to an increase in unbilled receivables attributed to the increase in software license revenue for which we have recognized revenue at the point in time when the software is made available to the customer, but the billing has not yet been submitted to the customer. An increase in software services contracts accounted for using progress-to-completion method of revenue recognition in which the services are performed in one accounting period, but the billing normally occurs subsequently in another accounting period also contributed to the increase in DSO. Furthermore, our maintenance billing cycle typically peaks at its highest level in June and second highest level in December of each year and is followed by collections in the subsequent quarter. DSO is calculated based on quarter-end accounts receivable (excluding long-term receivables but including unbilled receivables) divided by the quotient of annualized quarterly revenues divided by 360 days.

Investing activities used cash of \$238.3 million in 2018 compared to \$85.4 million in 2017. We invested \$115.6 million and received \$81.2 million in proceeds from investment grade corporate bonds, municipal bonds and asset-backed securities with maturity dates ranging from 2018 through 2022. Approximately \$27.4 million was invested in property and equipment, primarily for computer equipment, furniture and fixtures in support of internal growth, particularly with respect to our cloud-based offerings. We paid \$2.2 million for the expansion of existing buildings. On December 7, 2018, we acquired certain assets and intellectual property of SceneDoc, Inc., a company that provides mobile-first, SaaS field reporting for law enforcement agencies. The total purchase price was approximately \$6.2 million, of which \$5.4 million was paid in cash and

Management's Discussion and Analysis of Financial Condition and Results of Operations

approximately \$759,000 accrued for a working capital holdback. On October 1, 2018, we acquired all of the equity interests of MobileEyes, a company that develops software to improve public safety by supporting fire prevention and suppression, emergency response, and structural safety. The total purchase price was approximately \$5.3 million in cash. On August 31, 2018, we acquired all of the assets of CaseoaePBO, a company that provides a fully featured probation case management system. The purchase price of \$9.3 million was paid in cash. On April 30, 2018, we acquired all of the capital stock of Soratira, a company that provides open data and data-as-a-service solutions including cloud-based data integration, visualization, analysis, and reporting solutions for state and local government agencies. The purchase price, net of cash acquired of \$1.7 million, was \$147.6 million paid in cash. On April 30, 2018, we acquired all of the equity interests of Sage, a cybersecurity company offering a suite of services that supports an entire cybersecurity lifecycle, including program development, education and training, technical testing, advisory services, and digital forensics. The total purchase price was \$11.6 million paid in cash. These expenditures were funded from cash generated from operations.

In 2017, we invested \$59.8 million and received \$28.8 million in proceeds from investment grade corporate bonds, municipal bonds and asset-backed securities. Approximately \$43.1 million was invested in property and equipment. We purchased an office building in Latham, New York for approximately \$2.9 million and paid \$2.1 million for building improvements. We paid \$19.4 million for construction to expand our office building in Yarmouth, Maine. We also made three small acquisitions with a combined cash purchase price of \$11.3 million. The remaining additions were for computer equipment, furniture and fixtures in support of internal growth, particularly with respect to our cloud-based offerings. These expenditures were funded from cash generated from operations.

Financing activities used cash of \$63.6 million in 2018 compared to cash provided of \$39.4 million in 2017. Financing activities in 2018 were comprised of collections of \$83.0 million from stock option exercises and employee stock purchase plan activity. We also purchased approximately 781,000 shares of our common stock for an aggregate purchase price of \$50.1 million, of which \$3.5 million was accrued as of December 31, 2018.

Financing activities in 2017 were comprised of \$10.0 million net payments on our revolving line of credit offset by collections of \$56.9 million from stock option exercises and employee stock purchase plan activity. We also purchased approximately 44,000 shares of our common stock for an aggregate purchase price of \$6.6 million.

In February 2019, our board of directors authorized the repurchase of an additional 1.5 million shares of Tyler common stock. The repurchase program, which was approved by our board of directors, was announced in October 2002 and was amended at various times from 2003 through 2019. As of February 20, 2019, we had remaining authorization to repurchase up to 2.7 million additional shares of our common stock. Our share repurchase program allows us to repurchase shares at our discretion. Market conditions influence the timing of the buybacks and the number of shares repurchased, as well as the volume of employee stock option exercises. Share repurchases are generally funded using our existing cash balances and borrowings under our credit facility and may occur through open market purchases and transactions structured through investment banking institutions, privately negotiated transactions and/or other mechanisms. There is no expiration date specified for the authorization and we intend to repurchase stock under the plan from time to time.

On November 16, 2015, we entered into a \$300.0 million Credit Agreement (the "Credit Facility") with the various lenders party thereto and Wells Fargo Bank, National Association, as Administrative Agent. The Credit Facility provides for a revolving credit line of up to \$300.0 million, including a \$10.0 million sublimit for letters of credit. The Credit Facility matures on November 16, 2020. Borrowings under the Credit Facility may be used for general corporate purposes, including working capital requirements, acquisitions and share repurchases. Borrowings under the Credit Facility bear interest at a rate of either (1) Wells Fargo Bank's prime rate (subject to certain higher rate determinations) plus a margin of 0.25% to 1.00% or (2) the 30, 60, 90 or 180 day LIBOR rate plus a margin of 1.25% to 2.00%. As of December 31, 2018, our interest rate was 5.75% under the prime rate option or approximately 3.77% under the 30-day LIBOR option. The Credit Facility is secured by substantially all of our assets. The Credit Facility requires us to maintain certain financial ratios and other financial conditions and prohibits us from making certain investments, advances, cash dividends or loans, and limits incurrence of additional indebtedness and liens. As of December 31, 2018, we were in compliance with those covenants.

As of December 31, 2018, we had no outstanding borrowings and had unused borrowing capacity of \$300.0 million under the Credit Facility. We paid interest of \$770,000 in 2018, \$804,000 in 2017, and \$1.9 million in 2016.

We paid income taxes, net of refunds received, of \$6.8 million in 2018, \$36.0 million in 2017, and \$30.2 million in 2016. In 2018, we experienced significant stock option exercise activity that generated net tax benefits of \$32.5 million and reduced tax payments accordingly. In 2017 and 2016, excess tax benefits were \$40.6 million and \$29.6 million, respectively.

Management's Discussion and Analysis of Financial Condition and Results of Operations

We anticipate that 2019 capital spending will be between \$54 million and \$56 million, including approximately \$16 million related to real estate and approximately \$6 million of capitalized software development. We expect the majority of the other capital spending will consist of computer equipment and software for infrastructure replacements and expansion. Capital spending is expected to be funded from existing cash balances and cash flows from operations.

On January 31, 2019, we entered in to a Merger agreement to acquire 100% of the equity interests of MVP Holdings, Parent, Inc. dba MicroPact ("MicroPact") for the anticipated purchase price of \$95 million in cash at closing (subject to possible adjustments and holdback) plus contingent consideration not to exceed \$10 million. The completion of the acquisition is subject to customary closing conditions, including the expiration of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act. The Federal Trade Commission granted early termination of that waiting period effective February 15, 2019. The cash portion of the merger consideration will be funded from cash on hand and proceeds from the revolving credit facility.

On February 1, 2019, we acquired all the assets of Civic, LLC ("MyCivic"), a company that provides software solutions to connect communities. The purchase price is \$3.7 million of which \$3.6 million was paid in cash and approximately \$90,000 was accrued for a working capital holdback.

From time to time we engage in discussions with potential acquisition candidates. In order to pursue such opportunities, which could require significant commitments of capital, we may be required to incur debt or to issue additional potentially dilutive securities in the future. No assurance can be given as to our future acquisition opportunities and how such opportunities will be financed.

We lease office facilities, as well as transportation and other equipment used in our operations under non-cancelable operating lease agreements expiring at various dates through 2026.

Summarized in the table below are our obligations to make future payments under the Credit Facility and lease obligations at December 31, 2018 (in thousands):

	2018	2020	2021	2022	2023	Thereafter	Total
Revolving line of credit	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Lease obligations	5,994	5,146	3,976	1,925	1,164	2,132	20,337
Total future payment obligations	\$5,994	\$5,146	\$3,976	\$1,925	\$1,164	\$2,132	\$20,337

As of December 31, 2018, we do not have any off-balance sheet arrangements, guarantees to third-parties or material purchase commitments, except for the operating lease commitments listed above.

CAPITALIZATION

At December 31, 2018, our capitalization consisted of no outstanding borrowings and \$13 billion of shareholders' equity.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Market risk represents the risk of loss that may affect us due to adverse changes in financial market prices and interest rates.

In 2018, our effective average interest rate for borrowings was 5.22%. As of December 31, 2018, our interest rate was 5.75% under the prime rate option or approximately 3.77% under the 30-day LIBOR option. The Credit Facility is secured by substantially all of our assets. Loans under the Credit Facility bear interest at Tyler's option, at a per annum rate of either (i) the Wells Fargo Bank prime rate (subject to certain higher rate determinations) plus a margin of 0.25% to 1.00% or (ii) the 30, 60, 90 or 180-day LIBOR rate plus a margin of 1.25% to 2.00%.

As of December 31, 2018, we had no outstanding borrowings under the Credit Facility and therefore are not subject to any interest risk.

Management's Discussion and Analysis of Financial Condition and Results of Operations

CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures — We maintain disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act) designed to provide reasonable assurance that the information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. These include controls and procedures designed to ensure that this information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosures. Management, with the participation of the chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2018. Based on this evaluation, the chief executive officer and chief financial officer have concluded that our disclosure controls and procedures were effective as of December 31, 2018.

Management's Report on Internal Control Over Financial Reporting — Tyler's management is responsible for establishing and maintaining effective internal control over financial reporting as defined in Securities Exchange Act Rule 13a-15(f). Tyler's internal control over financial reporting is designed to provide reasonable assurance to Tyler's management and board of directors regarding the preparation and fair presentation of published financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Management assessed the effectiveness of Tyler's internal control over financial reporting as of December 31, 2018. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Based on our assessment, we concluded that, as of December 31, 2018, Tyler's internal control over financial reporting was effective based on those criteria.

Tyler's internal control over financial reporting as of December 31, 2018 has been audited by Ernst & Young LLP, the independent registered public accounting firm who also audited Tyler's financial statements. Ernst & Young's attestation report on Tyler's internal control over financial reporting appears on page 42 hereto.

Changes in Internal Control Over Financial Reporting — During the quarter ended December 31, 2018, there were no changes in our internal control over financial reporting, as defined in Securities Exchange Act Rule 13a-15(f), that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Tyler Technologies, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Tyler Technologies, Inc. (the Company) as of December 31, 2018 and 2017, the related consolidated statements of comprehensive income, cash flows and shareholders' equity for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 20, 2019 expressed an unqualified opinion thereon.

As discussed in Note 1 to the consolidated financial statements, the Company changed its method of accounting for revenue in 2018 due to the adoption of Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), and the related amendments.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

We have served as the Company's auditor since 1966.

Dallas, Texas
February 20, 2019

Ernst & Young LLP

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Tyler Technologies, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Tyler Technologies, Inc.'s internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Tyler Technologies, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and our report dated February 20, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Dallas, Texas
February 20, 2019

Ernst & Young LLP

Consolidated Statements of Comprehensive Income

For the years ended December 31, (In thousands, except per share amounts)	2018	2017	2016
			As Adjusted
Revenues:			
Software licenses and royalties	\$ 43,441	\$ 86,242	\$ 83,733
Subscriptions	220,547	172,176	142,657
Software services	191,269	180,460	171,648
Maintenance	364,521	359,319	320,958
Appraisal services	21,846	25,023	26,287
Hardware and other	23,658	17,679	14,557
Total revenues	935,282	840,859	759,880
Cost of revenues:			
Software licenses and royalties	3,802	3,321	2,954
Acquired software	22,572	21,686	22,235
Software services, maintenance and subscriptions	438,923	387,654	348,939
Appraisal services	14,299	16,286	16,411
Hardware and other	15,708	12,695	10,143
Total cost of revenues	495,304	441,522	400,682
Gross profit	439,978	399,377	359,188
Selling, general and administrative expenses	207,605	175,914	165,176
Research and development expense	63,594	47,324	43,154
Amortization of customer and trade name intangibles	16,217	13,381	13,202
Operating income	152,462	162,758	137,656
Other income (expense), net	3,378	698	(1,958)
Income before income taxes	155,870	163,456	135,698
Income tax provision (benefit)	8,408	(6,115)	21,957
Net income	\$147,462	\$169,571	\$113,701
Earnings per common share:			
Basic	\$ 3.84	\$ 4.55	\$ 3.12
Diluted	\$ 3.68	\$ 4.32	\$ 2.92

See accompanying notes.

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Consolidated Balance Sheets

December 31,	2018	2017
(In thousands, except per value and share amounts)		As Adjusted
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 134,279	\$ 185,305
Accounts receivable (less allowance for losses of \$4,647 in 2018 and \$5,427 in 2017)	298,512	246,188
Short-term investments	44,305	43,159
Prepaid expenses	33,258	32,206
Income tax receivable	4,697	11,339
Other current assets	3,405	1,897
Total current assets	518,858	520,815
Non-current assets:		
Accounts receivable, long-term	16,020	12,107
Property and equipment, net	155,177	152,315
Other assets:		
Goodwill	753,718	657,987
Other intangibles, net	276,852	229,617
Non-current investments and other assets	70,338	38,510
	\$1,790,963	\$1,611,351
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 6,310	\$ 8,174
Accrued liabilities	66,480	64,675
Deferred revenue	350,512	298,613
Total current liabilities	423,302	371,462
Revolving line of credit	—	—
Deferred revenue, long-term	424	1,274
Deferred income taxes	41,791	46,879
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, \$10.00 par value; 1,000,000 shares authorized; none issued	—	—
Common stock, \$0.01 par value; 100,000,000 shares authorized; 48,147,969 shares issued in 2018 and 2017	481	481
Additional paid-in capital	731,435	626,867
Accumulated other comprehensive loss, net of tax	(46)	(46)
Retained earnings	771,525	624,463
Treasury stock, at cost; 9,872,505 and 10,262,162 shares in 2018 and 2017, respectively	(178,949)	(60,029)
Total shareholders' equity	1,324,846	1,191,796
	\$1,790,963	\$1,611,351

See accompanying notes.

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Consolidated Statements of Cash Flows

For the years ended December 31,	2018	2017	2016
(In thousands)			As Adjusted
Cash flows from operating activities:			
Net income	\$ 147,462	\$ 169,571	\$ 113,701
Adjustments to reconcile net income to cash provided by operations:			
Depreciation and amortization	61,750	53,995	48,773
Share-based compensation expense	52,740	37,348	29,747
Provision for losses – accounts receivable	2,286	4,110	4,484
Deferred income tax benefit	(5,068)	(33,664)	(26,432)
Changes in operating assets and liabilities, exclusive of effects of acquired companies:			
Accounts receivable	(63,771)	(35,170)	(34,760)
Income tax receivable	6,642	(8,444)	18,185
Prepaid expenses and other current assets	(688)	(6,958)	246
Accounts payable	(2,416)	878	387
Accrued liabilities	(2,445)	6,050	10,717
Deferred revenue	43,693	8,639	25,811
Net cash provided by operating activities	250,203	195,755	191,859
Cash flows from investing activities:			
Cost of acquisitions, net of cash acquired	(178,093)	(11,344)	(9,394)
Purchase of marketable security investments	(115,625)	(59,779)	(20,316)
Proceeds from marketable security investments	81,205	28,786	16,837
Additions to property and equipment	(27,424)	(43,057)	(37,726)
Decrease (increase) in other	1,682	(1)	(121)
Net cash used by investing activities	(238,235)	(85,395)	(50,720)
Cash flows from financing activities:			
Decrease in net borrowings on revolving line of credit	—	(10,000)	(55,000)
Purchases of treasury shares	(146,533)	(7,474)	(111,838)
Contributions from employee stock purchase plan	8,051	7,044	6,236
Proceeds from exercise of stock options	74,907	49,845	29,575
Net cash (used) provided by financing activities	(63,595)	29,415	(138,075)
Net (decrease) increase in cash and cash equivalents	(51,627)	149,775	3,064
Cash and cash equivalents at beginning of period	185,926	86,151	33,087
Cash and cash equivalents at end of period	\$ 134,299	\$ 185,926	\$ 36,151

See accompanying notes.

Consolidated Statements of Shareholders' Equity

For the years ended December 31, 2018, 2017 and 2016	Common Stock		Additional Paid-in Capital		Accumulated Other Comprehensive Income (Loss)		Retained Earnings		Treasury Stock		Total Shareholders' Equity
(In thousands)	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	
Balance at December 31, 2015 (As Adjusted)	48,148	\$ 481	\$ 607,755	\$ (46)	\$ 341,191	(11,374)	\$ (75,352)	\$ 374,029			
Net income	—	—	—	—	113,701	—	—	113,701	—	—	113,701
Issuance of shares pursuant to stock compensation plan	—	—	(82,273)	—	—	827	105,800	23,527	—	—	23,527
Stock compensation	—	—	29,747	—	—	—	—	29,747	—	—	29,747
Issuance of shares pursuant to employee stock purchase plan	—	—	1,434	—	—	47	4,802	6,236	—	—	6,236
Treasury stock purchases	—	—	—	—	—	(882)	(112,698)	(112,698)	—	—	(112,698)
Balance at December 31, 2016 (As Adjusted)	48,148	481	556,863	(46)	454,892	(11,382)	(77,449)	934,561	—	—	934,561
Net income	—	—	—	—	169,571	—	—	169,571	—	—	169,571
Issuance of shares pursuant to stock compensation plan	—	—	28,174	—	—	1,113	21,671	49,845	—	—	49,845
Stock compensation	—	—	37,348	—	—	—	—	37,348	—	—	37,348
Issuance of shares pursuant to employee stock purchase plan	—	—	4,882	—	—	51	2,362	7,044	—	—	7,044
Treasury stock purchases	—	—	—	—	—	(44)	(6,613)	(6,613)	—	—	(6,613)
Balance at December 31, 2017 (As Adjusted)	48,148	481	626,867	(46)	624,463	(10,282)	(60,029)	1,191,736	—	—	1,191,736
Net income	—	—	—	—	147,462	—	—	147,462	—	—	147,462
Issuance of shares pursuant to stock compensation plan	—	—	44,438	—	—	1,126	30,443	74,907	—	—	74,907
Stock compensation	—	—	52,740	—	—	—	—	52,740	—	—	52,740
Issuance of shares pursuant to employee stock purchase plan	—	—	7,370	—	—	45	681	8,051	—	—	8,051
Treasury stock purchases	—	—	—	—	—	(781)	(150,050)	(150,050)	—	—	(150,050)
Balance at December 31, 2018	48,148	\$ 481	\$ 731,435	(46)	\$ 771,925	(9,872)	\$ (178,949)	\$ 1,324,846			

See accompanying notes.

Notes to Consolidated Financial Statements

(Tables in thousands, except pdf share data)

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

DESCRIPTION OF BUSINESS

We provide integrated software systems and related services for the public sector, with a focus on local governments. We develop and market a broad line of software solutions and services to address the information technology ("IT") needs of cities, counties, schools and other local government entities. In addition, we provide professional IT services, including software and hardware installation, data conversion, training, and for certain customers, product modifications, along with continuing maintenance and support for customers using our systems. We also provide subscription-based services such as software as a service ("SaaS") arrangements, which primarily utilize the Tyler private cloud, and electronic document filing solutions ("e-filing"). In addition, we provide property appraisal outsourcing services for taxing jurisdictions.

PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include our parent company and two subsidiaries, which are wholly-owned. All significant intercompany balances and transactions have been eliminated in consolidation. Comprehensive income is defined as the change in equity of a business enterprise during a period from transactions, and other events and circumstances from non-owner sources and includes all components of net income (loss) and other comprehensive income (loss). We had no items of other comprehensive income (loss) during the years ended December 31, 2018, 2017 and 2016.

CASH AND CASH EQUIVALENTS

Cash in excess of that necessary for operating requirements is invested in short-term, highly liquid, income-producing investments. Investments with original maturities of three months or less are classified as cash and cash equivalents, which primarily consist of cash on deposit with several banks and money market funds. Cash and cash equivalents are stated at cost, which approximates market value.

REVENUE RECOGNITION

Nature of Products and Services

We earn revenue from software licenses, royalties, subscription-based services, software services, post-contract customer support ("PCS" or "maintenance"), hardware, and appraisal services. Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer
- Identification of the performance obligations in the contract
- Determination of the transaction price
- Allocation of the transaction price to the performance obligations in the contract
- Recognition of revenue when, or as, we satisfy a performance obligation

Most of our software arrangements with customers contain multiple performance obligations that range from software licenses, installation, training, and consulting to software modification and customization to meet specific customer needs (services), hosting, and PCS. For these contracts, we account for individual performance obligations separately when they are distinct. We evaluate whether separate performance obligations can be distinct or should be accounted for as one performance obligation. Arrangements that include software services, such as training or installation, are evaluated to determine whether those services are highly interdependent or interrelated to the product's functionality. The transaction price is allocated to the distinct performance obligations on a relative standalone selling price ("SSP") basis. We determine the SSP based on our overall pricing objectives, taking into consideration market conditions and other factors, including the value of our contracts, the applications sold, customer demographics, and the number and types of users within our contracts. Revenue is recognized net of allowances for sales adjustments and any taxes collected from customers, which are subsequently remitted to governmental authorities.

Notes to Consolidated Financial Statements

Software Arrangements:

Software Licenses and Royalties

Many of our software arrangements involve "off-the-shelf" software. We recognize the revenue allocable to "off-the-shelf" software licenses and specified upgrades at a point in time when control of the software license transfers to the customer, unless the software is not considered distinct. We consider off-the-shelf software to be distinct when it can be added to an arrangement with minor changes in the underlying code, it can be used by the customer for the customer's purpose upon installation, and remaining services such as training are not considered highly interdependent or interrelated to the product's functionality.

For arrangements that involve significant production, modification or customization of the software, or where software services are otherwise not considered distinct, we recognize revenue over time by measuring progress-to-completion. We measure progress-to-completion primarily using labor hours incurred as it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. These arrangements are often implemented over an extended period and occasionally require us to revise total cost estimates. Amounts recognized in revenue are calculated using the progress-to-completion measurement after giving effect to any changes in our cost estimates. Changes to total estimated contract costs, if any, are recorded in the period they are determined. Estimated losses on uncompleted contracts are recorded in the period in which we first determine that a loss is apparent.

Software license fees are billed in accordance with the contract terms. Typically, a majority of the fee is due when access to the software license is made available to the customer and the remainder of the fee due over a passage of time stipulated by the contract. We record amounts that have been invoiced in accounts receivable and in deferred revenue or revenues, depending on whether the revenue recognition criteria have been met.

We recognize royalty revenue when the sale occurs under the terms of our third-party royalty arrangements. Currently, our third-party royalties are recognized on an estimated basis and are traced up when we receive notice of amounts we are entitled to receive. We typically receive notice of royalty revenues we are entitled to and billed on a quarterly basis in the quarter immediately following the royalty reporting period.

Software Services

As noted above, some of our software arrangements include services considered highly interdependent or highly interrelated or require significant customization to meet the customer's desired functionality. For these software arrangements, both the software licenses and related software services revenue are not distinct and are recognized over time using the progress-to-completion method. We measure progress-to-completion primarily using labor hours incurred as it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. Contract fees are typically billed on a milestone basis as defined within contract terms. We record amounts that have been invoiced in accounts receivable and in deferred revenue or revenues, depending on whether the revenue recognition criteria have been met. When software services are distinct, the fee allocable to the service element is recognized over the time we perform the services and is billed on a time and material basis.

Post-Contract Customer Support

Our customers generally enter into PCS agreements when they purchase our software licenses. PCS includes telephone support, bug fixes, and rights to upgrades on a when-and-if available basis. PCS is considered distinct when purchased with our software licenses. Our PCS agreements are typically renewable annually. PCS is recognized over time on a straight-line basis over the period the PCS is provided. All significant costs and expenses associated with PCS are expensed as incurred.

Computer Hardware Equipment

Revenue allocable to computer hardware equipment is recognized at a point in time when control of the equipment is transferred to the customer.

Notes to Consolidated Financial Statements

Subscription-Based Services:

Subscription-based services consist of revenues derived from SaaS arrangements, which primarily utilize the Tyler private cloud, and electronic filing transactions. Revenue from subscription-based services is generally recognized over time on a ratable basis over the contract term, beginning on the date that our service is made available to the customer. Our subscription contracts are generally three to five years or longer in length, billed annually in advance, and non-cancelable.

For SaaS arrangements, we evaluate whether the customer has the contractual right to take possession of our software at any time during the hosting period without significant penalty and whether the customer can feasibly maintain the software on the customer's hardware or enter into another arrangement with a third-party to host the software. We allocate contract value to each performance obligation of the arrangement that qualifies for treatment as a distinct element based on estimated SSP. When it is determined that software is distinct, and the customer has the ability to take control of the software, we recognize revenue allocable to the software license fee when access to the software license is made available to the customer. We recognize hosting services ratably over the term of the arrangement, which range from one to ten years but are typically for a period of three to five years. For software services associated with certain SaaS arrangements, we have concluded that the services are not distinct, and we recognize the revenue ratably over the remaining contractual period once we have provided the customer access to the software. We record amounts that have been invoiced in accounts receivable and in deferred revenue or revenues, depending on whether the revenue recognition criteria have been met.

Electronic filing transaction fees primarily pertain to documents filed with the courts by attorneys and other third-parties via our e-filing services and retrieval of filed documents via our access services. For each document filed with a court, the filer generally pays a transaction fee and a court filing fee to us and we remit a portion of the transaction fee and the filing fee to the court. We record as revenue the transaction fee, while the portion of the transaction fee remitted to the courts is recorded as cost of sales as we are acting as a principal in the arrangement. Court filing fees collected on behalf of the courts and remitted to the courts are recorded on a net basis and thus do not affect the statement of comprehensive income. For e-filing transaction fees, we have the right to charge the customer an amount that directly corresponds with the value to the customer of our performance to date. Therefore, we recognize revenue for these services over time based on the amount billable to the customer in accordance with the "as invoiced" practical expedient in ASC 606-10-55-18. In some cases, we are paid on a fixed fee basis and recognize the revenue ratably over the contractual period.

Costs of performing services under subscription-based arrangements are expensed as incurred, except for certain direct and incremental contract origination and set-up costs associated with SaaS arrangements. Such direct and incremental costs are capitalized and amortized ratably over the useful life.

Appraisal Services:

For our property appraisal projects, we recognize revenue using the progress-to-completion method since many of these projects are implemented over one to three-year periods and consist of various unique activities. Appraisal services require a significant level of integration and interdependency with various individual service components; therefore, the service components are not considered distinct. Appraisal services are recognized over time by measuring progress-to-completion primarily using labor hours incurred as it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. These arrangements are often implemented over an extended period and occasionally require us to revise total cost estimates. Amounts recognized in revenue are calculated using the progress-to-completion measurement after giving effect to any changes in our cost estimates. Changes to total estimated contract costs, if any, are recorded in the period they are determined. Estimated losses on uncompleted contracts are recorded in the period in which we first determine that a loss is apparent. Contract fees are typically billed on a milestone basis as defined within contract terms. We record amounts that have been invoiced in accounts receivable and in deferred revenue or revenues, depending on whether the revenue recognition criteria have been met.

Notes to Consolidated Financial Statements

Significant Judgments:

Our contracts with customers often include multiple performance obligations to a customer. When a software arrangement (license or subscription) includes both software licenses and software services, judgment is required to determine whether the software license is considered distinct and accounted for separately, or not distinct and accounted for together with the software services and recognized over time.

The transaction price is allocated to the separate performance obligations on a relative SSP basis. We determine the SSP based on our overall pricing objectives, taking into consideration market conditions and other factors, including the value of our contracts, the applications sold, customer demographics, and the number and types of users within our contracts. We use a range of amounts to estimate SSP when we sell each of the products and services separately and need to determine whether there is a discount to be allocated based on the relative SSP of the various products and services. In instances where SSP is not directly observable, such as when we do not sell the product or service separately, we determine SSP using the expected cost-plus margin approach.

For arrangements that involve significant production, modification or customization of the software, or where software services otherwise cannot be considered distinct, we recognize revenue as control is transferred to the customer over time using progress-to-completion methods. Depending on the contract, we measure progress-to-completion primarily using labor hours incurred, or value added. The progress-to-completion method generally results in the recognition of reasonably consistent profit margins over the life of a contract because we can provide reasonably dependable estimates of contract billings and contract costs. We use the level of profit margin that is most likely to occur on a contract. If the most likely profit margin cannot be precisely determined, the lowest probable level of profit margin in the range of estimates is used until the results can be estimated more precisely. These arrangements are often implemented over an extended time period and occasionally require us to revise total cost estimates. Amounts recognized in revenue are calculated using the progress-to-completion measurement after giving effect to any changes in our cost estimates. Changes to total estimated contract costs, if any, are recorded in the period they are determined. Estimated losses on uncompleted contracts are recorded in the period in which we first determine that a loss is apparent.

Typically, the structure of our arrangements does not give rise to variable consideration. However, in those instances whereby variable consideration exists, we include in our estimates additional revenue for variable consideration when we believe we have an enforceable right, the amount can be estimated reliably and its realization is probable.

Refer to Note 15 – Disaggregation of Revenue for further information, including the economic factors that affect the nature, amount, timing, and uncertainty of revenue and cash flows of our various revenue categories.

Contract Balances:

Accounts receivable and allowance for doubtful accounts

Timing of revenue recognition may differ from the timing of invoicing to customers. We record an unbilled receivable when revenue is recognized prior to invoicing, or deferred revenue when revenue is recognized subsequent to invoicing. For multi-year agreements, we generally invoice customers annually at the beginning of each annual coverage period. We record an unbilled receivable related to revenue recognized for on-premises licenses as we have an unconditional right to invoice and receive payment in the future related to those licenses.

We maintain allowances for doubtful accounts, which are provided at the time the revenue is recognized. Since most of our customers are domestic governmental entities, we rarely incur a loss resulting from the inability of a customer to make required payments. Events or changes in circumstances that indicate the carrying amount for the allowances for doubtful accounts may require revision include, but are not limited to, deterioration of a customer's financial condition, failure to manage our customer's expectations regarding the scope of the services to be delivered, and defects or errors in new versions or enhancements of our software products.

Notes to Consolidated Financial Statements

The following table summarizes the changes in the allowances for doubtful accounts and sales adjustments:

Years Ended December 31,	2018	2017	2016
Balance at beginning of year	\$ 5,427	\$ 3,386	\$ 1,640
Provisions for losses – accounts receivable	2,286	4,110	4,484
Collection of accounts previously written off	—	—	—
Deductions for accounts charged off or credits issued	(3,046)	(2,079)	(2,728)
Balance at end of year	\$ 4,667	\$ 5,427	\$ 3,396

The allowance for doubtful accounts reflects our best estimate of probable losses inherent in the accounts receivable balance. We determine the allowance based on known troubled accounts, historical experience, and other currently available evidence.

In connection with our appraisal services contracts and certain software services contracts, we may perform work prior to when the software and services are billable and/or payable pursuant to the contract. Unbilled revenue is not billable at the balance sheet date but is recoverable over the remaining life of the contract through billings made in accordance with contractual agreements. The termination clauses in most of our contracts provide for the payment for the value of products delivered or services performed in the event of early termination. We have historically recorded such unbilled receivables (costs and estimated profit in excess of billings) in connection with (1) property appraisal services contracts accounted for using progress-to-completion method of revenue recognition using labor hours as a measure of progress towards completion in which the services are performed in one accounting period but the billing normally occurs subsequently and may span another accounting period; (2) software services contracts accounted for using progress-to-completion method of revenue recognition using labor hours as a measure of progress towards completion in which the services are performed in one accounting period but the billing for the software element of the arrangement may be based upon the specific phase of the implementation; (3) software revenue for which we have recognized revenue at the point in time when the software is made available to the customer but the billing has not yet been submitted to the customer; (4) some of our contracts which provide for an amount to be withheld from a progress billing (generally between 5% and 20% retention) until final and satisfactory project completion is achieved; and (5) in a limited number of cases, extended payment terms, which may be granted to customers with whom we generally have a long-term relationship and favorable collection history.

The opening balance of current and long-term accounts receivable, net of allowance for doubtful accounts, was \$226.8 million (as adjusted) as of January 1, 2017.

As of December 31, 2018, and December 31, 2017, total current and long-term accounts receivable, net of allowance for doubtful accounts, was \$314.9 million and \$258.3 million (as adjusted), respectively. We have recorded unbilled receivables of \$104.2 million and \$64.6 million (as adjusted) at December 31, 2018, and December 31, 2017, respectively. Included in unbilled receivables are retention receivables of \$12.2 million and \$7.2 million at December 31, 2018, and December 31, 2017, respectively, which become payable upon the completion of the contract or completion of our fieldwork and formal hearings. Unbilled receivables expected to be collected within one year have been included with accounts receivable, current portion. In the accompanying consolidated balance sheets, unbilled receivables and retention receivables expected to be collected past one year have been included with accounts receivable, long-term portion. In the accompanying consolidated balance sheets.

Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 to 60 days. In instances where the timing of revenue recognition differs from the timing of invoicing, we have determined our contracts generally do not include a significant financing component. The primary purpose of our invoicing terms is to provide customers with simplified and predictable ways of purchasing our products and services, not to receive financing from our customers or to provide customers with financing. Examples include invoicing at the beginning of a subscription term with revenue recognized ratably over the contract period, and multi-year on-premises term licenses that are invoiced annually with revenue recognized upfront.

Notes to Consolidated Financial Statements

Deferred Revenue

The majority of deferred revenue consists of deferred maintenance revenue that has been billed based on contractual terms in the underlying arrangement, with the remaining balance consisting of payments received in advance of revenue being earned under software licensing, subscription-based services, software and appraisal services and hardware installation. Refer to Note 16 – Deferred Revenue and Performance Obligations for further information, including deferred revenue by segment and changes in deferred revenue during the period.

Deferred Commissions

Sales commissions earned by our sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for initial contracts are deferred and then amortized on a straight-line basis over a period of benefit that we have determined to be three to seven years. We utilized the 'portfolio approach' practical expedient in ASC 606-10-10-4, which allows entities to apply the guidance to a portfolio of contracts with similar characteristics because the effects on the financial statements of this approach would not differ materially from applying the guidance to individual contracts. Using the 'portfolio approach', we determined the period of benefit by taking into consideration our customer contracts, our technology life-cycle and other factors. Sales commissions for renewal contracts are generally not paid in connection with the renewal of a contract. In the small number of instances where a commission is paid on a renewal, it is not commensurate with the commission paid on the initial sale and is recognized over the term of renewal, which is generally one year. Amortization expense related to deferred commissions is included in selling, general and administrative expenses in the accompanying consolidated statements of income. Refer to Note 17 – Deferred Commissions for further information.

Prepaid expenses and other current assets include direct and incremental costs such as commissions associated with arrangements for which revenue recognition has been deferred. Such costs are expensed at the time the related revenue is recognized.

USE OF ESTIMATES

The preparation of our financial statements in conformity with accounting principles generally accepted in the United States ("GAAP") requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to such estimates and assumptions include revenue recognition, determining the nature and timing of satisfaction of performance obligations, and determining the SSP of performance obligations, variable consideration, and other obligations such as returns and refunds; loss contingencies; the estimated useful life of deferred commissions; the carrying amount and estimated useful lives of intangible assets; determining share-based compensation expense; the valuation allowance for receivables; and determining the potential outcome of future tax consequences of events that have been recognized on our consolidated financial statements or tax returns. Actual results could differ from estimates.

PROPERTY AND EQUIPMENT, NET

Property, equipment and purchased software are recorded at original cost and increased by the cost of any significant improvements after purchase. We expense maintenance and repairs when incurred. Depreciation and amortization is calculated using the straight-line method over the shorter of the asset's estimated useful life or the term of the lease in the case of leasehold improvements. For income tax purposes, we use accelerated depreciation methods as allowed by tax laws.

RESEARCH AND DEVELOPMENT COSTS

We expensed research and development costs of \$63.3 million in 2018, \$473 million in 2017, and \$43.2 million in 2016.

Notes to Consolidated Financial Statements

INCOME TAXES

Income taxes are accounted for under the asset and liability method. Deferred taxes arise because of different treatment between financial statement accounting and tax accounting, known as "temporary differences." We record the tax effect of these temporary differences as "deferred tax assets" (generally items that can be used as a tax deduction or credit in the future periods) and "deferred tax liabilities" (generally items that we received a tax deduction for, which have not yet been recorded in the income statement). The deferred tax assets and liabilities are measured using enacted tax rules and laws that are expected to be in effect when the temporary differences are expected to be recovered or settled. A valuation allowance would be established to reduce deferred tax assets if it is more likely than not that a deferred tax asset will not be "realized." On December 22, 2017, the Tax Cuts and Jobs Act (the "Tax Act") was enacted into law. The Tax Act amends the Internal Revenue Code to reduce tax rates and modify policies, credits and deductions for individuals and businesses. For businesses, the Tax Act reduces the corporate U.S. federal tax rate from a maximum of 35% to a flat 21% and transitions from a worldwide tax system to a territorial tax system. Under ASC 740 Income Taxes, the effects of changes in tax rates and laws are recognized in the period in which the new legislation is enacted. See Note 7 — "Income Tax" for further discussion related to the Tax Act.

SHARE-BASED COMPENSATION

We have a share-based award plan that provides for the grant of stock options, restricted stock units, and performance share units to key employees, directors and non-employee consultants. Stock options generally vest after three to six years of continuous service from the date of grant and have a contractual term of 10 years. Restricted stock unit grants generally vest ratably over time to five years of continuous service from the date of grant. Each performance share unit represents the right to receive one share of our common stock based on our achievement of certain financial performance targets during applicable performance periods. We account for share-based compensation utilizing the fair value recognition pursuant to ASC 718, *Stock Compensation*. See Note 9 — "Share-Based Compensation" for further information.

GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill

Goodwill represents the excess of the purchase price over the fair value of net assets acquired, including identifiable intangible assets, in connection with our business combinations. Upon acquisition, goodwill is assigned to the reporting unit that is expected to benefit from the synergies of the business combination, which is the reporting unit to which the related acquired technology is assigned. A reporting unit is the operating segment, or a business unit one level below that operating segment, for which discrete financial information is prepared and regularly reviewed by executive management.

We assess goodwill for impairment annually as of April 1st, or more frequently whenever events or changes in circumstances indicate its carrying value may not be recoverable. We begin with the qualitative assessment of whether it is more likely than not that a reporting unit's fair value is less than its carrying value before applying the quantitative assessment described below. If it is determined through the evaluation of events or circumstances that the carrying value may not be recoverable, we perform a comparison of the estimated fair value of the reporting unit to which the goodwill has been assigned to the sum of the carrying value of the assets and liabilities of that unit. If the sum of the carrying value of the assets and liabilities of a reporting unit exceeds the estimated fair value of that reporting unit, the carrying value of the reporting unit's goodwill is reduced to its fair value through an adjustment to the goodwill balance, resulting in an impairment charge. The fair values calculated in our impairment tests are determined using discounted cash flow models involving several assumptions. The assumptions that are used are based upon what we believe a hypothetical marketplace participant would use in estimating fair value. We evaluate the reasonableness of the fair value calculations of our reporting units by comparing the total of the fair value of all of our reporting units to our total market capitalization.

We did not record any goodwill impairment charges for the years ended December 31, 2018 and 2017. See Note 4 — Goodwill and Other Intangible Assets, for additional information.

Notes to Consolidated Financial Statements

Other Intangible Assets

We make judgments about the recoverability of purchased intangible assets other than goodwill whenever events or changes in circumstances indicate that an impairment may exist. Customer base and acquired software each comprise approximately half of our purchased intangible assets other than goodwill. We review our customer turnover each year for indications of impairment. Our customer turnover has historically been very low. If indications of impairment are determined to exist, we measure the recoverability of assets by a comparison of the carrying amount of the asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of the asset exceeds the estimated undiscounted future cash flows expected to be generated by the amount by which the carrying amount of the assets exceeds their estimated future cash flows, an impairment charge is recognized for the amount by which the carrying amount of the assets exceeds the fair value of the assets. There have been no significant impairments of intangible assets in any of the periods presented.

IMPAIRMENT OF LONG-LIVED ASSETS

We periodically evaluate whether current facts or circumstances indicate that the carrying value of our property and equipment or other long-lived assets to be held and used may not be recoverable. If such circumstances are determined to exist, we measure the recoverability of assets to be held and used by a comparison of the carrying amount of the asset or appropriate grouping of assets and the estimated undiscounted future cash flows expected to be generated by the assets. If the carrying amount of the assets exceeds their estimated future cash flows, an impairment charge is recognized for the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and would no longer be depreciated. The assets and liabilities of a disposed group classified as held for sale would be presented separately in the appropriate asset and liability sections of the balance sheet. There have been no significant impairments of long-lived assets in any of the periods presented.

COSTS OF COMPUTER SOFTWARE

We capitalize software development costs upon the establishment of technological feasibility and prior to the availability of the product for general release to customers. Software development costs primarily consist of personnel costs and rent for related office space. We begin to amortize capitalized costs when a product is available for general release to customers. Amortization expense is determined on a product-by-product basis at a rate not less than straight-line basis over the product's remaining estimated economic life. We have not capitalized any internal software development costs in any of the periods presented.

FAIR VALUE OF FINANCIAL INSTRUMENTS

Cash and cash equivalents, accounts receivables, accounts payables, short-term obligations and certain other assets at cost approximate fair value because of the short maturity of these instruments. The fair value of our revolving line of credit would approximate book value as of December 31, 2018, because our interest rates reset approximately every 30 days or less. See Note 6 — "Revolving Line of Credit" for further discussion.

As of December 31, 2018, we have \$97.7 million in investment grade corporate bonds, municipal bonds and asset-backed securities with maturity dates ranging from 2018 through 2022. We intend to hold these bonds to maturity and have classified them as such. We believe cost approximates fair value because of the relatively short duration of these investments. The fair values of these securities are considered Level II as they are based on inputs from quoted prices in markets that are not active or from other observable market data. These investments are included in short-term investments and non-current investments and other assets.

As of December 31, 2018, we have \$15.0 million invested in convertible preferred stock representing a 20% interest in Record Holdings Pty Limited, a privately held Australian company specializing in digitizing the spoken word in court and legal proceedings. The investment in convertible preferred stock is accounted under the cost method because we do not have the ability to exercise significant influence over the investee and the securities do not have readily determinable fair values. Our investment is carried at cost less any impairment write-downs. Annually, our cost method investments are assessed for impairment. We do not reassess the fair value of cost method investments if there are no identified events or changes in circumstances that may have a significant adverse effect on the fair value of the investments. There has been no impairment of our cost method investment for the periods presented. This investment is included in non-current investments and other assets in the accompanying consolidated balance sheets.

Notes to Consolidated Financial Statements

CONCENTRATIONS OF CREDIT RISK

Financial instruments that potentially subject us to significant concentrations of credit risk consist principally of cash and cash equivalents, accounts receivable from trade customers, and investments in marketable securities. Our cash and cash equivalents primarily consist of operating account balances and money market funds, which are maintained at several major domestic financial institutions and the balances often exceed insured amounts. As of December 31, 2018, we had cash and cash equivalents of \$B4.3 million. We perform periodic evaluations of the credit standing of these financial institutions.

Concentrations of credit risk with respect to receivables are limited due to the size and geographical diversity of our customer base. Historically, our credit losses have not been significant. As a result, we do not believe we have any significant concentrations of credit risk as of December 31, 2018.

We maintain allowances for doubtful accounts, which are provided at the time the revenue is recognized. Since most of our customers are domestic governmental entities, we rarely incur a loss resulting from the inability of a customer to make required payments. Events or changes in circumstances that indicate the carrying amount for the allowances for doubtful accounts may require revision include, but are not limited to, deterioration of a customer's financial condition, failure to manage our customer's expectations regarding the scope of the services to be delivered, and defects or errors in new versions or enhancements of our software products.

INDEMNIFICATION

Most of our software license agreements indemnify our customers in the event that the software sold infringes upon the intellectual property rights of a third-party. These agreements typically provide that in such event we will either modify or replace the software so that it becomes non-infringing or procure for the customer the right to use the software. We have recorded no liability associated with these indemnifications, as we are not aware of any pending or threatened infringement actions that are possible losses. We believe the estimated fair value of these intellectual property indemnification clauses is minimal.

We have also agreed to indemnify our officers and board members if they are named or threatened to be named as a party to any proceeding by reason of the fact that they acted in such capacity. We maintain directors' and officers' liability insurance coverage to protect against any such losses. We have recorded no liability associated with these indemnifications. Because of our insurance coverage, we believe the estimated fair value of these indemnification agreements is minimal.

RECLASSIFICATIONS

Certain amounts for previous years have been reclassified to conform to the current year presentation.

RECENTLY ADOPTED ACCOUNTING PRONOUNCEMENTS

Revenue from Contracts with Customers. In May 2014, the Financial Accounting Standards Board ("FASB") issued ASU No. 2014-09, *Revenue from Contracts with Customers*. ASU No. 2014-09 supersedes the revenue recognition requirements in Accounting Standards Codification ("ASC") Topic 605, *Revenue Recognition*, and requires the recognition of revenue when promised goods or services are transferred to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This model involves a five-step process that includes identifying the contract with the customer, identifying the performance obligations in the contract, determining the transaction price, allocating the transaction price to the performance obligations in the contract and recognizing revenue when (or as) the entity satisfies the performance obligations. Topic 606 also includes Subtopic 340-40 *Other Assets and Deferred Costs - Contracts with Customers*, which requires the deferral of incremental costs of obtaining a contract with a customer. Collectively, we refer to ASU No. 2014-09 and Subtopic 340-40 as the "new standard."

Notes to Consolidated Financial Statements

We adopted the requirements of the new standard as of January 1, 2018, utilizing the full retrospective method of transition. Adoption of the new standard resulted in changes to our accounting policies for revenue recognition, trade and other receivables, and deferred commissions as detailed below. We applied the new standard using a practical expedient where the consideration allocated to the remaining performance obligations or an explanation of when we expect to recognize that amount as revenue for all reporting periods presented before the date of the initial application is not disclosed.

The impact of adopting ASU No. 2014-09 on our total revenues for 2017 and 2016 was not material. The impact of adopting the new standard on our retained earnings and deferred commissions is material. The most significant impact of the new standard relates to our accounting for software license revenue. Specifically, under the new standard, software license fees under perpetual agreements are no longer subject to 100% discount allocations from other performance obligations in the contract. Discounts in arrangements are allocated across all performance obligations increasing license revenues and decreasing revenues allocated to other performance obligations. In addition, in most cases, net license fees less any allocated discounts are recognized at the point in time when control of the software license transfers to the customer versus our legacy policy of recognizing revenue upon delivery and only to the extent billable per the contractual terms. Under the new standard, time-based license fees are no longer recognized over the contractual period of the license and are instead recognized at the point in time when the control of the software license transfers to the customer. Revenues related to our PCS renewals, SaaS offerings and appraisal services remain substantially unchanged. Due to the complexity of certain contracts, the actual revenue recognition treatment required under the new standard is dependent on contract-specific terms and may vary in some instances from recognition at the time of billing.

Adoption of the new standard requires that incremental costs directly related to obtaining a contract (typically sales commissions) must be recognized as an asset and expensed on a systematic basis that is consistent with the transfer to the customer of the goods and services to which the asset relates, unless that life is less than one year. Prior to adoption of the new standard, we deferred sales commissions and recognized expense over the relevant initial contractual term, which was generally one to two years. Under the new standard, we amortize these costs over a period of benefit that we have determined to be three to seven years.

We adjusted our consolidated financial statements from amounts previously reported due to the adoption of the new standard. Select unaudited condensed consolidated statement of income line items, which reflect the adoption of the new standard, are as follows (in thousands, except per share data):

	December 31, 2017			December 31, 2016		
	As Reported	Adjustments	As Adjusted	As Reported	Adjustments	As Adjusted
Statement of Income:						
Software license and royalties	\$ 75,594	\$10,548	\$ 86,242	\$ 74,306	\$ 9,427	\$ 83,733
Subscriptions	173,510	(1,334)	172,176	142,704	(47)	142,657
Software services	187,149	(6,689)	180,460	174,804	(3,156)	171,648
Maintenance	361,589	(2,250)	359,339	327,959	(1,971)	325,988
Appraisal services	25,023	—	25,023	25,287	—	25,287
Hardware and other	17,717	(38)	17,679	14,973	(416)	14,557
Total revenues	840,662	237	840,899	756,043	3,837	759,880
Selling, general and administrative expenses	176,974	(1,060)	175,914	167,161	(1,985)	165,176
Amortization of customer and trade name intangibles	13,912	(531)	13,381	13,731	(329)	13,202
Operating income	160,890	1,828	162,718	131,305	6,351	137,656
Income tax (benefit) provision	(2,317)	(3,798)	(6,115)	19,450	2,507	21,957
Net income	\$183,945	\$ 5,626	\$189,571	\$109,857	\$ 8,844	\$113,701
Earnings per common share:						
Basic	\$ 4.40		\$ 4.55	\$ 3.01		\$ 3.12
Diluted	\$ 4.18		\$ 4.32	\$ 2.87		\$ 2.92

Notes to Consolidated Financial Statements

Select condensed consolidated balance sheet line items, which reflect the adoption of the new standard, are as follows (in thousands):

	December 31, 2017		
	As Reported	Adjustments	As Adjusted
Balance Sheet			
Accounts receivable	\$ 227,127	\$ 19,061	\$ 246,188
Prepaid expenses	27,252	4,554	32,206
Accounts receivable, long-term	7,536	4,571	12,107
Other intangibles, net	236,444	(6,827)	229,617
Total assets	1,589,592	21,759	1,611,351
Deferred revenue	309,461	(10,848)	298,613
Deferred income taxes	38,914	7,855	46,879
Retained earnings	593,821	24,642	624,463
Total liabilities and shareholders' equity	\$1,589,592	\$ 21,759	\$1,611,351

Our adoption of ASU No. 2014-09 had no impact on our net cash provided by or used in operating, investing or financing activities for any of the periods reported.

Recent tax legislation. On December 22, 2017, the Tax Cuts and Jobs Act ("Tax Act") was enacted into law. The Tax Act amends the Internal Revenue Code to reduce tax rates and modify policies, credits and deductions for businesses and individuals. For businesses, the Tax Act reduces the U.S. corporate federal income tax rate from a maximum of 35% to a flat 21% rate and transitions from a worldwide tax system to a territorial tax system. The Tax Act also adds many new provisions including changes to bonus depreciation, the deduction for executive compensation and a tax on global intangible low-taxed income (GILTI). The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate. Refer to Note 7 – Income Tax Provision for further information.

NEW ACCOUNTING PRONOUNCEMENTS

Recent Accounting Guidance not yet Adopted

Leases. On February 25, 2016, the FASB issued its new lease accounting guidance in ASU No. 2016-02, Leases ("Topic 842"). Under the new guidance, lessees will be required to recognize the following for all leases (with the exception of short-term leases) at the commencement date:

- A lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and
- A right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term.

Topic 842 is effective for fiscal years beginning after December 15, 2018, including interim periods therein. Early application is permitted for all business entities upon issuance. Upon adoption, entities will be required to use a modified retrospective approach with an option to use certain practical expedients. We expect to adopt ASU 2016-02 when effective, using the transition method that allows us to initially apply the guidance at the adoption date of January 1, 2019, and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. We expect to use the package of practical expedients that allows us to not reassess: (1) lease classification for any expired or existing leases and (2) initial direct costs for any expired or existing leases. We expect ASU 2016-02 will impact our consolidated financial statements and related disclosures. We are currently evaluating the extent of the impact and expect that most of our lease commitments will be subject to the updated guidance and recognized as lease liabilities and right-of-use assets on our consolidated balance sheets upon adoption. Based on our current portfolio of leases, we estimate a range of \$15.5 million to \$17.9 million of lease assets and liabilities to be recognized on our balance sheet, primarily relating to office facilities.

Notes to Consolidated Financial Statements

(2) ACQUISITIONS

2018

On December 7, 2018, we acquired certain assets and intellectual property of SceneDoc, Inc. ("SceneDoc"), a company that provides mobile-first, SaaS field reporting for law enforcement agencies. The total purchase price was approximately \$6.2 million, of which \$5.4 million was paid in cash and approximately \$759,000 accrued for a working capital holdback, subject to certain post-closing adjustments.

On October 1, 2018, we acquired all of the equity interests of TradeMaster, Inc. dba MobileEyes ("MobileEyes"), a company that develops SaaS software to improve public safety by supporting fire prevention and suppression, emergency response, and structural safety. The total purchase price was approximately \$5.3 million in cash.

On August 31, 2018, we acquired all of the assets of CaseloadPRO, L.P., a company that provides a fully featured SaaS probation case management system. The purchase price of \$9.3 million was paid in cash.

On April 30, 2018, we acquired all of the capital stock of Socrata, Inc. ("Socrata"), a company that provides open data and data-as-a-service solutions including cloud-based data integration, visualization, analysis, and reporting solutions for state and local government agencies. The purchase price, net of cash acquired of \$1.7 million, was \$147.6 million paid in cash.

We have performed a valuation analysis of the fair market value of Socrata's assets and liabilities. The following table summarizes the allocation of the purchase price as of the acquisition date:

	In thousands
Cash	\$ 1,724
Accounts receivable	3,616
Other current assets	2,037
Other noncurrent assets	68
Deferred tax assets, net	20
Identifiable intangible assets	75,000
Goodwill	75,657
Accounts payable	(1,254)
Accrued expenses	(1,604)
Deferred revenue	(5,915)
Total consideration	\$149,359

In connection with this transaction, we acquired total tangible assets of \$75 million and assumed liabilities of approximately \$8.8 million. We recorded goodwill of \$75.7 million, none of which is expected to be deductible for tax purposes, and other identifiable intangible assets of approximately \$75.0 million. The \$75.0 million of intangible assets are attributable to customer relationships, acquired software, and trade name and will be amortized over a weighted average period of approximately 14 years. We recorded deferred tax assets, net of approximately \$20,000 related to estimated fair value allocations. Socrata's solutions are a direct complement to our current offerings and will provide a new and important additional revenue stream. By offering Socrata within virtually every Tyler product suite, our clients will have the opportunity to make their existing data discoverable, usable and actionable, but more importantly, potentially include data from other agencies and jurisdictions to make analysis even more powerful and meaningful. Therefore, the goodwill of \$75.7 million arising from this acquisition is primarily attributed to our ability to integrate Socrata's solutions with our existing portfolio and to generate increased revenues, earnings and cash flow by leveraging our sales resources and client base. Our final valuation of the fair market value of Socrata's assets and liabilities and cash flow by leveraging our sales resources and client base. These adjustments related to a reduction in deferred income taxes and resulted in adjustments to the preliminary opening balance sheet. We also incurred fees of approximately \$3.3 million. We also incurred fees of approximately \$28,000 for accrued expenses resulting in a net decrease to goodwill of approximately \$3.3 million. We also incurred fees of approximately \$28,000 for financial advisory, legal, accounting, due diligence, valuation and other various services necessary to complete the acquisition. These fees were expensed in 2018 and are included in selling, general and administrative expenses.

Notes to Consolidated Financial Statements

The following unaudited pro forma information of the consolidated results of operations have been prepared as if the Socrata acquisition had occurred at January 1, 2017, after giving effect to certain adjustments, including amortization of intangibles, interest, transaction costs and tax effects.

Twelve Months Ended December 31,	2018	2017
Revenues	\$843,723	\$865,944
Net income	139,315	150,515
Basic earnings per share	3.62	4.04
Diluted earnings per share	\$ 3.47	\$ 3.84

Pro forma information above does not include acquisitions that are not considered material to our results of operations. The pro forma information does not purport to represent what our results of operations actually would have been had such transaction or event occurred on the dates specified, or to project our results of operations for any future period.

On April 30, 2018, we acquired all of the equity interests of Sage Data Security, LLC ("Sage"), a cybersecurity company offering a suite of services that supports an entire cybersecurity lifecycle, including program development, education and training, technical testing, advisory services, and digital forensics. The total purchase price was \$11.6 million paid in cash. Tyler has performed a valuation analysis of the fair market value of Sage's assets and liabilities. As a result, we acquired total tangible assets of approximately \$1.8 million and assumed liabilities of approximately \$730,000. We have recorded total goodwill of approximately \$3.5 million, all of which is expected to be deductible for tax purposes, and other intangible assets of approximately \$70 million. The \$70 million of intangible assets is attributable to customer relationships, acquired software and trade name and will be amortized over a weighted average period of approximately 14 years.

As of December 31, 2018, the purchase price allocations for Sage, Socrata, CaseloadPro, and MobileEyes are complete. As of December 31, 2018, the purchase price allocation for SceneDoc is not yet complete, therefore the preliminary valuation estimates of fair value assumed at the acquisition date for intangible assets, receivables and deferred revenue and related deferred taxes are subject to change as valuations are finalized.

The operating results of all 2018 acquisitions are included with the operating results of the Enterprise Software segment since their date of acquisition. Revenues from Socrata included in Tyler's results of operations totaled approximately \$13.9 million and the net loss was \$115 million for the twelve months ended December 31, 2018. The impact of the Sage, CaseloadPro, MobileEyes and SceneDoc acquisitions, individually and in the aggregate, on our operating results, assets and liabilities is not material.

Our balance sheet as of December 31, 2018, reflects the allocation of the purchase price to the assets acquired based on their fair value at the date of each acquisition. The fair value of the assets and liabilities acquired are based on valuations using Level III, unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

2017

On November 29, 2017, we acquired audio and digital two-way radio communications technology and related assets from Radio 10-33, LLC. The total purchase price was \$14 million, all of which was paid in cash.

On August 2, 2017, we acquired substantially all of the assets and assumed certain liabilities of Digital Health Department, Inc. ("DHD"), a company that provides environmental health software, offering a SaaS solution for public health compliance and inspections processes. The total purchase price, net of debt assumed, was \$3.9 million, all of which was paid in cash.

On May 30, 2017, we acquired all of the capital stock of Modria.com, Inc., a company that specializes in online dispute resolution for government and commercial entities. The total purchase price, net of debt assumed, was \$70 million, of which \$6.1 million was paid in cash and \$900,000 was accrued as of December 31, 2017.

The operating results of these acquisitions are included in our results of operations of the Enterprise Software segment from their respective dates of acquisition. The impact of these acquisitions, individually and in the aggregate, on our operating results, assets and liabilities is not material.

Notes to Consolidated Financial Statements

2016

On May 31, 2016, we acquired all of the capital stock of ExecuTime Software, LLC, a leading provider of time, attendance, and advanced scheduling software solutions. The total purchase price, net of debt assumed, was \$74 million. The fair value of the assets and liabilities acquired are based on valuations using Level III, unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. The operating results of this acquisition are included in our results of operations of the Enterprise Software segment from the date of the acquisition. The impact of this acquisition on our operating results is not material.

(3) PROPERTY AND EQUIPMENT, NET

Property and equipment, net consists of the following at December 31:

	Useful lives (years)	2018	2017
Land	—	\$ 9,588	\$ 9,588
Building and leasehold improvements	5-39	122,241	116,214
Computer equipment and purchased software	3-5	84,449	72,331
Furniture and fixtures	5	27,238	24,834
Transportation equipment	5	438	476
Accumulated depreciation and amortization		(244,524)	(224,013)
Property and equipment, net		\$(9,427)	(71,689)
		—	\$182,315

Depreciation expense was \$21.2 million in 2018, \$17.3 million in 2017, and \$13.4 million in 2016.

In 2018, we paid \$2.2 million for the expansion of existing buildings.

In 2017, we purchased an office building in Latham, New York for approximately \$2.9 million and paid \$2.1 million for improvements to that building. We also paid \$19.4 million for construction to expand our office building in Yarmouth, Maine.

We own office buildings in Bangor, Falmouth and Yarmouth, Maine, Lubbock and Plano, Texas; Troy, Michigan; Latham, New York; and Moraine, Ohio. We lease space in some of these buildings to third-party tenants. These leases expire between 2019 and 2025 and are expected to provide rental income of approximately \$1.3 million in 2019, \$1.3 million in 2020, \$1.3 million in 2021, \$1.4 million in 2022, \$1.4 million in 2023, and \$2.4 million thereafter. Rental income from third-party tenants was \$1.2 million in 2018, \$1.5 million in 2017, and \$1.7 million in 2016.

(4) GOODWILL AND OTHER INTANGIBLE ASSETS

Other intangible assets and related accumulated amortization consists of the following at December 31:

	2018	2017
Gross margin percentage		As adjusted
Gross carrying amount of acquisition intangibles:		
Customer related intangibles	\$ 238,219	\$ 179,789
Acquired software	202,416	179,466
Trade names	16,905	11,435
Leases acquired	3,694	3,694
	461,234	374,384
Accumulated amortization	(184,382)	(144,167)
Total intangibles, net	\$ 276,852	\$ 229,517

Total amortization expense for intangibles was \$39.6 million in 2018, \$35.5 million (as adjusted) in 2017, and \$35.9 million (as adjusted) during 2016.

Notes to Consolidated Financial Statements

The allocation of acquisition intangible assets is summarized in the following table:

	December 31, 2018			December 31, 2017		
	Gross Carrying Amount	Weighted Average Amortization Period	Accumulated Amortization	Gross Carrying Amount	Weighted Average Amortization Period	Accumulated Amortization
Non-amortizable intangibles:						
Goodwill	\$753,718	—	\$ —	\$657,987	—	\$ —
Amortizable intangibles:						
Customer related intangibles	233,219	15 years	78,120	179,789	15 years	63,274
Acquired software	202,416	7 years	99,772	179,466	7 years	76,800
Trade names	16,905	11 years	5,139	11,435	11 years	3,768
Leases acquired	3,694	10 years	1,351	3,694	10 years	925
The changes in the carrying amount of goodwill for the two years ended December 31, 2018 are as follows:						
		Enterprise Software	Appraisal and Tax			Total
Balance as of 12/31/2016		\$645,689	\$6,357			\$650,237
Goodwill acquired with acquisitions		7,750	—			7,750
Balance as of 12/31/2017		653,439	6,357			657,987
Goodwill acquired related to the purchase of Storata		75,657	—			75,657
Goodwill acquired related to other acquisitions		20,074	—			20,074
Balance as of 12/31/2018		\$747,161	\$6,357			\$753,718

Estimated annual amortization expense related to acquired leases will be recorded as a reduction to hardware and other revenue and is expected to be \$372,000 in 2019, \$313,000 in 2020, \$512,000 in 2021, \$312,000 in 2022, \$312,000 in 2023 and \$723,000 thereafter. Estimated annual amortization expense related to acquisition intangibles, including acquired software, for which the amortization expense is recorded as cost of revenues, is as follows:

	2019	2018
	\$ 40,222	
2020	38,820	
2021	36,453	
2022	34,957	
2023	16,950	
Thereafter	105,028	

Notes to Consolidated Financial Statements

(6) ACCRUED LIABILITIES

Accrued liabilities consist of the following at December 31:

	2018	2017
Accrued wages, bonuses and commissions	\$40,100	\$43,688
Other accrued liabilities	26,380	20,987
	<u>\$66,480</u>	<u>\$64,675</u>

(6) REVOLVING LINE OF CREDIT

On November 16, 2015, we entered into a \$300.0 million Credit Agreement (the "Credit Facility") with the various lenders party thereto and Wells Fargo Bank, National Association, as Administrative Agent. The Credit Facility provides for a revolving credit line of up to \$300.0 million, including a \$10.0 million sublimit for letters of credit. The Credit Facility matures on November 16, 2020. Borrowings under the Credit Facility may be used for general corporate purposes, including working capital requirements, acquisitions and share repurchases.

Borrowings under the Credit Facility bear interest at a rate of either (1) Wells Fargo Bank's prime rate (subject to certain higher rate determinations) plus a margin of 0.25% to 1.00% or (2) the 30, 60, 90 or 180-day LIBOR rate plus a margin of 1.25% to 2.00%. As of December 31, 2018, our interest rate was 5.75% under the prime rate option or approximately 3.77% under the 30-day LIBOR option. The Credit Facility is secured by substantially all our assets. The Credit Facility requires us to maintain certain financial ratios and other financial conditions and prohibits us from making certain investments, advances, cash dividends or loans, and limits incurrence of additional indebtedness and liens. As of December 31, 2018, we were in compliance with those covenants.

As of December 31, 2018, we had no outstanding borrowings and had unused borrowing capacity of \$300.0 million under the Credit Facility. In addition, as of December 31, 2018, we had no outstanding letter of credit.

We paid interest of \$770,000 in 2018, \$804,000 in 2017, and \$1.9 million in 2016.

(7) INCOME TAX

The income tax provision (benefit) on income from operations consists of the following:

	2018	2017	2016
			As Adjusted
Years Ended December 31:			
Current:			
Federal	\$ 9,110	\$ 22,883	\$ 41,366
State	4,367	4,596	7,023
	13,477	27,549	48,389
Deferred	(5,069)	(33,664)	(26,432)
	<u>\$ 8,408</u>	<u>\$ (6,115)</u>	<u>\$ 21,957</u>

Notes to Consolidated Financial Statements

Reconciliation of the U.S. statutory income tax rate to our effective income tax expense rate for operations follows:

Years Ended December 31,	2018	2017	2016
	As Adjusted		
Federal income tax expense at statutory rate	\$ 32,733	\$ 57,209	\$ 47,480
State income tax, net of federal income tax benefit	7,953	4,754	5,091
Domestic production activities deduction	(32,487)	(2,617)	(3,947)
Excess tax benefits related to stock option exercises	(40,624)	(40,624)	(29,582)
Tax Act adjustments	(1,750)	(25,932)	—
Tax credits	(3,715)	(3,578)	—
Non-deductible business expenses	5,655	4,573	2,979
Other, net	19	169	(64)
	<u>\$ 8,408</u>	<u>\$ (6,115)</u>	<u>\$ 21,957</u>

On December 22, 2017, the Tax Act was enacted into law. The Tax Act amends the Internal Revenue Code to reduce tax rates and modify policies, credits and deductions for individuals and businesses. For businesses, the Tax Act reduces the U.S. corporate federal tax rate from a maximum of 35% to a flat 21% rate and transitions from a worldwide tax system to a territorial tax system. The Tax Act also adds many new provisions including changes to bonus depreciation, the deduction for executive compensation and a tax on global intangible low-taxed income (GILTI). The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision was a \$26.0 million (as adjusted) tax benefit due to the remeasurement of deferred tax assets and liabilities. We recorded an additional \$1.8 million tax benefit in 2018 after our 2017 tax returns were finalized. The accounting for the income tax effects of the Tax Act was completed during the fourth quarter of 2018. Overall, the changes due to the Tax Act will favorably affect income tax expense and future U.S. earnings.

The tax effects of the major items recorded as deferred tax assets and liabilities as of December 31 are:

	2018	2017
	As Adjusted	
Deferred income tax assets:		
Operating expenses not currently deductible	\$ 4,989	\$ 9,714
Stock option and other employee benefit plans	19,496	15,952
Loss and credit carryforwards	17,599	—
Total deferred income tax assets	<u>42,084</u>	<u>25,666</u>
Valuation allowance	(1,049)	—
Total deferred income tax assets, net of valuation allowance	<u>41,035</u>	<u>25,666</u>
Deferred income tax liabilities:		
Intangible assets	(70,732)	(60,189)
Property and equipment	(8,453)	(5,699)
Prepaid expenses	(4,079)	(199)
Deferred revenue	(3,940)	(6,447)
Total deferred income tax liabilities	<u>(87,204)</u>	<u>(72,535)</u>
Net deferred income tax liabilities	<u>\$ (46,169)</u>	<u>\$ (46,869)</u>

The above 2017 balances reflect an \$8.0 million deferred tax liability related to the recognition of revenue as part of the adoption of ASU No. 2014-09.

Notes to Consolidated Financial Statements

During 2018, we acquired federal and state net operating loss and tax credit carryforwards totaling \$18.0 million in connection with the acquisition of Socrata. The federal and state net operating loss and tax credit carryforwards will expire in various years beginning in 2027. If not utilized, the acquired net operating loss and tax credit carryforwards are subject to an annual limitation but are expected to be realized with the exception of certain state net operating loss carryforwards. The valuation allowance disclosed in the table above relates to state net operating losses not likely to be realized. We believe it is more likely than not that all other deferred tax assets will be realized. However, the amount of the deferred tax asset considered realizable could be adjusted in the future if estimates of reversing taxable temporary differences are revised.

In connection with the acquisition of Socrata in 2018, we recorded a \$1.9 million liability for an uncertain tax position associated with acquired tax credit carryforwards. The unrecognized tax benefits are included in deferred income taxes in our consolidated balance sheets and are reflected in the opening balance sheet of Socrata. The entire amount, if recognized, would affect the effective tax rate.

The aggregate changes in the balance of unrecognized tax benefits were as follows:

	2018
Balance at beginning of year	\$ —
Increases for tax positions related to prior years	1,929
Balance at end of year	<u>\$ 1,929</u>

Based on the information currently available, we do not anticipate a significant increase or decrease to our tax contingencies for these issues for the next 12 months.

We are subject to U.S. federal tax, as well as income tax of multiple state, local and foreign jurisdictions. We are routinely subject to income tax examinations by these taxing jurisdictions, but we do not have a history of, nor do we expect any material adjustments as a result of these examinations. During 2017, the Internal Revenue Service issued a "no change" letter upon completion of their examination of our 2012 tax year. With few exceptions, major U.S. federal, state, local and foreign jurisdictions are no longer subject to examination for years before 2014. As of February 20, 2019, no significant adjustments have been proposed by any taxing jurisdiction.

We paid income taxes, net of refunds received, of \$6.8 million in 2018, \$36.0 million in 2017, and \$30.2 million in 2016.

(8) SHAREHOLDERS' EQUITY

The following table details activity in our common stock:

	2018		2017		2016	
	Shares	Amount	Shares	Amount	Shares	Amount
Years Ended December 31,						
Stock option exercises	1,126	\$ 74,907	1,113	\$ 49,845	827	\$ 23,527
Purchases of common stock	(781)	(150,050)	(44)	(6,613)	(882)	(112,699)
Employee stock plan purchases	45	8,051	51	7,044	47	6,236

As of February 20, 2019, we had authorization from our board of directors to repurchase up to 2.7 million additional shares of our common stock.

Notes to Consolidated Financial Statements

(9) SHARE-BASED COMPENSATION

Share-Based Compensation Plan

In May 2018, stockholders approved the Tyler Technologies, Inc. 2018 Stock Incentive Plan ("the 2018 Plan") which amended and restated the existing Tyler Technologies, Inc. 2010 Stock Option Plan ("the 2010 Plan"). Upon stockholder approval of the 2018 Plan, the remaining shares available for grant under the 2010 Plan were added to the shares authorized for grant under the 2018 Plan. Additionally, any awards previously granted under the 2010 Plan that expire unexercised or are forfeited are added to the shares authorized for grant under the 2018 Plan.

During fiscal year 2018, we granted stock awards under the 2018 Plan in the form of stock options, restricted stock units and performance share units. Stock options generally vest after three to six years of continuous service from the date of grant and have a contractual term of 10 years. Once options become exercisable, the employee can purchase shares of our common stock at the market price on the date we granted the option. Restricted stock unit grants generally vest ratably over three to five years of continuous service from the date of grant. Each performance share unit represents the right to receive one share of our common stock based on our achievement of certain financial performance targets during applicable performance periods. We account for share-based compensation utilizing the fair value recognition pursuant to ASC 718, Stock Compensation.

As of December 31, 2018, there were 3.8 million shares available for future grants under the plan from the 22.9 million shares previously approved by the shareholders.

Determining Fair Value of Stock Compensation

Valuation and Amortization Method. We estimate the fair value of stock option awards granted using the Black-Scholes option valuation model. For restricted stock unit and performance stock unit awards, we amortize the fair value of all awards on a straight-line basis over the requisite service periods, which are generally the vesting periods.

Expected Life. The expected life of awards granted represents the period of time that they are expected to be outstanding. The expected life represents the weighted-average period the stock options are expected to be outstanding based primarily on the options' vesting terms, remaining contractual life and the employees' expected exercise based on historical patterns.

Expected Volatility. Using the Black-Scholes option valuation model, we estimate the volatility of our common stock at the date of grant based on the historical volatility of our common stock.

Risk-Free Interest Rate. We base the risk-free interest rate used in the Black-Scholes option valuation model on the implied yield currently available on U.S. Treasury zero-coupon issues with an equivalent remaining term equal to the expected life of the award.

Expected Dividend Yield. We have not paid any cash dividends on our common stock in more than ten years and we do not anticipate paying any cash dividends in the foreseeable future. Consequently, we use an expected dividend yield of zero in the Black-Scholes option valuation model.

Expected Forfeitures. We use historical data to estimate pre-vesting option forfeitures. We record share-based compensation only for those awards that are expected to vest.

Notes to Consolidated Financial Statements

The following weighted average assumptions were used for options granted:

Years Ended December 31,	2018	2017	2016
Expected life (in years)	6.0	6.0	6.0
Expected volatility	26.7%	28.1%	29.3%
Risk-free interest rate	2.7%	2.0%	1.8%
Expected forfeiture rate	—%	—%	—%

Share-Based Award Activity

The following table summarizes restricted stock unit and performance stock unit activity during fiscal year 2018 (shares in thousands):

	Number of Shares	Weighted Average Grant Date Fair Value per Share
Unvested at January 1, 2018	—	\$ —
Granted	336	\$221.29
Vested	—	\$ —
Forfeited	(2)	\$225.75
Unvested at December 31, 2018	334	\$221.25

Options granted, exercised, forfeited and expired are summarized as follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding at December 31, 2015	5,154	\$ 64.43		
Granted	846	147.25		
Exercised	(827)	28.43		
Forfeited	(27)	95.32		
Outstanding at December 31, 2016	5,156	83.64		
Granted	824	176.26		
Exercised	(1,113)	44.80		
Forfeited	(50)	134.83		
Outstanding at December 31, 2017	4,817	107.91		
Granted	432	208.21		
Exercised	(1,126)	66.33		
Forfeited	(31)	158.80		
Outstanding at December 31, 2018	4,092	129.51	7	\$240,059
Exercisable at December 31, 2018	2,357	100.41	6	\$201,349

We had unvested options to purchase 1.7 million shares with a weighted average grant date exercise price of \$169.24 as of December 31, 2018, and unvested options to purchase 2.4 million shares with a weighted average grant date exercise price of \$136.51 as of December 31, 2017.

Notes to Consolidated Financial Statements

Other information pertaining to option activity was as follows during the twelve months ended December 31:

	2018	2017	2016
Weighted average grant-date fair value of stock options granted	\$ 66.52	\$ 55.56	\$ 46.89
Total intrinsic value of stock options exercised	176,716	137,689	103,703

Share-Based Compensation Expense

The following table summarizes share-based compensation expense related to share-based awards which is recorded in the statements of comprehensive income:

Years Ended December 31	2018	2017	2016
Cost of software services, maintenance and subscriptions	\$ 13,588	\$ 9,415	\$ 6,548
Selling, general and administrative expenses	39,152	27,933	23,199
Total share-based compensation expenses	52,740	37,348	29,747
Tax benefit	(32,467)	(40,604)	(30,089)
Net decrease (increase) in net income	\$ 20,273	\$ (3,276)	\$ (3,12)

As of December 31, 2018, we had \$137.6 million of total unrecognized compensation cost related to unvested options and restricted stock units, net of expected forfeitures, which is expected to be amortized over a weighted average amortization period of 3 years.

Employee Stock Purchase Plan

Under our Employee Stock Purchase Plan ("ESPP") participants may contribute up to 15% of their annual compensation to purchase common shares of Tyler. The purchase price of the shares is equal to 85% of the closing price of Tyler shares on the last day of each quarterly offering period. As of December 31, 2018, there were 749,000 shares available for future grants under the ESPP from the 2.0 million shares previously approved by the stockholders.

(10) EARNINGS PER SHARE

Basic earnings and diluted earnings per share data were computed as follows:

Years Ended December 31	2018	2017	2016
	As Adjusted		
Numerator for basic and diluted earnings per share:			
Net income	\$147,462	\$165,571	\$113,701
Denominator:			
Weighted-average basic common shares outstanding	36,445	37,273	36,448
Assumed conversion of dilutive securities:			
Stock options	1,678	1,973	2,513
Denominator for diluted earnings per share -- Adjusted weighted-average shares	40,123	35,246	38,961
Earnings per common share:			
Basic	\$ 3.84	\$ 4.55	\$ 3.12
Diluted	\$ 3.68	\$ 4.32	\$ 2.92

Notes to Consolidated Financial Statements

Share-based awards representing the right to purchase common stock of 888,000 shares in 2018, 1,343,000 shares in 2017, and 786,000 shares in 2016 were not included in the computation of diluted earnings per share because their inclusion would have had an anti-dilutive effect.

(11) LEASES

We lease office facilities for use in our operations, as well as transportation and other equipment. Most of our leases are non-cancelable operating lease agreements and they expire at various dates through 2026. In addition to rent, the leases generally require us to pay taxes, maintenance, insurance and certain other operating expenses.

Rent expense was approximately \$8.0 million in 2018, \$6.9 million in 2017, and \$6.7 million in 2016, which included rent expense associated with related party lease agreements of \$150,000 in 2017, and \$330,000 in 2016. We had no related party lease agreements in 2018.

Future minimum lease payments under all non-cancelable leases at December 31, 2018 are as follows:

Years Ending December 31	
2019	\$ 5,994
2020	5,146
2021	3,976
2022	1,925
2023	1,164
Thereafter	2,132
Total	\$20,337

(12) EMPLOYEE BENEFIT PLANS

We provide a defined contribution plan for the majority of our employees meeting minimum service requirements. Eligible employees can contribute up to 30% of their current compensation to the plan subject to certain statutory limitations. We contribute up to a maximum of 3% of an employee's compensation to the plan. We made contributions to the plan and charged operating results \$9.3 million in 2018, \$7.9 million in 2017, and \$6.9 million in 2016.

(13) COMMITMENTS AND CONTINGENCIES

Other than routine litigation incidental to our business, there are no material legal proceedings pending to which we are party or to which any of our properties are subject.

Notes to Consolidated Financial Statements

(14) SEGMENT AND RELATED INFORMATION

We provide integrated information management solutions and services for the public sector, with a focus on local governments.

We provide our software systems and services and appraisal services through five business units, which focus on the following products:

- financial management, education and planning, regulatory and maintenance software solutions;
- financial management, municipal courts, planning, regulatory and maintenance software solutions;
- courts and justice and public safety software solutions;
- data and insights solutions; and
- appraisal and tax software solutions and property appraisal services.

In accordance with ASC 280-10, *Segment Reporting*, the financial management, education and planning, regulatory and maintenance software solutions unit, financial management, municipal courts and land and vital records management software solutions unit, and the courts and justice and public safety software solutions unit meet the criteria for aggregation and are presented in one reportable segment, Enterprise Software ("ES"). The ES segment provides municipal and county governments and schools with software systems and services to meet their information technology and automation needs for mission-critical "back-office" functions such as financial management and courts and justice and public safety processes. The Appraisal and Tax ("A&T") segment provides systems and software that automate the appraisal and assessment of real and personal property as well as property appraisal outsourcing services for local governments and taxing authorities. Property appraisal outsourcing services include: the physical inspection of commercial and residential properties; data collection and processing; computer analysis for property valuation; preparation of tax rolls; community education; and arbitration between taxpayers and the assessing jurisdiction.

We evaluate performance based on several factors, of which the primary financial measure is business segment operating income. We define segment operating income for our business units as income before noncash amortization of intangible assets associated with their acquisition, interest expense and income taxes. Segment operating income includes intercompany transactions. The majority of intercompany transactions relate to contracts involving more than one unit and are valued based on the contractual arrangement. Segment operating income for corporate primarily consists of compensation costs for the executive management team and certain accounting and administrative staff and state-based compensation expense for the entire company. Corporate segment operating income also includes revenues and expenses related to a company-wide user conference. The accounting policies of the reportable segments are the same as those described in Note 1, "Summary of Significant Accounting Policies."

Segment assets include net accounts receivable, prepaid expenses and other current assets and net property and equipment. Corporate assets consist of cash and investments, prepaid insurance, intangibles associated with acquisitions, deferred income taxes and net property and equipment mainly related to unallocated information and technology assets.

ES segment capital expenditures included \$2.2 million in 2018 and \$24.4 million in 2017 for the expansion of existing buildings and purchases of buildings and land.

Notes to Consolidated Financial Statements

For the year ended December 31, 2018	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	\$ 53,735	\$ 9,706	\$ —	\$ 63,441
Subscriptions	210,740	9,807	—	220,547
Software services	165,921	24,348	—	191,269
Maintenance	359,904	24,617	—	384,521
Appraisal services	—	21,846	—	21,846
Hardware and other	18,745	32	4,881	23,658
Intercompany	13,155	—	(13,155)	—
Total revenues	\$63,200	\$30,335	\$ (6,274)	\$ 87,261
Depreciation and amortization expense	50,130	914	10,715	61,759
Segment operating income	237,159	23,094	(66,572)	193,681
Capital expenditures	13,973	782	10,377	25,132
Segment assets	\$56,100	\$63,670	\$1,271,193	\$1,790,963

For the year ended December 31, 2017 (As Adjusted)

Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues			
Software licenses and royalties	\$ 78,388	\$ 7,854	\$ 86,242
Subscriptions	164,317	7,859	172,176
Software services	161,245	19,215	180,460
Maintenance	337,701	21,618	359,319
Appraisal services	—	25,023	25,023
Hardware and other	13,057	10	13,067
Intercompany	10,425	—	(10,425)
Total revenues	\$365,133	\$81,579	\$ (5,813)
Depreciation and amortization expense	43,987	760	8,648
Segment operating income	229,001	20,788	(51,964)
Capital expenditures	28,096	1,181	16,341
Segment assets	\$365,736	\$46,279	\$1,195,336

For the year ended December 31, 2016 (As Adjusted)

Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues			
Software licenses and royalties	\$ 78,271	\$ 5,462	\$ 83,733
Subscriptions	135,459	7,188	142,647
Software services	155,322	16,376	171,698
Maintenance	302,409	18,589	320,998
Appraisal services	—	26,287	26,287
Hardware and other	11,526	16	14,557
Intercompany	6,742	—	(6,742)
Total revenues	\$689,739	\$73,868	\$ (3,727)
Depreciation and amortization expense	43,434	984	5,355
Segment operating income	196,054	18,871	(41,832)
Capital expenditures	23,843	1,432	11,448
Segment assets	\$321,886	\$33,005	\$1,023,612

Notes to Consolidated Financial Statements

	2018	2017	2016
		As Adjusted	
Reconciliation of reportable segment operating income to the Company's consolidated totals:			
Total segment operating income	\$131,481	\$197,825	\$173,093
Amortization of acquired software	(22,512)	(21,686)	(22,235)
Amortization of customer and trade name intangibles	(16,317)	(13,381)	(13,202)
Other income (expense), net	3,378	686	(1,956)
Income before income taxes	\$135,970	\$163,445	\$135,658

(15) DISAGGREGATION OF REVENUE

The tables below show disaggregation of revenue into categories that reflect how economic factors affect the nature, amount, timing, and uncertainty of revenue and cash flows.

Timing of Revenue Recognition

Timing of revenue recognition by revenue category during the period is as follows:

	For the year ended December 31, 2013	Transferred at a Point in time	Over time	Total
Revenues	\$75,188		\$ 18,263	\$ 93,441
Software licenses and royalties	—		220,347	220,347
Subscriptions	—		191,269	191,269
Software services	—		384,521	384,521
Maintenance	—		21,846	21,846
Appraisal services	—		—	—
Hardware and other	23,658		—	23,658
Total	\$98,846		\$86,436	\$935,282

	For the year ended December 31, 2017 (US-Adjusted)	Transferred as a Point in Time	Over time	Total
Revenues				
Software licenses and royalties	\$69,167	\$ 17,075	\$ 86,242	
Subscriptions	—	172,176	172,176	
Software services	—	180,460	180,460	
Maintenance	—	359,319	359,319	
Appraisal services	—	25,023	25,023	
Hardware and other	17,679	—	17,679	
Total	\$66,846	\$754,053	\$840,899	

Notes to Consolidated Financial Statements

Recurring Revenue

The majority of our revenue is comprised of recurring revenues from maintenance and subscriptions. Virtually all of our on-premises software clients contract with us for maintenance and support, which provides us with a significant source of recurring revenue. We generally provide maintenance and support for our on-premises clients under annual, or in some cases, multi-year contracts. The contract terms for subscription arrangements range from one to 10 years but are typically contracted for initial periods of three to five years, providing a significant source of recurring revenues on an annual basis. Non-recurring revenues are derived for all other revenue categories.

Recurring revenues and non-recurring revenues recognized during the period are as follows:

For the year ended December 31, 2016	Enterprise Serving	Apportioned and tax	Corporate	Totals
Recurring revenues	\$70,845	\$34,624	\$	\$105,069
Non-recurring revenues	269,400	55,562	4,991	330,213
Intercompany	13,155	—	(13,155)	—
Total revenues	\$803,200	\$90,356	\$ (8,274)	\$935,282
For the year ended December 31, 2017 (As Adjusted)	Enterprise Serving	Apportioned and tax	Corporate	Totals
Recurring revenues	\$502,018	\$29,477	\$	\$531,495
Non-recurring revenues	252,690	52,102	4,512	309,404
Intercompany	10,425	—	(10,425)	—
Total revenues	\$765,133	\$81,579	\$ (5,913)	\$940,899

(16) DEFERRED REVENUE AND PERFORMANCE OBLIGATIONS

Total deferred revenue, including long-term, by segment is as follows:

December 31,	As Adjusted
Enterprises Software	\$327,521
Appraisal and Tax	20,387
Corporate	2,302
Totals	\$350,209

The opening balance of total deferred revenue, including long-term, was \$290.1 million (as adjusted) as of January 1, 2017.

Changes in total deferred revenue, including long-term, were as follows:

Balance at beginning of year (As Adjusted)	\$ 299,887	2018
Deferral of revenue	871,498	
Recognition of deferred revenue	(820,449)	
Balance at end of year	\$ 350,936	

Notes to Consolidated Financial Statements

Transaction Price Allocated to the Remaining Performance Obligations

The aggregate amount of transaction price allocated to the remaining performance obligations represents contracted revenue that has not yet been recognized ("Backlog"), which includes deferred revenue and amounts that will be invoiced and recognized as revenue in future periods. Backlog as of December 31, 2018 was \$125 billion, of which we expect to recognize approximately 50% as revenue over the next 12 months and the remainder thereafter.

(17) DEFERRED COMMISSIONS

Sales commissions earned by our sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for initial contracts are deferred and then amortized commensurate with the recognition of associated revenue over a period of benefit that we have determined to be three to seven years. Deferred commissions were \$219 million and \$19.3 million (as adjusted) as of December 31, 2018, and December 31, 2017, respectively. Amortization expense was \$15.6 million for the twelve months ended December 31, 2018 and \$11.2 million (as adjusted) for the twelve months ended December 31, 2017, respectively. There were no indicators of impairment in relation to the costs capitalized for the periods presented. Deferred commissions have been included with prepaid expenses in the accompanying consolidated balance sheets. Amortization expense related to deferred commissions is included in selling, general and administrative expenses in the accompanying consolidated statements of income.

(18) SUBSEQUENT EVENTS

The following events and transactions occurred subsequent to December 31, 2018:

On January 31, 2019, (i) Tyler Technologies, Inc., a Delaware corporation ("Parent"), (ii) TMP Subsidiary, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), (iii) MP Holdings Parent, Inc., dba MicroPact, a Delaware corporation ("MicroPact"), and (iv) Arlington Capital Partners II L.P., a Delaware limited partnership ("Representative"), signed an Agreement and Plan of Merger (the "Merger Agreement").

The Merger Agreement provides for the merger of Merger Sub with and into MicroPact on the terms and subject to the conditions set forth in the Merger Agreement, with MicroPact as the surviving company and a wholly owned, direct subsidiary of Parent.

Pursuant to the Merger Agreement, Parent will pay MicroPact's shareholders aggregate merger consideration of approximately \$185.0 million in cash, which shall include an amount equal to MicroPact's closing date working capital and be subject to a post-closing working capital adjustment as described in the Merger Agreement and an additional merger consideration of up to \$10.0 million based on certain fiscal 2019 EBITDA thresholds. The merger consideration will be funded from cash on hand and proceeds from the revolving credit facility.

The Merger and the Merger Agreement have been approved by the boards of directors of both MicroPact, Parent and Merger Sub. The Merger Agreement contains customary representations, warranties, and covenants of MicroPact, Parent and Merger Sub. The covenants include, among others, an obligation on behalf of MicroPact to operate its business in the ordinary course until the Merger is consummated, and limitations on the right of MicroPact to solicit or engage in negotiations regarding alternative acquisition proposals during the pre-closing period.

The completion of the Merger is subject to customary closing conditions, including the expiration or the termination of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act. The Federal Trade Commission granted early termination of that waiting period effective February 15, 2019. Customary closing conditions also include each party's satisfaction of the applicable representations and warranties, and compliance in all material respects with its applicable covenants. Consummation of the Merger is not subject to a financing condition.

The Merger Agreement may be terminated prior to closing under certain enumerated circumstances, including if the Merger is not consummated by May 1, 2019. Termination rights are held by Parent, MicroPact and Representative, depending on the circumstances giving rise to the termination.

MicroPact is a leading provider of commercial off-the-shelf (COTS) solutions, including emellitrak®, a low-code application development platform for case management and business process management used extensively in the public sector.

Notes to Consolidated Financial Statements

On February 1, 2019, we acquired all the assets of Civic, LLC ("MyCivic"), a company that provides software solutions to connect communities. The purchase price is \$37 million of which \$3.6 million was paid in cash and approximately \$90,000 was accrued for a working capital holdback.

(19) QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

The following table contains selected financial information from unaudited statements of income for each quarter of 2018 and 2017.

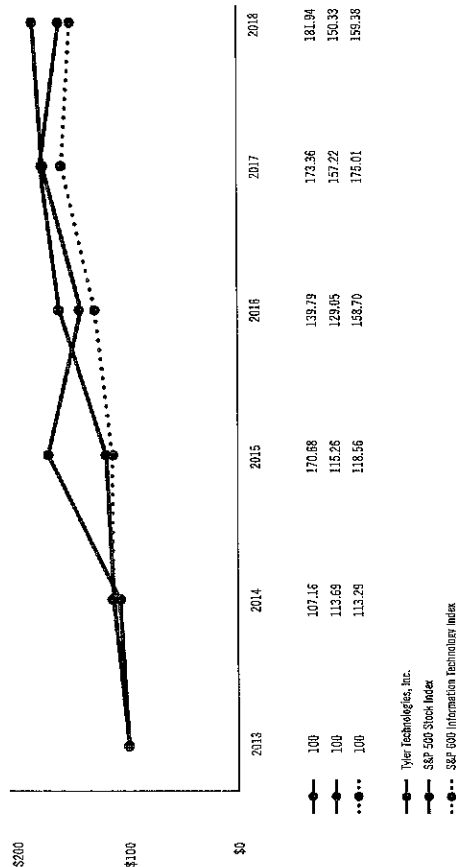
	2018						2017 (As Adjusted)					
	Quarters Ended						Quarters Ended					
	Dec. 31	Sept. 30	June 30	Mar. 31	Dec. 31 ^(a)	Mar. 31	Dec. 31 ^(a)	Sept. 30	June 30	Mar. 31	Dec. 31	Mar. 31
Revenues	\$241,381	\$236,067	\$236,060	\$221,174	\$217,701	\$214,706	\$214,706	\$208,763	\$196,779			
Gross profit	115,971	111,626	109,276	102,805	105,350	109,589	109,589	95,503	94,535			
Income before income taxes	40,107	38,826	37,700	39,437	45,261	44,357	44,357	37,197	36,641			
Net income	31,652	38,924	39,161	37,825	55,196	38,838	38,838	31,770	32,769			
Earnings per diluted share	\$ 0.79	\$ 0.96	\$ 0.97	\$ 0.95	\$ 1.68	\$ 0.99	\$ 0.99	\$ 0.81	\$ 0.84			
Shares used in computing diluted earnings per share	39,891	40,528	40,224	39,836	39,499	39,342	39,342	39,201	38,932			

(a) The fourth quarter of 2017 includes the significant impact of the enactment of the Tax Act. The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision is a \$26.0 million tax benefit due to the remeasurement of deferred tax assets and liabilities, refer to Note 7 — "Income Tax" for further discussion on the impact the Tax Act.

Performance Graph

The following table compares total shareholder returns for Tyler over the last five years to the Standard and Poor's 500 Stock Index and the Standard and Poor's 600 Information Technology Index assuming a \$100 investment made on December 31, 2013. Each of the three measures of cumulative total return assumes reinvestment of dividends. The stock performance shown on the graph below is not necessarily indicative of future price performance.

COMPARISON OF CUMULATIVE FIVE YEAR TOTAL RETURN



CORPORATE OFFICERS

H. Lynn Moore Jr.
President & Chief Executive Officer

Brian K. Miller
Executive Vice President,
Chief Financial Officer & Treasurer

Matthew B. Bieri
Chief Information Officer

S. Brett Catto
Chief Sales Officer

Samantha B. Crosby
Chief Marketing Officer

Abigail M. Diaz
Chief Legal Officer & Secretary

Bruce E. Graham
Chief Strategy Officer

Jeffrey S. Green
Chief Technology Officer

Kelley B. Shirmansky
Chief Human Resources Officer

W. Michael Smith
Chief Accounting Officer

BOARD OF DIRECTORS

John S. Marr Jr.
Executive Chairman of the Board
Tyler Technologies, Inc.

Donald R. Brattain^{1,2,4}
President
Brattain and Associates, LLC

Glenn A. Carter^{1,4}
Retired Chief Executive Officer
DataProse, Inc.

Brenda A. Cline^{1,3}
Executive Vice President
Kinbell Art Foundation

J. Luther King Jr.^{2,4}
Chief Executive Officer
Luther King Capital Management

Daniel M. Pope
Mayor
City of Lubbock, Texas

Dustin R. Womble¹
Retired Executive Vice President
Tyler Technologies, Inc.

¹ Executive Committee
² Audit Committee
³ Nominating and Governance Committee
⁴ Compensation Committee

CORPORATE HEADQUARTERS

5101 Tennyson Parkway
Plano, Texas 75024
972.713.3700
tylertech.com

TRANSFER AGENT AND REGISTRAR

American Stock Transfer & Trust Company
6201 15th Avenue
Brooklyn, New York 11219
800.937.5449
help@astfinancial.com
amstock.com

INDEPENDENT REGISTERED PUBLIC

ACCOUNTING FIRM
Ernst & Young LLP
Dallas, Texas

ANNUAL MEETING OF STOCKHOLDERS

Tuesday, May 7, 2019
9:30 A.M. Central Time
Renaissance Dallas at Plano Legacy West Hotel
6007 Legacy Drive
Plano, Texas 75024

CERTIFICATIONS

We submitted an unqualified Annual
CEO Certification to the New York Stock
Exchange (NYSE) as required by the NYSE
Listed Company rules. We also filed with the
Securities and Exchange Commission the
Chief Executive Officer and Chief Financial
Officer certifications required under Section
302 of the Sarbanes-Oxley Act as exhibits to
our Annual Report on Form 10-K.

INVESTOR INFORMATION

Our annual report on Form 10-K is
available on the company's website at
tylertech.com. A copy of the Form 10-K or
other information may also be obtained
by contacting the Investor Relations
Department at corporate headquarters.

INVESTOR RELATIONS

972.713.3714
info@tylertech.com

COMMON STOCK

Listed on the New York Stock Exchange
under the symbol "TYL."

Operational Leadership

ENTERPRISE GROUP

Andrew D. Teed
President
Enterprise Group

Mark A. Hawkins
President
Appraisal & Tax Division

Christopher P. Hepburn
President
ERP & Schools Division

Dane L. Womble
President
Local Government Division

JUSTICE GROUP

D. Bret Dixon
President
Justice Group

Bruce E. Graham
President
Courts & Justice Division

Greg T. Sebastian
President
Public Safety Division

Kevin Merritt
President
Data & Insights Division





Empowering people who serve the public®

5101 Tennyson Parkway | Plano, TX 75024
972.713.3700

TYLERTECH.COM

Tyler Technologies' Appraisal & Tax Division provides systems and software that automate the appraisal and assessment of real and personal property, including record keeping, mass appraisal, inquiry and protest tracking, appraisal and tax roll generation, tax statement processing and electronic state-level reporting. These systems are image and video-enabled to facilitate the storage of and access to the many property-related documents and for the online storage of digital photographs of properties for use in defending values in protest situations. Other related tax applications are available for agencies that bill and collect taxes, including cities, counties, school tax offices, and special taxing and collection agencies. These systems support billing, collections, lock box operations, mortgage company electronic payments, and various reporting requirements.

Tyler Technologies' Public Safety Division provides public safety software that is a fully unified and comprehensive solution for law enforcement, fire and EMS, including 911/computer aided dispatch ("CAD"), records management, mobile computing, corrections management, Web-based information sharing and decision support. The modules are fully integrated, utilizing a common database and providing full functionality between modules, reducing data entry. The software provides fast, efficient dispatching, and quick access to records, reports and actionable information from an agency's database.

Please also see attached 2018 Annual Report.

NYS Department of State

Division of Corporations

Entity Information

The information contained in this database is current through March 27, 2019.

Selected Entity Name: TYLER TECHNOLOGIES, INC.

Selected Entity Status Information

Current Entity Name: TYLER TECHNOLOGIES, INC.

DOS ID #: 3168959

Initial DOS Filing Date: FEBRUARY 25, 2005

County: ALBANY

Jurisdiction: DELAWARE

Entity Type: FOREIGN BUSINESS CORPORATION

Current Entity Status: ACTIVE

Selected Entity Address Information

DOS Process (Address to which DOS will mail process if accepted on behalf of the entity)

TYLER TECHNOLOGIES, INC.
5101 TENNYSON PARKWAY
PLANO, TEXAS, 75024

Chief Executive Officer

JOHN S MARR JR
5101 TENNYSON PARKWAY
PLANO, TEXAS, 75024

Principal Executive Office

TYLER TECHNOLOGIES, INC.
5101 TENNYSON PARKWAY
PLANO, TEXAS, 75024

Registered Agent

CAPITOL SERVICES, INC.
1218 CENTRAL AVENUE, SUITE 100
ALBANY, NEW YORK, 12205

This office does not record information regarding the names and addresses of officers, shareholders or directors of nonprofessional corporations except the chief executive officer, if provided, which would be listed above. Professional corporations must include the name(s) and address(es) of the initial officers, directors, and shareholders in the initial certificate of incorporation, however this information is not recorded and only available by viewing the certificate.

***Stock Information**

# of Shares	Type of Stock	\$ Value per Share
No Information Available		

*Stock information is applicable to domestic business corporations.

Name History

Filing Date	Name Type	Entity Name
FEB 25, 2005	Actual	TYLER TECHNOLOGIES, INC.

A **Fictitious** name must be used when the **Actual** name of a foreign entity is unavailable for use in New York State. The entity must use the fictitious name when conducting its activities or business in New York State.

NOTE: New York State does not issue organizational identification numbers.

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NYS Department of State

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ALBANY, NEW YORK, 12205

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COUNTY OF NASSAU

CONSULTANT'S, CONTRACTOR'S AND VENDOR'S DISCLOSURE FORM

1. Name of the Entity: Tyler Technologies, Inc.

Address: 5101 Tennyson Parkway

City: Plano State: TX Zip Code: 75024

2. Entity's Vendor Identification Number: 752303920

3. Type of Business: Public Corp (specify) _____

4. List names and addresses of all principals; that is, all individuals serving on the Board of Directors or comparable body, all partners and limited partners, all corporate officers, all parties of Joint Ventures, and all members and officers of limited liability companies (attach additional sheets if necessary):

See attached file(s):

YES ☒ NO ☐

5. List names and addresses of all shareholders, members, or partners of the firm. If the shareholder is not an individual, list the individual shareholders/partners/members. If a Publicly held Corporation, include a copy of the 10K in lieu of completing this section.

If none, explain.

6. List all affiliated and related companies and their relationship to the firm entered on line 1. above (if none, enter "None"). Attach a separate disclosure form for each affiliated or subsidiary company that may take part in the performance of this contract. Such disclosure shall be updated to include affiliated or subsidiary companies not previously disclosed that participate in the performance of the contract.

Tyler Technologies A&T Services, LLC - wholly owned subsidiary of Tyler Technologies, Inc.
Tyler Appraisal & Tax Services, ULC - wholly owned subsidiary of Tyler Technologies A&T Services, LLC
Socrata, Inc. - wholly owned subsidiary of Tyler Technologies, Inc.
Micropact, Inc. - wholly owned subsidiary of Tyler Technologies, Inc.
Tyler Technologies Australia PTY LTD - wholly owned subsidiary of Tyler Technologies, Inc.

None of the above listed subsidiaries will be taking part in the performance of the contracts.

7. List all lobbyists whose services were utilized at any stage in this matter (i.e., pre-bid, bid, post-bid, etc.). If none, enter "None." The term "lobbyist" means any and every person or organization retained, employed or designated by any client to influence - or promote a matter before - Nassau County, its agencies, boards, commissions, department heads, legislators or committees, including but not limited to the Open Space and Parks Advisory Committee and Planning Commission. Such matters include, but are not limited to, requests for proposals, development or improvement of real property subject to County regulation, procurements. The term "lobbyist" does not include any officer, director, trustee, employee, counsel or agent of the County of Nassau, or State of New York, when discharging his or her official duties.

Are there lobbyists involved in this matter?

YES ☐ NO ☒

(a) Name, title, business address and telephone number of lobbyist(s):

None

(b) Describe lobbying activity of each lobbyist. See below for a complete description of lobbying activities.

None

(c) List whether and where the person/organization is registered as a lobbyist (e.g., Nassau County, New York State):

None

8. VERIFICATION: This section must be signed by a principal of the consultant, contractor or Vendor authorized as a signatory of the firm for the purpose of executing Contracts.

The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her knowledge, true and accurate.

Electronically signed and certified at the date and time indicated by:

Abigail Diaz [ABIGAIL.DIAZ@TYLERTECH.COM]

Dated: 06/05/2019 10:18:51 AM

Title: Chief Legal Officer

The term lobbying shall mean any attempt to influence: any determination made by the Nassau County Legislature, or any member thereof, with respect to the introduction, passage, defeat, or substance of any local legislation or resolution; any determination by the County Executive to support, oppose, approve or disapprove any local legislation or resolution, whether or not such legislation has been introduced in the County Legislature; any determination by an elected County official or an officer or employee of the County with respect to the procurement of goods, services or construction, including the preparation of contract specifications, including by not limited to the preparation of requests for proposals, or solicitation, award or administration of a contract or with respect to the solicitation, award or administration of a grant, loan, or agreement involving the disbursement of public monies; any determination made by the County Executive, County Legislature, or by the County of Nassau, its agencies, boards, commissions, department heads or committees, including but not limited to the Open Space and Parks Advisory Committee, the Planning Commission, with respect to the zoning, use, development or improvement of real property subject to County regulation, or any agencies, boards, commissions, department heads or committees with respect to requests for proposals, bidding, procurement or contracting for services for the County; any determination made by an elected county official or an officer or employee of the county with respect to the terms of the acquisition or disposition by the county of any interest in real property, with respect to a license or permit for the use of real property of or by the county, or with respect to a franchise, concession or revocable consent; the proposal, adoption, amendment or rejection by an agency of any rule having the force and effect of law; the decision to hold, timing or outcome of any rate making proceeding before an agency; the agenda or any determination of a board or commission; any determination regarding the calendaring or scope of any legislature oversight hearing; the issuance, repeal, modification or substance of a County Executive Order; or any determination made by an elected county official or an officer or employee of the county to support or oppose any state or federal legislation, rule or regulation, including any determination made to support or oppose that is contingent on any amendment of such legislation, rule or regulation, whether or not such legislation has been formally introduced and whether or not such rule or regulation has been formally proposed.

Tyler Technologies, Incorporated

Corporate Officers	Board of Directors
H. Lynn Moore Jr. President and Chief Executive Officer 5101 Tennyson Parkway, Plano, Texas 75024	John S. Marr Jr. Executive Chairman of the Board, Tyler Technologies, Inc. One Tyler Drive, Yarmouth, Maine 04096
Brian K. Miller Executive Vice President, Chief Financial Officer and Treasurer 5101 Tennyson Parkway, Plano, Texas 75024	H. Lynn Moore Jr. President and Chief Executive Officer, Tyler Technologies, Inc. 5101 Tennyson Parkway, Plano, Texas 75024
Matthew B. Bieri Chief Information Officer 5101 Tennyson Parkway, Plano, Texas 75024	Donald R. Brattain President, Brattain and Associates, LLC 2827 Flight Safety Drive Vero Beach, Florida 32960
Brett Cate Chief Sales Officer 5519 53rd Street, Lubbock, Texas 79414	Glenn A. Carter Retired Chief Executive Officer, DataProse, Inc. 5101 Tennyson Parkway Plano, Texas 75024
Samantha B. Crosby Chief Marketing Officer 5101 Tennyson Parkway, Plano, Texas 75024	Brenda A. Cline Executive Vice President, Kimbell Art Foundation 301 Commerce Street Fort Worth, Texas 76102
Abigail Díaz Chief Legal Officer One Tyler Drive, Yarmouth, Maine 04096	J. Luther King Jr. Chief Executive Officer, Luther King Capital Management 301 Commerce Street, Suite 1600 Fort Worth, Texas 76102
Bruce E. Graham Chief Strategy Officer and Interim President, Courts & Justice Division 5101 Tennyson Parkway, Plano, Texas 75024	Daniel M. Pope Mayor, City of Lubbock, Texas 1625 13th Street Lubbock, Texas 79401
Jeff Green Chief Technology Officer 1601 East Valley Road, Suite 200, Renton, Washington 98057	Dustin R. Womble Retired Executive Vice President, Tyler Technologies, Inc. 5519 53rd Street Lubbock, Texas 79414
Kelley Shimansky, Chief Human Resources Officer One Tyler Drive, Yarmouth, Maine 04096	
W. Michael Smith Chief Accounting Officer 5101 Tennyson Parkway, Plano, Texas 75024	

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

- ☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES AND EXCHANGE ACT OF 1934
For the Fiscal Year Ended December 31, 2018
OR
☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES AND EXCHANGE ACT OF 1934
Commission File Number 1-10485

TYLER TECHNOLOGIES, INC.
(Exact name of registrant as specified in its charter)

DELAWARE (State or other jurisdiction of incorporation or organization)	75-2303920 (IRS employer identification no.)
5101 Tennyson Parkway Plano, Texas	75024
(Address of principal executive offices)	(Zip code)

Registrant's telephone number, including area code: (972) 713-3700

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u> COMMON STOCK, \$0.01 PAR VALUE	<u>Name of each exchange on which registered</u> NEW YORK STOCK EXCHANGE
--	---

Securities registered pursuant to Section 12(g) of the Act:

NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☐ NO ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark if disclosure of delinquent filer pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of the Form 10-K or any amendment to the Form 10-K. YES ☐ NO ☒

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data file required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES ☒ NO ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒ Accelerated filer ☐

Non-accelerated filer (Do not check if smaller reporting company) ☐ Smaller reporting company ☐

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act.) YES ☐ NO ☒

The aggregate market value of the voting stock held by non-affiliates of the registrant was \$8,417,174,000 based on the reported last sale price of common stock on June 30, 2018, which is the last business day of the registrant's most recently completed second fiscal quarter.

The number of shares of common stock of the registrant outstanding on February 19, 2019 was 38,293,000.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information required by Part III of this annual report is incorporated by reference from the registrant's definitive proxy statement for its annual meeting of stockholders to be held on May 7, 2019.

TYLER TECHNOLOGIES, INC.
FORM 10-K
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PART I

ITEM 1. BUSINESS.

DESCRIPTION OF BUSINESS

Tyler Technologies, Inc. ("Tyler") is a major provider of integrated information management solutions and services for the public sector, with a focus on local governments. We partner with clients to make government more accessible to the public, more responsive to the needs of citizens and more efficient in its operations. We have a broad line of software solutions and services to address the information technology ("IT") needs of major areas of operations for cities, counties, schools and other government entities. Most of our clients have our software installed in-house. For clients who prefer not to physically acquire the software and hardware, most of our software applications can be delivered as software as a service ("SaaS"), which primarily utilize the Tyler private cloud. We provide professional IT services to our clients, including software and hardware installation, data conversion, training and, at times, product modifications. In addition, we are the nation's largest provider of outsourced property appraisal services for taxing jurisdictions. We also provide continuing client support services to ensure product performance and reliability, which provides us with long-term client relationships and a significant base of recurring maintenance revenue. In addition, we provide electronic document filing ("e-filing") solutions, which simplify the filing and management of court documents.

Tyler was founded in 1966. Prior to 1998, we operated as a diversified industrial conglomerate, with operations in various industrial, retail and distribution businesses, all of which have been divested. In 1997, we embarked on a multi-phase growth plan focused on serving the specialized information management needs of local governments nationwide. We entered the local government IT market through a series of strategic acquisitions in 1998 and 1999.

MARKET OVERVIEW

The state and local government market is one of the largest and most decentralized IT markets in the country, consisting of all 50 states, approximately 3,000 counties, 36,000 cities and towns and 13,900 school districts. This market is also comprised of approximately 37,000 special districts and other agencies, each with specialized delegated responsibilities and unique information management requirements.

Traditionally, local government bodies and agencies performed state-mandated duties, including property assessment, record keeping, road maintenance, law enforcement, administration of election and judicial functions, and the provision of welfare assistance. Today, a host of emerging and urgent issues are confronting local governments, each of which demands a service response. These areas include criminal justice and corrections, administration and finance, public safety, health and human services, planning, regulatory and maintenance and records and document management. Transfers of responsibility from the federal and state governments to county and municipal governments and agencies in these and other areas also place additional service and financial requirements on these local government units. In addition, constituents of local governments are increasingly demanding improved service and better access to information from public entities. As a result, local governments recognize the increasing value of information management systems and services to, among other things, improve revenue collection, provide increased access to information, and streamline delivery of services to their constituents. Local government bodies are now recognizing that "e-government" is an additional responsibility for community development. From integrated tax systems to integrated civil and criminal justice information systems, many counties and cities have benefited significantly from the implementation of jurisdiction-wide systems that allow different agencies or government offices to share data and provide a more comprehensive approach to information management. Many city and county governmental agencies also have unique individual information management requirements, which must be tailored to the specific functions of each particular office.

Many local governments also have difficulties attracting and retaining the staff necessary to support their IT functions. As a result, they seek to establish long-term relationships with reliable providers of high quality IT products and services such as Tyler.

Although local governments often face budgetary constraints in their operations, their primary revenue sources are usually property taxes, and to a lesser extent, utility billings and other fees, which historically tend to be relatively stable. In addition, the acquisition of new technology typically enables local governments to operate more efficiently, and often provides a measurable return on investment that justifies the purchase of software and related services.

Gartner, Inc., a leading information technology research and advisory company, estimates that state and local government application and vertical specific software spending will grow from \$16.1 billion in 2019 to \$19.6 billion in 2022. The professional services and support segments of the market are expected to expand from \$31.6 billion in 2019 to \$35.2 billion in 2022. Application and vertical specific software sales in the primary and secondary education segments of the market is expected to expand from \$2.8 billion in 2019 to \$3.6 billion in 2022 while professional services and support are expected to grow from \$1.9 billion in 2019 to \$2.2 billion in 2022.

PRODUCTS AND SERVICES

We provide a comprehensive and flexible suite of products and services that addresses the information technology needs of cities, counties, schools and other local government entities. We derive our revenues from five primary sources:

- Sales of software licenses and royalties
- Subscription-based arrangements
- Software services
- Maintenance and support
- Appraisal services

We design, develop, market and support a broad range of software solutions to serve mission-critical “back-office” functions of local governments. Many of our software applications include Internet-accessible solutions that allow for real-time public access to a variety of information or that allow the public to transact business with local governments via the Internet. Our software solutions and services are generally grouped in seven major areas:

- Financial Management and Education
- Courts and Justice
- Public Safety
- Property Appraisal and Tax
- Planning, Regulatory and Maintenance
- Land and Vital Records Management
- Data and Insights

Each of our core software systems consists of several fully integrated applications. For clients who acquire software for use on premises, we generally license our systems under standard perpetual license agreements that provide the client with a fully paid, nonexclusive, nontransferable right to use the software. In some of the product areas, such as financial management and education and property appraisal and tax, we offer multiple solutions designed to meet the needs of different sized governments.

We also offer SaaS arrangements, which generally utilize the Tyler private cloud, for clients who do not wish to maintain, update and operate these systems or to make up-front capital expenditures to implement these advanced technologies. For these clients, the software and client data are hosted at our data centers or at third-party locations, and clients typically sign multi-year contracts for these subscription-based services.

Historically, we have had a greater proportion of our annual revenues in the second half of our fiscal year due to governmental budget and spending cycles and the timing of system implementations for clients desiring to “go live” at the beginning of the calendar year.

A description of our suites of products and services follows:

Software Licenses

Financial Management and Education

Our financial management and education solutions are enterprise resource planning systems for local governments, which integrate information across all facets of a client organization. Our financial management solutions include modular fund accounting systems that can be tailored to meet the needs of virtually any government agency or not-for-profit entity. Our financial management systems include modules for general ledger, budget preparation, fixed assets, requisitions, purchase orders, bid management, accounts payable, contract management, accounts receivable, investment management, inventory control, project and grant accounting, work orders, job costing, GASB reporting, payroll and human resources. All of our financial management systems are intended to conform to government auditing and financial reporting requirements and generally accepted accounting principles.

We sell utility billing systems that support the billing and collection of metered and non-metered services, along with multiple billing cycles. Our Web-enabled utility billing solutions allow clients to access information online such as average consumption and transaction history. In addition, our systems can accept secured Internet payments via credit cards and checks.

We also offer specialized products that automate numerous city and county functions, including municipal courts, parking tickets, equipment and project costing, animal licenses, business licenses, permits and inspections, code enforcement, citizen complaint tracking, ambulance billing, fleet maintenance, and cemetery records management.

In addition to providing financial management systems to K-12 schools, we sell student information systems for K-12 schools, which manage such activities as scheduling, grades and attendance. We also offer student transportation solutions to manage school bus routing optimization, fleet management, field trips and other related functions.

Tyler's financial management and education solutions include Web components that enhance local governments' service capabilities by facilitating online access to information for both employees and citizens and enabling online transactions.

Courts and Justice

We offer a complete, fully integrated suite of judicial solutions designed to handle complex, multi-jurisdictional county or statewide implementations as well as single county systems. Our solutions help eliminate duplicate data entry, promote more effective business procedures and improve efficiency across the entire justice process.

Our unified court case management system is designed to automate the tracking and management of information involved in all case types, including criminal, traffic, civil, family, probate and juvenile courts. It also tracks the status of cases, processes fines and fees and generates the specialized judgment and sentencing documents, notices and forms required in the court process. Documents received by the court can be scanned into the electronic case file and easily retrieved for viewing. Documents generated by the court can be electronically signed and automatically attached to the electronic case file. Additional modules automate the management of court calendars, coordinate judges' schedules and generate court dockets. Our targeted courtroom technologies allow courts to rapidly review calendars, cases and view documents in the courtroom. Courts may also take advantage of our related jury management system.

Our court and law enforcement systems allow the public to access, via the Internet, a variety of information, including non-confidential criminal and civil court records, jail booking and release information, bond and bondsmen information, and court calendars and dockets. In addition, our systems allow cities and counties to accept payments for traffic and parking tickets over the Internet, with a seamless and automatic interface to back-office justice and financial systems.

Our prosecutor system enables state attorney offices to track and manage criminal cases, including detailed victim information and private case notes. Investigative reports and charging instrument documents can be generated and stored for later viewing. Prosecutors can schedule and record the outcome of grand jury hearings. When integrated with the court system, prosecutors can view the electronic case file and related documents, as well as manage witness lists and subpoenas needed for court hearings.

Our supervision system allows pre-trial and probation offices to manage offender caseloads. Supervision officers can track contact schedules, risk/needs assessments and reassessments, detailed drug test results, employment histories, compliance with conditions and payments of fees and restitution. Documents and forms, like pre-sentence investigations or revocation orders, can be generated and stored for easy viewing. When integrated with the jail and court systems, supervision officers obtain easy access and quick notification of offenders that have court hearings scheduled, are arrested locally, and have new warrants issued.

We also offer a court case management solution that automates and tracks all aspects of municipal courts and offices. It is a fully integrated, graphical application that provides effective case management, document processing and cash/bond management. This system complies with all state reporting and conviction reports and includes electronic reporting and also integrates with certain of our financial management solutions and public safety solutions.

Public Safety

Our public safety software is a fully unified and comprehensive solution for law enforcement, fire and EMS, including 911 / computer aided dispatch ("CAD"), records management, mobile computing, corrections management, Web-based information sharing and decision support. The modules are fully integrated, utilizing a common database and providing full functionality between modules, reducing data entry. The software provides fast, efficient dispatching, and quick access to records, reports and actionable information from an agency's database.

Our 911 / CAD solutions provide real-time, critical response dispatch functions in either single- or multi-jurisdictional environments. When integrated with our records management software, a vital link exists between dispatch and the most comprehensive records database available. Within seconds, the dispatch operator and the officer in the field can access critical information, such as prior incidents and outstanding warrants, increasing officer knowledge and safety. The solutions offer strong geographic information systems integration to help dispatchers quickly locate and send the best response during an emergency. Tyler's 911 / CAD solutions dramatically improve performance, response time and unit safety.

Our records management solutions for law enforcement and fire track statistical, operational, investigative and management data for inquiry and reporting. The systems create an efficient case processing workflow and help solve crimes with an accessible database that maintains central files on people, places, property, vehicles and criminal activity. Tyler's public safety records management solutions enable easy access to information and simplify reporting.

Our mobile computing solutions for law enforcement and fire provide instant access to local, state, regional and federal databases via mobile devices. Officers and firefighters can experience the benefits of obtaining critical, real-time information in the field, while saving time by preparing reports directly in their vehicles.

Our jail management systems document and manage information that meets the requirements of a modern jail facility. This includes the booking and housing of persons in custody, supervising defendants on a pre-trial release, maintaining offenders sentenced to local incarceration and billing other agencies for housing inmates. Searching, reporting and tracking features are integrated, allowing reliable, up-to-date access to current arrest and incarceration data, including digital mug shots. Our systems also provide warrant checks for visitors or book-ins, inmate classification and risk assessment, commissary, property and medical processing, automation of statistics, and state and federal reporting.

Our civil processing solutions manage civil process needs from document receipt through service, payment process and final closeout. We also have a mobile electronic citation solution through which law enforcement officers can easily enter citation information in a mobile device, which is automatically uploaded into the court or public safety records management systems, rather than hand-writing citations that must be re-entered into the systems.

Property Appraisal and Tax

We provide systems and software that automate the appraisal and assessment of real and personal property, including record keeping, mass appraisal, inquiry and protest tracking, appraisal and tax roll generation, tax statement processing, and electronic state-level reporting. These systems are image and video-enabled to facilitate the storage of and access to the many property-related documents and for the online storage of digital photographs of properties for use in defending values in protest situations. Other related tax applications are available for agencies that bill and collect taxes, including cities, counties, school tax offices, and special taxing and collection agencies. These systems support billing, collections, lock box operations, mortgage company electronic payments, and various reporting requirements.

Planning, Regulatory and Maintenance

Our planning, regulatory and maintenance software solutions are designed for public sector agencies such as community development, planning, building, code enforcement, tax and revenues, public works, transportation, land control, environmental, fire safety, storm water management, regulatory controls and engineering. These solutions help public sector agencies better manage their day-to-day business functions while streamlining and automating the many aspects of their land management, permitting and planning systems. Our mobile solutions extend automation to the field and Web access brings online services to citizens 24 hours a day, 365 days a year.

Land and Vital Records Management

We also offer a number of specialized software applications designed to help local governments enhance and automate operations involving records and document management. These systems record, scan and index information for the many documents maintained by local governments, such as deeds, mortgages, liens, UCC financing statements and vital records (birth, death and marriage certificates). These applications include fully integrated imaging systems with batch and scan processing capabilities and fully integrated receipting and cashing systems, as well as Web-enabled public access.

Our content management solutions allow state and local governments and school districts to capture, deliver, manage and archive electronic information. These solutions streamline the flow of digital information throughout the organization to increase efficiency by transforming paper forms and documents into electronic images that drive key business processes.

Data and Insights

Our data and insights solutions make existing government data discoverable, usable, and actionable for government workers and the people they serve. The data and insights solution includes a data-as-a-service platform and cloud applications for open data and citizen engagement, exclusively for city, county, state, and federal government organizations. Our data and insights solutions allow government to analyze, visualize, and securely share data across multiple departments and programs. These solutions deliver data-driven innovation and cost-savings by bringing together disparate systems and leveraging the cloud to dramatically enhance the effectiveness of government programs, to improve quality of life for residents, to positively impact local economies, and to achieve excellence in government operations.

Subscription-Based Services

Subscription-based revenue is primarily derived from our SaaS arrangements, which generally utilize the Tyler private cloud, as well as our transaction-based offerings such as e-filing solutions.

We are able to provide the majority of our software products through our SaaS model. The clients who choose this model typically do not wish to maintain, update and operate these systems or make up-front capital expenditures to implement these advanced technologies. The contract terms for these arrangements range from one to 10 years but are typically contracted for initial periods of three to five years. The majority of our SaaS or hosting arrangements include additional professional services as well as maintenance and support services. In certain arrangements, the client may also acquire a license to the software.

As part of our subscription-based services, we provide e-filing solutions that simplify the filing and management of court related documents for courts and law offices. Revenues for e-filing are included in subscription-based revenues and are derived from transaction fees and in some cases, fixed fee arrangements.

Software Services

We provide a variety of professional IT services to clients who utilize our software products. Virtually all of our clients contract with us for installation, training, and data conversion services in connection with their implementation of Tyler's software solutions. The complete implementation process for a typical system includes planning, design, data conversion, set-up and testing. At the culmination of the implementation process, a data implementation team is generally onsite at the client's facility to ensure the smooth go-live with the new system. Implementation fees are charged separately to clients on either a fixed-fee or hourly charge basis, depending on the contract.

Both in connection with the installation of new systems and on an ongoing basis, we provide extensive training services and programs related to our products and services. Training can be provided in our training centers, onsite at clients' locations, or at meetings and conferences and can be customized to meet clients' requirements. The vast majority of our clients contract with us for training services, both to improve their employees' proficiency and productivity and to fully utilize the functionality of our systems. Training services are generally billed on an hourly or daily basis, along with travel and other expenses.

Maintenance and Support

Following the implementation of our software systems, we provide ongoing software support services to assist our clients in operating the systems and to periodically update the software. Support is provided to clients over the phone or via the Web through help desks staffed by our client support representatives. For more complicated issues, our staff, with the clients' permission, can log on to clients' systems remotely. We maintain our clients' software largely through releases that contain improvements and incremental additions of features and functionality, along with updates necessary because of legislative or regulatory changes.

Virtually all of our software clients contract with us for maintenance and support, which provides us with a significant source of recurring revenue. We generally provide maintenance and support for our on-premises clients under annual, or in some cases, multi-year contracts, with a typical fee based on a percentage of the software product's license fee. These fees can generally be increased on renewal and may also increase as new license fees increase. Maintenance and support fees are generally paid annually in advance. Most maintenance contracts automatically renew unless the client or Tyler gives notice of termination prior to expiration. Similar support is provided to our SaaS clients and is included in their subscription fees, which are classified as subscription-based revenues.

Appraisal Services

We are the nation's largest provider of property appraisal outsourcing services for local government taxing authorities. These services include

- The physical inspection of commercial and residential properties
- Data collection and processing
- Sophisticated computer analyses for property valuation
- Preparation of tax rolls
- Community education regarding the assessment process
- Arbitration between taxpayers and the assessing jurisdiction

Local government taxing authorities normally reappraise properties from time to time to update values for tax assessment purposes and to maintain equity in the taxing process. In some jurisdictions, law mandates reassessment cycles; in others, they are discretionary. While some taxing jurisdictions perform reappraisals in-house, many local governments outsource this function because of its cyclical nature and because of the specialized knowledge and expertise requirements associated with it. Our appraisal services business unit has been in this business since 1938.

In some instances, we also sell property tax and/or appraisal software products in connection with appraisal outsourcing projects, while other clients may only engage us to provide appraisal services. Appraisal outsourcing services are somewhat seasonal in nature to the extent that winter weather conditions reduce the productivity of data collection activities in connection with those projects.

STRATEGY

Our objective is to grow our revenue and earnings organically, supplemented by focused strategic acquisitions. The key components of our business strategy are to:

- Provide high quality, value-added products and services to our clients. We compete on the basis of, among other things, delivering to clients our deep domain expertise in local government operations through the highest value products and services in the market. We believe we have achieved a reputation as a premium product and service provider to the local government market.
- Continue to expand our product and service offerings. While we already have what we believe to be the broadest line of software products for local governments, we continually upgrade our core software applications and expand our complementary product and service offerings to respond to technological advancements and the changing needs of our clients. In 2010, we began providing e-filing for courts and law offices, which simplifies the filing and management of court related documents. We believe revenue from e-filing solutions will continue to grow over time as more local and state governments mandate electronic document filings. We also offer solutions that allow the public to access data and conduct transactions with local governments, such as paying traffic tickets, property taxes and utility bills online. We believe that the addition of such features enhances the market appeal of our core products. We have also broadened our offerings of consulting and business process reengineering services. In November 2015, we significantly expanded our presence in the public safety software market through the acquisition of New World Systems Corporation.

- Expand our client base. We seek to establish long-term relationships with new clients primarily through our sales and marketing efforts. While we currently have clients in all 50 states, Canada, the Caribbean, the United Kingdom, Australia, and other international locations, not all of our solutions have achieved nationwide geographic penetration. We intend to continue to expand into new geographic markets by adding sales staff and targeting marketing efforts by solutions in those areas. We also intend to continue to expand our customer base to include more large governments. While our traditional market focus has primarily been on small and mid-sized governments, our increased size and market presence, together with the technological advances and improved scalability of certain of our solutions, are allowing us to achieve increasing success in selling to larger clients. We also expect to expand our presence in international markets by leveraging our leadership position in the United States through the disciplined pursuit of selected opportunities in other countries.
- Expand our existing client relationships. Our existing customer base offers significant opportunities for additional sales of solutions and services that we currently offer, but that existing clients do not fully utilize. Add-on sales to existing clients typically involve lower sales and marketing expenses than sales to new clients.
- Grow recurring revenues. We have a large recurring revenue base from maintenance and support and subscription-based services, which generated revenues of \$605.1 million, or 65% of total revenues, in 2018. We have historically experienced very low customer turnover (approximately 2% annually) and recurring revenues continue to grow as the installed customer base increases. Subscription-based revenues have been our fastest growing revenue category over the past five years, increasing from \$87.8 million in 2014 to \$220.5 million in 2018.
- Maximize economies of scale and take advantage of financial leverage in our business. We seek to build and maintain a larger client base to create economies of scale, enabling us to provide value-added products and services to our clients while expanding our operating margins. Because we sell primarily “off-the-shelf” software, increased sales of the same solutions result in incrementally higher gross margins. In addition, we believe that we have a marketing and administrative infrastructure in place that can be leveraged to accommodate significant long-term growth without proportionately increasing selling, general and administrative expenses.
- Attract and retain highly qualified employees. We believe that the depth and quality of our management and staff is one of our significant strengths, and that the ability to retain such employees is crucial to our continued growth and success. We believe that our stable management team, financial strength and growth opportunities, as well as our leadership position in the local government market, enhance our attractiveness as an employer for highly skilled employees.
- Pursue selected strategic acquisitions. While we expect to primarily grow internally, from time to time we selectively pursue strategic acquisitions that provide us with one or more of the following:
 - New products and services to complement our existing offerings
 - Entry into new markets related to the public sector
 - New clients and/or geographic expansion

SALES, MARKETING, AND CLIENTS

We market our products and services through direct sales and marketing personnel located throughout the United States. Other in-house sales staff focus on add-on sales, professional services and support.

Sales of new systems are typically generated from referrals from other government offices or departments within a county or municipality, referrals from other local governments, relationships established between sales representatives and county or local officials, contacts at trade shows, direct mailings, and direct contact from prospects already familiar with us. We are active in numerous national, state, county, and local government associations, and participate in annual meetings, trade shows, and educational events.

Clients consist primarily of federal, county and municipal agencies, school districts and other government offices. In counties, clients include the auditor, treasurer, tax assessor/collector, county clerk, district clerk, county and district court judges, probation officers, sheriff, and county appraiser. At municipal government sites, clients include directors from various departments, including administration, finance, utilities, public works, code enforcement, personnel, purchasing, taxation, municipal court, and police. Contracts for software products and services are generally implemented over periods of three months to one year, although some complex implementations may span multiple years, with annually renewing maintenance and support update agreements thereafter. Although either the client or we can terminate these agreements, historically almost all support and maintenance agreements are automatically renewed annually. During 2018, approximately 41% of our revenue was attributable to ongoing support and maintenance agreements.

COMPETITION

We compete with numerous local, regional, and national firms that provide or offer some or many of the same solutions and services that we provide. Many of these competitors are smaller companies that may be able to offer less expensive solutions than ours. Many of these firms operate within a specific geographic area and/or in a narrow product or service niche. We also compete with national firms, some of which have greater financial and technical resources than we do, including Oracle Corporation, Infor, SAP AG, Workday, Inc., CentralSquare Technologies, Thomson Reuters Corporation, and Constellation Software, Inc. In addition, we sometimes compete with consulting and systems integration firms, which develop custom systems, primarily for larger governments. We also occasionally compete with central internal information service departments of local governments, which requires us to persuade the end-user department to discontinue service by its own personnel and outsource the service to us.

We compete on a variety of factors, including price, service, name recognition, reputation, technological capabilities, and the ability to modify existing products and services to accommodate the individual requirements of the client. Our ability to offer an integrated system of applications for several offices or departments is often a competitive advantage. Local governmental units often are required to seek competitive proposals through a request for proposal process and some prospective clients use consultants to assist them with the proposal and vendor selection process.

SUPPLIERS

Substantially all of the computers, peripherals, printers, scanners, operating system software, office automation software, and other equipment necessary for the implementation and provision of our software systems and services are presently available from several third-party sources. Hardware is purchased on original equipment manufacturer or distributor terms at discounts from retail. We have not experienced any significant supply problems.

BACKLOG

At December 31, 2018, our revenue backlog was approximately \$1.25 billion, compared to \$1.23 billion (as adjusted) at December 31, 2017. The backlog represents signed contracts under which the revenue has not been recognized as of year-end. Approximately \$625.6 million, or 50%, of the backlog is expected to be recognized during 2019.

INTELLECTUAL PROPERTY, PROPRIETARY RIGHTS, AND LICENSES

We regard certain features of our internal operations, software, and documentation as confidential and proprietary and rely on a combination of contractual restrictions, trade secret laws and other measures to protect our proprietary intellectual property. We generally do not rely on patents. We believe that, due to the rapid rate of technological change in the computer software industry, trade secrets and copyright protection are less significant than factors such as knowledge, ability and experience of our employees, frequent product enhancements, and timeliness and quality of support services. We typically license our software products under non-exclusive license agreements, which are generally non-transferable and have a perpetual term.

EMPLOYEES

At December 31, 2018, we had 4,525 employees. None of our employees are represented by a labor union or are subject to collective bargaining agreements. We consider our relations with our employees to be positive.

INTERNET WEBSITE AND AVAILABILITY OF PUBLIC FILINGS

We file annual, quarterly, current and other reports, proxy statements and other information with the Securities and Exchange Commission, or SEC, pursuant to the Securities Exchange Act. You may read and copy any materials we file with the SEC at the SEC's Public Reference Room by calling the SEC at 1-800-732-0330. The SEC maintains an Internet site that contains reports, proxy and other information statements, and other information regarding issuers, including us, that file electronically with the SEC. The address of this site is <http://www.sec.gov>.

We also maintain a website at www.tylertech.com. We make available free of charge through this site our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Forms 4 and 5, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. In addition, copies of our annual report will be made available, free of charge, upon written request.

Our "Code of Business Conduct and Ethics" is also available on our website. We intend to satisfy the disclosure requirements regarding amendments to, or waivers from, a provision of our Code of Business Conduct and Ethics by posting such information on our website.

ITEM 1A. RISK FACTORS.

An investment in our common stock involves a high degree of risk. Investors evaluating our company should carefully consider the factors described below and all other information contained in this Annual Report. Any of the following factors could materially harm our business, operating results, and financial condition. Additional factors and uncertainties not currently known to us or that we currently consider immaterial could also harm our business, operating results, and financial condition. This section should be read in conjunction with the Financial Statements and related Notes and Management's Discussion and Analysis of Financial Condition and Results of Operations included in this Annual Report. We may make forward-looking statements from time to time, both written and oral. We undertake no obligation to revise or publicly release the results of any revisions to these forward-looking statements. Our actual results may differ materially from those projected in any such forward-looking statements due to a number of factors, including those set forth below and elsewhere in this Annual Report.

Risks Associated with Our Software Products

Cyber-attacks and security vulnerabilities can disrupt our business and harm our competitive position.

Threats to IT security can take a variety of forms. Individuals and groups of hackers, and sophisticated organizations including state-sponsored organizations, may take steps that pose threats to our clients and our IT. They may develop and deploy malicious software to attack our products and services and gain access to our networks and data centers, or act in a coordinated manner to launch distributed denial of service or other coordinated attacks. Cyber threats are constantly evolving, thereby increasing the difficulty of detecting and successfully defending against them. Cyber threats can have cascading impacts that unfold with increasing speed across our internal networks and systems and those of our partners and clients. Breaches of our network or data security could disrupt the security of our internal systems and business applications, impair our ability to provide services to our clients and protect the privacy of their data, result in product development delays, compromise confidential or technical business information harming our competitive position, result in theft or misuse of our intellectual property or other assets, require us to allocate more resources to improve technologies, or otherwise adversely affect our business. Our business policies and internal security controls may not keep pace with these evolving threats.

Disclosure of personally identifiable information and/or other sensitive client data could result in liability and harm our reputation.

We store and process increasingly large amounts of personally identifiable and other confidential information of our clients. The continued occurrence of high-profile data breaches provides evidence of an external environment increasingly hostile to information security. Despite our efforts to improve security controls, it is possible our security controls over personal data, our training of employees on data security, and other practices we follow may not prevent the improper disclosure of client data that we store and manage. Disclosure of personally identifiable information and/or other sensitive client data could result in liability and harm our reputation.

Hosting services for some of our products are dependent upon the uninterrupted operation of data centers.

A material portion of our business is provided through software hosting services. These hosting services depend on the uninterrupted operation of data centers and the ability to protect computer equipment and information stored in these data centers against damage that may be caused by natural disaster, fire, power loss, telecommunications or Internet failure, acts of terrorism, unauthorized intrusion, computer viruses, and other similar damaging events. If any of our data centers were to become inoperable for an extended period, we might be unable to fulfill our contractual commitments. Although we take what we believe to be reasonable precautions against such occurrences, we can give no assurance that damaging events such as these will not result in a prolonged interruption of our services, which could result in client dissatisfaction, loss of revenue, and damage to our business.

We run the risk of errors or defects with new products or enhancements to existing products.

Our software products are complex and may contain errors or defects, especially when first introduced or when new versions or enhancements are released. Although we have not experienced material adverse effects from any such defects or errors to date, we cannot assure you that material defects and errors will not be found in the future. Any such defects could result in a loss of revenues or delay market acceptance. Our license agreements typically contain provisions designed to limit our exposure to potential liability. However, it is possible we may not always successfully negotiate such provisions in our client contracts or the limitation of liability provisions may not be effective due to existing or future federal, state, or local laws, ordinances, or judicial decisions. Although we maintain errors and omissions and general liability insurance, and we try to structure contracts to limit liability, we cannot assure you that a successful claim could not be made or would not have a material adverse effect on our future operating results.

We must timely respond to technological changes to be competitive.

The market for our products is characterized by technological change, evolving industry standards in software technology, changes in client requirements, and frequent new product introductions and enhancements. The introduction of products embodying new technologies and the emergence of new industry standards can render existing products obsolete and unmarketable. As a result, our future success will depend, in part, upon our ability to enhance existing products and develop and introduce new products that keep pace with technological developments, satisfy increasingly sophisticated client requirements, and achieve market acceptance. We cannot assure you that we will successfully identify new product opportunities and develop and bring new products to market in a timely and cost-effective manner. The products, capabilities, or technologies developed by others could also render our products or technologies obsolete or noncompetitive. Our business may be adversely affected if we are unable to develop or acquire new software products or develop enhancements to existing products on a timely and cost-effective basis, or if such new products or enhancements do not achieve market acceptance.

We may be unable to protect our proprietary rights.

Many of our product and service offerings incorporate proprietary information, trade secrets, know-how, and other intellectual property rights. We rely on a combination of contracts, copyrights, and trade secret laws to establish and protect our proprietary rights in our technology. We cannot be certain that we have taken all appropriate steps to deter misappropriation of our intellectual property. There has also recently been an apparent evolution in the legal standards and regulations courts and the U.S. patent office may apply in favorably evaluating software patent rights. We are not currently involved in any material intellectual property litigation; however, we may be a party to such litigation in the future to protect our proprietary information, trade secrets, know-how, and other intellectual property rights. We cannot assure you that third-parties will not assert infringement or misappropriation claims against us with respect to current or future products. Any claims or litigation, with or without merit, could be time-consuming, costly, and a diversion to management. Any such claims and litigation could also cause product shipment delays or require us to enter into royalty or licensing arrangements. Such royalty or licensing arrangements, if required, may not be available on terms acceptable to us, if at all. Therefore, litigation to defend and enforce our intellectual property rights could have a material adverse effect on our business, regardless of the final outcome of such litigation.

Clients may elect to terminate our maintenance contracts and manage operations internally.

It is possible that our clients may elect to not renew maintenance contracts for our software, trying instead to maintain and operate the software themselves using their perpetual license rights (excluding software applications that we provide on a hosted or cloud basis). This could adversely affect our revenues and profits. Additionally, they may inadvertently allow our intellectual property or other information to fall into the hands of third-parties, including our competitors, which could adversely affect our business.

Material portions of our business require the Internet infrastructure to be further developed or adequately maintained.

Part of our future success depends on the use of the Internet as a means to access public information and perform transactions electronically, including, for example, electronic filing of court documents. This in part requires the further development and maintenance of the Internet infrastructure. Among other things, this further development and maintenance will require a reliable network backbone with the necessary speed, data capacity, security, and timely development of complementary products for providing reliable Internet access and services. If this infrastructure fails to be further developed or be adequately maintained, our business would be harmed because users may not be able to access our government portals.

Risks Associated with Selling Products and Services into the Public Sector Marketplace

Selling products and services into the public sector poses unique challenges.

We derive substantially all of our revenues from sales of software and services to state, county, and city governments, other municipal agencies, and other public entities. We expect that sales to public sector clients will continue to account for substantially all of our revenues in the future. We face many risks and challenges associated with contracting with governmental entities, including

- Resource limitations caused by budgetary constraints, which may provide for a termination of executed contracts due to a lack of future funding
- Long and complex sales cycles
- Contract payments at times being subject to achieving implementation milestones, and we may have differences with clients as to whether milestones have been achieved
- Political resistance to the concept of contracting with third-parties to provide IT solutions
- Legislative changes affecting a local government's authority to contract with third-parties
- Varying bid procedures and internal processes for bid acceptance
- Various other political factors, including changes in governmental administrations and personnel

Each of these risks is outside our control. If we fail to adequately adapt to these risks and uncertainties, our financial performance could be adversely affected.

A prolonged economic slowdown could harm our operations.

A prolonged economic slowdown or recession could reduce demand for our software products and services. Governments may face financial pressures that could in turn affect our growth rate and profitability in the future. There is no assurance that government spending levels will be unaffected by declining or stagnant general economic conditions, and if budget shortfalls occur, they may negatively impact government IT spending and could adversely affect our business.

The open bidding process creates uncertainty in predicting future contract awards.

Many governmental agencies purchase products and services through an open bidding process. Generally, a governmental entity will publish an established list of requirements requesting potential vendors to propose solutions for the established requirements. To respond successfully to these requests for proposals, we must accurately estimate our cost structure for servicing a proposed contract, the time required to establish operations for the proposed client, and the likely terms of any other third-party proposals submitted. We cannot guarantee that we will win any bids in the future through the request for proposal process, or that any winning bids will ultimately result in contracts on favorable terms. Our failure to secure contracts through the open bidding process, or to secure such contracts on favorable terms, may adversely affect our revenue and gross margins.

We face significant competition from other vendors and potential new entrants into our markets.

We believe we are a leading provider of integrated solutions for the public sector. However, we face competition from a variety of software vendors that offer products and services similar to those offered by us, as well as from companies offering to develop custom software. We compete based on a number of factors, including

- The attractiveness of our "evergreen" business strategy
- The breadth, depth, and quality of our product and service offerings
- The ability to modify our offerings to accommodate particular clients' needs
- Technological innovation
- Name recognition, reputation and references

- Price
- Our financial strength and stability

We believe our market is highly fragmented with a large number of competitors that vary in size, product platform, and product scope. Our competitors include consulting firms, publicly held companies that focus on selected segments of the public sector market, and a significant number of smaller, privately held companies. Certain competitors have greater technical, marketing, and financial resources than we do. We cannot assure you that such competitors will not develop products or offer services that are superior to our products or services or that achieve greater market acceptance.

We also compete with internal, centralized IT departments of governmental entities, which requires us to persuade the end-user to stop the internal service and outsource to us. In addition, our clients and prospective clients could elect to provide information management services internally through new or existing departments, which could reduce the market for our services.

We could face additional competition as other established and emerging companies enter the public sector software application market and new products and technologies are introduced. Increased competition could result in pricing pressure, fewer client orders, reduced gross margins, and loss of market share. Current and potential competitors may make strategic acquisitions or establish cooperative relationships among themselves or with third-parties, thereby increasing the ability of their products to address the needs of our prospective clients. It is possible that new competitors or alliances may emerge and rapidly gain significant market share. We cannot assure you that we will be able to compete successfully against current and future competitors, and the failure to do so would have a material adverse effect upon our business.

Fixed-price contracts may affect our profits.

Some of our contracts are structured on a fixed-price basis, which can lead to various risks, including

- The failure to accurately estimate the resources and time required for an engagement
- The failure to effectively manage our clients' expectations regarding the scope of services delivered for a fixed fee
- The failure to timely and satisfactorily complete fixed-price engagements within budget

If we do not adequately assess and manage these and other risks, we may be subject to cost overruns and penalties, which may harm our financial performance.

Changes in the insurance markets may affect our business.

Some of our clients, primarily those for our property appraisal services, require that we secure performance bonds before they will select us as their vendor. In addition, we have in the past been required to provide letters of credit as security for the issuance of a performance bond. We cannot guarantee that we will be able to secure such performance bonds in the future on terms that are favorable to us, if at all. Our inability to obtain performance bonds on favorable terms or at all could impact our future ability to win some contract awards, particularly large property appraisal services contracts, which could negatively impact revenues. In addition, the general insurance markets may experience volatility, which may lead to future increases in our general and administrative expenses and negatively impact our operating results.

Risks Associated with Our Periodic Results and Stock Price

Fluctuations in quarterly revenue could adversely impact our operating results and stock price.

Our revenues and operating results are difficult to predict and may fluctuate substantially from quarter to quarter for a variety of reasons, including

- Prospective clients' contracting decisions are often made in the last few weeks of a quarter
- The size of license transactions can vary significantly
- Clients may unexpectedly postpone or cancel procurement processes due to changes in strategic priorities, project objectives, budget, or personnel
- Client purchasing processes vary significantly and a client's internal approval, expenditure authorization, and contract negotiation processes can be difficult and time consuming to complete, even after selection of a vendor
- The number, timing, and significance of software product enhancements and new software product announcements by us and our competitors may affect purchase decisions
- We may have to defer revenues under our revenue recognition policies and GAAP
- Clients may elect subscription-based arrangements, which result in lower software license revenues in the initial year as compared to traditional, on-premise software license arrangements, but generate higher overall subscription-based revenues over the term of the contract

In each fiscal quarter, our expense levels, operating costs, and hiring plans are based to some extent on projections of future revenues and are relatively fixed. If our actual revenues fall below expectations, we could experience a reduction in operating results. Also, if actual revenues or earnings for any given quarter fall below expectations, it may lead to a decline in our stock price.

Increases in service revenue as a percentage of total revenues could decrease overall margins.

We realize lower margins on software and appraisal service revenues than on license revenue. The majority of our contracts include both software licenses and software services. Therefore, an increase in the percentage of software service and appraisal service revenue compared to license revenue could have a detrimental impact on our overall gross margins and could adversely affect operating results.

Our stock price may be volatile.

The market price of our common stock may be volatile. Examples of factors that may significantly impact our stock price include:

- Actual or anticipated fluctuations in our operating results
- Announcements of technological innovations, new products, or new contracts by us or our competitors
- Developments with respect to patents, copyrights, or other proprietary rights
- Conditions and trends in the software and other technology industries
- Adoption of new accounting standards affecting the software industry
- Changes in financial estimates by securities analysts
- General market conditions and other factors

In addition, the stock market has from time to time experienced significant price and volume fluctuations that have particularly affected the market prices of technology company stocks and may in the future adversely affect the market price of our stock. Sometimes, securities class action litigation is filed following periods of volatility in the market price of a particular company's securities. We cannot assure you that similar litigation will not occur in the future with respect to us. Such litigation could result in substantial costs and a diversion of management's attention and resources, which could have a material adverse effect upon our financial performance.

Our financial outlook may not be realized.

From time to time, in press releases and otherwise, we may publish forecasts or other forward-looking statements regarding our results, including estimated revenues or earnings. Any forecast of our future performance reflects various assumptions. These assumptions are subject to significant uncertainties, and as a matter of course, any number of them may prove to be incorrect. Further, the achievement of any forecast depends on numerous risks and other factors (including those described in this discussion), many of which are beyond our control. As a result, we cannot be certain that our performance will be consistent with any management forecasts or that the variation from such forecasts will not be material and adverse. Current and potential stockholders are cautioned not to base their entire analysis of our business and prospects upon isolated predictions, but instead are encouraged to utilize our entire publicly available mix of historical and forward-looking information, as well as other available information regarding us, our products and services, and the software industry when evaluating our prospective results of operations.

Risks Associated with Our Growth Strategy and Other General Corporate Risks

We may experience difficulties in executing our acquisition strategy.

A material portion of our historical growth has resulted from strategic acquisitions. Although our focus is on internal growth, we will continue to identify and pursue strategic acquisitions with suitable candidates. These transactions involve significant challenges and risks, including risks that a transaction does not advance our business strategy; that we do not achieve the expected return on our investment; that we have difficulty integrating business systems and technology; that we have difficulty retaining or integrating new employees; that the transactions distract management from our other businesses; that we acquire unforeseen liabilities; and other unanticipated events. Our future success will depend, in part, on our ability to successfully integrate future acquisitions into our operations. It may take longer than expected to realize the full benefits of these transactions, such as increased revenue, enhanced efficiencies, or increased market share, or the benefits may be ultimately less than we expected. Although we conduct due diligence reviews of potential acquisition candidates, we may not identify all material liabilities or risks related to acquisition candidates. There can be no assurance that any such strategic acquisitions will be accomplished on favorable terms or will result in profitable operations.

Our failure to properly manage growth could adversely affect our business.

We have expanded our operations significantly since 1998, when we entered the business of providing software solutions and services to the public sector. We intend to continue expansion in the foreseeable future to pursue existing and potential market opportunities. This growth places significant demands on management and operational resources. In order to manage growth effectively, we must implement and improve our operational systems, procedures, and controls on a timely basis. If we fail to implement these systems, our business may be materially adversely affected.

We may be unable to hire, integrate, and retain qualified personnel.

Our continued success will depend upon the availability and performance of our key management, sales, marketing, client support, and product development personnel. The loss of key management or technical personnel could adversely affect us. We believe that our continued success will depend in large part upon our ability to attract, integrate, and retain such personnel. We have at times experienced and continue to experience difficulty in recruiting qualified personnel. Competition for qualified software development, sales, and other personnel is intense, and we cannot assure you that we will be successful in attracting and retaining such personnel.

Compliance with changing regulation of corporate governance may result in additional expenses.

Changing laws, regulations, and standards relating to corporate governance and public disclosure can create uncertainty for public companies. The costs required to comply with such evolving laws are difficult to predict. To maintain high standards of corporate governance and public disclosure, we intend to invest all reasonably necessary resources to comply with evolving standards. This investment may result in an unforeseen increase in general and administrative expenses and a diversion of management's time and attention from revenue-generating activities, which may harm our operating results.

We don't foresee paying dividends on our common stock.

We have not declared nor paid a cash dividend since we entered the business of providing software solutions and services to the public sector in 1998. We intend to retain earnings for use in the operation and expansion of our business. We do not anticipate paying any cash dividends on our common stock in the foreseeable future.

Provisions in our certificate of incorporation, bylaws, and Delaware law could deter takeover attempts.

Our board of directors may issue up to 1,000,000 shares of preferred stock and may determine the price, rights, preferences, privileges, and restrictions, including voting and conversion rights, of these preferred shares. These determinations may be made without any further vote or action by our stockholders. The rights of the holders of our common stock will be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. The issuance of preferred stock may make it more difficult for a third-party to acquire a majority of our outstanding voting stock. In addition, some provisions of our Certificate of Incorporation, Bylaws, and the Delaware General Corporation Law could also delay, prevent, or make more difficult a merger, tender offer, or proxy contest involving us.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

Not applicable.

ITEM 2. PROPERTIES.

We occupy a total of approximately 1.0 million square feet of office space, of which approximately 746,000 square feet is in various office facilities we own. We own or lease offices for our major operations in the states of Arizona, Arkansas, California, Colorado, Georgia, Iowa, Maine, Massachusetts, Michigan, Missouri, Montana, New Hampshire, New York, Ohio, Texas, Washington and Wisconsin, and in Ontario, Canada.

ITEM 3. LEGAL PROCEEDINGS.

Other than routine litigation incidental to our business, there are no material legal proceedings pending to which we are party or to which any of our properties are subject.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

Our common stock is traded on the New York Stock Exchange under the symbol "TYL." At December 31, 2018, we had approximately 1,262 stockholders of record. Most of our stockholders hold their shares in street name; therefore, there are substantially more than 1,262 beneficial owners of our common stock.

We did not pay any cash dividends in 2018 or 2017. Our bank credit agreement contains restrictions on the payment of cash dividends. We intend to retain earnings for use in the operation and expansion of our business and do not anticipate paying a cash dividend in the foreseeable future.

The following table summarizes certain information related to our stock incentive plan, restricted stock units and our employee stock purchase plan. There are no warrants or rights related to our equity compensation plans as of December 31, 2018.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants, purchase rights and vesting of restricted stock units as of December 31, 2018	Weighted average exercise price of outstanding options and unvested restricted stock units	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in initial column as of December 31, 2018)
Equity compensation plans approved by security shareholders:			
2018 Incentive Stock Plan (a)	4,425,728	\$ 136.43	3,835,338
Employee Stock Purchase Plan	14,869	157.95	749,410
Equity compensation plans not approved by security shareholders	—		
	<u>4,440,597</u>	<u>\$ 136.50</u>	<u>4,584,748</u>

(a) In May 2018, stockholders approved our 2018 Stock Incentive Plan ("the 2018 Plan") which amended and restated the existing Tyler Technologies, Inc. 2010 Stock Option Plan ("the 2010 Plan"). Upon stockholder approval of the 2018 Plan, the remaining shares available for grant under the 2010 Plan were added to the shares authorized for grant under the 2018 Plan. Additionally, any awards previously granted under the 2010 Plan that expire unexercised or are forfeited are added to the shares authorized for grant under the 2018 Plan. Under the 2018 Plan, each award granted, other than stock options, reduces the number of securities available for issuance under the 2018 Plan by 2.5 shares.

As of December 31, 2018, we had authorization to repurchase up to approximately 1.2 million additional shares of Tyler common stock. During 2018, we purchased approximately 781,000 shares of our common stock for an aggregate purchase price of \$150.1 million. A summary of the repurchase activity during 2018 is as follows:

Period	Total number of shares repurchased	Additional number of shares authorized that may be repurchased	Average price paid per share	Maximum number of shares that may be repurchased under current authorization
Three months ended March 31	—	\$ —	\$ —	1,973,560
Three months ended June 30	—	—	—	1,973,560
Three months ended September 30	—	—	—	1,973,560
October 1 through October 31	154,739	—	209.69	1,818,821
November 1 through November 30	457,503	—	189.13	1,361,318
December 1 through December 31	168,600	—	183.86	1,192,718
	<u>780,842</u>		<u>\$ 192.16</u>	

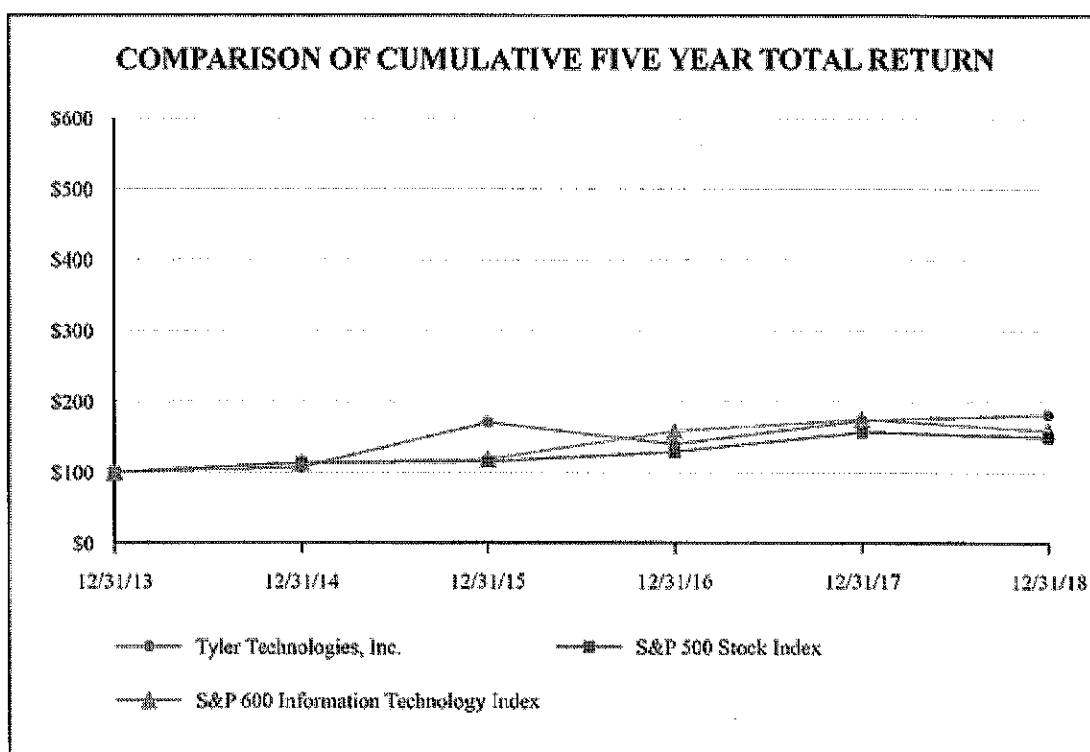
The repurchase program, which was approved by our board of directors, was announced in October 2002 and was amended at various times from 2003 through 2019. There is no expiration date specified for the authorization, and we intend to repurchase stock under the program from time to time.

Subsequent to December 31, 2018, our board of directors authorized the repurchase of an additional 1.5 million shares of Tyler common stock. As of February 20, 2019, we had remaining authorization to repurchase up to 2.7 million additional shares of our common stock.

Performance Graph

The following Performance Graph and related information shall not be deemed "soliciting material" or to be "filed" with the Securities and Exchange Commission, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that we specifically incorporate it by reference into such filing.

The following table compares total shareholder returns for Tyler over the last five years to the Standard and Poor's 500 Stock Index and the Standard and Poor's 600 Information Technology Index assuming a \$100 investment made on December 31, 2013. Each of the three measures of cumulative total return assumes reinvestment of dividends. The stock performance shown on the graph below is not necessarily indicative of future price performance.



Company / Index	12/31/13	12/31/14	12/31/15	12/31/16	12/31/17	12/31/18
Tyler Technologies, Inc.	100	107.16	170.68	139.79	173.36	181.94
S&P 500 Stock Index	100	113.69	115.26	129.05	157.22	150.33
S&P 600 Information Technology Index	100	113.29	118.56	158.70	175.01	159.38

ITEM 6. SELECTED FINANCIAL DATA.

	FOR THE YEARS ENDED DECEMBER 31,				
	2018	2017 (a),(b)	2016 (a),(c)	2015(d)	2014
		As Adjusted	As Adjusted		
STATEMENT OF OPERATIONS DATA:					
Revenues	\$ 935,282	\$ 840,899	\$ 759,880	\$ 591,022	\$ 493,101
Cost and expenses:					
Cost of revenues	495,704	441,522	400,692	313,835	259,730
Selling, general and administrative expenses	207,605	175,914	165,176	133,317	108,260
Research and development expense	63,264	47,324	43,154	29,922	25,743
Amortization of customer and trade name intangibles	16,217	13,381	13,202	5,905	4,546
Operating income	152,492	162,758	137,656	108,043	94,822
Other income (expense), net	3,378	698	(1,998)	381	(355)
Income before income taxes	155,870	163,456	135,658	108,424	94,467
Income tax (benefit) provision (b)	8,408	(6,115)	21,957	43,555	35,527
Net income	147,462	169,571	113,701	64,869	58,940
Net earnings per diluted share	\$ 3.68	\$ 4.32	\$ 2.92	\$ 1.77	\$ 1.66
Weighted average diluted shares (c)	40,123	39,246	38,961	36,552	35,401
STATEMENT OF CASH FLOWS DATA:					
Cash flows provided by operating activities (c)	\$ 250,203	\$ 195,755	\$ 191,859	\$ 134,327	\$ 142,839
Cash flows used by investing activities	(238,255)	(85,395)	(50,720)	(398,459)	(11,555)
Cash flows (used) provided by financing activities (c)	(63,595)	39,415	138,075	91,052	(3,993)
BALANCE SHEET DATA:					
Total assets	\$ 1,790,963	\$ 1,611,351	\$ 1,378,502	\$ 1,356,570	\$ 569,812
Revolving line of credit	—	—	10,000	66,000	—
Shareholders' equity	1,324,846	1,191,736	934,540	858,857	336,973

(a) Reflects the impact of the adoption of Accounting Standards Update ("ASU") ASU No. 2014-09, *Revenue from Contracts with Customers* in fiscal year 2018. Refer to Note - 1 "Summary of Significant Accounting Policies" for further discussion.

(b) 2017 includes the significant impact of the enactment of the Tax Cuts and Jobs Act ("Tax Act"). The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision is a \$26.0 million (as adjusted) tax benefit due to the remeasurement of deferred tax assets and liabilities. Refer to Note - 7 "Income Tax" for further discussion on the impact of the Tax Act.

(c) During 2016, we early adopted ASU No. 2016-09 *Improvements to Employee Share-Based Payment Accounting* requiring the recognition of excess tax benefits or tax deficiencies as a component of income tax expense; these benefits or deficiencies were historically recognized in equity. As the standard requires a prospective method of adoption, our net income in 2016 includes a \$29.6 million income tax benefit due to the adoption that did not occur in the comparable prior periods presented above. In 2016, ASU No. 2016-09 updated the method of calculating diluted shares resulting in the inclusion of 519,000 additional shares in our diluted earnings per share calculation, which is not comparable to the other prior periods presented. The adoption of ASU No. 2016-09 also required excess tax benefits, previously presented as financing activities, to be classified as operating activities. As retrospective adoption for this component of the standard is allowable, we have adjusted all periods presented above to reflect this change in classification.

(d) On November 16, 2015, we completed the acquisition of New World Systems Corporation ("NWS"). Operating results for the twelve months ended December 31, 2015, include \$5.9 million for non-recurring financial advisory, legal, accounting, due diligence, valuation and other expenses necessary to complete the NWS acquisition.

FORWARD-LOOKING STATEMENTS

This document contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that are not historical in nature and typically address future or anticipated events, trends, expectations or beliefs with respect to our financial condition, results of operations or business. Forward-looking statements often contain words such as "believes," "expects," "anticipates," "foresees," "forecasts," "estimates," "plans," "intends," "continues," "may," "will," "should," "projects," "might," "could" or other similar words or phrases. Similarly, statements that describe our business strategy, outlook, objectives, plans, intentions or goals also are forward-looking statements. We believe there is a reasonable basis for our forward-looking statements, but they are inherently subject to risks and uncertainties and actual results could differ materially from the expectations and beliefs reflected in the forward-looking statements. We presently consider the following to be among the important factors that could cause actual results to differ materially from our expectations and beliefs: (1) changes in the budgets or regulatory environments of our clients, primarily local and state governments, that could negatively impact information technology spending; (2) our ability to protect client information from security breaches and provide uninterrupted operations of data centers; (3) our ability to achieve growth or operational synergies through the integration of acquired businesses, while avoiding unanticipated costs and disruptions to existing operations; (4) material portions of our business require the Internet infrastructure to be adequately maintained; (5) our ability to achieve our financial forecasts due to various factors, including project delays by our clients, reductions in transaction size, fewer transactions, delays in delivery of new products or releases or a decline in our renewal rates for service agreements; (6) general economic, political and market conditions; (7) technological and market risks associated with the development of new products or services or of new versions of existing or acquired products or services; (8) competition in the industry in which we conduct business and the impact of competition on pricing, client retention and pressure for new products or services; (9) the ability to attract and retain qualified personnel and dealing with the loss or retirement of key members of management or other key personnel; and (10) costs of compliance and any failure to comply with government and stock exchange regulations. A detailed discussion of these factors and other risks that affect our business are described in Item 1A, "Risk Factors." We expressly disclaim any obligation to publicly update or revise our forward-looking statements.

OVERVIEW

General

We provide integrated information management solutions and services for the public sector, with a focus on local governments. We develop and market a broad line of software products and services to address the IT needs of cities, counties, schools and other local government entities. In addition, we provide professional IT services to our clients, including software and hardware installation, data conversion, training and for certain clients, product modifications, along with continuing maintenance and support for clients using our systems. We also provide subscription-based services such as software as a service ("SaaS"), which primarily utilize the Tyler private cloud, and electronic document filing solutions ("e-filing"), which simplify the filing and management of court related documents. Revenues for e-filing are derived from transaction fees and, in some cases, fixed fee arrangements. We also provide property appraisal outsourcing services for taxing jurisdictions.

Our products generally automate seven major functional areas: (1) financial management and education, (2) courts and justice, (3) public safety (4) property appraisal and tax, (5) planning, regulatory and maintenance (6) land and vital records management and (7) data and insights. We report our results in two segments. The Enterprise Software ("ES") segment provides municipal and county governments and schools with software systems and services to meet their information technology and automation needs for mission-critical "back-office" functions such as: financial management; courts and justice processes; public safety; planning, regulatory and maintenance; land and vital records management; and data analytics. The Appraisal and Tax ("A&T") segment provides systems and software that automate the appraisal and assessment of real and personal property as well as property appraisal outsourcing services for local governments and taxing authorities. Property appraisal outsourcing services include: the physical inspection of commercial and residential properties; data collection and processing; computer analysis for property valuation; preparation of tax rolls; community education; and arbitration between taxpayers and the assessing jurisdiction.

Our total employee count increased to 4,525 at December 31, 2018, from 4,069 at December 31, 2017.

For the twelve months ended December 31, 2018, total revenues increased 11% compared to the prior year. Organic revenue growth was 9% for the twelve months ended December 31, 2018, compared to the prior year period and revenues from acquisitions contributed 2% of growth for the twelve months ended December 31, 2018.

Subscriptions revenue grew 28% for the twelve months ended December 31, 2018, due to a gradual shift toward cloud-based, software as a service business, as well as continued strong growth in our e-filing revenues from courts and the addition of new subscription revenues from the acquisition of Socrata. Organic subscriptions revenue increased 21% for the twelve months ended December 31, 2018.

Our backlog at December 31, 2018 was \$1.25 billion, a 2% increase from last year.

Recent Acquisitions

On December 7, 2018, we acquired certain assets and intellectual property of SceneDoc, Inc. ("SceneDoc"), a company that provides mobile-first, software-as-a-service (SaaS) field reporting for law enforcement agencies. The total purchase price was approximately \$6.2 million, of which \$5.4 million was paid in cash and approximately \$759,000 accrued for a working capital holdback. As of December 31, 2018, the purchase price allocation for SceneDoc is not yet complete. The preliminary estimates of fair value assumed at the acquisition date for intangible assets, receivables and deferred revenue and related deferred taxes are subject to change as valuations are finalized.

On October 1, 2018, we acquired all of the equity interests of TradeMaster, Inc. dba MobileEyes ("MobileEyes"), a company that develops software to improve public safety by supporting fire prevention and suppression, emergency response, and structural safety. The total purchase price was approximately \$5.3 million in cash.

On August 31, 2018, we acquired all of the assets of CaseloadPRO, L. P. ("CaseloadPro"), a company that provides a fully featured probation case management system. The purchase price of \$9.3 million was paid in cash.

On April 30, 2018, we acquired all of the capital stock of Socrata, Inc. ("Socrata"), a company that provides open data and data-as-a-service solutions including cloud-based data integration, visualization, analysis, and reporting solutions for federal, state and local government agencies. The purchase price, net of cash acquired of \$1.7 million, was \$147.6 million in cash.

On April 30, 2018, we acquired all of the equity interests of Sage Data Security, LLC ("Sage"), a cybersecurity company offering a suite of services that supports an entire cybersecurity lifecycle, including program development, education and training, technical testing, advisory services, and digital forensics. The total purchase price was \$11.6 million paid in cash.

As of December 31, 2018, the purchase price allocations for Sage, Socrata, CaseloadPro, and MobileEyes are complete.

The operating results of all 2018 acquisitions are included with the operating results of the Enterprise Software segment since their date of acquisition. Revenues from Socrata included in Tyler's results of operations totaled approximately \$13.9 million and the net loss was \$11.5 million for the twelve months ended December 31, 2018. The impact of the Sage, CaseloadPRO, MobileEyes and SceneDoc acquisitions, individually and in the aggregate, on our operating results, assets and liabilities is not material.

Our balance sheet as of December 31, 2018, reflects the allocation of the purchase price to the assets acquired based on their fair value at the date of each acquisition. The fair value of the assets and liabilities acquired are based on valuations using Level III, unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

We monitor and analyze several key performance indicators in order to manage our business and evaluate our financial and operating performance. These indicators include the following:

Revenues – We derive our revenues from five primary sources: sale of software licenses and royalties; subscription-based arrangements; software services; maintenance; and appraisal services. Subscriptions and maintenance are considered recurring revenue sources and comprised approximately 65% of our revenue in 2018. The number of new SaaS clients and the number of existing clients who convert from our traditional software arrangements to our SaaS model are a significant driver to our business, together with new software license sales and maintenance rate increases. In addition, we also monitor our customer base and churn as we historically have experienced very low customer turnover. During 2018, based on our number of customers, turnover was approximately 2%.

Cost of Revenues and Gross Margins – Our primary cost component is personnel expenses in connection with providing software implementation, subscription-based services, maintenance and support, and appraisal services to our clients. We can improve gross margins by controlling headcount and related costs and by expanding our revenue base, especially from those products and services that produce incremental revenue with minimal incremental cost, such as software licenses and royalties, subscription-based services, and maintenance and support. Our appraisal projects are cyclical in nature, and we often employ appraisal personnel on a short-term basis to coincide with the life of a project. As of December 31, 2018, our total employee count increased to 4,525 from 4,069 at December 31, 2017.

Selling, General and Administrative (“SG&A”) Expenses – The primary components of SG&A expenses are administrative and sales personnel salaries and commissions, share-based compensation expense, marketing expense, rent and professional fees. Sales commissions typically fluctuate with revenues and share-based compensation expense generally increases as the market price of our stock increases. Other administrative expenses tend to grow at a slower rate than revenues.

Liquidity and Cash Flows – The primary driver of our cash flows is net income. Uses of cash include acquisitions, capital investments in property and equipment and discretionary purchases of treasury stock. Our working capital needs are fairly stable throughout the year with the significant components of cash outflows being payment of personnel expenses offset by cash inflows representing collection of accounts receivable and cash receipts from clients in advance of revenue being earned. In recent years, we have also received significant amounts of cash from employees exercising stock options and contributing to our Employee Stock Purchase Plan.

Balance Sheet – Cash, accounts receivable and days sales outstanding and deferred revenue balances are important indicators of our business.

Adoption of New Revenue Accounting Standard

On January 1, 2018, we adopted ASU No. 2014-09, using the full retrospective method of transition, which requires that the new standard be applied to all periods presented. The impacts of adoption are reflected in the financial information herein. For additional details, see Note 1 - "Summary of Significant Accounting Policies" to our consolidated financial statements in this report.

Recent Accounting Guidance not yet Adopted

Leases. On February 25, 2016, the FASB issued its new lease accounting guidance in ASU No. 2016-02, *Leases* ("Topic 842"). Under the new guidance, lessees will be required to recognize the following for all leases (with the exception of short-term leases) at the commencement date:

- A lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and
- A right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term.

Topic 842 is effective for fiscal years beginning after December 15, 2018, including interim periods therein. Early application is permitted for all business entities upon issuance. Upon adoption, entities will be required to use a modified retrospective approach with an option to use certain practical expedients. We expect to adopt ASU 2016-02 when effective, using the transition method that allows us to initially apply the guidance at the adoption date of January 1, 2019 and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. We expect to use the package of practical expedients that allows us to not reassess: (1) lease classification for any expired or existing leases and (2) initial direct costs for any expired or existing leases. We expect ASU 2016-02 will impact our consolidated financial statements and related disclosures. We are currently evaluating the extent of the impact and expect that most of our lease commitments will be subject to the updated guidance and recognized as lease liabilities and right-of-use assets on our consolidated balance sheets upon adoption. Based on our current portfolio of leases, we estimate a range of \$15.5 million to \$17.8 million of lease assets and liabilities to be recognized on our balance sheet, primarily relating to office facilities.

Outlook

The local government software market continues to be active, and our backlog at December 31, 2018 reached \$1.25 billion, a 2% increase from last year. We expect to continue to achieve solid growth in revenue and earnings. With our strong financial position and cash flow, we plan to continue to make significant investments in product development to better position us to continue to expand our competitive position in the public sector software market over the long term.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analysis of financial condition and results of operations is based upon our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP"). The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities at the date of the financial statements, the reported amounts of revenues, cost of revenues and expenses during the reporting period, and related disclosure of contingencies. The Notes to the Financial Statements included as part of this Annual Report describe our significant accounting policies used in the preparation of the financial statements. Significant items subject to such estimates and assumptions include the application of the progress toward completion methods of revenue recognition, estimated standalone selling price ("SSP") for distinct performance obligations, the carrying amount and estimated useful lives of intangible assets, determination of share-based compensation expense and valuation allowance for receivables. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies require significant judgments and estimates used in the preparation of our financial statements.

Revenue Recognition. We earn revenue from software licenses, royalties, subscription-based services, software services, post-contract customer support ("PCS" or "maintenance"), hardware, and appraisal services. Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer
- Identification of the performance obligations in the contract
- Determination of the transaction price
- Allocation of the transaction price to the performance obligations in the contract
- Recognition of revenue when, or as, we satisfy a performance obligation

Most of our software arrangements with customers contain multiple performance obligations that range from software licenses, installation, training, and consulting to software modification and customization to meet specific customer needs (services), hosting, and PCS. For these contracts, we account for individual performance obligations separately when they are distinct. We evaluate whether separate performance obligations can be distinct or should be accounted for as one performance obligation. Arrangements that include software services, such as training or installation, are evaluated to determine whether those services are highly interdependent or highly interrelated to the product's functionality. Many of our software arrangements involve "off-the-shelf" software. We recognize the revenue allocable to "off-the-shelf" software licenses and specified upgrades at a point in time when control of the software license transfers to the customer, unless the software is not considered distinct. We consider off-the-shelf software to be distinct when it can be added to an arrangement with minor changes in the underlying code, it can be used by the customer for the customer's purpose upon installation, and remaining services such as training are not considered highly interdependent or highly interrelated to the product's functionality.

For arrangements that involve significant production, modification or customization of the software, or where software services are otherwise not considered distinct, we recognize revenue over time by measuring progress-to-completion. We measure progress-to-completion primarily using labor hours incurred as it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. These arrangements are often implemented over an extended period and occasionally require us to revise total cost estimates. Amounts recognized in revenue are calculated using the progress-to-completion measurement after giving effect to any changes in our cost estimates. Changes to total estimated contract costs, if any, are recorded in the period they are determined. Estimated losses on uncompleted contracts are recorded in the period in which we first determine that a loss is apparent. When software services are distinct, the fee allocable to the service element is recognized over the time we perform the services and is billed on a time and material basis.

Subscription-based services consist of revenues derived from SaaS arrangements, which primarily utilize the Tyler private cloud, and electronic filing transactions. Revenue from subscription-based services is generally recognized over time on a ratable basis over the contract term, beginning on the date that our service is made available to the customer. For SaaS arrangements, we evaluate whether the customer has the contractual right to take possession of our software at any time during the hosting period without significant penalty and whether the customer can feasibly maintain the software on the customer's hardware or enter into another arrangement with a third-party to host the software. We allocate contract value to each performance obligation of the arrangement that qualifies for treatment as a distinct element based on estimated SSP. When it is determined that software is distinct and the customer has the ability to take control of the software, we recognize revenue allocable to the software license fee when access to the software license is made available to the customer. We recognize hosting services ratably over the term of the arrangement, which range from one to ten years but are typically for a period of three to five years. For software services associated with certain SaaS arrangements, we have concluded that the services are not distinct, and we recognize the revenue ratably over the remaining contractual period once we have provided the customer access to the software. We record amounts that have been invoiced in accounts receivable and in deferred revenue or revenues, depending on whether the revenue recognition criteria have been met.

The transaction price is allocated to the separate performance obligations on a relative SSP basis. We determine the SSP based on our overall pricing objectives, taking into consideration market conditions and other factors, including the value of our contracts, the applications sold, customer demographics, and the number and types of users within our contracts. We use a range of amounts to estimate SSP when we sell each of the products and services separately and need to determine whether there is a discount to be allocated based on the relative SSP of the various products and services. In instances where SSP is not directly observable, such as when we do not sell the product or service separately, we determine SSP using the expected cost-plus margin approach. Revenue is recognized net of allowances for sales adjustments and any taxes collected from customers, which are subsequently remitted to governmental authorities.

Typically, the structure of our arrangements does not give rise to variable consideration. However, in those instances whereby variable consideration exists, we include in our estimates additional revenue for variable consideration when we believe we have an enforceable right, the amount can be estimated reliably and its realization is probable.

We maintain allowances for doubtful accounts, which are provided at the time the revenue is recognized. Since most of our customers are domestic governmental entities, we rarely incur a loss resulting from the inability of a customer to make required payments. Events or changes in circumstances that indicate that the carrying amount for the allowances for doubtful accounts may require revision include, but are not limited to, deterioration of a customer's financial condition, failure to manage our customer's expectations regarding the scope of the services to be delivered, and defects or errors in new versions or enhancements of our software products. The allowance for doubtful accounts reflects our best estimate of probable losses inherent in the accounts receivable balance. We determine the allowance based on known troubled accounts, historical experience, and other currently available evidence.

In connection with certain of our contracts, we have recorded retentions receivable or unbilled receivables consisting of costs and estimated profit in excess of billings as of the balance sheet date. Many of the contracts which give rise to unbilled receivables at a given balance sheet date are subject to billings in the subsequent accounting period. We review unbilled receivables and related contract provisions to ensure we are justified in recognizing revenue prior to billing the customer and that we have objective evidence which allows us to recognize such revenue. In addition, we have a sizable amount of deferred revenue, which represents billings in excess of revenue earned. The majority of this liability consists of maintenance billings for which payments are made in advance and the revenue is ratably earned over the maintenance period, generally one year. We also have deferred revenue for those contracts in which we receive a deposit and the conditions in which to record revenue for the service or product have not been met. On a periodic basis, we review by customer the detail components of our deferred revenue to ensure our accounting remains appropriate.

Intangible Assets and Goodwill. Our business acquisitions typically result in the creation of goodwill and other intangible asset balances, and these balances affect the amount and timing of future period amortization expense, as well as expense we could possibly incur as a result of an impairment charge. The cost of acquired companies is allocated to identifiable tangible and intangible assets based on estimated fair value, with the excess allocated to goodwill. Accordingly, we have a significant balance of acquisition date intangible assets, including software, customer related intangibles, trade name, leases and goodwill. These intangible assets (other than goodwill) are amortized over their estimated useful lives. We currently have no intangible assets with indefinite lives other than goodwill.

When testing goodwill for impairment quantitatively, we first compare the fair value of each reporting unit with its carrying amount. If the carrying amount of a reporting unit exceeds its fair value, a second step is performed to measure the amount of potential impairment. In the second step, we compare the implied fair value of reporting unit goodwill with the carrying amount of the reporting unit's goodwill. If the carrying amount of reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized. The fair values calculated in our impairment tests are determined using discounted cash flow models involving several assumptions. The assumptions that are used are based upon what we believe a hypothetical marketplace participant would use in estimating fair value. We base our fair value estimates on assumptions we believe to be reasonable but that are unpredictable and inherently uncertain. We evaluate the reasonableness of the fair value calculations of our reporting units by comparing the total of the fair value of all of our reporting units to our total market capitalization. Our annual goodwill impairment analysis, which we performed quantitatively during the second quarter of 2018, did not result in an impairment charge. During 2018, we did not identify any triggering events that would require an update to our annual impairment review. All intangible assets (other than goodwill) are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of other intangible assets is measured by comparison of the carrying amount to estimated undiscounted future cash flows. The assessment of recoverability or of the estimated useful life for amortization purposes will be affected if the timing or the amount of estimated future operating cash flows is not achieved. Such indicators may include, among others: a significant decline in expected future cash flows; a sustained, significant decline in stock price and market capitalization; a significant adverse change in legal factors or in the business climate; unanticipated competition; and reductions in growth rates. In addition, products, capabilities, or technologies developed by others may render our software products obsolete or non-competitive. Any adverse change in these factors could have a significant impact on the recoverability of goodwill or other intangible assets.

Share-Based Compensation. We have a stock incentive plan that provides for the grant of stock options, restricted stock units and performance stock units to key employees, directors and non-employee consultants. We estimate the fair value of share-based awards on the date of grant. Share-based compensation expense includes the estimated effects of forfeitures, which will be adjusted over the requisite service period to the extent actual forfeitures differ or are expected to differ from such estimates. Changes in estimated forfeitures are recognized in the period of change and will also impact the amount of expense to be recognized in future periods. Forfeiture rate assumptions are derived from historical data.

We estimate stock price volatility at the date of grant based on the historical volatility of our common stock. Estimated option life is determined using the weighted-average period the stock options are expected to be outstanding based primarily on the options' vesting terms, remaining contractual life and the employees' expected exercise based on historical patterns. Determining the appropriate fair-value model and calculating the fair value of share-based awards at the grant date requires considerable judgment, including estimating stock price volatility, expected option life and forfeiture rates.

ANALYSIS OF RESULTS OF OPERATIONS AND OTHER

The following discussion compares the historical results of operations on a basis consistent with GAAP for the years ended December 31, 2018, 2017 and 2016.

	Percentage of Total Revenues Years Ended December 31,		
	2018	2017	2016
		As Adjusted	As Adjusted
Revenues:			
Software licenses and royalties	10.0%	10.3%	11.0%
Subscriptions	23.6	20.5	18.8
Software services	20.5	21.5	22.6
Maintenance	41.1	42.6	42.2
Appraisal services	2.3	3.0	3.5
Hardware and other	2.5	2.1	1.9
Total revenues	100.0	100.0	100.0
Operating expenses:			
Cost of software licenses, royalties and acquired software	2.9	3.0	3.3
Cost of software services, maintenance and subscriptions	46.9	46.1	45.8
Cost of appraisal services	1.5	1.9	2.2
Cost of hardware and other	1.7	1.5	1.3
Selling, general and administrative expenses	22.2	20.9	21.7
Research and development expense	6.8	5.6	5.7
Amortization of customer and trade name intangibles	1.7	1.6	1.7
Operating income	16.3	19.4	18.3
Other income (expense), net	0.4	0.1	(0.3)
Income before income taxes	16.7	19.5	18.0
Income tax (benefit) provision	0.9	(0.7)	2.9
Net income	15.8%	20.2%	15.1%

2018 Compared to 2017

Revenues

On April 30, 2018, we acquired Socrata, a company that provides open data and data-as-a-service solutions for federal, state and local government agencies including cloud-based data integration, visualization, analysis, and reporting solutions. The following table details revenue for Socrata for the periods presented as of December 31, 2018, which is included in our consolidated statements of income:

	2018
Revenues:	
Software licenses and royalties	\$
Subscriptions	12,106
Software services	1,751
Maintenance	—
Appraisal services	—
Hardware and other	20
Total revenues	\$ 13,877

On December 7, 2018, we acquired SceneDoc, Inc., a company that provides mobile-first, software-as-a-service (SaaS) field reporting for law enforcement agencies. On October 1, 2018, we acquired MobileEyes, a company that develops software to improve public safety by supporting fire prevention and suppression, emergency response, and structural safety. On August 31, 2018, we acquired CaseloadPRO, a company that provides a fully featured probation case management system. On April 30, 2018, we also acquired Sage, a cybersecurity company offering a suite of services that supports an entire cybersecurity lifecycle. The impact of these acquisitions on our operating results is not considered material, individually and in the aggregate, and is not included in the table above. The results of these acquisitions are included with the operating results of the ES segment from their dates of acquisition. For comparative purposes, we have provided explanations for changes in operations to exclude results of operations for these acquisitions noting the exclusion.

Software licenses and royalties.

The following table sets forth a comparison of our software licenses and royalties revenue for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
		As Adjusted		
ES	\$ 83,735	\$ 78,388	\$ 5,347	7%
A&T	9,706	7,854	1,852	24
Total software licenses and royalties revenue	\$ 93,441	\$ 86,242	\$ 7,199	8%

Software license and royalties revenue grew 8% compared to the prior year. The majority of this growth was due to an active marketplace as the result of generally positive local government economic conditions, as well as our increasingly strong competitive position, which we attribute in part to our investment in product development in recent years. An increase in the number of larger contracts related to our planning, regulatory and maintenance solutions and public safety solutions also contributed to the growth in license revenue.

Although the mix of new contracts between subscription-based and perpetual license arrangements may vary from quarter to quarter and year to year, we expect our longer-term software license growth rate to be negatively impacted by a growing number of customers choosing our subscription-based options, rather than purchasing the software under a traditional perpetual software license arrangement. Subscription-based arrangements result in lower software license revenue in the initial year as compared to perpetual software license arrangements but generate higher overall revenue over the term of the contract. Our new client mix in 2018 was approximately 47% selecting perpetual software license arrangements and approximately 53% selecting subscription-based arrangements compared to a client mix in 2017 of approximately 53% selecting perpetual software license arrangements and approximately 47% selecting subscription-based arrangements.

Subscriptions.

The following table sets forth a comparison of our subscriptions revenue for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
		As Adjusted		
ES	\$ 210,740	\$ 164,317	\$ 46,423	28%
A&T	9,807	7,859	1,948	25
Total subscriptions revenue	\$ 220,547	\$ 172,176	\$ 48,371	28%

Subscription-based revenue primarily consists of revenue derived from our SaaS arrangements, which generally utilize the Tyler private cloud. As part of our subscription-based services, we also provide electronic document filing solutions ("e-filing") that simplify the filing and management of court related documents for courts and law offices. E-filing revenue is derived from transaction fees and fixed fee arrangements.

Excluding the results of acquisitions, subscription-based revenue increased 21% compared to 2017. New SaaS clients as well as existing clients who converted to our SaaS model provided the majority of the subscription revenue increase. In 2018, we added 410 new SaaS clients and 97 existing clients elected to convert to our SaaS model. Also, e-filing services contributed approximately \$6.2 million of the subscription revenue increase in 2018. The increase in e-filing revenue is attributed to new e-filing clients, as well as increased volumes as the result of several existing clients mandating e-filing. The acquisition of Socrata, which primarily has a subscription revenue model, also contributed to the increase in subscription revenues.

Software services.

The following table sets forth a comparison of our software services revenue for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
		As Adjusted		
ES	\$ 166,921	\$ 161,245	\$ 5,676	4%
A&T	24,348	19,215	5,133	27
Total software services revenue	\$ 191,269	\$ 180,460	\$ 10,809	6%

Software services revenue primarily consists of professional services billed in connection with implementing our software, converting client data, training client personnel, custom development activities and consulting. New clients who purchase our proprietary software licenses generally also contract with us to provide for the related software services. Existing clients also periodically purchase additional training, consulting and minor programming services. Excluding the results of acquisitions, software services revenue grew 3% compared to the prior year period. This growth is due to a higher level of new software sales, through both our license and subscription models.

Maintenance.

The following table sets forth a comparison of our maintenance revenue for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
		As Adjusted		
ES	\$ 359,904	\$ 337,701	\$ 22,203	7%
A&T	24,617	21,618	2,999	14
Total maintenance revenue	\$ 384,521	\$ 359,319	\$ 25,202	7%

We provide maintenance and support services for our software products and certain third-party software. Maintenance revenue grew 7% compared to the prior year. Maintenance and support revenue increased mainly due to growth in our installed customer base from new software license sales as well as annual maintenance rate increases.

Appraisal services.

The following table sets forth a comparison of our appraisal services revenue for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
		As Adjusted		
ES	\$ —	\$ —	\$ —	—%
A&T	21,846	25,023	(3,177)	(13)
Total appraisal services revenue	\$ 21,846	\$ 25,023	\$ (3,177)	(13)%

In 2018, appraisal services revenue decreased 13% compared to the prior year primarily due to the successful completion of several large revaluation projects in mid-2017. The appraisal services business is somewhat cyclical and driven in part by statutory revaluation cycles in various states.

Cost of Revenues and Gross Margins

The following table sets forth a comparison of the key components of our cost of revenues for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
		As Adjusted		
Software licenses and royalties	\$ 3,802	\$ 3,321	\$ 481	14%
Acquired software	22,972	21,686	1,286	6
Software services, maintenance and subscriptions	438,923	387,634	51,289	13
Appraisal services	14,299	16,286	(1,987)	(12)
Hardware and other	15,708	12,595	3,113	25
Total cost of revenues	\$ 495,704	\$ 441,522	\$ 54,182	12%

The following table sets forth a comparison of gross margin percentage by revenue type for the years ended December 31:

Gross margin percentage	2018	2017	Change
		As Adjusted	
Software licenses, royalties and acquired software	71.3%	71.0%	0.3%
Software services, maintenance and subscriptions	44.9	45.6	(0.7)
Appraisal services	34.5	34.9	(0.4)
Hardware and other	33.6	28.8	4.8
Overall gross margin	47.0%	47.5%	(0.5)%

Software licenses, royalties and acquired software. Cost of software licenses, royalties and acquired software is primarily comprised of amortization expense for acquired software and third-party software costs. We do not have any direct costs associated with royalties. The gross margin increase of 0.3% is due to higher software license revenues offset by an increase in amortization expense for acquired software attributed to new acquisitions completed in 2018.

Software services, maintenance and subscriptions. Cost of software services, maintenance and subscriptions primarily consists of personnel costs related to installation of our software, conversion of client data, training client personnel and support activities and various other services such as custom client development and on-going operation of SaaS and e-filing arrangements. In 2018, the software services, maintenance and subscriptions gross margin decreased 0.7% compared to the prior year. Excluding employees added through acquisitions, our implementation and support staff has grown by 57 employees since December 31, 2017 as we accelerated hiring to ensure that we are well-positioned to deliver our current backlog and anticipated new business. Recognition of acquisition-related deferred revenue associated with subscriptions and maintenance also resulted in lower gross margins.

Appraisal services. Appraisal services revenue comprised approximately 2.3% of total revenue. The appraisal services gross margin decreased 0.4% compared to 2017 due to the reduction in higher margin projects substantially complete by early 2017 and lower volume of revenues in the current period to cover relatively fixed costs.

Our 2018 blended gross margin slightly decreased by 0.5% compared to 2017. Our overall gross margin decrease is mainly attributed to additions to our implementation staff and lower margin revenues from appraisal services, offset by improved margin on revenues from software licenses.

Selling, General and Administrative Expenses

Selling, general and administrative (“SG&A”) expenses consist primarily of salaries, employee benefits, travel, share-based compensation expense, commissions and related overhead costs for administrative and sales and marketing employees, as well as, professional fees, trade show activities, advertising costs and other marketing related costs. The following table sets forth a comparison of our SG&A expenses for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
		As Adjusted		
Selling, general and administrative expenses	\$ 207,605	\$ 175,914	\$ 31,691	18%

SG&A as a percentage of revenue was 22.2% in 2018 compared to 20.9% in 2017. SG&A expense increased approximately 18% compared to the prior year period. In 2018, our operating results include \$9.1 million of SG&A expenses for Socrata from the date of acquisition. The remaining SG&A expense increase is mainly due to compensation cost related to increased staff levels, higher stock compensation expense and increased commission expense as a result of higher sales. Excluding employees added with acquisitions, we have added 47 employees mainly to our sales and finance teams since December 31, 2017. In addition, our 2018 stock compensation expense rose \$11.2 million, mainly due to increases in our stock price over the last few years.

Research and Development Expense

Research and development expense consists primarily of salaries, employee benefits and related overhead costs associated with new product development. The following table sets forth a comparison of our research and development expense for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
Research and development expense	\$ 63,264	\$ 47,324	\$ 15,940	34%

Research and development expense increased 34% in 2018 compared to the prior year period, mainly due to a number of new Tyler product development initiatives across our product suites, including increased investments in research and development at recently acquired businesses. To support these initiatives, our research and development staff has grown by 159 since December 31, 2017.

Amortization of Customer and Trade Name Intangibles

Acquisition intangibles are comprised of the excess of the purchase price over the fair value of net tangible assets acquired that is allocated to acquired software, leases and customer and trade name intangibles. The remaining excess purchase price is allocated to goodwill that is not subject to amortization. Amortization expense related to acquired software is included with cost of revenues, while amortization expense of customer and trade name intangibles is recorded as operating expense. The estimated useful lives of both customer and trade name intangibles range from five to 25 years. The following table sets forth a comparison of amortization of customer and trade name intangibles for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
			As Adjusted	
Amortization of customer and trade name intangibles	\$ 16,217	\$ 13,381	\$ 2,836	21%

Amortization of customer and trade name intangibles increased due to the impact of intangibles added with several acquisitions completed in 2017 and 2018.

Estimated annual amortization expense relating to customer and trade name acquisition intangibles, excluding acquired software for which the amortization expense is recorded as cost of revenues, for the next five years is as follows (in thousands):

2019	\$ 16,459
2020	15,350
2021	15,232
2022	14,740
2023	14,665
Thereafter	95,419

Amortization expense relating to acquired leases will be recorded as a reduction to hardware and other revenue and is expected to be \$372,000 in 2019, \$313,000 in 2020, \$312,000 in 2021, \$312,000 in 2022, \$312,000 in 2023 and \$723,000 thereafter.

Other

The following table sets forth a comparison of other income (expense), net for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
Other income, net	\$ 3,378	\$ 698	\$ 2,680	N/M

Other income is comprised of interest expense and non-usage and other fees associated with our revolving credit agreement as well as interest income from invested cash. Other income, net, increased compared to the prior period due to increased interest income from significantly higher levels of cash and investments resulting from cash generated in the last year. We had no debt in the current period, as we repaid all borrowings under the revolving line of credit in January 2017.

Income Tax Provision (Benefit)

The following table sets forth a comparison of our income tax provision for the years ended December 31:

(\$ in thousands)	2018	2017	Change	
			\$	%
		As Adjusted		
Income tax provision (benefit)	\$ 8,408	\$ (6,115)	\$ 14,523	(237)%
Effective income tax rate	5.4%	(3.7)%		

The increase in the income tax provision in 2018 is primarily due to the one-time tax benefit of \$26.0 million (as adjusted) recognized in the fourth quarter of 2017 resulting from the remeasurement of deferred tax assets and liabilities associated with the enactment of the Tax Act which reduced the statutory U.S. federal corporate income tax rate from 35% to 21%. The increase is somewhat offset by the decrease in statutory U.S. federal corporate income tax rate for 2018. In addition, excess tax benefits from stock option exercises were lower in 2018 as compared to the prior period. Stock option exercise activity in 2018 generated excess tax benefits of \$32.5 million, while stock option exercise activity in 2017 generated \$40.6 million excess tax benefits.

The increase in the effective income tax rate in 2018 compared to 2017 is also primarily attributable to the one-time tax benefit associated with the Tax Act recognized in 2017 and the decrease in excess tax benefits related to stock option exercises realized, offset by the decrease in statutory U.S. federal corporate income tax rate for 2018. Excluding the impact of the Tax Act and the excess tax benefits, our income tax provision and effective tax rate in 2018 would have been \$42.6 million and 27.4% and in 2017, would have been \$60.5 million (as adjusted) and 37.0%, respectively.

The effective income tax rates in both 2018 and 2017 differed from the statutory United States federal corporate income tax rate of 21% and 35%, respectively, due to state income taxes, the research tax credit, non-deductible share-based compensation expense, disqualifying incentive stock option dispositions, and other non-deductible business expenses, and in 2017, the domestic production activities deduction.

2017 Compared to 2016

Revenues

Software licenses and royalties.

The following table sets forth a comparison of our software licenses and royalties revenue for the years ended December 31:

(\$ in thousands)	2017	2016	Change	
			\$	%
	As Adjusted	As Adjusted		
ES	\$ 78,388	\$ 78,271	\$ 117	—%
A&T	7,854	5,462	2,392	44
Total software licenses and royalties revenue	\$ 86,242	\$ 83,733	\$ 2,509	3%

Software license and royalties revenue increased 3% compared to the prior year. The increase in software licenses and royalties is attributed to additions to our implementation staff, which increased our capacity to deliver backlog.

Although the mix of new contracts between subscription-based and perpetual license arrangements may vary from quarter to quarter and year to year, we expect our longer-term software license growth rate to be negatively impacted by a growing number of customers choosing our subscription-based options, rather than purchasing the software under a traditional perpetual software license arrangement. Subscription-based arrangements result in lower software license revenue in the initial year as compared to perpetual software license arrangements but generate higher overall revenue over the term of the contract. Our new client mix in 2017 was approximately 53% selecting perpetual software license arrangements and approximately 47% selecting subscription-based arrangements compared to a client mix in 2016 of approximately 68% selecting perpetual software license arrangements and approximately 32% selecting subscription-based arrangements.

Subscriptions.

The following table sets forth a comparison of our subscriptions revenue for the years ended December 31:

(\$ in thousands)			Change	
	2017	2016	\$	%
	As Adjusted	As Adjusted		
ES	\$ 164,317	\$ 135,469	\$ 28,848	21%
A&T	7,859	7,188	671	9
Total subscriptions revenue	\$ 172,176	\$ 142,657	\$ 29,519	21%

Subscription-based revenue primarily consists of revenue derived from our SaaS arrangements, which generally utilize the Tyler private cloud. As part of our subscription-based services, we also provide electronic document filing solutions ("e-filing") that simplify the filing and management of court related documents for courts and law offices. E-filing revenue is derived from transaction fees and fixed fee arrangements.

Subscription-based revenue increased 21% compared to 2016. New SaaS clients as well as existing clients who converted to our SaaS model provided the majority of the subscriptions revenue increase. In 2017, we added 374 new SaaS clients and 88 existing clients elected to convert to our SaaS model. The average contract size in 2017 were 64% and 44% higher than 2016 for new clients and clients converting to our SaaS model, respectively. Also, e-filing services contributed approximately \$8.5 million of the subscriptions revenue increase in 2017. The increase in e-filing revenue is attributed to new e-filing clients, as well as increased volumes as the result of several existing clients mandating e-filing.

Software services.

The following table sets forth a comparison of our software services revenue for the years ended December 31:

(\$ in thousands)			Change	
	2017	2016	\$	%
	As Adjusted	As Adjusted		
ES	\$ 161,245	\$ 155,322	\$ 5,923	4%
A&T	19,215	16,326	2,889	18
Total software services revenue	\$ 180,460	\$ 171,648	\$ 8,812	5%

Software services revenue primarily consists of professional services billed in connection with implementing our software, converting client data, training client personnel, custom development activities and consulting. New clients who purchase our proprietary software licenses generally also contract with us to provide for the related software services. Existing clients also periodically purchase additional training, consulting and minor programming services. Software services revenue grew 5% compared to the prior year period. This growth is partly due to additions to our implementation and support staff, which increased our capacity to deliver backlog and partially due to completing recognition of a majority of the acquisition-related deferred service revenue that was fair valued at rates below Tyler's average service rate in prior periods.

Maintenance.

The following table sets forth a comparison of our maintenance revenue for the years ended December 31:

(\$ in thousands)	2017	2016	Change	
			\$	%
	As Adjusted	As Adjusted		
ES	\$ 337,701	\$ 302,409	\$ 35,292	12%
A&T	21,618	18,589	3,029	16
Total maintenance revenue	\$ 359,319	\$ 320,998	\$ 38,321	12%

We provide maintenance and support services for our software products and certain third-party software. Maintenance revenue grew 12% compared to the prior year. Maintenance and support revenue increased mainly due to growth in our installed customer base from new software license sales as well as annual maintenance rate increases. In addition, the increase is partially due to completing recognition of a majority of the acquisition-related deferred maintenance revenue that was fair valued at rates below Tyler's average maintenance rate in prior periods.

Appraisal services.

The following table sets forth a comparison of our appraisal services revenue for the years ended December 31:

(\$ in thousands)	2017	2016	Change	
			\$	%
ES	\$ —	\$ —	\$ —	—%
A&T	25,023	26,287	(1,264)	(5)
Total appraisal services revenue	\$ 25,023	\$ 26,287	\$ (1,264)	(5)%

In 2017, appraisal services revenue decreased 5% compared to the prior year primarily due to the successful completion of several large revaluation projects in mid-2017. The appraisal services business is somewhat cyclical and driven in part by statutory revaluation cycles in various states.

Cost of Revenues and Gross Margins

The following table sets forth a comparison of the key components of our cost of revenues for the years ended December 31:

(\$ in thousands)	2017	2016	Change	
			\$	%
Software licenses and royalties	\$ 3,321	\$ 2,964	\$ 357	12%
Acquired software	21,686	22,235	(549)	N/M
Software services, maintenance and subscriptions	387,634	348,939	38,695	11
Appraisal services	16,286	16,411	(125)	(1)
Hardware and other	12,595	10,143	2,452	24
Total cost of revenues	\$ 441,522	\$ 400,692	\$ 40,830	10%

The following table sets forth a comparison of gross margin percentage by revenue type for the years ended December 31:

Gross margin percentage	2017	2016	Change
	As Adjusted	As Adjusted	
Software licenses, royalties and acquired software	71.0%	69.9%	1.1%
Software services, maintenance and subscriptions	45.6	45.1	0.5
Appraisal services	34.9	37.6	(2.7)
Hardware and other	28.8	30.3	(1.5)
Overall gross margin	47.5%	47.3%	0.2%

Software licenses, royalties and acquired software. Cost of software licenses, royalties and acquired software is primarily comprised of amortization expense for acquired software and third-party software costs. We do not have any direct costs associated with royalties. The gross margin increase of 1.1% is due to higher incremental margins on software license revenues, in part due to slightly lower amortization expense for acquired software resulting from acquisitions.

Software services, maintenance and subscriptions. Cost of software services, maintenance and subscriptions primarily consists of personnel costs related to installation of our software, conversion of client data, training client personnel and support activities and various other services such as custom client development and on-going operation of SaaS and e-filing arrangements. In 2017, the software services, maintenance and subscriptions gross margin increased 0.5% compared to the prior year. Our implementation and support staff grew by 220 employees in 2017. Many of these additions occurred in early to mid-2017 and are contributing to revenue in 2017. Costs related to maintenance and various other services such as SaaS and e-filing typically grow at a slower rate than related revenue due to leverage in the utilization of support and maintenance staff and economies of scale. Reduced recognition of acquisition-related deferred revenue associated with software services and maintenance obligations completed in prior periods also resulted in higher gross margins.

Appraisal services. Appraisal services revenue comprised approximately 3.0% of total revenue. The appraisal services gross margin decreased 2.7% compared to 2016 due to the reduction in higher margin projects substantially complete by early 2017 and lower volume of revenues in the current period to cover relatively fixed costs.

Our 2017 blended gross margin slightly increased 0.2% compared to 2016. Our overall gross margin was positively impacted by a product mix that included more higher-margin recurring revenues from subscriptions and maintenance and improved margin on revenues from software licenses offset by the lower-margin revenues from appraisal services as described above.

Selling, General and Administrative Expenses

The following table sets forth a comparison of selling, general and administrative expenses for the years ended December 31:

(\$ in thousands)	2017	2016	Change	
	As Adjusted	As Adjusted	\$	%
Selling, general and administrative expenses	\$ 175,914	\$ 165,176	\$ 10,738	7%

SG&A as a percentage of revenue was 20.9% in 2017 compared to 21.7% in 2016. SG&A expense increased approximately 7% mainly due to compensation costs related to increased staff levels, merit increases and higher stock compensation expense. We added 28 SG&A employees, mainly to our sales and finance teams in 2017. In addition, our 2017 stock compensation expense rose \$4.7 million, mainly due to increases in our stock price over the last few years.

Research and Development Expense

The following table sets forth a comparison of our research and development expense for the years ended December 31:

(\$ in thousands)	2017	2016	Change	
			\$	%
Research and development expense	\$ 47,324	\$ 43,154	\$ 4,170	10%

Research and development expense consists mainly of costs associated with development of new products and technologies from which we do not currently generate revenue, as well as costs related to the ongoing development efforts for Microsoft Dynamics AX. Our contractual research and development commitment to develop public sector functionality for Microsoft Dynamics AX was amended in March 2016, which significantly reduced our development commitment through March 2018. However, we continue to provide sustained engineering and technical support for the public sector functionality within Dynamics AX. License and maintenance royalties for all applicable domestic and international sales of Dynamics AX to public sector entities will continue under the terms of the contract.

Research and development expense increased 10% in 2017 compared to the prior year period, mainly due to research and development efforts related to new Tyler product development initiatives, primarily in our public safety solutions, offset by reduced development efforts for Microsoft Dynamics AX. As a result of the Microsoft Dynamics AX amendment, we have redeployed certain development resources to enhance functionality on several existing solutions and these costs are being recorded in cost of revenues – software services, maintenance and subscriptions.

Amortization of Customer and Trade Name Intangibles

The following table sets forth a comparison of amortization of customer and trade name intangibles for the years ended December 31:

(\$ in thousands)	2017	2016	Change	
			\$	%
	As Adjusted	As Adjusted		
Amortization of customer and trade name intangibles	\$ 13,381	\$ 13,202	\$ 179	1%

Amortization of customer and trade name intangibles increased due to the impact of intangibles added with several small acquisitions completed in 2016 and 2017.

Other

The following table sets forth a comparison of other income (expense), net for the years ended December 31:

(\$ in thousands)	2017	2016	Change	
			\$	%
Other income (expense), net	\$ 698	\$ (1,998)	\$ 2,696	N/M

Other income (expense) is comprised of interest expense and non-usage and other fees associated with our revolving credit agreement as well as interest income from invested cash. Other income (expense), net increased compared to the prior period is attributed to significantly lower debt levels in the current period, as we repaid all borrowings under the revolving line of credit in January 2017, and correspondingly higher levels of cash investments.

Income Tax (Benefit) Provision

The following table sets forth a comparison of our income tax provision for the years ended December 31:

(\$ in thousands)	2017 As Adjusted	2016 As Adjusted	Change	
			\$	%
Income tax provision	\$ (6,115)	\$ 21,957	\$ (28,072)	(128)%
Effective income tax rate	(3.7)%	16.2%		

The decrease in the income tax provision during 2017 was primarily driven by the enactment of the Tax Act which reduced the statutory U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision is a \$26.0 million (as adjusted) tax benefit due to the remeasurement of deferred tax assets and liabilities. See Note 7 - "Income Tax" for additional information related to the Tax Act. The income tax provision is also lower due to the increase in the excess tax benefits from stock option exercises as compared to prior period. We experienced significant stock option exercise activity in 2017 and 2016 that generated excess tax benefits of \$40.6 million and \$29.6 million, respectively.

The change in the effective income tax rate in 2017 compared to 2016 is also primarily attributable to the impact of the Tax Act and the changes in excess tax benefits related to stock option exercises realized. Excluding the impact of the Tax Act and the excess tax benefits, our income tax provision and effective tax rate in 2017 would have been \$60.5 million (as adjusted) and 37.0%, respectively. Excluding the excess tax benefits, our income tax provision and effective tax rate in 2016 would have been \$51.5 million (as adjusted) and 38.0% respectively.

The effective income tax rates in both 2017 and 2016 differed from the statutory United States federal corporate income tax rate of 35% due to state income taxes, the domestic production activities deduction, the research tax credit, non-deductible share-based compensation expense, disqualifying incentive stock option dispositions, and other non-deductible business expenses.

FINANCIAL CONDITION AND LIQUIDITY

As of December 31, 2018, we had cash and cash equivalents of \$134.3 million compared to \$185.9 million at December 31, 2017. We also had \$97.7 million invested in investment grade corporate bonds, municipal bonds and asset-backed securities as of December 31, 2018 compared to \$63.8 million at December 31, 2017. These investments mature between 2018 through 2022 and we intend to hold these investments until maturity. Cash and cash equivalents consist of cash on deposit with several domestic banks and money market funds. As of December 31, 2018, we had no outstanding borrowings and no outstanding letters of credit. We believe our revolving line of credit, cash from operating activities, cash on hand and access to the credit markets provide us with sufficient flexibility to meet our long-term financial needs.

The following table sets forth a summary of cash flows for the years ended December 31:

(\$ in thousands)	2018	2017	2016
Cash flows provided (used) by:			
Operating activities	\$ 250,203	\$ 195,755	\$ 191,859
Investing activities	(238,255)	(85,395)	(50,720)
Financing activities	(63,595)	39,415	(138,075)
Net (decrease) increase in cash and cash equivalents	\$ (51,647)	\$ 149,775	\$ 3,064

Net cash provided by operating activities continues to be our primary source of funds to finance operating needs and capital expenditures. Other potential capital resources include cash on hand, public and private issuances of debt or equity securities, and bank borrowings. It is possible that our ability to access the capital and credit markets in the future may be limited by economic conditions or other factors. We currently believe that cash provided by operating activities, cash on hand and available credit are sufficient to fund our working capital requirements, capital expenditures, income tax obligations, and share repurchases for at least the next twelve months.

In 2018, operating activities provided cash of \$250.2 million compared to \$195.8 million in 2017. Operating activities that provided cash were primarily comprised of net income of \$147.5 million, non-cash depreciation and amortization charges of \$61.8 million and non-cash share-based compensation expense of \$52.7 million. Working capital, excluding cash, increased approximately \$14.0 million due to higher accounts receivable because of an increase in unbilled receivables attributed to revenues recognized from prior billings, higher accounts receivable related to annual maintenance and subscription billings, and the deferred taxes associated with stock option activity during the period. These increases were offset slightly by the growth in deferred revenue balances and timing of income tax payments.

In general, changes in the balance of deferred revenue are cyclical and primarily driven by the timing of our maintenance and subscription billings. Our renewal dates occur throughout the year, but our largest maintenance renewal cycles occur in the second and fourth quarters.

Days sales outstanding in accounts receivable were 111 days at December 31, 2018, compared to 102 days at December 31, 2017. The increase in our DSO is mainly due to an increase in unbilled receivables attributed to the increase in software license revenue for which we have recognized revenue at the point in time when the software is made available to the customer, but the billing has not yet been submitted to the customer. An increase in software services contracts accounted for using progress-to-completion method of revenue recognition in which the services are performed in one accounting period, but the billing normally occurs subsequently in another accounting period also contributed to the increase in DSO. Furthermore, our maintenance billing cycle typically peaks at its highest level in June and second highest level in December of each year and is followed by collections in the subsequent quarter. DSO is calculated based on quarter-end accounts receivable (excluding long-term receivables but including unbilled receivables) divided by the quotient of annualized quarterly revenues divided by 360 days.

Investing activities used cash of \$238.3 million in 2018 compared to \$85.4 million in 2017. We invested \$115.6 million and received \$81.2 million in proceeds from investment grade corporate bonds, municipal bonds and asset-backed securities with maturity dates ranging from 2018 through 2022. Approximately \$27.4 million was invested in property and equipment, primarily for computer equipment, furniture and fixtures in support of internal growth, particularly with respect to our cloud-based offerings. We paid \$2.2 million for the expansion of existing buildings. On December 7, 2018, we acquired certain assets and intellectual property of SceneDoc, Inc., a company that provides mobile-first, SaaS field reporting for law enforcement agencies. The total purchase price was approximately \$6.2 million, of which \$5.4 million was paid in cash and approximately \$759,000 accrued for a working capital holdback. On October 1, 2018, we acquired all of the equity interests of MobileEyes, a company that develops software to improve public safety by supporting fire prevention and suppression, emergency response, and structural safety. The total purchase price was approximately \$5.3 million in cash. On August 31, 2018, we acquired all of the assets of CaseloadPRO, a company that provides a fully featured probation case management system. The purchase price of \$9.3 million was paid in cash. On April 30, 2018, we acquired all of the capital stock of Socrata, a company that provides open data and data-as-a-service solutions including cloud-based data integration, visualization, analysis, and reporting solutions for state and local government agencies. The purchase price, net of cash acquired of \$1.7 million, was \$147.6 million paid in cash. On April 30, 2018, we acquired all of the equity interests of Sage, a cybersecurity company offering a suite of services that supports an entire cybersecurity lifecycle, including program development, education and training, technical testing, advisory services, and digital forensics. The total purchase price was \$11.6 million paid in cash. These expenditures were funded from cash generated from operations.

In 2017, we invested \$59.8 million and received \$28.8 million in proceeds from investment grade corporate bonds, municipal bonds and asset-backed securities. Approximately \$43.1 million was invested in property and equipment. We purchased an office building in Latham, New York for approximately \$2.9 million and paid \$2.1 million for building improvements. We paid \$19.4 million for construction to expand our office building in Yarmouth, Maine. We also made three small acquisitions with a combined cash purchase price of \$11.3 million. The remaining additions were for computer equipment, furniture and fixtures in support of internal growth, particularly with respect to our cloud-based offerings. These expenditures were funded from cash generated from operations.

Financing activities used cash of \$63.6 million in 2018 compared to cash provided of \$39.4 million in 2017. Financing activities in 2018 were comprised of collections of \$83.0 million from stock option exercises and employee stock purchase plan activity. We also purchased approximately 781,000 shares of our common stock for an aggregate purchase price of \$150.1 million, of which \$3.5 million was accrued as of December 31, 2018.

Financing activities in 2017 were comprised of \$10.0 million net payments on our revolving line of credit offset by collections of \$56.9 million from stock option exercises and employee stock purchase plan activity. We also purchased approximately 44,000 shares of our common stock for an aggregate purchase price of \$6.6 million.

In February 2019, our board of directors authorized the repurchase of an additional 1.5 million shares of Tyler common stock. The repurchase program, which was approved by our board of directors, was announced in October 2002, and was amended at various times from 2003 through 2019. As of February 20, 2019, we had remaining authorization to repurchase up to 2.7 million additional shares of our common stock. Our share repurchase program allows us to repurchase shares at our discretion. Market conditions influence the timing of the buybacks and the number of shares repurchased, as well as the volume of employee stock option exercises.

Share repurchases are generally funded using our existing cash balances and borrowings under our credit facility and may occur through open market purchases and transactions structured through investment banking institutions, privately negotiated transactions and/or other mechanisms. There is no expiration date specified for the authorization and we intend to repurchase stock under the plan from time to time.

On November 16, 2015, we entered into a \$300.0 million Credit Agreement (the "Credit Facility") with the various lenders party thereto and Wells Fargo Bank, National Association, as Administrative Agent. The Credit Facility provides for a revolving credit line of up to \$300.0 million, including a \$10.0 million sublimit for letters of credit. The Credit Facility matures on November 16, 2020. Borrowings under the Credit Facility may be used for general corporate purposes, including working capital requirements, acquisitions and share repurchases. Borrowings under the Credit Facility bear interest at a rate of either (1) Wells Fargo Bank's prime rate (subject to certain higher rate determinations) plus a margin of 0.25% to 1.00% or (2) the 30, 60, 90 or 180 day LIBOR rate plus a margin of 1.25% to 2.00%. As of December 31, 2018, our interest rate was 5.75% under the prime rate option or approximately 3.77% under the 30-day LIBOR option. The Credit Facility is secured by substantially all of our assets. The Credit Facility requires us to maintain certain financial ratios and other financial conditions and prohibits us from making certain investments, advances, cash dividends or loans, and limits incurrence of additional indebtedness and liens. As of December 31, 2018, we were in compliance with those covenants.

As of December 31, 2018, we had no outstanding borrowings and had unused borrowing capacity of \$300.0 million under the Credit Facility. We paid interest of \$770,000 in 2018, \$804,000 in 2017, and \$1.9 million in 2016.

We paid income taxes, net of refunds received, of \$6.8 million in 2018, \$36.0 million in 2017, and \$30.2 million in 2016. In 2018, we experienced significant stock option exercise activity that generated net tax benefits of \$32.5 million and reduced tax payments accordingly. In 2017 and 2016, excess tax benefits were \$40.6 million and \$29.6 million, respectively.

We anticipate that 2019 capital spending will be between \$54 million and \$56 million, including approximately \$16 million related to real estate and approximately \$6 million of capitalized software development. We expect the majority of the other capital spending will consist of computer equipment and software for infrastructure replacements and expansion. Capital spending is expected to be funded from existing cash balances and cash flows from operations.

On January 31, 2019, we entered in to a Merger agreement to acquire 100% of the equity interests of MP Holdings, Parent, Inc. dba MicroPact ("MicroPact") for the anticipated purchase price of \$185 million in cash at closing (subject to possible adjustments and holdback) plus contingent consideration not to exceed \$10 million. The completion of the acquisition is subject to customary closing conditions, including the expiration or the termination of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act. The Federal Trade Commission granted early termination of that waiting period effective February 15, 2019. The cash portion of the merger consideration will be funded from cash on hand and proceeds from the revolving credit facility.

On February 1, 2019, we acquired all the assets of Civic, LLC ("MyCivic"), a company that provides software solutions to connect communities. The purchase price is \$3.7 million of which \$3.6 million was paid in cash and approximately \$90,000 was accrued for a working capital holdback.

From time to time we engage in discussions with potential acquisition candidates. In order to pursue such opportunities, which could require significant commitments of capital, we may be required to incur debt or to issue additional potentially dilutive securities in the future. No assurance can be given as to our future acquisition opportunities and how such opportunities will be financed.

We lease office facilities, as well as transportation and other equipment used in our operations under non-cancelable operating lease agreements expiring at various dates through 2026.

Summarized in the table below are our obligations to make future payments under the Credit Facility and lease obligations at December 31, 2018 (in thousands):

	2019	2020	2021	2022	2023	Thereafter	Total
Revolving line of credit	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Lease obligations	5,994	5,146	3,976	1,925	1,164	2,132	20,337
Total future payment obligations	\$ 5,994	\$ 5,146	\$ 3,976	\$ 1,925	\$ 1,164	\$ 2,132	\$ 20,337

As of December 31, 2018, we do not have any off-balance sheet arrangements, guarantees to third-parties or material purchase commitments, except for the operating lease commitments listed above.

CAPITALIZATION

At December 31, 2018, our capitalization consisted of no outstanding borrowings and \$1.3 billion of shareholders' equity.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Market risk represents the risk of loss that may affect us due to adverse changes in financial market prices and interest rates.

In 2018, our effective average interest rate for borrowings was 5.22%. As of December 31, 2018, our interest rate was 5.75% under the prime rate option or approximately 3.77% under the 30-day LIBOR option. The Credit Facility is secured by substantially all of our assets. Loans under the Credit Facility bear interest, at Tyler's option, at a per annum rate of either (1) the Wells Fargo Bank prime rate (subject to certain higher rate determinations) plus a margin of 0.25% to 1.00% or (2) the 30, 60, 90 or 180-day LIBOR rate plus a margin of 1.25% to 2.00%.

As of December 31, 2018, we had no outstanding borrowings under the Credit Facility and therefore are not subject to any interest risk.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The reports of our independent registered public accounting firm and our financial statements, related notes, and supplementary data are included as part of this Annual Report beginning on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None.

ITEM 9A. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures — We maintain disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act) designed to provide reasonable assurance that the information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. These include controls and procedures designed to ensure that this information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosures. Management, with the participation of the chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2018. Based on this evaluation, the chief executive officer and chief financial officer have concluded that our disclosure controls and procedures were effective as of December 31, 2018.

Management's Report on Internal Control Over Financial Reporting — Tyler's management is responsible for establishing and maintaining effective internal control over financial reporting as defined in Securities Exchange Act Rule 13a-15(f). Tyler's internal control over financial reporting is designed to provide reasonable assurance to Tyler's management and board of directors regarding the preparation and fair presentation of published financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Management assessed the effectiveness of Tyler's internal control over financial reporting as of December 31, 2018. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Based on our assessment, we concluded that, as of December 31, 2018, Tyler's internal control over financial reporting was effective based on those criteria.

Tyler's internal control over financial reporting as of December 31, 2018 has been audited by Ernst & Young LLP, the independent registered public accounting firm who also audited Tyler's financial statements. Ernst & Young's attestation report on Tyler's internal control over financial reporting appears on page F-1 hereof.

Changes in Internal Control Over Financial Reporting — During the quarter ended December 31, 2018, there were no changes in our internal control over financial reporting, as defined in Securities Exchange Act Rule 13a-15(f), that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

None.

PART III

See the information under the following captions in Tyler's definitive Proxy Statement, which is incorporated herein by reference. Only those sections of the Proxy Statement that specifically address the items set forth herein are incorporated by reference. Such incorporation by reference does not include the Compensation Discussion and Analysis, the Compensation Committee Report or the Audit Committee Report, which are included in the Proxy Statement.

Headings in Proxy Statement

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE.

"Tyler Management" and "Corporate Governance Principles and Board Matters"

ITEM 11. EXECUTIVE COMPENSATION.

"Executive Compensation"

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND
MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

"Security Ownership of Certain Beneficial Owners and Management"

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND
DIRECTOR INDEPENDENCE.

"Executive Compensation" and
"Certain Relationships and Related Transactions"

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

The information required under this item may be found under the section captioned "Proposals For Consideration – Proposal Two – Ratification of Our Independent Auditors for Fiscal Year 2019" in our Proxy Statement when filed.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES.

The following documents are filed as part of this Annual Report:

- (a) (1) The financial statements are filed as part of this Annual Report.

	Page
<u>Reports of Independent Registered Public Accounting Firm</u>	<u>F-1</u>
<u>Consolidated Statements of Comprehensive Income for the years ended December 31, 2018, 2017 and 2016</u>	<u>F-3</u>
<u>Consolidated Balance Sheets as of December 31, 2018 and 2017</u>	<u>F-4</u>
<u>Consolidated Statements of Shareholders' Equity for the years ended December 31, 2018, 2017 and 2016</u>	<u>F-6</u>
<u>Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2017 and 2016</u>	<u>F-5</u>
<u>Notes to Consolidated Financial Statements</u>	<u>F-7</u>

- (2) Financial statement schedules:

There are no financial statement schedules filed as part of this Annual Report, since the required information is included in the financial statements, including the notes thereto, or the circumstances requiring inclusion of such schedules are not present.

- (3) Exhibits

Certain of the exhibits to this Annual Report are hereby incorporated by reference, as specified:

Exhibit Number	Description
3.1	Restated Certificate of Incorporation of Tyler Three, as amended through May 14, 1990, and Certificate of Designation of Series A Junior Participating Preferred Stock (filed as Exhibit 3.1 to our Form 10-Q for the quarter ended June 30, 1990, and incorporated by reference herein).
3.2	Certificate of Amendment to the Restated Certificate of Incorporation (filed as Exhibit 3.1 to our Form 8-K, dated February 19, 1998, and incorporated by reference herein).
3.3	<u>Amended and Restated By-Laws of Tyler Corporation, dated October 20, 2015 (filed as Exhibit 3.3 to our Form 10-Q for the quarter ended September 30, 2015, and incorporated by reference herein).</u>
3.4	<u>Certificate of Amendment dated May 19, 1999 to the Restated Certificate of Incorporation (filed as Exhibit 3.4 to our Form 10-K for the year ended December 31, 2000, and incorporated by reference herein).</u>
4.1	Specimen of Common Stock Certificate (filed as Exhibit 4.1 to our registration statement no. 33-33505 and incorporated by reference herein).
4.2	<u>Credit Agreement dated November 16, 2015, among Tyler Technologies, Inc. and Wells Fargo Bank, N. A. as Administrative Agent and other lenders party hereto (filed as Exhibit 10.1 to our Form 8-K dated November 16, 2015, and incorporated by reference herein).</u>
10.1	<u>Employee Stock Purchase Plan (filed as Exhibit 10.1 to our registration statement 333-182318 dated June 25, 2012 and incorporated by reference herein).</u>
10.2	<u>Employment and Non-Competition Agreement between Tyler Technologies, Inc. and John S. Marr Jr. effective February 26, 2018 (filed as Exhibit 10.1 to our Form 8-K dated March 9, 2018 and incorporated by reference herein).</u>

Exhibit Number	Description
<u>10.3</u>	<u>Employment and Non-Competition Agreement between Tyler Technologies, Inc. and Brian K. Miller effective February 26, 2018 (filed as Exhibit 10.3 to our Form 8-K dated March 9, 2018 and incorporated by reference herein).</u>
<u>10.4</u>	<u>Employment and Non-Competition Agreement between Tyler Technologies, Inc. and H. Lynn Moore, Jr. effective February 26, 2018 (filed as Exhibit 10.2 to our Form 8-K dated March 9, 2018 and incorporated by reference herein).</u>
<u>10.5</u>	<u>Agreement and plan of merger by and among Tyler Technologies, Inc. and Dedomena Acquisition, Inc., Socrata, Inc. (filed as Exhibit 10.4 to our Form 10-Q dated May 10, 2018 and incorporated by reference herein).</u>
<u>10.6</u>	<u>Tyler Technologies, Inc. 2018 Stock Option Plan effective as of May 9, 2018 (filed as Appendix A to the registrant's Proxy Statement filed with the Commission on March 28, 2018 and incorporated by reference herein).</u>
<u>10.7</u>	<u>Agreement and Plan of Merger by and among Tyler Technologies, Inc. TMP, Subsidiary, Inc. MP Holding Parent, Inc.</u>
<u>*23</u>	<u>Consent of Independent Registered Public Accounting Firm.</u>
<u>*31.1</u>	<u>Rule 13a-14(a) Certification by Principal Executive Officer.</u>
<u>*31.2</u>	<u>Rule 13a-14(a) Certification by Principal Financial Officer.</u>
<u>*32</u>	<u>Section 1350 Certification of Principal Executive Officer and Principal Financial Officer.</u>
*101	Instance Document
*101	Schema Document
*101	Calculation Linkbase Document
*101	Labels Linkbase Document
*101	Definition Linkbase Document
*101	Presentation Linkbase Document

* — Filed herewith.

A copy of each exhibit may be obtained at a price of 15 cents per page, with a \$10.00 minimum order, by writing Investor Relations, 5101 Tennyson Parkway, Plano, Texas, 75024.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: February 20, 2019

TYLER TECHNOLOGIES, INC.

By: /s/ H. Lynn Moore
H. Lynn Moore
President and Chief Executive Officer
(principal executive officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, the following persons on behalf of the registrant and in the capacities and on the dates indicated have signed this report below.

Date: February 20, 2019

By: /s/ John S. Marr
John S. Marr
Executive Chairman of the Board
Director

Date: February 20, 2019

By: /s/ H. Lynn Moore
H. Lynn Moore
President and Chief Executive Officer
(principal executive officer)

Date: February 20, 2019

By: /s/ Brian K. Miller
Brian K. Miller
Executive Vice President and Chief Financial Officer
(principal financial officer)

Date: February 20, 2019

By: /s/ W. Michael Smith
W. Michael Smith
Chief Accounting Officer
(principal accounting officer)

Date: February 20, 2019

By: /s/ Donald R. Brattain
Donald R. Brattain
Director

Date: February 20, 2019

By: /s/ Glenn A. Carter
Glenn A. Carter
Director

Date: February 20, 2019

By: /s/ Brenda A. Cline
Brenda A. Cline
Director

Date: February 20, 2019

By: /s/ J. Luther King
J. Luther King
Director

Date: February 20, 2019

By: /s/ Daniel M. Pope
Daniel M. Pope
Director

Date: February 20, 2019

By: /s/ Dustin R. Womble
Dustin R. Womble
Director

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Tyler Technologies, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Tyler Technologies, Inc. (the Company) as of December 31, 2018 and 2017, the related consolidated statements of comprehensive income, cash flows and shareholders' equity for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 20, 2019 expressed an unqualified opinion thereon.

As discussed in Note 1 to the consolidated financial statements, the Company changed its method of accounting for revenue in 2018 due to the adoption of Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), and the related amendments.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ ERNST & YOUNG LLP

We have served as the Company's auditor since 1966.

Dallas, Texas
February 20, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Tyler Technologies, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Tyler Technologies, Inc.'s internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Tyler Technologies, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and our report dated February 20, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ ERNST & YOUNG LLP

Dallas, Texas
February 20, 2019

Tyler Technologies, Inc.
Consolidated Statements of Comprehensive Income
For the years ended December 31
(In thousands, except per share amounts)

	2018	2017	2016
		As Adjusted	As Adjusted
Revenues:			
Software licenses and royalties	\$ 93,441	\$ 86,242	\$ 83,733
Subscriptions	220,547	172,176	142,657
Software services	191,269	180,460	171,648
Maintenance	384,521	359,319	320,998
Appraisal services	21,846	25,023	26,287
Hardware and other	23,658	17,679	14,557
Total revenues	935,282	840,899	759,880
Cost of revenues:			
Software licenses and royalties	3,802	3,321	2,964
Acquired software	22,972	21,686	22,235
Software services, maintenance and subscriptions	438,923	387,634	348,939
Appraisal services	14,299	16,286	16,411
Hardware and other	15,708	12,595	10,143
Total cost of revenues	495,704	441,522	400,692
Gross profit	439,578	399,377	359,188
Selling, general and administrative expenses	207,605	175,914	165,176
Research and development expense	63,264	47,324	43,154
Amortization of customer and trade name intangibles	16,217	13,381	13,202
Operating income	152,492	162,758	137,656
Other income (expense), net	3,378	698	(1,998)
Income before income taxes	155,870	163,456	135,658
Income tax provision (benefit)	8,408	(6,115)	21,957
Net income	\$ 147,462	\$ 169,571	\$ 113,701
Earnings per common share:			
Basic	\$ 3.84	\$ 4.55	\$ 3.12
Diluted	\$ 3.68	\$ 4.32	\$ 2.92

See accompanying notes.

Tyler Technologies, Inc.
Consolidated Balance Sheets
(In thousands, except par value and share amounts)

	December 31, 2018	December 31, 2017
	As Adjusted	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 134,279	\$ 185,926
Accounts receivable (less allowance for losses of \$4,647 in 2018 and \$5,427 in 2017)	298,912	246,188
Short-term investments	44,306	43,159
Prepaid expenses	33,258	32,206
Income tax receivable	4,697	11,339
Other current assets	3,406	1,997
Total current assets	518,858	520,815
Accounts receivable, long-term	16,020	12,107
Property and equipment, net	155,177	152,315
Other assets:		
Goodwill	753,718	657,987
Other intangibles, net	276,852	229,617
Non-current investments and other assets	70,338	38,510
	<u>\$ 1,790,963</u>	<u>\$ 1,611,351</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 6,910	\$ 8,174
Accrued liabilities	66,480	64,675
Deferred revenue	350,512	298,613
Total current liabilities	423,902	371,462
Revolving line of credit	—	—
Deferred revenue, long-term	424	1,274
Deferred income taxes	41,791	46,879
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, \$10.00 par value; 1,000,000 shares authorized; none issued	—	—
Common stock, \$0.01 par value; 100,000,000 shares authorized; 48,147,969 shares issued in 2018 and 2017	481	481
Additional paid-in capital	731,435	626,867
Accumulated other comprehensive loss, net of tax	(46)	(46)
Retained earnings	771,925	624,463
Treasury stock, at cost; 9,872,505 and 10,262,182 shares in 2018 and 2017, respectively	(178,949)	(60,029)
Total shareholders' equity	1,324,846	1,191,736
	<u>\$ 1,790,963</u>	<u>\$ 1,611,351</u>

See accompanying notes.

Tyler Technologies, Inc.
Consolidated Statements of Cash Flows
For the years ended December 31
(In thousands)

	2018	2017	2016
		As Adjusted	As Adjusted
Cash flows from operating activities:			
Net income	\$ 147,462	\$ 169,571	\$ 113,701
Adjustments to reconcile net income to cash provided by operations:			
Depreciation and amortization	61,759	53,395	49,773
Share-based compensation expense	52,740	37,348	29,747
Provision for losses - accounts receivable	2,286	4,110	4,484
Deferred income tax benefit	(5,069)	(33,664)	(26,432)
Changes in operating assets and liabilities, exclusive of effects of acquired companies:			
Accounts receivable	(53,771)	(35,170)	(34,760)
Income tax receivable	6,642	(8,444)	18,185
Prepaid expenses and other current assets	(588)	(6,958)	246
Accounts payable	(2,416)	878	387
Accrued liabilities	(2,445)	6,050	10,717
Deferred revenue	43,603	8,639	25,811
Net cash provided by operating activities	250,203	195,755	191,859
Cash flows from investing activities:			
Cost of acquisitions, net of cash acquired	(178,093)	(11,344)	(9,394)
Purchase of marketable security investments	(115,625)	(59,779)	(20,316)
Proceeds from marketable security investments	81,205	28,786	16,837
Additions to property and equipment	(27,424)	(43,057)	(37,726)
Decrease (increase) in other	1,682	(1)	(121)
Net cash used by investing activities	(238,255)	(85,395)	(50,720)
Cash flows from financing activities:			
Decrease in net borrowings on revolving line of credit		(10,000)	(56,000)
Purchase of treasury shares	(146,553)	(7,474)	(111,838)
Contributions from employee stock purchase plan	8,051	7,044	6,236
Proceeds from exercise of stock options	74,907	49,845	23,527
Net cash (used) provided by financing activities	(63,595)	39,415	(138,075)
Net (decrease) increase in cash and cash equivalents	(51,647)	149,775	3,064
Cash and cash equivalents at beginning of period	185,926	36,151	33,087
Cash and cash equivalents at end of period	\$ 134,279	\$ 185,926	\$ 36,151

See accompanying notes.

Tyler Technologies, Inc.
Consolidated Statements of Shareholders' Equity
For the years ended December 31, 2018, 2017 and 2016
(In thousands)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock		Total Shareholders' Equity
	Shares	Amount				Shares	Amount	
Balance at December 31, 2015 (As Adjusted)	48,148	\$ 481	\$ 607,755	\$ (46)	\$ 341,191	(11,374)	\$ (75,352)	\$ 874,029
Net income	—	—	—	—	113,701	—	—	113,701
Issuance of shares pursuant to stock compensation plan	—	—	(82,273)	—	—	827	105,800	23,527
Stock compensation	—	—	29,747	—	—	—	—	29,747
Issuance of shares pursuant to employee stock purchase plan	—	—	1,434	—	—	47	4,802	6,236
Treasury stock purchases	—	—	—	—	—	(882)	(112,699)	(112,699)
Balance at December 31, 2016 (As Adjusted)	48,148	481	556,663	(46)	454,892	(11,382)	(77,449)	934,541
Net income	—	—	—	—	169,571	—	—	169,571
Issuance of shares pursuant to stock compensation plan	—	—	28,174	—	—	1,113	21,671	49,845
Stock compensation	—	—	37,348	—	—	—	—	37,348
Issuance of shares pursuant to employee stock purchase plan	—	—	4,682	—	—	51	2,362	7,044
Treasury stock purchases	—	—	—	—	—	(44)	(6,613)	(6,613)
Balance at December 31, 2017 (As Adjusted)	48,148	481	626,867	(46)	624,463	(10,262)	(60,029)	1,191,736
Net income	—	—	—	—	147,462	—	—	147,462
Issuance of shares pursuant to stock compensation plan	—	—	44,458	—	—	1,126	30,449	74,907
Stock compensation	—	—	52,740	—	—	—	—	52,740
Issuance of shares pursuant to employee stock purchase plan	—	—	7,370	—	—	45	681	8,051
Treasury stock purchases	—	—	—	—	—	(781)	(150,050)	(150,050)
Balance at December 31, 2018	48,148	\$ 481	\$ 731,435	\$ (46)	\$ 771,925	(9,872)	\$ (178,949)	\$ 1,324,846

See accompanying notes.

Tyler Technologies, Inc.
Notes to Consolidated Financial Statements
(Tables in thousands, except per share data)

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

DESCRIPTION OF BUSINESS

We provide integrated software systems and related services for the public sector, with a focus on local governments. We develop and market a broad line of software solutions and services to address the information technology ("IT") needs of cities, counties, schools and other local government entities. In addition, we provide professional IT services, including software and hardware installation, data conversion, training, and for certain customers, product modifications, along with continuing maintenance and support for customers using our systems. We also provide subscription-based services such as software as a service ("SaaS") arrangements, which primarily utilize the Tyler private cloud, and electronic document filing solutions ("e-filing"). In addition, we provide property appraisal outsourcing services for taxing jurisdictions.

PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include our parent company and two subsidiaries, which are wholly-owned. All significant intercompany balances and transactions have been eliminated in consolidation. Comprehensive income is defined as the change in equity of a business enterprise during a period from transactions, and other events and circumstances from non-owner sources and includes all components of net income (loss) and other comprehensive income (loss). We had no items of other comprehensive income (loss) during the years ended December 31, 2018, 2017 and 2016.

CASH AND CASH EQUIVALENTS

Cash in excess of that necessary for operating requirements is invested in short-term, highly liquid, income-producing investments. Investments with original maturities of three months or less are classified as cash and cash equivalents, which primarily consist of cash on deposit with several banks and money market funds. Cash and cash equivalents are stated at cost, which approximates market value.

REVENUE RECOGNITION

Nature of Products and Services

We earn revenue from software licenses, royalties, subscription-based services, software services, post-contract customer support ("PCS" or "maintenance"), hardware, and appraisal services. Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer
- Identification of the performance obligations in the contract
- Determination of the transaction price
- Allocation of the transaction price to the performance obligations in the contract
- Recognition of revenue when, or as, we satisfy a performance obligation

Most of our software arrangements with customers contain multiple performance obligations that range from software licenses, installation, training, and consulting to software modification and customization to meet specific customer needs (services), hosting, and PCS. For these contracts, we account for individual performance obligations separately when they are distinct. We evaluate whether separate performance obligations can be distinct or should be accounted for as one performance obligation. Arrangements that include software services, such as training or installation, are evaluated to determine whether those services are highly interdependent or interrelated to the product's functionality. The transaction price is allocated to the distinct performance obligations on a relative standalone selling price ("SSP") basis. We determine the SSP based on our overall pricing objectives, taking into consideration market conditions and other factors, including the value of our contracts, the applications sold, customer demographics, and the number and types of users within our contracts. Revenue is recognized net of allowances for sales adjustments and any taxes collected from customers, which are subsequently remitted to governmental authorities.

Software Arrangements:

Software Licenses and Royalties

Many of our software arrangements involve "off-the-shelf" software. We recognize the revenue allocable to "off-the-shelf" software licenses and specified upgrades at a point in time when control of the software license transfers to the customer, unless the software is not considered distinct. We consider off-the-shelf software to be distinct when it can be added to an arrangement with minor changes in the underlying code, it can be used by the customer for the customer's purpose upon installation, and remaining services such as training are not considered highly interdependent or interrelated to the product's functionality.

For arrangements that involve significant production, modification or customization of the software, or where software services are otherwise not considered distinct, we recognize revenue over time by measuring progress-to-completion. We measure progress-to-completion primarily using labor hours incurred as it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. These arrangements are often implemented over an extended period and occasionally require us to revise total cost estimates. Amounts recognized in revenue are calculated using the progress-to-completion measurement after giving effect to any changes in our cost estimates. Changes to total estimated contract costs, if any, are recorded in the period they are determined. Estimated losses on uncompleted contracts are recorded in the period in which we first determine that a loss is apparent.

Software license fees are billed in accordance with the contract terms. Typically, a majority of the fee is due when access to the software license is made available to the customer and the remainder of the fee due over a passage of time stipulated by the contract. We record amounts that have been invoiced in accounts receivable and in deferred revenue or revenues, depending on whether the revenue recognition criteria have been met.

We recognize royalty revenue when the sale occurs under the terms of our third-party royalty arrangements. Currently, our third-party royalties are recognized on an estimated basis and are trueed up when we receive notice of amounts we are entitled to receive. We typically receive notice of royalty revenues we are entitled to and billed on a quarterly basis in the quarter immediately following the royalty reporting period.

Software Services

As noted above, some of our software arrangements include services considered highly interdependent or highly interrelated or require significant customization to meet the customer's desired functionality. For these software arrangements, both the software licenses and related software services revenue are not distinct and are recognized over time using the progress-to-completion method. We measure progress-to-completion primarily using labor hours incurred as it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. Contract fees are typically billed on a milestone basis as defined within contract terms. We record amounts that have been invoiced in accounts receivable and in deferred revenue or revenues, depending on whether the revenue recognition criteria have been met. When software services are distinct, the fee allocable to the service element is recognized over the time we perform the services and is billed on a time and material basis.

Post-Contract Customer Support

Our customers generally enter into PCS agreements when they purchase our software licenses. PCS includes telephone support, bug fixes, and rights to upgrades on a when-and-if available basis. PCS is considered distinct when purchased with our software licenses. Our PCS agreements are typically renewable annually. PCS is recognized over time on a straight-line basis over the period the PCS is provided. All significant costs and expenses associated with PCS are expensed as incurred.

Computer Hardware Equipment

Revenue allocable to computer hardware equipment is recognized at a point in time when control of the equipment is transferred to the customer.

Subscription-Based Services:

Subscription-based services consist of revenues derived from SaaS arrangements, which primarily utilize the Tyler private cloud, and electronic filing transactions. Revenue from subscription-based services is generally recognized over time on a ratable basis over the contract term, beginning on the date that our service is made available to the customer. Our subscription contracts are generally three to five years or longer in length, billed annually in advance, and non-cancelable.

For SaaS arrangements, we evaluate whether the customer has the contractual right to take possession of our software at any time during the hosting period without significant penalty and whether the customer can feasibly maintain the software on the customer's hardware or enter into another arrangement with a third-party to host the software. We allocate contract value to each performance obligation of the arrangement that qualifies for treatment as a distinct element based on estimated SSP. When it is determined that software is distinct, and the customer has the ability to take control of the software, we recognize revenue allocable to the software license fee when access to the software license is made available to the customer. We recognize hosting services ratably over the term of the arrangement, which range from one to ten years but are typically for a period of three to five years. For software services associated with certain SaaS arrangements, we have concluded that the services are not distinct, and we recognize the revenue ratably over the remaining contractual period once we have provided the customer access to the software. We record amounts that have been invoiced in accounts receivable and in deferred revenue or revenues, depending on whether the revenue recognition criteria have been met.

Electronic filing transaction fees primarily pertain to documents filed with the courts by attorneys and other third-parties via our e-filing services and retrieval of filed documents via our access services. For each document filed with a court, the filer generally pays a transaction fee and a court filing fee to us and we remit a portion of the transaction fee and the filing fee to the court. We record as revenue the transaction fee, while the portion of the transaction fee remitted to the courts is recorded as cost of sales as we are acting as a principal in the arrangement. Court filing fees collected on behalf of the courts and remitted to the courts are recorded on a net basis and thus do not affect the statement of comprehensive income. For e-filing transaction fees, we have the right to charge the customer an amount that directly corresponds with the value to the customer of our performance to date. Therefore, we recognize revenue for these services over time based on the amount billable to the customer in accordance with the 'as invoiced' practical expedient in ASC 606-10-55-18. In some cases, we are paid on a fixed fee basis and recognize the revenue ratably over the contractual period.

Costs of performing services under subscription-based arrangements are expensed as incurred, except for certain direct and incremental contract origination and set-up costs associated with SaaS arrangements. Such direct and incremental costs are capitalized and amortized ratably over the useful life.

Appraisal Services:

For our property appraisal projects, we recognize revenue using the progress-to-completion method since many of these projects are implemented over one to three-year periods and consist of various unique activities. Appraisal services require a significant level of integration and interdependency with various individual service components; therefore, the service components are not considered distinct. Appraisal services are recognized over time by measuring progress-to-completion primarily using labor hours incurred as it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. These arrangements are often implemented over an extended period and occasionally require us to revise total cost estimates. Amounts recognized in revenue are calculated using the progress-to-completion measurement after giving effect to any changes in our cost estimates. Changes to total estimated contract costs, if any, are recorded in the period they are determined. Estimated losses on uncompleted contracts are recorded in the period in which we first determine that a loss is apparent. Contract fees are typically billed on a milestone basis as defined within contract terms. We record amounts that have been invoiced in accounts receivable and in deferred revenue or revenues, depending on whether the revenue recognition criteria have been met.

Significant Judgments:

Our contracts with customers often include multiple performance obligations to a customer. When a software arrangement (license or subscription) includes both software licenses and software services, judgment is required to determine whether the software license is considered distinct and accounted for separately, or not distinct and accounted for together with the software services and recognized over time.

The transaction price is allocated to the separate performance obligations on a relative SSP basis. We determine the SSP based on our overall pricing objectives, taking into consideration market conditions and other factors, including the value of our contracts, the applications sold, customer demographics, and the number and types of users within our contracts. We use a range of amounts to estimate SSP when we sell each of the products and services separately and need to determine whether there is a discount to be allocated based on the relative SSP of the various products and services. In instances where SSP is not directly observable, such as when we do not sell the product or service separately, we determine SSP using the expected cost-plus margin approach.

For arrangements that involve significant production, modification or customization of the software, or where software services otherwise cannot be considered distinct, we recognize revenue as control is transferred to the customer over time using progress-to-completion methods. Depending on the contract, we measure progress-to-completion primarily using labor hours incurred, or value added. The progress-to-completion method generally results in the recognition of reasonably consistent profit margins over the life of a contract because we can provide reasonably dependable estimates of contract billings and contract costs. We use the level of profit margin that is most likely to occur on a contract. If the most likely profit margin cannot be precisely determined, the lowest probable level of profit margin in the range of estimates is used until the results can be estimated more precisely. These arrangements are often implemented over an extended time period and occasionally require us to revise total cost estimates. Amounts recognized in revenue are calculated using the progress-to-completion measurement after giving effect to any changes in our cost estimates. Changes to total estimated contract costs, if any, are recorded in the period they are determined. Estimated losses on uncompleted contracts are recorded in the period in which we first determine that a loss is apparent.

Typically, the structure of our arrangements does not give rise to variable consideration. However, in those instances whereby variable consideration exists, we include in our estimates additional revenue for variable consideration when we believe we have an enforceable right, the amount can be estimated reliably and its realization is probable.

Refer to Note 15 - Disaggregation of Revenue for further information, including the economic factors that affect the nature, amount, timing, and uncertainty of revenue and cash flows of our various revenue categories.

Contract Balances:

Accounts receivable and allowance for doubtful accounts

Timing of revenue recognition may differ from the timing of invoicing to customers. We record an unbilled receivable when revenue is recognized prior to invoicing, or deferred revenue when revenue is recognized subsequent to invoicing. For multi-year agreements, we generally invoice customers annually at the beginning of each annual coverage period. We record an unbilled receivable related to revenue recognized for on-premises licenses as we have an unconditional right to invoice and receive payment in the future related to those licenses.

We maintain allowances for doubtful accounts, which are provided at the time the revenue is recognized. Since most of our customers are domestic governmental entities, we rarely incur a loss resulting from the inability of a customer to make required payments. Events or changes in circumstances that indicate the carrying amount for the allowances for doubtful accounts may require revision include, but are not limited to, deterioration of a customer's financial condition, failure to manage our customer's expectations regarding the scope of the services to be delivered, and defects or errors in new versions or enhancements of our software products.

The following table summarizes the changes in the allowances for doubtful accounts and sales adjustments:

	Years Ended December 31,		
	2018	2017	2016
Balance at beginning of year	\$ 5,427	\$ 3,396	\$ 1,640
Provisions for losses - accounts receivable	2,286	4,110	4,484
Collection of accounts previously written off	—	—	—
Deductions for accounts charged off or credits issued	(3,066)	(2,079)	(2,728)
Balance at end of year	\$ 4,647	\$ 5,427	\$ 3,396

The allowance for doubtful accounts reflects our best estimate of probable losses inherent in the accounts receivable balance. We determine the allowance based on known troubled accounts, historical experience, and other currently available evidence.

In connection with our appraisal services contracts and certain software services contracts, we may perform work prior to when the software and services are billable and/or payable pursuant to the contract. Unbilled revenue is not billable at the balance sheet date but is recoverable over the remaining life of the contract through billings made in accordance with contractual agreements. The termination clauses in most of our contracts provide for the payment for the value of products delivered or services performed in the event of early termination. We have historically recorded such unbilled receivables (costs and estimated profit in excess of billings) in connection with (1) property appraisal services contracts accounted for using progress-to-completion method of revenue recognition using labor hours as a measure of progress towards completion in which the services are performed in one accounting period but the billing normally occurs subsequently and may span another accounting period; (2) software services contracts accounted for using progress-to-completion method of revenue recognition using labor hours as a measure of progress towards completion in which the services are performed in one accounting period but the billing for the software element of the arrangement may be based upon the specific phase of the implementation; (3) software revenue for which we have recognized revenue at the point in time when the software is made available to the customer but the billing has not yet been submitted to the customer; (4) some of our contracts which provide for an amount to be withheld from a progress billing (generally between 5% and 20% retention) until final and satisfactory project completion is achieved; and (5) in a limited number of cases, extended payment terms, which may be granted to customers with whom we generally have a long-term relationship and favorable collection history.

The opening balance of current and long-term accounts receivable, net of allowance for doubtful accounts, was \$226.8 million (as adjusted) as of January 1, 2017.

As of December 31, 2018, and December 31, 2017, total current and long-term accounts receivable, net of allowance for doubtful accounts, was \$314.9 million and \$258.3 million (as adjusted), respectively. We have recorded unbilled receivables of \$104.2 million and \$64.6 million (as adjusted) at December 31, 2018, and December 31, 2017, respectively. Included in unbilled receivables are retention receivables of \$12.2 million and \$7.2 million at December 31, 2018, and December 31, 2017, respectively, which become payable upon the completion of the contract or completion of our fieldwork and formal hearings. Unbilled receivables expected to be collected within one year have been included with accounts receivable, current portion in the accompanying consolidated balance sheets. Unbilled receivables and retention receivables expected to be collected past one year have been included with accounts receivable, long-term portion in the accompanying consolidated balance sheets.

Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 to 60 days. In instances where the timing of revenue recognition differs from the timing of invoicing, we have determined our contracts generally do not include a significant financing component. The primary purpose of our invoicing terms is to provide customers with simplified and predictable ways of purchasing our products and services, not to receive financing from our customers or to provide customers with financing. Examples include invoicing at the beginning of a subscription term with revenue recognized ratably over the contract period, and multi-year on-premises term licenses that are invoiced annually with revenue recognized upfront.

Deferred Revenue

The majority of deferred revenue consists of deferred maintenance revenue that has been billed based on contractual terms in the underlying arrangement, with the remaining balance consisting of payments received in advance of revenue being earned under software licensing, subscription-based services, software and appraisal services and hardware installation. Refer to Note 16 - Deferred Revenue and Performance Obligations for further information, including deferred revenue by segment and changes in deferred revenue during the period.

Deferred Commissions

Sales commissions earned by our sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for initial contracts are deferred and then amortized on a straight-line basis over a period of benefit that we have determined to be three to seven years. We utilized the 'portfolio approach' practical expedient in ASC 606-10-10-4, which allows entities to apply the guidance to a portfolio of contracts with similar characteristics because the effects on the financial statements of this approach would not differ materially from applying the guidance to individual contracts. Using the 'portfolio approach', we determined the period of benefit by taking into consideration our customer contracts, our technology life-cycle and other factors. Sales commissions for renewal contracts are generally not paid in connection with the renewal of a contract. In the small number of instances where a commission is paid on a renewal, it is not commensurate with the commission paid on the initial sale and is recognized over the term of renewal, which is generally one year. Amortization expense related to deferred commissions is included in selling, general and administrative expenses in the accompanying consolidated statements of income. Refer to Note 17 - Deferred Commissions for further information.

Prepaid expenses and other current assets include direct and incremental costs such as commissions associated with arrangements for which revenue recognition has been deferred. Such costs are expensed at the time the related revenue is recognized.

USE OF ESTIMATES

The preparation of our financial statements in conformity with accounting principles generally accepted in the United States ("GAAP") requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to such estimates and assumptions include revenue recognition, determining the nature and timing of satisfaction of performance obligations, and determining the SSP of performance obligations, variable consideration, and other obligations such as returns and refunds; loss contingencies; the estimated useful life of deferred commissions; the carrying amount and estimated useful lives of intangible assets; determining share-based compensation expense; the valuation allowance for receivables; and determining the potential outcome of future tax consequences of events that have been recognized on our consolidated financial statements or tax returns. Actual results could differ from estimates.

PROPERTY AND EQUIPMENT, NET

Property, equipment and purchased software are recorded at original cost and increased by the cost of any significant improvements after purchase. We expense maintenance and repairs when incurred. Depreciation and amortization is calculated using the straight-line method over the shorter of the asset's estimated useful life or the term of the lease in the case of leasehold improvements. For income tax purposes, we use accelerated depreciation methods as allowed by tax laws.

RESEARCH AND DEVELOPMENT COSTS

We expensed research and development costs of \$63.3 million in 2018, \$47.3 million in 2017, and \$43.2 million in 2016.

INCOME TAXES

Income taxes are accounted for under the asset and liability method. Deferred taxes arise because of different treatment between financial statement accounting and tax accounting, known as "temporary differences." We record the tax effect of these temporary differences as "deferred tax assets" (generally items that can be used as a tax deduction or credit in the future periods) and "deferred tax liabilities" (generally items that we received a tax deduction for, which have not yet been recorded in the income statement). The deferred tax assets and liabilities are measured using enacted tax rules and laws that are expected to be in effect when the temporary differences are expected to be recovered or settled. A valuation allowance would be established to reduce deferred tax assets if it is more likely than not that a deferred tax asset will not be "realized." On December 22, 2017, the Tax Cuts and Jobs Act (the "Tax Act") was enacted into law. The Tax Act amends the Internal Revenue Code to reduce tax rates and modify policies, credits and deductions for individuals and businesses. For businesses, the Tax Act reduces the corporate U.S. federal tax rate from a maximum of 35% to a flat 21% rate and transitions from a worldwide tax system to a territorial tax system. Under ASC 740 Income Taxes, the effects of changes in tax rates and laws are recognized in the period in which the new legislation is enacted. See Note 7 - "Income Tax" for further discussion related to the Tax Act.

SHARE-BASED COMPENSATION

We have a share-based award plan that provides for the grant of stock options, restricted stock units, and performance share units to key employees, directors and non-employee consultants. Stock options generally vest after three to six years of continuous service from the date of grant and have a contractual term of 10 years. Restricted stock unit grants generally vest ratably over three to five years of continuous service from the date of grant. Each performance share unit represents the right to receive one share of our common stock based on our achievement of certain financial performance targets during applicable performance periods. We account for share-based compensation utilizing the fair value recognition pursuant to ASC 718, *Stock Compensation*. See Note 9 – "Share-Based Compensation" for further information.

GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill

Goodwill represents the excess of the purchase price over the fair value of net assets acquired, including identifiable intangible assets, in connection with our business combinations. Upon acquisition, goodwill is assigned to the reporting unit that is expected to benefit from the synergies of the business combination, which is the reporting unit to which the related acquired technology is assigned. A reporting unit is the operating segment, or a business unit one level below that operating segment, for which discrete financial information is prepared and regularly reviewed by executive management.

We assess goodwill for impairment annually as of April 1st, or more frequently whenever events or changes in circumstances indicate its carrying value may not be recoverable. We begin with the qualitative assessment of whether it is more likely than not that a reporting unit's fair value is less than its carrying value before applying the quantitative assessment described below. If it is determined through the evaluation of events or circumstances that the carrying value may not be recoverable, we perform a comparison of the estimated fair value of the reporting unit to which the goodwill has been assigned to the sum of the carrying value of the assets and liabilities of that unit. If the sum of the carrying value of the assets and liabilities of a reporting unit exceeds the estimated fair value of that reporting unit, the carrying value of the reporting unit's goodwill is reduced to its fair value through an adjustment to the goodwill balance, resulting in an impairment charge. The fair values calculated in our impairment tests are determined using discounted cash flow models involving several assumptions. The assumptions that are used are based upon what we believe a hypothetical marketplace participant would use in estimating fair value. We evaluate the reasonableness of the fair value calculations of our reporting units by comparing the total of the fair value of all of our reporting units to our total market capitalization.

We did not record any goodwill impairment charges for the years ended December 31, 2018 and 2017. See Note 4 - Goodwill and Other Intangible Assets, for additional information.

Other Intangible Assets

We make judgments about the recoverability of purchased intangible assets other than goodwill whenever events or changes in circumstances indicate that an impairment may exist. Customer base and acquired software each comprise approximately half of our purchased intangible assets other than goodwill. We review our customer turnover each year for indications of impairment. Our customer turnover has historically been very low. If indications of impairment are determined to exist, we measure the recoverability of assets by a comparison of the carrying amount of the asset to the estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of the assets exceeds their estimated future cash flows, an impairment charge is recognized for the amount by which the carrying amount of the assets exceeds the fair value of the assets. There have been no significant impairments of intangible assets in any of the periods presented.

IMPAIRMENT OF LONG-LIVED ASSETS

We periodically evaluate whether current facts or circumstances indicate that the carrying value of our property and equipment or other long-lived assets to be held and used may not be recoverable. If such circumstances are determined to exist, we measure the recoverability of assets to be held and used by a comparison of the carrying amount of the asset or appropriate grouping of assets and the estimated undiscounted future cash flows expected to be generated by the assets. If the carrying amount of the assets exceeds their estimated future cash flows, an impairment charge is recognized for the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and would no longer be depreciated. The assets and liabilities of a disposed group classified as held for sale would be presented separately in the appropriate asset and liability sections of the balance sheet. There have been no significant impairments of long-lived assets in any of the periods presented.

COSTS OF COMPUTER SOFTWARE

We capitalize software development costs upon the establishment of technological feasibility and prior to the availability of the product for general release to customers. Software development costs primarily consist of personnel costs and rent for related office space. We begin to amortize capitalized costs when a product is available for general release to customers. Amortization expense is determined on a product-by-product basis at a rate not less than straight-line basis over the product's remaining estimated economic life. We have not capitalized any internal software development costs in any of the periods presented.

FAIR VALUE OF FINANCIAL INSTRUMENTS

Cash and cash equivalents, accounts receivables, accounts payables, short-term obligations and certain other assets at cost approximate fair value because of the short maturity of these instruments. The fair value of our revolving line of credit would approximate book value as of December 31, 2018, because our interest rates reset approximately every 30 days or less. See Note 6 – "Revolving Line of Credit" for further discussion.

As of December 31, 2018, we have \$97.7 million in investment grade corporate bonds, municipal bonds and asset-backed securities with maturity dates ranging from 2018 through 2022. We intend to hold these bonds to maturity and have classified them as such. We believe cost approximates fair value because of the relatively short duration of these investments. The fair values of these securities are considered Level II as they are based on inputs from quoted prices in markets that are not active or from other observable market data. These investments are included in short-term investments and non-current investments and other assets.

As of December 31, 2018, we have \$15.0 million invested in convertible preferred stock representing a 20% interest in Record Holdings Pty Limited, a privately held Australian company specializing in digitizing the spoken word in court and legal proceedings. The investment in convertible preferred stock is accounted under the cost method because we do not have the ability to exercise significant influence over the investee and the securities do not have readily determinable fair values. Our investment is carried at cost less any impairment write-downs. Annually, our cost method investments are assessed for impairment. We do not reassess the fair value of cost method investments if there are no identified events or changes in circumstances that may have a significant adverse effect on the fair value of the investments. There has been no impairment of our cost method investment for the periods presented. This investment is included in non-current investments and other assets in the accompanying consolidated balance sheets.

CONCENTRATIONS OF CREDIT RISK

Financial instruments that potentially subject us to significant concentrations of credit risk consist principally of cash and cash equivalents, accounts receivable from trade customers, and investments in marketable securities. Our cash and cash equivalents primarily consist of operating account balances and money market funds, which are maintained at several major domestic financial institutions and the balances often exceed insured amounts. As of December 31, 2018, we had cash and cash equivalents of \$134.3 million. We perform periodic evaluations of the credit standing of these financial institutions.

Concentrations of credit risk with respect to receivables are limited due to the size and geographical diversity of our customer base. Historically, our credit losses have not been significant. As a result, we do not believe we have any significant concentrations of credit risk as of December 31, 2018.

We maintain allowances for doubtful accounts, which are provided at the time the revenue is recognized. Since most of our customers are domestic governmental entities, we rarely incur a loss resulting from the inability of a customer to make required payments. Events or changes in circumstances that indicate the carrying amount for the allowances for doubtful accounts may require revision include, but are not limited to, deterioration of a customer's financial condition, failure to manage our customer's expectations regarding the scope of the services to be delivered, and defects or errors in new versions or enhancements of our software products.

INDEMNIFICATION

Most of our software license agreements indemnify our customers in the event that the software sold infringes upon the intellectual property rights of a third-party. These agreements typically provide that in such event we will either modify or replace the software so that it becomes non-infringing or procure for the customer the right to use the software. We have recorded no liability associated with these indemnifications, as we are not aware of any pending or threatened infringement actions that are possible losses. We believe the estimated fair value of these intellectual property indemnification clauses is minimal.

We have also agreed to indemnify our officers and board members if they are named or threatened to be named as a party to any proceeding by reason of the fact that they acted in such capacity. We maintain directors' and officers' liability insurance coverage to protect against any such losses. We have recorded no liability associated with these indemnifications. Because of our insurance coverage, we believe the estimated fair value of these indemnification agreements is minimal.

RECLASSIFICATIONS

Certain amounts for previous years have been reclassified to conform to the current year presentation.

RECENTLY ADOPTED ACCOUNTING PRONOUNCEMENTS

Revenue from Contracts with Customers. In May 2014, the Financial Accounting Standards Board ("FASB") issued ASU No. 2014-09, *Revenue from Contracts with Customers*. ASU No. 2014-09 supersedes the revenue recognition requirements in Accounting Standards Codification ("ASC") Topic 605, *Revenue Recognition*, and requires the recognition of revenue when promised goods or services are transferred to customers in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services. This model involves a five-step process that includes identifying the contract with the customer, identifying the performance obligations in the contract, determining the transaction price, allocating the transaction price to the performance obligations in the contract and recognizing revenue when (or as) the entity satisfies the performance obligations. Topic 606 also includes Subtopic 340-40 *Other Assets and Deferred Costs - Contracts with Customers*, which requires the deferral of incremental costs of obtaining a contract with a customer. Collectively, we refer to ASU No. 2014-09 and Subtopic 340-40 as the "new standard."

We adopted the requirements of the new standard as of January 1, 2018, utilizing the full retrospective method of transition. Adoption of the new standard resulted in changes to our accounting policies for revenue recognition, trade and other receivables, and deferred commissions as detailed below. We applied the new standard using a practical expedient where the consideration allocated to the remaining performance obligations or an explanation of when we expect to recognize that amount as revenue for all reporting periods presented before the date of the initial application is not disclosed.

The impact of adopting ASU No. 2014-09 on our total revenues for 2017 and 2016 was not material. The impact of adopting the new standard on our retained earnings and deferred commissions is material. The most significant impact of the new standard relates to our accounting for software license revenue. Specifically, under the new standard, software license fees under perpetual agreements are no longer subject to 100% discount allocations from other performance obligations in the contract. Discounts in arrangements are allocated across all performance obligations increasing license revenues and decreasing revenues allocated to other performance obligations. In addition, in most cases, net license fees (total license fees less any allocated discounts) are recognized at the point in time when control of the software license transfers to the customer versus our legacy policy of recognizing revenue upon delivery and only to the extent billable per the contractual terms. Under the new standard, time-based license fees are no longer recognized over the contractual period of the license and are instead recognized at the point in time when the control of the software license transfers to the customer. Revenues related to our PCS renewals, SaaS offerings and appraisal services remain substantially unchanged. Due to the complexity of certain contracts, the actual revenue recognition treatment required under the new standard is dependent on contract-specific terms and may vary in some instances from recognition at the time of billing.

Adoption of the new standard requires that incremental costs directly related to obtaining a contract (typically sales commissions) must be recognized as an asset and expensed on a systematic basis that is consistent with the transfer to the customer of the goods and services to which the asset relates, unless that life is less than one year. Prior to adoption of the new standard, we deferred sales commissions and recognized expense over the relevant initial contractual term, which was generally one to two years. Under the new standard, we amortize these costs over a period of benefit that we have determined to be three to seven years.

We adjusted our consolidated financial statements from amounts previously reported due to the adoption of the new standard. Select unaudited condensed consolidated statement of income line items, which reflect the adoption of the new standard, are as follows (in thousands, except per share data):

	December 31, 2017			December 31, 2016		
	As Reported	Adjustments	As Adjusted	As Reported	Adjustments	As Adjusted
Statement of Income:						
Software licenses and royalties	\$ 75,694	\$ 10,548	\$ 86,242	\$ 74,306	\$ 9,427	\$ 83,733
Subscriptions	173,510	(1,334)	172,176	142,704	(47)	142,657
Software services	187,149	(6,689)	180,460	174,804	(3,156)	171,648
Maintenance	361,569	(2,250)	359,319	322,969	(1,971)	320,998
Appraisal services	25,023	—	25,023	26,287	—	26,287
Hardware and other	17,717	(38)	17,679	14,973	(416)	14,557
Total revenues	840,662	237	840,899	756,043	3,837	759,880
Selling, general and administrative expenses	176,974	(1,060)	175,914	167,161	(1,985)	165,176
Amortization of customer and trade name intangibles	13,912	(531)	13,381	13,731	(529)	13,202
Operating income	160,930	1,828	162,758	131,305	6,351	137,656
Income tax (benefit) provision	(2,317)	(3,798)	(6,115)	19,450	2,507	21,957
Net income	\$ 163,945	\$ 5,626	\$ 169,571	\$ 109,857	\$ 3,844	\$ 113,701
Earnings per common share:						
Basic	\$ 4.40		\$ 4.55	\$ 3.01		\$ 3.12
Diluted	\$ 4.18		\$ 4.32	\$ 2.87		\$ 2.92

Select condensed consolidated balance sheet line items, which reflect the adoption of the new standard, are as follows (in thousands):

	December 31, 2017		
	As Reported	Adjustments	As Adjusted
Balance Sheet:			
Accounts receivable	\$ 227,127	\$ 19,061	\$ 246,188
Prepaid expenses	27,252	4,954	32,206
Accounts receivable, long-term	7,536	4,571	12,107
Other intangibles, net	236,444	(6,827)	229,617
Total assets	1,589,592	21,759	1,611,351
Deferred revenue	309,461	(10,848)	298,613
Deferred income taxes	38,914	7,965	46,879
Retained earnings	599,821	24,642	624,463
Total liabilities and shareholders' equity	\$ 1,589,592	\$ 21,759	\$ 1,611,351

Our adoption of ASU No. 2014-09 had no impact on our net cash provided by or used in operating, investing or financing activities for any of the periods reported.

Recent tax legislation. On December 22, 2017, the Tax Cuts and Jobs Act ("Tax Act") was enacted into law. The Tax Act amends the Internal Revenue Code to reduce tax rates and modify policies, credits and deductions for businesses and individuals. For businesses, the Tax Act reduces the U.S. corporate federal income tax rate from a maximum of 35% to a flat 21% rate and transitions from a worldwide tax system to a territorial tax system. The Tax Act also adds many new provisions including changes to bonus depreciation, the deduction for executive compensation and a tax on global intangible low-taxed income (GILTI). The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate. Refer to Note 7 - Income Tax Provision for further information.

NEW ACCOUNTING PRONOUNCEMENTS

Recent Accounting Guidance not yet Adopted

Leases. On February 25, 2016, the FASB issued its new lease accounting guidance in ASU No. 2016-02, *Leases* ("Topic 842"). Under the new guidance, lessees will be required to recognize the following for all leases (with the exception of short-term leases) at the commencement date:

- A lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and
- A right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term.

Topic 842 is effective for fiscal years beginning after December 15, 2018, including interim periods therein. Early application is permitted for all business entities upon issuance. Upon adoption, entities will be required to use a modified retrospective approach with an option to use certain practical expedients. We expect to adopt ASU 2016-02 when effective, using the transition method that allows us to initially apply the guidance at the adoption date of January 1, 2019 and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. We expect to use the package of practical expedients that allows us to not reassess: (1) lease classification for any expired or existing leases and (2) initial direct costs for any expired or existing leases. We expect ASU 2016-02 will impact our consolidated financial statements and related disclosures. We are currently evaluating the extent of the impact and expect that most of our lease commitments will be subject to the updated guidance and recognized as lease liabilities and right-of-use assets on our consolidated balance sheets upon adoption. Based on our current portfolio of leases, we estimate a range of \$15.5 million to \$17.8 million of lease assets and liabilities to be recognized on our balance sheet, primarily relating to office facilities.

(2) ACQUISITIONS

2018

On December 7, 2018, we acquired certain assets and intellectual property of SceneDoc, Inc. ("SceneDoc"), a company that provides mobile-first, SaaS field reporting for law enforcement agencies. The total purchase price was approximately \$6.2 million, of which \$5.4 million was paid in cash and approximately \$759,000 accrued for a working capital holdback, subject to certain post-closing adjustments.

On October 1, 2018, we acquired all of the equity interests of TradeMaster, Inc. dba MobileEyes ("MobileEyes"), a company that develops SaaS software to improve public safety by supporting fire prevention and suppression, emergency response, and structural safety. The total purchase price was approximately \$5.3 million in cash.

On August 31, 2018, we acquired all of the assets of CaseloadPRO, L. P., a company that provides a fully featured SaaS probation case management system. The purchase price of \$9.3 million was paid in cash.

On April 30, 2018, we acquired all of the capital stock of Socrata, Inc. ("Socrata"), a company that provides open data and data-as-a-service solutions including cloud-based data integration, visualization, analysis, and reporting solutions for state and local government agencies. The purchase price, net of cash acquired of \$1.7 million, was \$147.6 million paid in cash.

We have performed a valuation analysis of the fair market value of Socrata's assets and liabilities. The following table summarizes the allocation of the purchase price as of the acquisition date:

In thousands	
Cash	\$ 1,724
Accounts receivable	3,616
Other current assets	2,057
Other noncurrent assets	68
Deferred tax assets, net	20
Identifiable intangible assets	75,000
Goodwill	75,657
Accounts payable	(1,254)
Accrued expenses	(1,604)
Deferred revenue	(5,915)
Total consideration	\$ 149,369

In connection with this transaction, we acquired total tangible assets of \$7.5 million and assumed liabilities of approximately \$8.8 million. We recorded goodwill of \$75.7 million, none of which is expected to be deductible for tax purposes, and other identifiable intangible assets of approximately \$75.0 million. The \$75.0 million of intangible assets are attributable to customer relationships, acquired software, and trade name and will be amortized over a weighted average period of approximately 14 years. We recorded deferred tax assets, net of approximately \$20,000 related to estimated fair value allocations. Socrata's solutions are a direct complement to our current offerings and will provide a new and important additional revenue stream. By offering Socrata within virtually every Tyler product suite, our clients will have the opportunity to make their existing data discoverable, usable and actionable, but more importantly, potentially include data from other agencies and jurisdictions to make analysis even more powerful and meaningful. Therefore, the goodwill of \$75.7 million arising from this acquisition is primarily attributed to our ability to integrate Socrata's solutions with our existing portfolio and to generate increased revenues, earnings and cash flow by leveraging our sales resources and client base. Our final valuation of the fair market value of Socrata's assets and liabilities resulted in adjustments to the preliminary opening balance sheet. These adjustments related to a reduction in deferred income taxes and accrued expenses resulting in a net decrease to goodwill of approximately \$3.3 million. We also incurred fees of approximately \$578,000 for financial advisory, legal, accounting, due diligence, valuation and other various services necessary to complete the acquisition. These fees were expensed in 2018 and are included in selling, general and administrative expenses.

The following unaudited pro forma information of the consolidated results of operations have been prepared as if the Socrata acquisition had occurred at January 1, 2017, after giving effect to certain adjustments, including amortization of intangibles, interest, transaction costs and tax effects.

	Twelve Months Ended December 31,	
	2018	2017
Revenues	\$ 943,723	\$ 865,944
Net income	139,315	150,515
Basic earnings per share	3.62	4.04
Diluted earnings per share	\$ 3.47	\$ 3.84

Pro forma information above does not include acquisitions that are not considered material to our results of operations. The pro forma information does not purport to represent what our results of operations actually would have been had such transaction or event occurred on the dates specified, or to project our results of operations for any future period.

On April 30, 2018, we acquired all of the equity interests of Sage Data Security, LLC ("Sage"), a cybersecurity company offering a suite of services that supports an entire cybersecurity lifecycle, including program development, education and training, technical testing, advisory services, and digital forensics. The total purchase price was \$11.6 million paid in cash. Tyler has performed a valuation analysis of the fair market value of Sage's assets and liabilities. As a result, we acquired total tangible assets of approximately \$1.8 million and assumed liabilities of approximately \$730,000. We have recorded total goodwill of approximately \$3.5 million, all of which is expected to be deductible for tax purposes, and other intangible assets of approximately \$7.0 million. The \$7.0 million of intangible assets is attributable to customer relationships, acquired software and trade name and will be amortized over a weighted average period of approximately 14 years.

As of December 31, 2018, the purchase price allocations for Sage, Socrata, CaseloadPro, and MobileEyes are complete. As of December 31, 2018, the purchase price allocation for SceneDoc is not yet complete, therefore the preliminary valuation estimates of fair value assumed at the acquisition date for intangible assets, receivables and deferred revenue and related deferred taxes are subject to change as valuations are finalized.

The operating results of all 2018 acquisitions are included with the operating results of the Enterprise Software segment since their date of acquisition. Revenues from Socrata included in Tyler's results of operations totaled approximately \$13.9 million and the net loss was \$11.5 million for the twelve months ended December 31, 2018. The impact of the Sage, CaseloadPRO, MobileEyes and SceneDoc acquisitions, individually and in the aggregate, on our operating results, assets and liabilities is not material.

Our balance sheet as of December 31, 2018, reflects the allocation of the purchase price to the assets acquired based on their fair value at the date of each acquisition. The fair value of the assets and liabilities acquired are based on valuations using Level III, unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

2017

On November 29, 2017, we acquired audio and digital two-way radio communications technology and related assets from Radio 10-33, LLC. The total purchase price was \$1.4 million, all of which was paid in cash.

On August 2, 2017, we acquired substantially all of the assets and assumed certain liabilities of Digital Health Department, Inc. ("DHD"), a company that provides environmental health software, offering a SaaS solution for public health compliance and inspections processes. The total purchase price, net of debt assumed, was \$3.9 million, all of which was paid in cash.

On May 30, 2017, we acquired all of the capital stock of Modria.com, Inc., a company that specializes in online dispute resolution for government and commercial entities. The total purchase price, net of debt assumed, was \$7.0 million, of which \$6.1 million was paid in cash and \$900,000 was accrued as of December 31, 2017.

The operating results of these acquisition are included in our results of operations of the Enterprise Software segment from their respective dates of acquisition. The impact of these acquisitions, individually and in the aggregate, on our operating results, assets and liabilities is not material.

2016

On May 31, 2016, we acquired all of the capital stock of ExecuTime Software, LLC, a leading provider of time, attendance, and advanced scheduling software solutions. The total purchase price, net of debt assumed, was \$7.4 million. The fair value of the assets and liabilities acquired are based on valuations using Level III, unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. The operating results of this acquisition are included in our results of operations of the Enterprise Software segment from the date of the acquisition. The impact of this acquisition on our operating results is not material.

(3) PROPERTY AND EQUIPMENT, NET

Property and equipment, net consists of the following at December 31:

	Useful Lives (years)	2018	2017
Land	—	\$ 9,958	\$ 9,958
Building and leasehold improvements	5-39	122,241	116,214
Computer equipment and purchased software	3-5	84,649	72,531
Furniture and fixtures	5	27,238	24,834
Transportation equipment	5	438	476
		244,524	224,013
Accumulated depreciation and amortization		(89,347)	(71,698)
Property and equipment, net		\$ 155,177	\$ 152,315

Depreciation expense was \$21.2 million in 2018, \$17.3 million in 2017, and \$13.4 million in 2016.

In 2018, we paid \$2.2 million for the expansion of existing buildings.

In 2017, we purchased an office building in Latham, New York for approximately \$2.9 million and paid \$2.1 million for improvements to that building. We also paid \$19.4 million for construction to expand our office building in Yarmouth, Maine.

We own office buildings in Bangor, Falmouth and Yarmouth, Maine; Lubbock and Plano, Texas; Troy, Michigan; Latham, New York; and Moraine, Ohio. We lease space in some of these buildings to third-party tenants. These leases expire between 2019 and 2025 and are expected to provide rental income of approximately \$1.3 million in 2019, \$1.3 million in 2020, \$1.3 million in 2021, \$1.4 million in 2022, \$1.4 million in 2023, and \$2.4 million thereafter. Rental income from third-party tenants was \$1.2 million in 2018, \$1.5 million in 2017, and \$1.7 million in 2016.

(4) GOODWILL AND OTHER INTANGIBLE ASSETS

Other intangible assets and related accumulated amortization consists of the following at December 31:

	2018	2017
		As Adjusted
Gross carrying amount of acquisition intangibles:		
Customer related intangibles	\$ 238,219	\$ 179,789
Acquired software	202,416	179,466
Trade names	16,905	11,435
Leases acquired	3,694	3,694
	461,234	374,384
Accumulated amortization	(184,382)	(144,767)
Total intangibles, net	\$ 276,852	\$ 229,617

Total amortization expense for intangibles was \$39.6 million in 2018, \$35.5 million (as adjusted) in 2017, and \$35.9 million (as adjusted) during 2016.

The allocation of acquisition intangible assets is summarized in the following table:

	December 31, 2018			December 31, 2017		
	Gross Carrying Amount	Weighted Average Amortization Period	Accumulated Amortization	As Adjusted Gross Carrying Amount	As Adjusted Weighted Average Amortization Period	As Adjusted Accumulated Amortization
Non-amortizable intangibles:						
Goodwill	\$ 753,718	—	\$ —	\$ 657,987	—	\$ —
Amortizable intangibles:						
Customer related intangibles	238,219	15 years	78,120	179,789	15 years	63,274
Acquired software	202,416	7 years	99,772	179,466	7 years	76,800
Trade names	16,905	11 years	5,139	11,435	11 years	3,768
Leases acquired	3,694	10 years	1,351	3,694	10 years	925

The changes in the carrying amount of goodwill for the two years ended December 31, 2018 are as follows:

	Enterprise Software	Appraisal and Tax	Total
Balance as of 12/31/2016	\$ 643,680	\$ 6,557	\$ 650,237
Goodwill acquired with acquisitions	7,750	—	7,750
Balance as of 12/31/2017	651,430	6,557	657,987
Goodwill acquired related to the purchase of Socrata	75,657	—	75,657
Goodwill acquired related to other acquisitions	20,074	—	20,074
Balance as of 12/31/2018	\$ 747,161	\$ 6,557	\$ 753,718

Estimated annual amortization expense related to acquired leases will be recorded as a reduction to hardware and other revenue and is expected to be \$372,000 in 2019, \$313,000 in 2020, \$312,000 in 2021, \$312,000 in 2022, \$312,000 in 2023 and \$723,000 thereafter. Estimated annual amortization expense related to acquisition intangibles, including acquired software, for which the amortization expense is recorded as cost of revenues, is as follows:

2019	\$ 40,222
2020	38,820
2021	38,463
2022	34,987
2023	16,990
Thereafter	105,028

(5) ACCRUED LIABILITIES

Accrued liabilities consist of the following at December 31:

	2018	2017
Accrued wages, bonuses and commissions	\$ 40,100	\$ 43,688
Other accrued liabilities	26,380	20,987
	\$ 66,480	\$ 64,675

(6) REVOLVING LINE OF CREDIT

On November 16, 2015, we entered into a \$300.0 million Credit Agreement (the "Credit Facility") with the various lenders party thereto and Wells Fargo Bank, National Association, as Administrative Agent. The Credit Facility provides for a revolving credit line of up to \$300.0 million, including a \$10.0 million sublimit for letters of credit. The Credit Facility matures on November 16, 2020. Borrowings under the Credit Facility may be used for general corporate purposes, including working capital requirements, acquisitions and share repurchases.

Borrowings under the Credit Facility bear interest at a rate of either (1) Wells Fargo Bank's prime rate (subject to certain higher rate determinations) plus a margin of 0.25% to 1.00% or (2) the 30, 60, 90 or 180-day LIBOR rate plus a margin of 1.25% to 2.00%. As of December 31, 2018, our interest rate was 5.75% under the prime rate option or approximately 3.77% under the 30-day LIBOR option. The Credit Facility is secured by substantially all our assets. The Credit Facility requires us to maintain certain financial ratios and other financial conditions and prohibits us from making certain investments, advances, cash dividends or loans, and limits incurrence of additional indebtedness and liens. As of December 31, 2018, we were in compliance with those covenants.

As of December 31, 2018, we had no outstanding borrowings and had unused borrowing capacity of \$300.0 million under the Credit Facility. In addition, as of December 31, 2018, we had no outstanding letter of credit.

We paid interest of \$770,000 in 2018, \$804,000 in 2017, and \$1.9 million in 2016.

(7) INCOME TAX

The Income tax provision (benefit) on income from operations consists of the following:

	Years Ended December 31,		
	2018	2017	2016
		As Adjusted	As Adjusted
Current:			
Federal	\$ 9,110	\$ 22,883	\$ 41,366
State	4,367	4,666	7,023
	13,477	27,549	48,389
Deferred	(5,069)	(33,664)	(26,432)
	\$ 8,408	\$ (6,115)	\$ 21,957

Reconciliation of the U.S. statutory income tax rate to our effective income tax expense rate for operations follows:

	Years Ended December 31,		
	2018	2017	2016
		As Adjusted	As Adjusted
Federal income tax expense at statutory rate	\$ 32,733	\$ 57,209	\$ 47,480
State income tax, net of federal income tax benefit	7,953	4,754	5,091
Domestic production activities deduction	—	(2,617)	(3,947)
Excess tax benefits related to stock option exercises	(32,487)	(40,624)	(29,582)
Tax Act adjustments	(1,750)	(25,992)	—
Tax credits	(3,715)	(3,578)	—
Non-deductible business expenses	5,655	4,573	2,979
Other, net	19	160	(64)
	\$ 8,408	\$ (6,115)	\$ 21,957

On December 22, 2017, the Tax Act was enacted into law. The Tax Act amends the Internal Revenue Code to reduce tax rates and modify policies, credits and deductions for individuals and businesses. For businesses, the Tax Act reduces the U.S. corporate federal tax rate from a maximum of 35% to a flat 21% rate and transitions from a worldwide tax system to a territorial tax system. The Tax Act also adds many new provisions including changes to bonus depreciation, the deduction for executive compensation and a tax on global intangible low-taxed income (GILTI). The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision was a \$26.0 million (as adjusted) tax benefit due to the remeasurement of deferred tax assets and liabilities. We recorded an additional \$1.8 million tax benefit in 2018 after our 2017 tax returns were finalized. The accounting for the income tax effects of the Tax Act was completed during the fourth quarter of 2018. Overall, the changes due to the Tax Act will favorably affect income tax expense and future U.S. earnings.

The tax effects of the major items recorded as deferred tax assets and liabilities as of December 31 are:

	2018	2017
		As Adjusted
Deferred income tax assets:		
Operating expenses not currently deductible	\$ 8,989	\$ 9,714
Stock option and other employee benefit plans	19,496	15,932
Loss and credit carryforwards	17,999	—
Total deferred income tax assets	46,484	25,646
Valuation allowance	(1,049)	—
Total deferred income tax assets, net of valuation allowance	45,435	25,646
Deferred income tax liabilities:		
Intangible assets	(70,752)	(60,189)
Property and equipment	(8,455)	(5,699)
Prepaid expenses	(4,079)	(190)
Deferred revenue	(3,940)	(6,447)
Total deferred income tax liabilities	(87,226)	(72,525)
Net deferred income tax liabilities	\$ (41,791)	\$ (46,879)

The above 2017 balances reflect an \$8.0 million deferred tax liability related to the recognition of revenue as part of the adoption of ASU No. 2014-09.

During 2018, we acquired federal and state net operating loss and tax credit carryforwards totaling \$18.0 million in connection with the acquisition of Socrata. The federal and state net operating loss and tax credit carryforwards will expire in various years beginning in 2027, if not utilized. The acquired net operating loss and tax credit carryforwards are subject to an annual limitation but are expected to be realized with the exception of certain state net operating loss carryforwards. The valuation allowance disclosed in the table above relates to state net operating losses not likely to be realized. We believe it is more likely than not that all other deferred tax assets will be realized. However, the amount of the deferred tax asset considered realizable could be adjusted in the future if estimates of reversing taxable temporary differences are revised.

In connection with the acquisition of Socrata in 2018, we recorded a \$1.9 million liability for an uncertain tax position associated with acquired tax credit carryforwards. The unrecognized tax benefits are included in deferred income taxes in our consolidated balance sheets and are reflected in the opening balance sheet of Socrata. The entire amount, if recognized, would affect the effective tax rate.

The aggregate changes in the balance of unrecognized tax benefits were as follows:

	2018
Balance at beginning of year	\$ —
Increases for tax positions related to prior years	1,929
Balance at end of year	\$ 1,929

Based on the information currently available, we do not anticipate a significant increase or decrease to our tax contingencies for these issues for the next 12 months.

We are subject to U.S. federal tax, as well as income tax of multiple state, local and foreign jurisdictions. We are routinely subject to income tax examinations by these taxing jurisdictions, but we do not have a history of, nor do we expect any material adjustments as a result of these examinations. During 2017, the Internal Revenue Service issued a "no change" letter upon completion of their examination of our 2012 tax year. With few exceptions, major U.S. federal, state, local and foreign jurisdictions are no longer subject to examination for years before 2014. As of February 20, 2019, no significant adjustments have been proposed by any taxing jurisdiction.

We paid income taxes, net of refunds received, of \$6.8 million in 2018, \$36.0 million in 2017, and \$30.2 million in 2016.

(8) SHAREHOLDERS' EQUITY

The following table details activity in our common stock:

	Years Ended December 31,					
	2018		2017		2016	
	Shares	Amount	Shares	Amount	Shares	Amount
Stock option exercises	1,126	\$ 74,907	1,113	\$ 49,845	827	\$ 23,527
Purchases of common stock	(781)	(150,050)	(44)	(6,613)	(882)	(112,699)
Employee stock plan purchases	45	8,051	51	7,044	47	6,236

As of February 20, 2019, we had authorization from our board of directors to repurchase up to 2.7 million additional shares of our common stock.

(9) SHARE-BASED COMPENSATION

Share-Based Compensation Plan

In May 2018, stockholders approved the Tyler Technologies, Inc. 2018 Stock Incentive Plan ("the 2018 Plan") which amended and restated the existing Tyler Technologies, Inc. 2010 Stock Option Plan ("the 2010 Plan"). Upon stockholder approval of the 2018 Plan, the remaining shares available for grant under the 2010 Plan were added to the shares authorized for grant under the 2018 Plan. Additionally, any awards previously granted under the 2010 Plan that expire unexercised or are forfeited are added to the shares authorized for grant under the 2018 Plan.

During fiscal year 2018, we granted stock awards under the 2018 Plan in the form of stock options, restricted stock units and performance share units. Stock options generally vest after three to six years of continuous service from the date of grant and have a contractual term of 10 years. Once options become exercisable, the employee can purchase shares of our common stock at the market price on the date we granted the option. Restricted stock unit grants generally vest ratably over three to five years of continuous service from the date of grant. Each performance share unit represents the right to receive one share of our common stock based on our achievement of certain financial performance targets during applicable performance periods. We account for share-based compensation utilizing the fair value recognition pursuant to ASC 718, *Stock Compensation*.

As of December 31, 2018, there were 3.8 million shares available for future grants under the plan from the 22.9 million shares previously approved by the shareholders.

Determining Fair Value of Stock Compensation

Valuation and Amortization Method. We estimate the fair value of stock option awards granted using the Black-Scholes option valuation model. For restricted stock unit and performance stock unit awards, we amortize the fair value of all awards on a straight-line basis over the requisite service periods, which are generally the vesting periods.

Expected Life. The expected life of awards granted represents the period of time that they are expected to be outstanding. The expected life represents the weighted-average period the stock options are expected to be outstanding based primarily on the options' vesting terms, remaining contractual life and the employees' expected exercise based on historical patterns.

Expected Volatility. Using the Black-Scholes option valuation model, we estimate the volatility of our common stock at the date of grant based on the historical volatility of our common stock.

Risk-Free Interest Rate. We base the risk-free interest rate used in the Black-Scholes option valuation model on the implied yield currently available on U.S. Treasury zero-coupon issues with an equivalent remaining term equal to the expected life of the award.

Expected Dividend Yield. We have not paid any cash dividends on our common stock in more than ten years and we do not anticipate paying any cash dividends in the foreseeable future. Consequently, we use an expected dividend yield of zero in the Black-Scholes option valuation model.

Expected Forfeitures. We use historical data to estimate pre-vesting option forfeitures. We record share-based compensation only for those awards that are expected to vest.

The following weighted average assumptions were used for options granted:

	Years Ended December 31,		
	2018	2017	2016
Expected life (in years)	6.0	6.0	6.0
Expected volatility	26.7%	28.1%	29.3%
Risk-free interest rate	2.7%	2.0%	1.8%
Expected forfeiture rate	—%	—%	—%

Share-Based Award Activity

The following table summarizes restricted stock unit and performance stock unit activity during fiscal year 2018 (shares in thousands):

	Number of Shares	Weighted Average Grant Date Fair Value per Share
Unvested at January 1, 2018	—	\$ —
Granted	336	\$ 221.29
Vested	—	\$ —
Forfeited	(2)	\$ 229.75
Unvested at December 31, 2018	334	\$ 221.25

Options granted, exercised, forfeited and expired are summarized as follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding at December 31, 2015	5,164	\$ 64.43		
Granted	846	147.25		
Exercised	(827)	28.43		
Forfeited	(27)	95.33		
Outstanding at December 31, 2016	5,156	83.64		
Granted	824	176.26		
Exercised	(1,113)	44.80		
Forfeited	(50)	134.83		
Outstanding at December 31, 2017	4,817	107.91		
Granted	432	208.21		
Exercised	(1,126)	66.53		
Forfeited	(31)	158.80		
Outstanding at December 31, 2018	4,092	129.51	7	\$ 240,069
Exercisable at December 31, 2018	2,357	100.41	6	\$ 201,349

We had unvested options to purchase 1.7 million shares with a weighted average grant date exercise price of \$169.24 as of December 31, 2018, and unvested options to purchase 2.4 million shares with a weighted average grant date exercise price of \$136.51 as of December 31, 2017.

Other information pertaining to option activity was as follows during the twelve months ended December 31:

	2018	2017	2016
Weighted average grant-date fair value of stock options granted	\$ 66.52	\$ 55.56	\$ 46.89
Total intrinsic value of stock options exercised	176,716	137,699	103,703

Share-Based Compensation Expense

The following table summarizes share-based compensation expense related to share-based awards which is recorded in the statements of comprehensive income:

	Years Ended December 31,		
	2018	2017	2016
Cost of software services, maintenance and subscriptions	\$ 13,588	\$ 9,415	\$ 6,548
Selling, general and administrative expenses	39,152	27,933	23,199
Total share-based compensation expenses	52,740	37,348	29,747
Tax benefit	(32,487)	(40,624)	(30,059)
Net decrease (increase) in net income	\$ 20,253	\$ (3,276)	\$ (312)

As of December 31, 2018, we had \$137.6 million of total unrecognized compensation cost related to unvested options and restricted stock units, net of expected forfeitures, which is expected to be amortized over a weighted average amortization period of 3 years.

Employee Stock Purchase Plan

Under our Employee Stock Purchase Plan ("ESPP") participants may contribute up to 15% of their annual compensation to purchase common shares of Tyler. The purchase price of the shares is equal to 85% of the closing price of Tyler shares on the last day of each quarterly offering period. As of December 31, 2018, there were 749,000 shares available for future grants under the ESPP from the 2.0 million shares previously approved by the stockholders.

(10) EARNINGS PER SHARE

Basic earnings and diluted earnings per share data were computed as follows:

	Years Ended December 31,		
	2018	2017	2016
		As Adjusted	As adjusted
Numerator for basic and diluted earnings per share:			
Net income	\$ 147,462	\$ 169,571	\$ 113,701
Denominator:			
Weighted-average basic common shares outstanding	38,445	37,273	36,448
Assumed conversion of dilutive securities:			
Stock options	1,678	1,973	2,513
Denominator for diluted earnings per share - Adjusted weighted-average shares	40,123	39,246	38,961
Earnings per common share:			
Basic	\$ 3.84	\$ 4.55	\$ 3.12
Diluted	\$ 3.68	\$ 4.32	\$ 2.92

Share-based awards representing the right to purchase common stock of 888,000 shares in 2018, 1,343,000 shares in 2017, and 786,000 shares in 2016 were not included in the computation of diluted earnings per share because their inclusion would have had an anti-dilutive effect.

(11) LEASES

We lease office facilities for use in our operations, as well as transportation and other equipment. Most of our leases are non-cancelable operating lease agreements and they expire at various dates through 2026. In addition to rent, the leases generally require us to pay taxes, maintenance, insurance and certain other operating expenses.

Rent expense was approximately \$8.0 million in 2018, \$6.9 million in 2017, and \$6.7 million in 2016, which included rent expense associated with related party lease agreements of \$150,000 in 2017, and \$330,000 in 2016. We had no related party lease agreements in 2018.

Future minimum lease payments under all non-cancelable leases at December 31, 2018 are as follows:

	Years Ending December 31,
2019	\$ 5,994
2020	5,146
2021	3,976
2022	1,925
2023	1,164
Thereafter	2,132
Total	\$ 20,337

(12) EMPLOYEE BENEFIT PLANS

We provide a defined contribution plan for the majority of our employees meeting minimum service requirements. Eligible employees can contribute up to 30% of their current compensation to the plan subject to certain statutory limitations. We contribute up to a maximum of 3% of an employee's compensation to the plan. We made contributions to the plan and charged operating results \$9.3 million in 2018, \$7.9 million in 2017, and \$6.9 million in 2016.

(13) COMMITMENTS AND CONTINGENCIES

Other than routine litigation incidental to our business, there are no material legal proceedings pending to which we are party or to which any of our properties are subject.

(14) SEGMENT AND RELATED INFORMATION

We provide integrated information management solutions and services for the public sector, with a focus on local governments.

We provide our software systems and services and appraisal services through five business units, which focus on the following products:

- financial management, education and planning, regulatory and maintenance software solutions;
- financial management, municipal courts, planning, regulatory and maintenance, and land and vital records management software solutions;
- courts and justice and public safety software solutions;
- data and insights solutions; and
- appraisal and tax software solutions and property appraisal services.

In accordance with ASC 280-10, *Segment Reporting*, the financial management, education and planning, regulatory and maintenance software solutions unit; financial management, municipal courts and land and vital records management software solutions unit; and the courts and justice and public safety software solutions unit meet the criteria for aggregation and are presented in one reportable segment, Enterprise Software ("ES"). The ES segment provides municipal and county governments and schools with software systems and services to meet their information technology and automation needs for mission-critical "back-office" functions such as financial management and courts and justice and public safety processes. The Appraisal and Tax ("A&T") segment provides systems and software that automate the appraisal and assessment of real and personal property as well as property appraisal outsourcing services for local governments and taxing authorities. Property appraisal outsourcing services include: the physical inspection of commercial and residential properties; data collection and processing; computer analysis for property valuation; preparation of tax rolls; community education; and arbitration between taxpayers and the assessing jurisdiction.

We evaluate performance based on several factors, of which the primary financial measure is business segment operating income. We define segment operating income for our business units as income before noncash amortization of intangible assets associated with their acquisition, interest expense and income taxes. Segment operating income includes intercompany transactions. The majority of intercompany transactions relate to contracts involving more than one unit and are valued based on the contractual arrangement. Segment operating income for corporate primarily consists of compensation costs for the executive management team and certain accounting and administrative staff and share-based compensation expense for the entire company. Corporate segment operating income also includes revenues and expenses related to a company-wide user conference. The accounting policies of the reportable segments are the same as those described in Note 1, "Summary of Significant Accounting Policies."

Segment assets include net accounts receivable, prepaid expenses and other current assets and net property and equipment. Corporate assets consist of cash and investments, prepaid insurance, intangibles associated with acquisitions, deferred income taxes and net property and equipment mainly related to unallocated information and technology assets.

ES segment capital expenditures included \$2.2 million in 2018 and \$24.4 million in 2017 for the expansion of existing buildings and purchases of buildings and land.

For the year ended December 31, 2018

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	\$ 83,735	\$ 9,706	\$ —	\$ 93,441
Subscriptions	210,740	9,807	—	220,547
Software services	166,921	24,348	—	191,269
Maintenance	359,904	24,617	—	384,521
Appraisal services	—	21,846	—	21,846
Hardware and other	18,745	32	4,881	23,658
Intercompany	13,155	—	(13,155)	—
Total revenues	\$ 853,200	\$ 90,356	\$ (8,274)	\$ 935,282
Depreciation and amortization expense	50,130	914	10,715	61,759
Segment operating income	237,159	23,094	(68,572)	191,681
Capital expenditures	13,973	782	10,377	25,132
Segment assets	\$ 556,100	\$ 63,670	\$ 1,171,193	\$ 1,790,963

For the year ended December 31, 2017 (As Adjusted)

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	\$ 78,388	\$ 7,854	\$ —	\$ 86,242
Subscriptions	164,317	7,859	—	172,176
Software services	161,245	19,215	—	180,460
Maintenance	337,701	21,618	—	359,319
Appraisal services	—	25,023	—	25,023
Hardware and other	13,057	10	4,612	17,679
Intercompany	10,425	—	(10,425)	—
Total revenues	\$ 765,133	\$ 81,579	\$ (5,813)	\$ 840,899
Depreciation and amortization expense	43,987	760	8,648	53,395
Segment operating income	229,001	20,788	(51,964)	197,825
Capital expenditures	28,096	1,181	16,341	45,618
Segment assets	\$ 365,736	\$ 46,279	\$ 1,199,336	\$ 1,611,351

For the year ended December 31, 2016 (As Adjusted)

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	\$ 78,271	\$ 5,462	\$ —	\$ 83,733
Subscriptions	135,469	7,188	—	142,657
Software services	155,322	16,326	—	171,648
Maintenance	302,409	18,589	—	320,998
Appraisal services	—	26,287	—	26,287
Hardware and other	11,526	16	3,015	14,557
Intercompany	6,742	—	(6,742)	—
Total revenues	\$ 689,739	\$ 73,868	\$ (3,727)	\$ 759,880
Depreciation and amortization expense	43,434	984	5,355	49,773
Segment operating income	196,054	18,871	(41,832)	173,093
Capital expenditures	23,843	1,432	11,448	36,723
Segment assets	\$ 321,886	\$ 33,005	\$ 1,023,612	\$ 1,378,503

Reconciliation of reportable segment operating
income to the Company's consolidated totals:

	Years Ended December 31,		
	2018	2017	2016
		As Adjusted	As Adjusted
Total segment operating income	\$ 191,681	\$ 197,825	\$ 173,093
Amortization of acquired software	(22,972)	(21,686)	(22,235)
Amortization of customer and trade name intangibles	(16,217)	(13,381)	(13,202)
Other income (expense), net	3,378	698	(1,998)
Income before income taxes	\$ 155,870	\$ 163,456	\$ 135,658

(15) Disaggregation of Revenue

The tables below show disaggregation of revenue into categories that reflect how economic factors affect the nature, amount, timing, and uncertainty of revenue and cash flows.

Timing of Revenue Recognition

Timing of revenue recognition by revenue category during the period is as follows:

For the year ended December 31, 2018

	Products and services transferred at a point in time	Products and services transferred over time	Total
Revenues			
Software licenses and royalties	\$ 75,188	\$ 18,253	\$ 93,441
Subscriptions		220,547	220,547
Software services	—	191,269	191,269
Maintenance		384,521	384,521
Appraisal services	—	21,846	21,846
Hardware and other	23,658		23,658
Total	\$ 98,846	\$ 836,436	\$ 935,282

For the year ended December 31, 2017

(As Adjusted)

	Products and services transferred at a point in time	Products and services transferred over time	Total
Revenues			
Software licenses and royalties	\$ 69,167	\$ 17,075	\$ 86,242
Subscriptions		172,176	172,176
Software services	—	180,460	180,460
Maintenance		359,319	359,319
Appraisal services	—	25,023	25,023
Hardware and other	17,679		17,679
Total	\$ 86,846	\$ 754,053	\$ 840,899

Recurring Revenue

The majority of our revenue is comprised of recurring revenues from maintenance and subscriptions. Virtually all of our on-premises software clients contract with us for maintenance and support, which provides us with a significant source of recurring revenue. We generally provide maintenance and support for our on-premises clients under annual, or in some cases, multi-year contracts. The contract terms for subscription arrangements range from one to 10 years but are typically contracted for initial periods of three to five years, providing a significant source of recurring revenues on an annual basis. Non-recurring revenues are derived for all other revenue categories.

Recurring revenues and non-recurring revenues recognized during the period are as follows:

For the year ended December 31, 2018

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Recurring revenues	\$ 570,645	\$ 34,424	\$ —	\$ 605,069
Non-recurring revenues	269,400	55,932	4,881	330,213
Intercompany	13,155		(13,155)	
Total revenues	\$ 853,200	\$ 90,356	\$ (8,274)	\$ 935,282

For the year ended December 31, 2017

(As Adjusted)

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Recurring revenues	\$ 502,018	\$ 29,477	\$ —	\$ 531,495
Non-recurring revenues	252,690	52,102	4,612	309,404
Intercompany	10,425		(10,425)	
Total revenues	\$ 765,133	\$ 81,579	\$ (5,813)	\$ 840,899

(16) Deferred Revenue and Performance Obligations

Total deferred revenue, including long-term, by segment is as follows:

	December 31, 2018	December 31, 2017
		As Adjusted
Enterprise Software	\$ 327,521	\$ 277,198
Appraisal and Tax	20,018	20,387
Corporate	3,397	2,302
Totals	\$ 350,936	\$ 299,887

The opening balance of total deferred revenue, including long-term, was \$290.1 million (as adjusted) as of January 1, 2017.

Changes in total deferred revenue, including long-term, were as follows:

	2018
Balance at beginning of year (As Adjusted)	\$ 299,887
Deferral of revenue	871,498
Recognition of deferred revenue	(820,449)
Balance at end of year	\$ 350,936

Transaction Price Allocated to the Remaining Performance Obligations

The aggregate amount of transaction price allocated to the remaining performance obligations represents contracted revenue that has not yet been recognized ("Backlog"), which includes deferred revenue and amounts that will be invoiced and recognized as revenue in future periods. Backlog as of December 31, 2018 was \$1.25 billion, of which we expect to recognize approximately 50% as revenue over the next 12 months and the remainder thereafter.

(17) Deferred Commissions

Sales commissions earned by our sales force are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions for initial contracts are deferred and then amortized commensurate with the recognition of associated revenue over a period of benefit that we have determined to be three to seven years. Deferred commissions were \$21.9 million and \$19.3 million (as adjusted) as of December 31, 2018, and December 31, 2017, respectively. Amortization expense was \$15.6 million for the twelve months ended December 31, 2018 and \$11.2 million (as adjusted) for the twelve months ended December 31, 2017, respectively. There were no indicators of impairment in relation to the costs capitalized for the periods presented. Deferred commissions have been included with prepaid expenses in the accompanying consolidated balance sheets. Amortization expense related to deferred commissions is included in selling, general and administrative expenses in the accompanying consolidated statements of income.

(18) Subsequent Events

The following events and transactions occurred subsequent to December 31, 2018:

On January 31, 2019, (i) Tyler Technologies, Inc., a Delaware corporation ("Parent"), (ii) TMP Subsidiary, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), (iii) MP Holdings Parent, Inc., dba MicroPact, a Delaware corporation ("MicroPact"), and (iv) Arlington Capital Partners II, L.P., a Delaware limited partnership ("Representative"), signed an Agreement and Plan of Merger (the "Merger Agreement").

The Merger Agreement provides for the merger of Merger Sub with and into MicroPact on the terms and subject to the conditions set forth in the Merger Agreement, with MicroPact as the surviving company and a wholly owned, direct subsidiary of Parent.

Pursuant to the Merger Agreement, Parent will pay MicroPact's shareholders aggregate merger consideration of approximately \$185.0 million in cash, which shall include an amount equal to MicroPact's closing date working capital and be subject to a post-closing working capital adjustment as described in the Merger Agreement and an additional merger consideration of up to \$10.0 million based on certain fiscal 2019 EBITDA thresholds. The merger consideration will be funded from cash on hand and proceeds from the revolving credit facility.

The Merger and the Merger Agreement have been approved by the boards of directors of both MicroPact, Parent and Merger Sub. The Merger Agreement contains customary representations, warranties, and covenants of MicroPact, Parent and Merger Sub. The covenants include, among others, an obligation on behalf of MicroPact to operate its business in the ordinary course until the Merger is consummated, and limitations on the right of MicroPact to solicit or engage in negotiations regarding alternative acquisition proposals during the pre-Closing period.

The completion of the Merger is subject to customary closing conditions, including the expiration or the termination of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act. The Federal Trade Commission granted early termination of that waiting period effective February 15, 2019. Customary closing conditions also include each party's satisfaction of the applicable representations and warranties, and compliance in all material respects with its applicable covenants. Consummation of the Merger is not subject to a financing condition.

The Merger Agreement may be terminated prior to closing under certain enumerated circumstances, including if the Merger is not consummated by May 1, 2019. Termination rights are held by Parent, MicroPact, and Representative, depending on the circumstances giving rise to the termination.

The foregoing description of the Merger Agreement and the transactions contemplated thereby does not purport to be complete and is subject to, and qualified in its entirety by, the full text of the Merger Agreement, a copy of which is attached hereto as Exhibit 10.7 and incorporated herein by reference.

MicroPact is a leading provider of commercial off-the-shelf (COTS) solutions, including entellitrak®, a low-code application development platform for case management and business process management used extensively in the public sector.

On February 1, 2019, we acquired all the assets of Civic, LLC ("MyCivic"), a company that provides software solutions to connect communities. The purchase price is \$3.7 million of which \$3.6 million was paid in cash and approximately \$90,000 was accrued for a working capital holdback.

(19) QUARTERLY FINANCIAL INFORMATION (unaudited)

The following table contains selected financial information from unaudited statements of income for each quarter of 2018 and 2017:

	Quarters Ended							
	2018				2017 (As Adjusted)			
	Dec. 31	Sept. 30	June 30	Mar. 31	Dec. 31(a)	Sept. 30	June 30	Mar. 31
Revenues	\$ 241,981	\$ 236,067	\$ 236,060	\$ 221,174	\$ 217,701	\$ 214,706	\$ 208,763	\$ 199,729
Gross profit	115,871	111,626	109,276	102,805	105,350	103,989	95,503	94,535
Income before income taxes	40,107	38,626	37,700	39,437	45,261	44,357	37,197	36,641
Net income	31,552	38,924	39,161	37,825	66,196	38,836	31,770	32,769
Earnings per diluted share	\$ 0.79	\$ 0.96	\$ 0.97	\$ 0.95	\$ 1.68	\$ 0.99	\$ 0.81	\$ 0.84
Shares used in computing diluted earnings per share	39,891	40,528	40,224	39,836	39,499	39,342	39,201	38,932

(a) The fourth quarter of 2017 includes the significant impact of the enactment of the Tax Act. The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision is a \$26.0 million tax benefit due to the remeasurement of deferred tax assets and liabilities. Refer to Note 7 - "Income Tax" for further discussion on the impact the Tax Act.

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AGREEMENT AND PLAN OF MERGER

BY AND AMONG

TYLER TECHNOLOGIES, INC.,

TMP SUBSIDIARY, INC.,

MP HOLDINGS PARENT, INC.,

AND

THE REPRESENTATIVE IDENTIFIED HEREIN

DATED AS OF JANUARY 31, 2019

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Exhibits

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AGREEMENT AND PLAN OF MERGER

THIS AGREEMENT AND PLAN OF MERGER (this "Agreement") is entered into as of January 31, 2019, by and among (i) Tyler Technologies, Inc., a Delaware corporation ("Parent"), (ii) TMP Subsidiary, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), (iii) MP Holdings Parent, Inc., a Delaware corporation (the "Company"), and (iv) Arlington Capital Partners II, L.P., a Delaware limited partnership, solely in its capacity as representative for the Seller (the "Representative"). Parent, Merger Sub, the Company and, as applicable, the Representative are sometimes referred to in this Agreement as a "Party" and collectively as the "Parties." Capitalized terms that are used in this Agreement and not otherwise defined herein shall have the respective meanings ascribed to such terms in ARTICLE XI.

WITNESSETH:

WHEREAS, the Parties intend to effectuate a merger (the "Merger") of Merger Sub with and into the Company in accordance with this Agreement and the Delaware General Corporation Law (the "DGCL"), with the Company surviving the Merger (the "Surviving Company");

WHEREAS, the boards of directors of the Company, Parent and Merger Sub have, upon the terms and subject to the conditions set forth herein, (i) unanimously approved this Agreement, the Merger and the other transactions contemplated hereby and (ii) declared that this Agreement, the Merger and the other transactions contemplated hereby are advisable on the terms and conditions set forth herein;

WHEREAS, the board of directors of the Company has recommended that the stockholders of the Company adopt and approve this Agreement and the transactions contemplated hereby;

WHEREAS, concurrently with the execution of this Agreement, (i) in accordance with Section 2.1 of the Company Stockholder Agreement, the Majority ACP Holders (as defined in the Company Stockholder Agreement) have approved this Agreement and the transactions contemplated hereby, including the Merger, and, (ii) in accordance with the DGCL, the stockholders of the Company holding a majority of the outstanding shares of capital stock of the Company representing the Requisite Stockholder Approval have approved this Agreement and the transactions contemplated hereby, including the Merger, by written consent; and

WHEREAS, Parent, as the sole stockholder of Merger Sub, has adopted and approved this Agreement and the transactions contemplated hereby in accordance with the DGCL.

NOW, THEREFORE in consideration of the foregoing and the mutual representations, warranties, covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound hereby, the Parties hereby agree as follows:

ARTICLE I
EFFECTS OF THE MERGER; MERGER CONSIDERATION

1.1 Merger. At the Effective Time and upon the terms and subject to the conditions of this Agreement and the applicable provisions of the DGCL, Merger Sub shall merge with and into the Company, the separate corporate existence of Merger Sub shall cease and the Company shall continue as the Surviving Company and as a wholly owned Subsidiary of Parent.

1.2 Effect of the Merger. At the Effective Time, the effect of the Merger shall be as provided in the applicable provisions of the DGCL. Without limiting the generality of the foregoing, and subject thereto, at the Effective Time by virtue of the Merger and without any action on the part of Merger Sub or the Company, all of the property, rights, privileges, powers and franchises of the Company and Merger Sub shall vest in the Surviving Company, and all debts, liabilities and duties of the Company and Merger Sub shall become the debts, liabilities and duties of the Surviving Company.

1.3 Certificate of Incorporation; Bylaws. At the Effective Time, by virtue of the Merger and without any action on the part of Merger Sub or the Company, (a) the certificate of incorporation of the Surviving Company shall be amended and restated in the form of Exhibit A and, as so amended, shall be the certificate of incorporation of the Surviving Company until thereafter amended in accordance with the terms thereof or as provided by applicable Law, and (b) the bylaws of the Merger Sub as in effect immediately prior to the Effective Time shall be the bylaws of the Surviving Company until thereafter amended in accordance with the terms thereof, the certificate of incorporation of the Surviving Company or as provided by applicable Law; provided that, in each case, the name of the corporation set forth therein shall be changed to MicroPact Holdings, Inc.

1.4 Officers of the Surviving Company. The officers of Merger Sub immediately prior to the Effective Time shall, from and after the Effective Time, be the officers of the Surviving Company until the earlier of their resignation or removal or until their respective successors are duly elected and qualified, as the case may be.

1.5 Common Stock of Merger Sub. At the Effective Time, by virtue of the Merger and without any action on the part of Merger Sub, the Company or Parent, each share of common stock of Merger Sub issued and outstanding immediately prior to the Effective Time shall each be converted into and exchanged for one (1) share of common stock of the Surviving Company.

1.6 Effect on Company Capital Stock. At the Effective Time, upon the terms and subject to the conditions of this Agreement, by virtue of the Merger and without any action on the part of the Company, Parent, Merger Sub or the Sellers, as the case may be:

(a) Preferred Stock. At the Effective Time, no share of Preferred Stock shall be issued and outstanding, requiring no action by virtue of the Merger.

(b) Common Stock. Each share of Common Stock, including, subject to Section 1.7, Vested Restricted Stock but excluding Unvested Restricted Stock, that is issued and outstanding immediately prior to the Effective Time shall be canceled, extinguished and automatically converted

into the right to receive an amount of cash (without interest) equal to the Per Share Merger Consideration (as reduced at the Closing by the Per Share Portion of each of the Holdback Amounts and the Representative Expense Fund Amount consistent with Section 1.9(a), and subject to adjustment as provided in Section 1.10(e)) in cash, payable in accordance with and subject to the conditions provided in this ARTICLE I.

(c) Treasury Stock. Each share of treasury stock of the Company, if any, shall automatically be cancelled and retired and shall cease to exist, and no consideration shall be paid or delivered in exchange therefor.

(d) Dissenting Shares. Notwithstanding any provision of this Agreement to the contrary, including this Section 1.6, shares of Common Stock issued and outstanding immediately prior to the Effective Time (other than shares of Common Stock cancelled in accordance with Section 1.6(c)) and held by a holder who has not voted in favor of adoption of this Agreement or consented thereto in writing and who has properly exercised appraisal rights of such shares of Common Stock in accordance with Section 262 of the DGCL (such shares of Common Stock being referred to collectively as the "Dissenting Shares" until such time as such holder fails to perfect or otherwise loses such holder's appraisal rights under the DGCL with respect to such shares of Common Stock) shall not be converted into a right to receive a portion of the Merger Consideration, but instead shall be entitled to only such rights as are granted by Section 262 of the DGCL; provided, however that if, after the Effective Time, such holder fails to perfect, withdraws, or loses such holder's right to appraisal pursuant to Section 262 of the DGCL or if a court of competent jurisdiction shall determine that such holder is not entitled to the relief provided by Section 262 of the DGCL, such shares of Common Stock shall be treated as if they had been converted as of the Effective Time into the right to receive the portion of the Merger Consideration, if any, to which such holder is entitled pursuant to Section 1.6(b), without interest thereon. The Company shall provide Parent prompt written notice of any demands received by the Company for appraisal of shares of Common Stock, any withdrawal of any such demand and any other demand, notice or instrument delivered to the Company prior to the Effective Time pursuant to the DGCL that relates to such demand, and Parent shall have, at Parent's sole cost and expense, the opportunity and right to direct all negotiations and proceedings with respect to such demands. Except with the prior written consent of Parent, the Company shall not make any payment with respect to, or settle or offer to settle, any such demands.

1.7 Employee Loans; Treatment of Unvested Restricted Stock.

(a) To the extent that the purchase price for any shares of the Vested Restricted Stock payable under the applicable Restricted Stock Award Agreement was paid by a promissory note or other form of a loan or advance by the Company or its predecessor and any amounts payable pursuant to such note, loan or advance remain unpaid and outstanding as of the Closing, the amounts payable to the respective Seller by Parent pursuant to Section 1.6(b) shall be reduced by the applicable amounts so owed by such Seller in order to satisfy such obligations in full (the aggregate of the unpaid amounts as of the Closing of all Sellers pursuant to such notes, loans or advances, the "Seller Loans Balance").

(b) At the Effective Time, each share of Unvested Restricted Stock issued and outstanding immediately prior to the Effective Time, if any, shall be canceled and extinguished. Holders of Unvested Restricted Stock will be entitled to receive an Unvested Restricted Stock Refund Payment to the extent required by such holder's Restricted Stock Award Agreement(s).

1.8 Merger Consideration. The aggregate consideration in respect of all shares of Common Stock and Vested Restricted Stock shall be an amount equal to (a) One Hundred and Eighty-Five Million Dollars (\$185,000,000), plus (b) the amount, if any, by which the Working Capital exceeds the Working Capital Target, minus (c) the amount, if any, by which the Working Capital Target exceeds the Working Capital, minus (d) Transaction Expenses, plus (e) the Seller Loans Balance (such resulting amount pursuant to clauses (a)-(e), and as such amount may be adjusted pursuant to the provisions of Section 1.10, the "Merger Consideration"). The Merger Consideration shall be allocated among the Sellers as specified in the Pre-Closing Statement delivered pursuant to Section 1.10. The Parties acknowledge and agree that neither Parent, Merger Sub nor the Surviving Company shall have any liability to any Person relating to, or obligation to verify, the allocation of the Merger Consideration among the Sellers as set forth in the Pre-Closing Statement (including with respect to the determination of the Per Share Merger Consideration and the Per Share Portion), and upon payment of the amounts set forth in this Section 1.8 in accordance with the Pre-Closing Statement, Parent and Merger Sub will have satisfied all of their respective obligations under this Agreement with respect thereto, subject to any adjustments to the Merger Consideration pursuant to Section 1.10.

1.9 Closing Payments. At the Closing, Parent shall make or cause to be made, by wire transfer of immediately available funds, the following payments (each such payment, a "Closing Payment"):

(a) payment to the account designated by American Stock Transfer & Trust Company, LLC, appointed by Parent to act as its paying agent in the Merger (the "Paying Agent") of a cash amount equal to the aggregate amount of the Estimated Closing Consideration payable to the Sellers accordance with Section 1.6(b) and as set forth in the Pre-Closing Statement to be distributed by the Paying Agent to the Sellers in accordance with this ARTICLE I provided, that if any Seller has not delivered to Parent a duly executed and completed Letter of Transmittal and Surrendered Certificate(s) prior to the Closing Date, the amount allocated with respect to such Seller will be paid to the Paying Agent on behalf of such Seller (and distributed thereto upon delivery of such executed and completed Letter of Transmittal and Surrendered Certificate(s)). The term "Estimated Closing Consideration" means the Estimated Merger Consideration less (i) the Holdback Amounts and less (ii) the Representative Expense Fund Amount.

(b) payment to the Representative of a cash amount equal to Five Hundred Thousand Dollars (\$500,000) (such amount, the "Representative Expense Fund Amount") to a bank account designated in writing by the Representative; and

(c) payment on behalf of the Group Companies, to the payees thereof, of an aggregate cash amount equal to the amount of all Closing Date Indebtedness of the type identified in item (i) of the definition of "Indebtedness" and all Transaction Expenses (other than the Unvested Restricted Stock Refund Payments, which shall instead be paid by Parent to the account designated by the Company for further distribution to the holders of Unvested Restricted Stock entitled thereto in accordance with Section 1.7(b)).

Each of the Closing Payments shall be made in the amounts and as set forth in the Pre-Closing Statement delivered pursuant to Section 1.10.

1.10 Adjustment of the Merger Consideration.

(a) Pre-Closing Statement. No later than three (3) Business Days prior to the Closing Date (or at such earlier time as may reasonably be practicable), the Company shall deliver to Parent a statement (the "Pre-Closing Statement") including or setting forth the following:

- (i) a good faith estimate of the Closing Balance Sheet;
- (ii) a calculation of estimated Working Capital;
- (iii) the amounts of the Closing Date Indebtedness and the holders thereof;
- (iv) the amounts of the Transaction Expenses and the payees thereof, including the Unvested Restricted Stock Refund Payments, including wiring instructions with respect to each payee of Transaction Expenses;
- (v) the Company's good faith estimate of the Merger Consideration as of the Adjustment Time (the "Estimated Merger Consideration"); and
- (vi) the allocation of the Estimated Closing Consideration among Sellers.

The Pre-Closing Statement shall include reasonably detailed calculations with respect to each component of the Estimated Merger Consideration. As applicable, the Pre-Closing Statement shall be prepared in a manner consistent with the definitions of the terms Working Capital, Transaction Expenses and the Accounting Rules and practices referred to therein, including the definitions of any defined terms used in such definitions and including as reflected on Exhibit B).

(b) Final Merger Consideration Adjustment. The Merger Consideration shall be adjusted following the Closing based on the difference between the Final Closing Date Merger Consideration (as determined in accordance with this Section 1.10) and the Estimated Merger Consideration, if any, and payment shall be made in respect of any such post-Closing adjustment as set forth in Section 1.10(e).

(c) Closing Statement. No later than ninety (90) days after the Closing Date, Parent shall cause to be prepared in good faith and delivered to the Representative a statement (the "Closing Statement"), including an unaudited consolidated balance sheet of the Company as of the Adjustment Time (the "Closing Balance Sheet") and setting forth Parent's calculation of the Merger

Consideration as of the Adjustment Time ("Closing Date Merger Consideration"). The Closing Statement shall be prepared in a manner consistent with the definitions of the terms Working Capital, Transaction Expenses and the Accounting Rules and practices referred to therein (including as reflected on Exhibit B). The Closing Statement shall entirely disregard (i) any and all effects on the assets or liabilities of the Group Companies as a result of the Transaction or of any financing or refinancing arrangements entered into at any time by Parent or its Affiliates or any other transaction entered into by Parent or its Affiliates in connection with the consummation of the Transaction and (ii) any of the plans, transactions, or changes which Parent intends to initiate or make or cause to be initiated or made after the Closing with respect to any Group Company or their respective businesses or assets, or any facts or circumstances that are unique or particular to Parent or its Affiliates or any of their assets or liabilities. For the avoidance of doubt, unless the Representative otherwise agrees in writing, Parent may not amend, adjust, supplement or modify the Closing Statement or the amount of Closing Date Merger Consideration following its delivery to the Representative. If Parent fails to deliver the Closing Statement within such ninety (90)-day period, then in addition to any other rights the Representative may have under this Agreement, the Representative shall have the right to elect that the Estimated Merger Consideration be deemed to be the amount of the Closing Date Merger Consideration and be final and binding and used for purposes of calculating the adjustment pursuant to Section 1.10(e). The Parties acknowledge that no adjustments may be made to the Working Capital Target.

(d) Disputes.

(i) The Representative shall have thirty (30) days after receipt of the Closing Statement to review the Closing Statement; provided that if Parent does not promptly provide access or other information specified in Section 1.10(f) (and in any event within five (5) Business Days of any request by the Representative), then the Representative shall have thirty (30) days plus the number of days between the date of the Representative's request for such access or information and the date Parent grants or provides such access or information. If the Representative disagrees with Parent's calculation of the Closing Date Merger Consideration as set forth in the Closing Statement, the Representative may, within such period, deliver a written notice to Parent (a "Dispute Notice") disagreeing with such calculation and, to the extent reasonably able to so specify, setting forth the Representative's basis for such disagreement (the "Disputed Items"). If the Representative fails to deliver a Dispute Notice during such period, the Representative shall have waived its rights to contest the Closing Statement and the calculations of the Closing Date Merger Consideration set forth therein shall be deemed to be final and binding upon the Parties, and such amount shall be used as the Final Closing Date Merger Consideration for purposes of calculating the adjustment pursuant to Section 1.10(e).

(ii) If a Dispute Notice is duly delivered pursuant to Section 1.10(d)(i), the Representative and Parent shall, during the thirty (30) days following such delivery, attempt to reach an agreement on all or a portion of the Disputed Items. If Parent and the Representative reach an agreement on any Disputed Item during such period, the resolution of such Disputed Items shall be in writing and shall be final and binding upon the Parties. If, during such thirty (30)-day period, the Representative and Parent are unable to reach an

agreement on all of the Disputed Items, then all Disputed Items remaining in dispute following such thirty (30)-day period shall be submitted by the Representative and Parent to the Accounting Referee (the "Referred Disputed Items") as promptly as reasonably practicable for a determination resolving such Referred Disputed Items (it being agreed and understood that the Accounting Referee shall act as an arbitrator to determine the Referred Disputed Items (and, as a result thereof, the Closing Date Merger Consideration) and shall do so based solely on presentations and information provided by Parent and the Representative, as further specified below, and not by independent review). In conducting its review, the decision of the Accounting Referee shall be solely based on (A) the definitions and other applicable provisions of this Agreement, (B) a single presentation by each of the Representative and Parent limited to the Referred Disputed Items (which presentations the Accounting Referee shall be instructed to forward to Parent and the Representative, as applicable) and (C) one (1) written response submitted to the Accounting Referee by each of the Representative and Parent within ten (10) Business Days after receipt of each such presentation (which responses the Accounting Referee shall be instructed to forward to Parent and the Representative, as applicable), and not on independent review. The scope of the disputes to be resolved by the Accounting Referee shall be limited to resolving the Referred Disputed Items, and, in connection therewith, fixing mathematical errors and determining whether the Referred Disputed Items were determined in accordance with this Agreement (including the definition of the terms Working Capital, Transaction Expenses and the Accounting Rules) and the Accounting Referee is not to make any other determination. The Accounting Referee shall deliver to the Representative and Parent, as promptly as practicable (but in any case no later than thirty (30) days from the date of engagement of the Accounting Referee), a report setting forth its calculations of the Closing Date Merger Consideration based solely upon (x) the Accounting Referee's final determination of the Referred Disputed Items and (y) the items which were finally determined pursuant to Sections 1.10(d)(i) and 1.10(d)(ii) and not submitted to the Accounting Referee for resolution, which such Closing Date Merger Consideration amount shall not be less than the applicable amount thereof shown in Parent's calculation delivered pursuant to Section 1.10(c) nor more than the amount thereof shown in the Representative's calculation delivered pursuant to Section 1.10(d)(i). Such report shall be final and binding upon the Parties, absent manifest error, and shall be used for purposes of calculating the adjustment pursuant to Section 1.10(b). Notwithstanding anything herein to the contrary, the dispute resolution mechanism contained in this Section 1.10(d) shall be the exclusive mechanism for resolving disputes regarding the Merger Consideration adjustment. Judgment may be entered upon the determination of the Accounting Referee in any court having jurisdiction over the Party against which such determination is to be enforced. The fees, costs and expenses of the Accounting Referee shall be borne by the Parties in proportion to the relative amount each Party's determination has been modified, with any amount borne by the Representative to be paid out of the Representative Expense Fund Amount. For example, if the Representative challenges the calculation of the Closing Date Merger Consideration by an amount of \$100,000, but the Accounting Referee determines that the Representative has a valid claim for only \$60,000, the Representative (on behalf of the Sellers) shall bear 40% of the fees and expenses of the Accounting Referee and Parent shall bear the other 60% of such fees and expenses of the Accounting Referee. The Representative

and Parent shall, and Parent shall cause the Group Companies, and each of its and their representatives to, reasonably cooperate and assist in any review by the Accounting Referee of the Closing Statement and the calculations of the Closing Date Merger Consideration.

(e) Final Closing Date Merger Consideration Following the time that the Closing Date Merger Consideration is finally determined pursuant to this Section 1.10 (such finally determined amount, the "Final Closing Date Merger Consideration"), payment shall be made as follows:

(i) If the Final Closing Date Merger Consideration is greater than or equal to the Estimated Merge Consideration (the amount of such excess, the "Increase Amount"), then within five (5) Business Days after the Final Closing Date Merger Consideration is finally determined pursuant to this Section 1.10, (A) Parent shall pay by wire transfer of immediately available funds an amount equal to the Increase Amount to the Paying Agent (for further distribution to the Sellers who delivered to Parent a duly completed and executed Letter of Transmittal and Surrendered Certificate(s) prior to such time), and (B) Parent shall disburse the Adjustment Holdback Amount to the Paying Agent (for further distribution to the Sellers who delivered to Parent a duly completed and executed Letter of Transmittal and Surrendered Certificate(s) prior to such time).

(ii) If the Final Closing Date Merger Consideration is less than the Estimated Merger Consideration, the within five (5) Business Days after the Final Closing Date Merger Consideration is finally determined pursuant to this Section 1.10, (A) the Adjustment Holdback Amount shall be deemed automatically reduced by the full amount of such deficiency (for purposes of clarity, the absolute amount of such deficiency will be subtracted from the Adjustment Holdback Amount thereby resulting in a reduction of the Adjustment Holdback Amount) (it being understood that, notwithstanding anything to the contrary contained herein, the Adjustment Holdback Amount shall be the sole source of recovery for any payment required to be made to Parent pursuant to this Section 1.10(e)(ii)), and (B) Parent shall disburse in accordance with Section 1.11 to the Paying Agent (for further distribution to the Sellers who delivered to Parent a duly completed and executed Letter of Transmittal and Surrendered Certificate(s) prior to such time) the balance of the Adjustment Holdback Amount, if any, remaining after the reduction of the Adjustment Holdback Amount pursuant to the preceding clause (A).

(iii) Notwithstanding anything to the contrary in this Section 1.10(e), if, at the time that Parent is required to make any payments to the Paying Agent (on behalf of the Sellers) pursuant to this Section 1.10(e), any Seller has not delivered Parent a duly completed and executed Letter of Transmittal and Surrendered Certificate(s) prior to such time, then the amount allocated with respect to such Seller will be paid to the Paying Agent on behalf of such Seller (and distributed thereto upon delivery of such executed and completed Letter of Transmittal and Surrendered Certificate(s)).

Upon payment of the amounts provided in this Section 1.10(e) in accordance herewith, none of the Parties may make or assert any claim under this Section 1.10.

(f) Cooperation. During the period of time from and after the Closing Date through the final determination and payment of the Final Closing Date Merger Consideration in accordance with this Section 1.10, Parent shall afford, and shall cause the Group Companies to afford, to the Representative and any accountants, counsel or financial or other advisers retained by the Representative in connection with the review of the Closing Date Merger Consideration, and afford to the Accounting Referee in connection with any review by it in accordance with Section 1.10(d)(ii), direct access during normal business hours upon reasonable advance notice to all the books, properties, records, contracts, documents, information, personnel and representatives of the Group Companies and their accountants (including the work papers of the Surviving Company's accountants) relevant to the review or preparation of the Closing Statement and the calculation of the Closing Date Merger Consideration and, if requested by the Representative, shall provide any such books, records, contracts, documents and information electronically and in such formats as are reasonably requested.

(g) No Further Ownership Rights in Common Stock The Estimated Closing Consideration paid in accordance with the terms of this ARTICLE I, subject to the indemnification provisions set forth in this Agreement, payment of the amounts provided in Section 1.11, and the rights of Sellers with respect to the Holdback Amounts, the Representative Expense Fund Amount and any Additional Merger Consideration Payment, each as provided herein, shall be deemed to have been paid in full satisfaction of all rights pertaining to the shares of Common Stock formerly represented by the Stock Certificates. From and after the Effective Time, there shall be no further registration of transfers of shares of Common Stock on the stock transfer books of the Surviving Company.

(h) Adjustments. Without limiting the other provisions of this Agreement, if at any time during the period between the date of this Agreement and the Effective Time, any change in the outstanding shares of Common Stock shall occur, including by reason of any reclassification, recapitalization, stock split (including reverse stock split), or combination, exchange or readjustment of shares, or any stock dividend or distribution paid in stock, the applicable Per Share Merger Consideration and any other amounts payable pursuant to this Agreement shall be appropriately adjusted to reflect such change.

1.11 Other Payments. In order to facilitate the payment of any Other Seller Payments pursuant to this Agreement such funds shall be paid to an account designated by the Paying Agent (on behalf of the Sellers) for distribution to the Sellers entitled thereto on a pro rata basis (based on each Seller's Pro Rata Share), subject to such Sellers delivering to Parent a duly completed and executed Letter of Transmittal and Surrendered Certificate(s) prior to such time. The Parties acknowledge and agree that Parent and the Surviving Company shall have no liability to any Person relating to, or obligation to verify, the allocation of any Other Seller Payment among the Sellers as set forth in this Section 1.11, and upon payment of any Other Seller Payment in accordance with this Section 1.11 or as directed by the Representative, Parent will have satisfied all of its obligations under this Agreement with respect thereto.

1.12 Withholding. Parent, the Company and Paying Agent shall be entitled to deduct and withhold from the amounts payable pursuant to this Agreement such amounts as it reasonably determines it is required to deduct and withhold with respect to the making of such payments under any provision of U.S. federal, state, local or foreign tax Law and instead shall pay such amount to the applicable Governmental Authority. Before making any such deduction or withholding described in the previous sentence, except for (a) any withholding required as a result of a failure to deliver the certificate as described in Section 2.3(h), (b) any withholding on payments under any compensatory payments made in connection with the transactions contemplated by this Agreement, including the payments with respect to Vested Restricted Stock and the payment of any Unvested Restricted Stock Refund Amount, Parent shall give the Representative notice of the intention to make such deduction or withholding, and such notice, which shall include the authority, basis and method of calculation for the proposed deduction or withholding, at least three (3) Business Days before such deduction or withholding is required, in order for the Representative to obtain reduction of or relief from such deduction or withholding. To the extent that amounts are properly so withheld by Parent, the Company, or Paying Agent, and paid to the applicable Governmental Authority, such amounts withheld shall be treated for all purposes of this Agreement as having been paid to the recipient in respect of which such deduction and withholding was made by Parent or other withholding agent.

1.13 Letters of Transmittal.

(a) Promptly following the date hereof, the Company shall deliver to each Seller a Letter of Transmittal in a form mutually agreed to by Parent and the Company (a "Letter of Transmittal"). Promptly following the receipt by the Paying Agent of the Estimated Closing Consideration, the Paying Agent shall deliver to each Seller who delivered to Parent a duly completed and executed Letter of Transmittal and Surrendered Certificate(s) at least two (2) Business Days prior to the Closing Date the portion of the Estimated Closing Consideration allocated to each such Seller in accordance with the Pre-Closing Statement and to the bank account designated in such Seller's Letter of Transmittal. Following the Closing, but subject to Section 1.13(c), upon delivery by a Seller that did not receive such portion of the Estimated Closing Consideration promptly following the Closing pursuant to the immediately preceding sentence to Parent of a duly completed and executed Letter of Transmittal and Surrendered Certificate(s), the Paying Agent shall pay to such Seller within five (5) Business Days after such delivery, (x) the amounts to which such Seller is entitled to pursuant to the immediately preceding sentence and (y) if the Final Closing Date Merger Consideration has been finally determined as of such time, the amounts to which such Seller is entitled to pursuant to Section 1.10(e), in each case, by wire transfer of immediately available funds to the account designated by such Seller in such Seller's Letter of Transmittal. No interest or dividends will be paid or accrued on the consideration payable to any Seller hereunder. At the Effective Time, all Common Stock will cease to exist and each share of Common Stock outstanding immediately prior to the Effective Time (including any Stock Certificate that prior to the Effective Time represented such shares of Common Stock) shall be deemed from and after the Effective Time, for all purposes, to evidence the right to receive the applicable portion of the Merger Consideration as provided in Section 1.6(b) and of the Other Seller Payments as provided in Section 1.11. If after the Effective Time, any Stock Certificate is presented to the Paying Agent, it shall be exchanged as provided in this Section 1.13(a).

(b) In the event that any stock certificate representing the shares of Common Stock has been lost, stolen or destroyed, upon the making of a customary affidavit of that fact by the Seller claiming such certificate to be lost, stolen or destroyed, the Paying Agent or the Surviving Company, as applicable, will pay, in exchange for the shares represented by such lost, stolen or destroyed certificate, the consideration to which such Seller would otherwise be entitled pursuant to Section 1.6(b) without any requirement to post any bond or other security.

(c) Promptly following the date that is one (1) year after the Closing Date, Parent may instruct the Paying Agent to deliver to the Surviving Company all cash delivered to the Paying Agent pursuant to this Agreement that is still in its possession at such time, in which case the Paying Agent's duties shall terminate. Thereafter, each Seller may deliver a duly completed and executed Letter of Transmittal and Surrendered Certificates(s) to the Surviving Company and (subject to applicable abandoned property, escheat and similar Laws) receive in consideration therefor, and the Surviving Company shall promptly pay, the portion of the Merger Consideration deliverable to such Seller in respect of its Surrendered Certificates(s) as determined in accordance with this ARTICLE I without any interest thereon.

1.14 Merger Consideration Holdbacks Parent shall retain, and not pay at Closing, the Holdback Amounts for the purpose of securing any adjustment to the Merger Consideration to be paid by the Sellers in accordance with Section 1.10(e) and any indemnification claims pursuant to Section 9.2(a)(iv). The Holdback Amounts shall be paid to the Sellers in the amount and at such time(s) as contemplated by Section 1.10(e) and Section 9.5(b), respectively.

1.15 Additional Merger Consideration.

(a) EBITDA Statement. On or before February 1, 2020, Parent shall cause to be calculated and delivered to the Representative a statement (an "EBITDA Statement"), setting forth Parent's calculation of the Net EBITDA for the period beginning on January 1, 2019 and ending on December 31, 2019 (the "Measurement Period"). During the thirty (30) days following the delivery of the EBITDA Statement, Parent shall provide the Representative and its advisors access to such accounting and other records of the Group Companies to the extent requested and reasonably necessary to evaluate the accuracy of the EBITDA Statements. If, within thirty (30) days following receipt of the EBITDA Statement, the Representative does not deliver to Parent written notice of a dispute with respect to the calculations set forth in such EBITDA Statement, then the Net EBITDA set forth in the EBITDA Statement shall be deemed to be the Net EBITDA for all purposes under this Agreement as Parent shall pay, or cause the Company to pay, the applicable Additional Merger Consideration Payment no later than March 15, 2020. In the event the Representative delivers written notice to Parent within thirty (30) days of the delivery of the EBITDA Statement stating that the Representative objects to Parent's calculation thereof and specifying the basis for such objection in reasonable detail and setting forth the proposed modification to such EBITDA Statement, such dispute shall be resolved in the same manner as any dispute regarding the Closing Statement in accordance with the provisions of Section 1.10(d) (for the avoidance of doubt, the Accounting Rules shall not apply to calculation of the Net EBITDA) provided, however, that once the Net EBITDA is finally determined pursuant to the provisions of Section 1.10(d), the applicable Additional Merger Consideration Payment (as defined below) shall

be made no later than the later of (x) March 15, 2020 and (y) the date that is ten (10) days following such date of final determination.

(b) Additional Merger Consideration Payment Subject to Section 1.15(a), in the event the Net EBITDA for the Measurement Period exceeds the minimum EBITDA threshold set forth below, Sellers shall be entitled to receive, and Parent shall pay (or cause the Surviving Company to pay) to the Representative (for distribution to Sellers in accordance with Section 1.11), the applicable additional Merger Consideration payment set forth in the table below (the "Additional Merger Consideration Payment") in accordance with this Agreement. For the avoidance of doubt, unless otherwise required by applicable Law, any Additional Merger Consideration Payments made to Sellers will be treated as additional Merger Consideration.

EBITDA Threshold	Additional Merger Consideration Payment
Less than \$13,999,999.99	\$0
\$14,000,000 - \$14,999,999.99	(i) \$5,000,000 <u>plus</u> (ii) (A) 2 <u>multiplied by</u> (B) the amount by which the Net EBITDA for the Measurement Period exceeds \$14,000,000
\$15,000,000 - \$15,999,999.99	(i) \$7,000,000 <u>plus</u> (ii) (A) 1.5 <u>multiplied by</u> (B) the amount by which the Net EBITDA for the Measurement Period exceeds \$15,000,000
\$16,000,000 - \$16,999,999.99	(i) \$8,500,000 <u>plus</u> (ii) (A) 1.5 <u>multiplied by</u> (B) the amount by which the Net EBITDA for the Measurement Period exceeds \$16,000,000
\$17,000,000 or greater	\$10,000,000

Notwithstanding any other provision hereof, in no event shall the Additional Merger Consideration Payment exceed Ten Million Dollars (\$10,000,000).

(c) Operation of the Group Companies during the Measurement Period.

(i) From and after the Closing until the end of the Measurement Period, Parent covenants and agrees (i) to maintain the Group Companies as a separate and standalone business unit, (ii) to cause the Group Companies to maintain books and records that are separate from those of Parent and its other Affiliates as necessary for Parent to calculate the Net EBITDA for the Measurement Period and any Additional Merger Consideration Payment, (iii) to provide reasonable access to the Representative, upon advance written request, to such books and records referenced in clause (ii) above, and (iv) to reasonably cooperate with the Representative to estimate expenses to be allocated to the Group Companies for purposes of determining the Net EBITDA for the Measurement Period.

(ii) From and after the Closing until the end of the Measurement Period, Parent shall act in good faith to give effect to the intent and purposes of Parent's agreements and obligations under this Section 1.15 and, in furtherance thereof shall or shall not take, as applicable, the actions set forth below, provided, for the avoidance of doubt, that any action taken by Parent that would not adversely affect in any material respect the amount or timing of the Additional Merger Consideration Payment shall not constitute an act in bad faith:

(A) Parent shall not, and shall cause its Affiliates (including the Group Companies) not to, take or omit to take any action for the purpose of, or the primary effect of which is, undermining the Group Companies' ability to achieve the EBITDA Thresholds or avoiding, reducing or delaying any Additional Merger Consideration Payment;

(B) Parent shall not, and shall cause its Affiliates (including the Group Companies) not to, divert the sale of any Group Company products and services in favor of a sale of products and services offered by or through Parent or its other Affiliates if the primary purpose of such diverted sale is to reduce the Net EBITDA provided, for the avoidance of the doubt, that nothing in this Section 1.15(c)(ii)(B), shall limit the ability of Parent or its Affiliates, subject to clause (A) above, to operate in the Ordinary Course of Business consistent with past practices with respect to the sale of products or services sold by Parent on or prior to the date hereof, including submission of more than one offer or bid (such as for a legacy Parent product or service and for a Group Company product or service) for a proposed sale;

(C) Parent shall not, and shall cause its Affiliates (including the Group Companies) not to, transfer or assign the assets of the Group Companies as of the Closing Date to Parent or any Affiliate of Parent (other than the Company or its Subsidiaries) or any third party unless, in the case of such transfer to Parent or any Affiliate of Parent, (x) such assets and any revenue derived therefrom shall continue to be included in full in the Net EBITDA for all purposes hereunder ("Transferred Company Assets") and (y) Parent maintains separate books and records necessary for Parent to include such Transferred Company Assets in Net EBITDA;

(D) Parent shall adopt, in meaningful consultation with the Company's management, an operating budget for the Group Companies for the 2019 calendar year, including with respect to the compensation of employees of the Group Companies (the "Company Budget"); and

(E) To the extent the approval or consent of Parent or any Affiliate is required or otherwise sought by the Company's management (whether under Parent's or any Affiliate's policies or otherwise) for any proposed transaction, opportunity or other action of any Group Company in accordance with the Company Budget, Parent shall, and shall cause any such Affiliate to, exercise such approval or consent in good faith and in a manner that (x) Parent reasonably believes to be in the best interests of the Group Companies consistent with the principles and assumptions utilized in the creation of the Company Budget and (y) is consistent with Parent's approvals and consents in respect of its other business units and Affiliates.

(d) Additional Considerations.

(i) For the avoidance of doubt, Parent shall have no obligation to fund any monies for the Group Companies during the Measurement Period (provided, however, that Parent shall not, and shall cause its Affiliates not to, deplete the Group Companies' working capital to below levels that are adequate for them to operate in the Ordinary Course of Business) or to operate the Group Companies in order to achieve any, or maximize the amount of, the Additional Merger Consideration Payment, and nothing contained in this Section 1.15, except as expressly provided in Section 1.15(c), is intended to control or otherwise restrict in any way management or the board of directors (or other equivalent governing body) of Parent or its Affiliates or any Group Company from operating the Group Companies and making all business and customer decisions (including regarding efforts or resources to secure or maintain business, the hiring or termination of employees and the incurrence of expenses) and requiring compliance with Parent's and its Affiliates' internal controls, corporate governance policies and procedures, legal and regulatory compliance standards and other similar matters, in each case in the manner which Parent's or its Affiliate's management or board of directors (or other equivalent governing body) deem appropriate in their good faith judgment; provided, however, that such operating decisions or compliance requirements are consistently applied, as applicable, to Parent and its Affiliates. For the avoidance of doubt, nothing contained in this Section 1.15(d) is intended to in any way limit, abridge, restrict, amend or modify any of the express provisions of Section 1.15(c).

(ii) The Parties acknowledge that Parent is a publicly traded corporation, which provides a wide range of services and other business activities through itself and its direct and indirect Subsidiaries, and Parent's and its Affiliates' boards of directors, officers and managers owe their fiduciary duties to their respective stockholders, members or other equityholders and nothing herein shall operate to limit, modify or abrogate such fiduciary duties. For the avoidance of doubt, none of Parent, any Group Company or any of their respective Affiliates: (A) will owe the Sellers any fiduciary or similar duty in respect of this Section 1.15, (B) are making any representations or warranties to the Sellers with respect to the operations of the Surviving Company or other Group Companies after the Closing or with respect to any estimates or projections relating to Net EBITDA, or (C) will be restricted or otherwise limited from taking any action (or refrainin from taking any action) with respect to the business activities of Parent or its Affiliates (other than as expressly set forth in Section 1.15(c)).

1.16 Issuances or Transfers of Common Stock Except as provided in this Section 1.16, as of the date of this Agreement, the stock transfer books of the Company shall be closed and there shall be no further registration of issuances or other transfers that occur after the date of this Agreement on the stock record books of the Company of the shares of Preferred Stock or Common Stock. On or before the fifth (5th) Business Day prior to the Closing, only the following transfers of shares of Common Stock shall be permitted:

(a) transfers permitted under the Company Stockholder Agreement or any other agreement between the Company and a Seller, a copy of which has been made available to Parent;

(b) transfers for estate planning or Tax purposes; and

(c) otherwise permitted transfers among Sellers.

1.17 No Liability. Notwithstanding anything to the contrary in this ARTICLE I, none of the Company, Parent, the Representative or the Surviving Company shall be liable to any Person for any amount properly paid in good faith to a public official pursuant to any withholding, abandoned property, escheat or similar law.

ARTICLE II CLOSING

2.1 Closing. Subject to the terms and conditions of this Agreement, the consummation of the Merger and the other Transactions (the "Closing") shall take place at 9:00 a.m., Central Time, at the offices of Munck Wilson Mandala, LLP, 12770 Coit Road, Suite 600, Dallas, Texas 75251, on a date to be mutually agreed by Parent and the Representative, which shall be no later than the third (3rd) Business Day after the satisfaction or waiver (by the applicable Party in writing) of the conditions set forth in ARTICLE VI (not including conditions which are to be satisfied by actions taken at the Closing but subject to the satisfaction or waiver (by the applicable Party hereto in writing) of those conditions at the Closing) (the date on which the Closing actually occurs, the "Closing Date"). The Parties shall use their reasonable best efforts to complete the Closing through electronic means of communication to avoid the necessity of a physical Closing.

2.2 Effective Time. Subject to the provisions of this Agreement, on the Closing Date, the Parties shall cause to be filed a certificate of merger, executed in accordance with, and in such form as is required by, the relevant provisions of the DGCL with respect to the Merger (the "Certificate of Merger") with the Secretary of State of the state of Delaware. The Merger shall become effective upon the filing of the Certificate of Merger or at such later time as is agreed to by the Parties and specified in the Certificate of Merger (the time the Merger becomes effective being hereinafter referred to as the "Effective Time").

2.3 Deliveries by the Company and the Representative at Closing. At or prior to the Closing, the Company and/or the Representative, as applicable, shall deliver, or cause to be delivered, to Parent the following:

(a) the Certificate of Merger, duly executed by the Company;

(b) at least three (3) Business Days prior to the Closing Date (or at such earlier time as may reasonably be practicable), the Pre-Closing Statement;

(c) at least three (3) Business Days prior to the Closing Date (or at such earlier time as may reasonably be practicable), a payoff letter in a commercially reasonable form from each holder of the Closing Date Indebtedness to be repaid at Closing in accordance with Section 1.9(c), in form and substance reasonably acceptable to Parent;

(d) a certificate required to be delivered pursuant to Section 6.2(e);

(e) a legal existence or good standing certificate for the Company from the Secretary of State of the State of Delaware, as of a date within five (5) Business Days immediately preceding the Closing Date;

(f) evidence of resignation or removal, effective as of the Closing, of all directors, managers and officers of any Group Company;

(g) evidence of the termination of the Management Services Agreement, except with respect to limitation of liability and indemnification for third-party claims; and

(h) a certificate conforming to the requirements of Treasury Regulation Section 1.1445-2(c)(3) to the effect that the Company is not, and has not been during the relevant period specified in Section 897(c)(1)(A)(ii) of the Code, a "United States real property holding corporation" within the meaning of Section 897(c) of the Code together with the appropriate notice to the Internal Revenue Service pursuant to Treasury Regulation Section 1.897-2(h).

2.4 Deliveries by Parent and Merger Sub at Closing At or prior to the Closing, Parent and/or Merger Sub, as applicable, shall deliver, or cause to be delivered, the following:

(a) on the Closing Date, payment of the Closing Payments to the Representative, the Paying Agent, the Company and all other payees, in each case as set forth in Section 1.9 and on the Pre-Closing Statement;

(b) an agreement with the Paying Agent (in a form reasonably satisfactory to each of Parent and the Representative, the "Paying Agent Agreement"), duly executed by Parent and the Paying Agent;

(c) to the Representative, a certificate required to be delivered pursuant to Section 6.3(d); and

(d) a legal existence or good standing certificate for each of Parent and Merger Sub from the Secretary of State of the State of Delaware, as of a date within five (5) Business Days immediately preceding the Closing Date.

ARTICLE III REPRESENTATIONS AND WARRANTIES OF THE COMPANY

Except as set forth on the disclosure schedule delivered by the Company to Parent and Merger Sub on the date hereof (the "Company Disclosure Schedule"), which are subject to the limitations and qualifications set forth in Section 11.2(d), the Company hereby represents and warrants to Parent and Merger Sub as of the date hereof as follows:

3.1 Organization and Power. Each of the Group Companies is a corporation or other legal entity duly formed, validly existing and in good standing under the Laws of its respective jurisdiction of formation. Each of the Group Companies is duly licensed or qualified to do business in each jurisdiction in which the nature of its business or the character or location of any properties

or assets owned or leased by it makes such licensing or qualification necessary, except for those jurisdictions where the failure to be so licensed or qualified would not have a Company Material Adverse Effect. The Company has the requisite power and authority to execute and deliver this Agreement and each other Transaction Agreement to which it is a party, to perform its obligations hereunder and thereunder and to consummate the Transactions. Each of the Group Companies has the power and authority to own or lease all of its properties and assets and to carry on its business as it is now being conducted in all material respects.

3.2 Authorization of Agreement. The execution and delivery of the Transaction Agreements to which the Company is a party, the performance by the Company of its obligations thereunder and the consummation of the Transactions have been duly authorized by the requisite corporate action on the part of the Company. This Agreement has been, and the other Transaction Agreements to which the Company is a party will be, duly and validly executed and delivered by the Company and (assuming the due authorization, execution, and delivery hereof and thereof by other parties thereto), constitutes or, with respect to such other Transaction Agreements upon execution and delivery will each constitute, the legal, valid and binding obligations of the Company, enforceable against it in accordance with its terms, subject to applicable Equitable Principles.

3.3 Conflicts; Consents of Third Parties.

(a) Except as listed on Section 3.3(a) of the Company Disclosure Schedule, and assuming all Governmental Approvals set forth on Section 3.3(b) of the Company Disclosure Schedule have been obtained and are effective and all applicable waiting periods have expired or been terminated and all filings and notifications described in Section 3.3(b) of the Company Disclosure Schedule have been made, none of the execution, delivery and performance by the Company of this Agreement or the other Transaction Agreements to which it is a party or the consummation of the Transactions by the Company will conflict with, violate or constitute a default (with or without notice or lapse of time, or both) under, give rise to a right of termination, acceleration, modification or cancellation under, or otherwise require the consent or waiver of, notice or declaration to, or filing with any Person, including any Governmental Authority, pursuant to, any provision of (i) the Organizational Documents of any Group Company; (ii) any Material Contract, Material Government Contract or Permit to which any Group Company is a party to or bound by, or by which any Group Company's properties or assets are bound; or (iii) any Law applicable to any Group Company, except, in the case of clauses (ii) and (iii), where such conflict, violation or default, consent, waiver, notice, declaration or filing would not have, individually or in the aggregate, a Company Material Adverse Effect.

(b) Except as set forth on Section 3.3(b) of the Company Disclosure Schedule, no consent, waiver, approval, waiting period expiration or termination, Order, Permit or authorization of, or declaration or filing with, or notification to, any Governmental Authority (a "Governmental Approval") is required on the part of any Group Company in connection with the execution and delivery by the Company of the Transaction Agreements to which it is a party or the consummation of the Transactions by the Company, except those Governmental Approvals, which, if not obtained, would not have, individually or in the aggregate, a Company Material Adverse Effect.

3.4 Capitalization; Operating Subsidiaries.

(a) The authorized capital stock of the Company consists of 500,000 shares, consisting of (a) 350,000 shares of Common Stock, and (b) 150,000 shares of Preferred Stock. As of the date hereof, there are zero (0) shares of Preferred Stock issued and outstanding, and approximately 175,390.518 shares of Common Stock issued and outstanding. Section 3.4(a)(i) of the Company Disclosure Schedule sets forth the number and classes of issued and outstanding shares of Common Stock as of the date of this Agreement, the names of the holders thereof and the number of shares of Common Stock held by each such holder. Each of the shares of Common Stock has been duly and validly authorized and issued. Except as set forth on Section 3.4(a)(ii) of the Company Disclosure Schedule, there are no outstanding (i) equity interests or voting securities of the Company, (ii) securities convertible or exchangeable into or exchangeable or exercisable for any shares of Common Stock or other equity interests or voting securities of the Company, (iii) options, warrants or rights (including purchase rights, subscription rights, preemptive rights, conversion rights, exchange rights, calls, puts or rights of first refusal) or other Contracts that require the Company to issue, sell or otherwise cause to become outstanding or to acquire, subscribe for, purchase, repurchase or redeem shares of Common Stock or other equity interests of the Company or (iv) stock appreciation, phantom stock, profit participation or similar rights with respect to the Company. The shares of Common Stock set forth on Section 3.4(a)(i) of the Company Disclosure Schedule constitute all of the outstanding equity securities or securities convertible into or exchangeable for equity securities of the Company.

(b) Section 3.4(b) of the Company Disclosure Schedule sets forth a true and correct list of all direct and indirect Subsidiaries of the Company (the "Operating Subsidiaries"), listing for each such Operating Subsidiary (i) its name, (ii) its jurisdiction of organization, and (iii) the number and type of its issued and outstanding equity interests. The Company has no Subsidiaries other than the Operating Subsidiaries. Except for the Operating Subsidiaries or as set forth on Section 3.4(b) of the Company Disclosure Schedule, no Group Company owns, or holds the right to acquire, any stock, partnership interest, joint venture interest or other equity ownership interest in any other Person. All of the issued and outstanding equity interests of each of the Operating Subsidiaries have been duly and validly authorized and issued and are owned (either directly or indirectly) by the Company or one of the Operating Subsidiaries, free and clear of any Liens (other than Permitted Liens and limitations imposed by their Organizational Documents or any applicable securities Laws). Except as otherwise set forth in Section 3.4(b) of the Company Disclosure Schedule, there are no outstanding (w) equity interests or voting securities of any Operating Subsidiary, (x) securities convertible or exchangeable into equity interests of any Operating Subsidiary, (y) options, warrants or rights (including purchase rights, subscription rights, preemptive rights, conversion rights, exchange rights, calls, puts or rights of first refusal) or other Contracts that require any Operating Subsidiary to issue, sell or otherwise cause to become outstanding or to acquire, subscribe for, purchase, repurchase or redeem any equity interests of such Operating Subsidiary or (z) stock appreciation, phantom stock, profit participation or similar rights with respect to any Operating Subsidiary.

(c) Except for this Agreement and as set forth on Section 3.4(c) of the Company Disclosure Schedule, the Company is not a party to any agreement restricting the transfer of, relating to the voting of, requiring registration of, or granting any preemptive rights, anti-dilution rights, rights of first refusal or any similar rights with respect to any securities of the Company.

3.5 Financial Statements.

(a) Attached to Section 3.5 of the Company Disclosure Schedule are complete and correct copies of the following financial statements (collectively, the "Company Financial Statements"):

(i) the audited consolidated balance sheets of the Company as of December 31, 2016 and December 31, 2017, and the related consolidated statements of operations, consolidated statements of changes in stockholders' equity and consolidated statements of cash flows of the Company for the fiscal years then ended; and

(ii) an unaudited consolidated balance sheet of the Company as of September 30, 2018, and the related unaudited statements of operations and cash flows of the Company for the nine (9)-month period then ended.

September 30, 2018 shall be referred to herein as the "Balance Sheet Date", the balance sheet of the Company as of such date shall be referred to herein as the "Balance Sheet".

(b) The Company Financial Statements have been prepared from the books and records of the Company in accordance with GAAP and present fairly, in all material respects, the consolidated financial condition and results of operations of the Company as of the dates and for the periods indicated therein except, in each case, as disclosed therein or as set forth on Section 3.5(b) of the Company Disclosure Schedule, and, in the case of the unaudited Company Financial Statements, (i) the such Company Financial Statements may be subject to normal year-end adjustments and (ii) for the absence of notes thereto throughout the periods covered thereby. Since January 1, 2016, the Group Companies have maintained a system of internal accounting controls that are designed to provide reasonable assurance that the Group Companies' material transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP. The books of account of the Group Companies have been kept accurately in all material respects in the Ordinary Course of Business, the transactions entered therein represent bona fide transactions and the revenues, expenses, assets and liabilities of the Group Companies have been properly recorded therein in all material respects.

3.6 Undisclosed Liabilities: Indebtedness.

(a) Except as set forth on Section 3.6(a) of the Company Disclosure Schedule, neither the Company nor any of the Operating Subsidiaries have any liabilities that would have been required to be reflected on the Balance Sheet or in the notes thereto in accordance with GAAP and were not so reflected, other than (i) as disclosed in, set forth on, or reflected or reserved against in the Company Financial Statements, (ii) those incurred in the Ordinary Course of Business since the Balance Sheet Date, (iii) those included in the calculation of the Closing Payments, (iv) those

that are repaid, terminated, forgiven, settled, cancelled or otherwise extinguished at Closing pursuant to the terms of this Agreement, (v) those incurred in connection with the Transactions or (vi) those that would not have, individually or in the aggregate, a Company Material Adverse Effect.

(b) Section 3.6(b) of the Company Disclosure Schedule sets forth a true and complete list as of the date of this Agreement of all Indebtedness of the Group Companies.

3.7 Absence of Certain Developments. Except as set forth on Section 3.7 of the Company Disclosure Schedule, between the Balance Sheet Date and the date hereof, (a) the business of the Group Companies has been conducted in all material respects in the Ordinary Course of Business, (b) there has not been any Company Material Adverse Effect, and (c) no Group Company has:

- (i) amended or modified any Group Company Organizational Documents;
- (ii) issued or sold any capital stock or options, warrants, convertible or exchangeable securities, subscriptions, rights, stock appreciation rights, calls or commitments of any kind with respect to its capital stock;
- (iii) adopted a plan of liquidation, dissolution, merger, consolidation or other reorganization;
- (iv) made any material change in its accounting methods, principles or practices, other than in a manner consistent with GAAP or made any material change in its tax accounting methods, principles or practices;
- (v) materially increased the compensation or benefits payable or to become payable by the Group Companies to any officer, director, manager, stockholder, member, employee, consultant or agent, except for ordinary and customary bonuses and salary increases for employees in accordance with past practice and/or contractual requirements;
- (vi) made any material loan or advance to any of its officers, directors, employees or consultants (other than in the Ordinary Course of Business) or made any other material loan or advance;
- (vii) incurred any new Indebtedness in excess of \$500,000 in the aggregate (with respect to the Group Companies, taken as a whole) other than in the Ordinary Course of Business;
- (viii) mortgaged or pledged any of its material assets or properties, or subjected them to any material encumbrance other than in the Ordinary Course of Business;
- (ix) sold, transferred, or otherwise disposed of any part of the assets, properties, capital stock or business of the Group Companies in excess of \$200,000 in the aggregate, other than in the Ordinary Course of Business and except for any tangible asset which is obsolete;

(x) made any acquisition of any material assets, properties, capital stock or business of any other Person, capital expenditures, or commitments for the same, other than in the Ordinary Course of Business and the total purchase price of which does not exceed \$500,000 in the aggregate;

(xi) cancelled, or agreed to cancel, any material Indebtedness or other material obligation owing to the Group Companies other than in the Ordinary Course of Business;

(xii) waived, or agreed to waive, any material rights or claims of the Group Companies other than in the Ordinary Course of Business;

(xiii) declared or made any distribution of property (other than cash) to Sellers with respect to their capital stock, or purchased or redeemed any shares of their capital stock other than in the Ordinary Course of Business;

(xiv) entered into, extended, renewed or terminated any Material Contract, Material Government Contract or Real Property Lease other than in the Ordinary Course of Business;

(xv) suffered any damage, destruction, or casualty loss (whether or not covered by insurance) in excess of \$200,000;

(xvi) entered into any material amendment of any Material Contract other than in the Ordinary Course of Business;

(xvii) (A) received a written notice or threat (that was not subsequently withdrawn) of termination or nonrenewal by the other party, with respect to any Material Contract, or (B) failed to renew a Material Contract other than in the Ordinary Course of Business;

(xviii) made any material change in any of its business policies, including advertising, distributing, marketing, pricing, purchasing, personnel, sales, returns, budget, product acquisition, or sale policies other than in the Ordinary Course of Business;

(xix) made any illegal payment or rebates; or

(xx) committed to do any of the foregoing.

3.8 Legal Proceedings. Except as set forth on Section 3.8 of the Company Disclosure Schedule, as of the date hereof, there are no pending or, to the Knowledge of the Company, threatened, material Legal Proceedings against any Group Company. As of the date hereof, there is no pending material Order imposed upon any of the Group Companies. None of the Group Companies has any suit, litigation, arbitration, claim, charge, grievance, action or proceeding pending against any Governmental Authority or other Person.

3.9 Compliance with Laws; Permits.

(a) Except as set forth on Section 3.9(a) of the Company Disclosure Schedule, each Group Company is in compliance with all Laws applicable to their respective businesses or operations, except for such instances of noncompliance that would not, individually or in the aggregate, result in a material liability to the Group Companies, taken as a whole. Between the Balance Sheet Date and the date hereof, no Group Company has received any written notice of, or been formally charged by a Governmental Authority with, the violation of any Laws.

(b) Except as set forth on Section 3.9(b) of the Company Disclosure Schedule, the Group Companies have obtained all Permits that are required for the operation of their respective businesses as presently conducted, other than any such Permits that, if not held by the Group Companies, would, individually or in the aggregate, result in a material liability to the Group Companies.

(c) Without limiting the generality of the foregoing, the Group Companies are in compliance in all material respects and have, during all periods for which any applicable statute of limitations has not expired, complied in all material respects with, the applicable provisions of the U.S. Foreign Corrupt Practices Act of 1977, as amended, and any other applicable non-U.S. anti-corruption laws and regulations; applicable Laws related to the imposition of economic sanctions or embargoes by the U.S. Government, including all regulations, laws and policies administered by the U.S. Department of Treasury, Office of Foreign Assets Control; and applicable U.S. export controls, including the Export Administration Regulations administered by the U.S. Department of Commerce, Bureau of Industry and Security.

(d) None of the representations and warranties contained in this Section 3.9 shall be deemed to relate to tax matters (which are governed by Section 3.10), environmental matters (which are governed by Section 3.12), government contract matters (which are governed by Section 3.14), employee benefits matters (which are governed by Section 3.17) or employment matters (which are governed by Section 3.18).

3.10 Taxes. Except as set forth on Section 3.10 of the Company Disclosure Schedule:

(a) The Group Companies have prepared and timely filed, or caused to be prepared and timely filed, with the appropriate Governmental Authorities, all Tax Returns required to be filed with respect to any or all of the Group Companies, taking into account any extensions of time to file. None of the Group Companies is currently the beneficiary of any extension of time within which to file any Tax Return. Such Tax Returns are (or, if to be filed, will be) true, complete and correct in all material respects.

(b) The Group Companies have timely paid, or caused to be timely paid, all material Taxes (whether or not shown as due and payable on such Tax Returns) with respect to the Group Companies. The Group Companies have complied with all applicable Tax Laws and other Laws administered by any Governmental Authority responsible for Taxes, including employment Taxes and with respect to currency transactions and foreign bank account reporting relating to the payment and withholding of Taxes and withheld and timely paid to the appropriate Governmental

Authority responsible for Taxes all Taxes required to have been withheld and paid by it in connection with any amounts paid or owing to any employee, independent contractor, creditor, stockholder, or third party, and the Group Companies have properly received and maintained any and all material certificates, forms and other documents required by applicable Tax Law for any exemption from withholding or remitting any such Taxes.

(c) No deficiencies for any Taxes have been proposed, asserted or assessed in writing against any Group Company that are still pending.

(d) None of the Group Companies has waived (and is not subject to a waiver of) any statute of limitations in respect of assessment of any Taxes nor has it agreed to (and is not subject to) any extension of time with respect to a Tax assessment or deficiency (other than by virtue of extensions of time to file Tax Returns obtained in the Ordinary Course of Business). There is no power of attorney in respect of Taxes granted by any of the Group Companies that is currently in force.

(e) To the Knowledge of the Company, no Tax Return filed by the Group Companies is under current examination by any Governmental Authority. There is no audit, examination, matter in controversy, proposed adjustment, refund litigation, claim, or other action currently pending, or to the Knowledge of any of the Group Companies, proposed or threatened in writing against, or with respect to, any of the Group Companies in respect of any Taxes. No written claim for unpaid Taxes has been proposed or asserted by a Governmental Authority against or with respect to any of the Group Companies. All Tax deficiencies asserted, or assessments made, by any Governmental Authority against a Group Company as a result of any examinations by such Governmental Authority responsible for Taxes have been fully paid.

(f) No claim has ever been made in writing by any Governmental Authority responsible for Taxes in a jurisdiction where the Group Companies do not file Tax Returns that any of them is or may be subject to taxation by that jurisdiction or must file Tax Returns in such jurisdiction.

(g) There are no Liens with respect to Taxes upon any of the assets or properties of the Group Companies, except for Permitted Liens.

(h) No Group Company is nor has it been, a party to, or a promoter of, a "listed transaction" within the meaning of Treasury Regulations Section 1.6011-4(b).

(i) The Group Companies have provided to Parent true, correct and complete copies of all federal, state, local and foreign income, franchise, and similar Tax Returns filed by or with respect to each Group Company, and all examination reports and all statements of deficiencies assessed against, or agreed to by, any of the Group Companies, in each case for taxable periods beginning after December 31, 2014.

(j) The unpaid Taxes not yet due and payable owed by or with respect to, as the case may be, each Group Company: (i) did not, as of the Balance Sheet Date, exceed the reserve for Tax liability (rather than any reserve for deferred Taxes established to reflect timing differences

between book and Tax income), and (ii) do not exceed that reserve as adjusted for the passage of time through the Closing Date in accordance with the past custom and practice of any Group Company in filing its Tax Returns. Since the Balance Sheet Date no Group Company has incurred any liability for Taxes outside the Ordinary Course of Business and all Taxes not yet due and payable for a Pre-Closing Tax Period have been accrued and adequately disclosed and fully provided for in accordance with GAAP on the Financial Statements provided to Parent.

(k) No Group Company will be required to include any item of income in, or exclude any item of deduction from, taxable income for any taxable period (or portion thereof) beginning after the Closing Date as a result of (i) any change in method of accounting for a Pre-Closing Tax Period; (ii) any closing agreement described in Section 7121 of the Code (or similar provision of state, local or foreign Law); (iii) any installment sale or open sale transaction disposition made in a Pre-Closing Tax Period; (iv) any prepaid amount received in a Pre-Closing Tax Period; (v) any election by the Company under Section 108(i) of the Code; (vi) any intercompany transaction or excess loss account described in Treasury regulations under Section 1502 of the Code (or any corresponding or similar provision of state, local, or non-U.S. income Tax Law); or (vii) any other action taken outside of the Ordinary Course of Business for the purpose of deferring a Tax from a Pre-Closing Tax Period to a period following the Closing Date.

(l) Each Group Company has the U.S. federal income tax classification set forth on Section 3.10(l) of the Company Disclosure Schedule.

(m) The Group Companies have no liability for Taxes of any Person (other than the Group Companies) (i) under Treasury Regulations Section 1.1502-6 (or any corresponding or similar provision of state, local, or foreign Law), or (ii) as transferee or successor.

(n) None of the Group Companies is a party to, or bound by, any Tax indemnity, Tax sharing or Tax allocation agreement.

(o) No private letter rulings, technical advice memoranda or similar agreement or rulings have ever been requested, entered into or issued by any Governmental Authority responsible for Taxes with respect to any of the Group Companies.

(p) No Group Company is a United States real property holding corporation (as defined in Section 897(c)(2) of the Code) during the applicable period specified in Section 897(c)(1)(a) of the Code.

(q) None of the Group Companies has been a "distributing corporation" or a "controlled corporation" in connection with a distribution intended to be governed by Section 355 of the Code within the five-year period ending on the date of this Agreement.

(r) Other than as set forth on Section 3.10(r) of the Company Disclosure Schedule, no Group Company is subject to Tax, is engaged in business or has a permanent establishment in, any other country other than the country in which it was formed. None of the Group Companies has entered into a gain recognition agreement pursuant to Treasury Regulations Section 1.367(a)-8. None of the Group Companies has transferred an intangible, the transfer of which would be subject to the rules of Section 367(d) of the Code.

(s) No entity classification election has been filed at any time with respect to any of the Group Companies that was formed in a jurisdiction within the United States.

(t) Other than as set forth on Section 3.10(t) of the Company Disclosure Schedule, for the period commencing on the first day of any Straddle Period and ending at the close of business on the Closing Date, no non-U.S. Group Company has any item of income which would constitute subpart F income within the meaning of Section 952 of the Code.

(u) The Group Companies have complied with all material transfer pricing rules.

(v) The representations set forth in this Section 3.10 and Section 3.17 are the only representations in this Agreement with respect to Taxes of the Group Companies and, except with respect to Section 3.10(k), shall only apply to taxable periods ending on or prior to the Closing Date and portions of Straddle Periods up to and including the Closing Date.

3.11 Title to Properties.

(a) No Group Company owns any real property.

(b) Section 3.11(b) of the Company Disclosure Schedule sets forth a list of all real property leased, or subleased to, or otherwise used or occupied by any Group Company (the "Leased Real Property") pursuant to leases, subleases and occupancy agreements thereof (individually, a "Real Property Lease").

(c) Except as disclosed on Section 3.11(c) of the Company Disclosure Schedule:

(i) each Real Property Lease is a legal, valid and binding obligation of the Group Company party thereto (except (i) as enforceability may be limited by applicable Equitable Principles or (ii) where the failure to be legal, valid, or binding would not, individually or in the aggregate, result in a material liability to the Group Companies) and, assuming the due authorization and execution by any other party thereto, is in full force and effect; and

(ii) no Group Company (A) is in material default under any Real Property Lease, or (B) has any Knowledge of any current default by any other party to any Real Property Lease.

3.12 Environmental Matters.

(a) Except as set forth on Section 3.12(a) of the Company Disclosure Schedule:

(i) The Group Companies are in compliance with all Environmental Laws applicable to them or their respective businesses or operations, except where the failure to be in compliance would not, individually or in the aggregate, result in a material liability to the Group Companies.

(ii) (A) The Group Companies maintain all Permits that are required under Environmental Laws for the operation of their respective businesses as presently conducted (collectively, the "Environmental Permits") and (B) the Group Companies are not in default or violation of any term, condition or provision of any Environmental Permit, except in the case of clauses (A) and (B), as would not, individually or in the aggregate, result in a material liability to the Group Companies.

(iii) Since the Balance Sheet Date, the Group Companies have not received any written notice of a Legal Proceeding or Order alleging that any of the Group Companies are in material violation of or have any material liability for cleanup or remediation of Hazardous Materials under any Environmental Law.

(b) This Section 3.12 sets forth the sole and exclusive representations and warranties of the Group Companies under this Agreement with respect to Environmental Permits, Environmental Laws, Hazardous Materials, or other environmental matters.

3.13 Material Contracts.

(a) Excluding Government Contracts, Section 3.13(a) of the Company Disclosure Schedule sets forth a list of all of the following Contracts as of the date of this Agreement (other than (A) any such Contract solely by or between the Group Companies, (B) purchase or sale orders entered into in the Ordinary Course of Business or (C) confidentiality or non-disclosure Contracts entered into in the Ordinary Course of Business) to which any Group Company is a party or by which it is bound (collectively, the "Material Contracts"):

(i) Contracts with each current officer or director, or current employee of a Group Company who receives annual compensation (excluding bonus and commissions) in excess of \$200,000;

(ii) Contracts entered into since the Balance Sheet Date relating to the acquisition by a Group Company of any operating business, or the equity interests of any other Person;

(iii) Contracts for or relating to the making of any material loans to another Person;

(iv) Contracts that involved in 2018, or are forecasted by the Company to involve in 2019, (A) payment to a Group Company or (B) payment by a Group Company, in either case, of more than \$500,000 for any individual Contract, which are not terminable by such Group Company without penalty on 90-days' or less notice;

(v) Contracts under which any Group Company is a lessee or lessor of any tangible property (other than real property), except for any such Contract that is characterized as an operating lease under which the aggregate annual rental payments do not exceed \$200,000;

(vi) Contracts containing covenants of a Group Company prohibiting or materially limiting the right of any of the Group Companies to compete in any line of material business or prohibiting or restricting their ability to conduct material business with any Person in any geographic area;

(vii) Contracts for material joint venture agreements with any Person (other than a Group Company); and

(viii) Contracts relating to the incurrence, assumption or guarantee of any Indebtedness or imposing a Lien (other than Permitted Lien) on any of the assets of the Company or any Operating Subsidiary, including indentures, guarantees, loan or credit agreements (except for (A) those being terminated or cancelled in connection with the Closing and (B) security agreements ancillary to any Lease of personal property with respect to the property so Leased).

(b) Except as set forth on Section 3.13(b) of the Company Disclosure Schedule, each Material Contract is in full force and effect and is a legal, valid, and binding obligation of the Group Company party thereto and, to the Knowledge of the Company, the other party or parties thereto, except (i) as enforceability may be limited by applicable Equitable Principles or (ii) where the failure to be legal, valid binding or enforceable would not, individually or in the aggregate, result in a material liability to the Group Companies, taken as a whole.

3.14 Government Contracts.

(a) Section 3.14(a) of the Company Disclosure Schedule sets forth a list of each active Government Contract that had annual revenue in 2018, or is forecasted by the Company to have annual revenue in 2019, in excess of \$500,000 and the name of the customer (each, a "Material Government Contract" and, collectively, the "Material Government Contracts").

(b) Except as set forth on Section 3.14(b) of the Company Disclosure Schedule, since January 1, 2017, with respect to each Material Government Contract or material Government Bid, (i) the Group Companies have complied in all respects with all material terms and conditions thereof; (ii) no written notice has been received by any Group Company, or, to the Knowledge of the Company, threatened, asserting that the Company, any of its Subsidiaries or any director, officer or employee of the Company or any of its Subsidiaries, is in material breach or violation of any Law or contractual requirement (other than pursuant to routine audits conducted pursuant to such

Law or contractual requirement); and (iii) no written notice of termination, cure notice or show-cause notice has been received by any Group Company.

(c) Except as set forth on Section 3.14(c) of the Company Disclosure Schedule, since January 1, 2017, no Governmental Authority nor any prime contractor, subcontractor or vendor has asserted in writing any claim or initiated any dispute proceeding against the Company or any of its Subsidiaries relating to Material Government Contracts or material Government Bids, nor is the Company or any of its Subsidiaries asserting in writing any claim or initiating any dispute proceeding directly or indirectly against any such party concerning any Material Government Contract or material Government Bid.

(d) Neither (i) the Company, its Subsidiaries nor any of its or their stockholders, members, officers or directors, nor (ii) to the Knowledge of the Company, any of its or their employees is debarred, suspended, deemed non-responsible or otherwise excluded from participation in the award of any Material Government Contract or for any reason listed on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs nor, to the Knowledge of the Company, is there any pending debarment, suspension or exclusion proceeding that has been initiated against the Company or any of its Subsidiaries or any of its or their predecessors, stockholders, members, officers, directors, managers or employees.

(e) This Section 3.14 sets forth the sole and exclusive representations and warranties of the Group Companies under this Agreement with respect to government contracts matters.

3.15 Personal Property. Except as set forth in Section 3.15 of the Company Disclosure Schedule, each of the Group Companies has good and valid title to (or a valid leasehold interest in) the tangible personal property currently used in the conduct of the business of such Group Company (other than items of tangible personal property that individually or in the aggregate are immaterial to the operation of such business), and such title or leasehold interests are free and clear of all Liens (other than Permitted Liens). All items of tangible personal property that are material to the operation of the business of the Group Companies are in satisfactory operating condition and repair (ordinary wear and tear excepted).

3.16 Intellectual Property.

(a) Except as set forth on Section 3.16(a) of the Company Disclosure Schedule, to the Knowledge of the Company, all material Intellectual Property that is used in or necessary to the conduct of business of the Group Companies as currently conducted is either (i) owned by a Group Company (such Intellectual Property, "Owned Intellectual Property"), or (ii) licensed to a Group Company for its use, except, in each case, where a failure to so own or license such Intellectual Property would not, individually or in the aggregate, result in a material liability to the Group Companies.

(b) Section 3.16(b) of the Company Disclosure Schedule sets forth a list of (i) all material registrations and applications for registration or issuance with a Governmental Authority of any Owned Intellectual Property, including all: (A) registered trademarks, including applications

therefor; (B) patents, including applications therefor; (C) registered copyrights, including applications therefor; and (D) all internet domain names, in each of the above cases as currently owned by the Group Companies (collectively, the "Scheduled IP"), and (ii) social media accounts and user names in connection therewith. To the Knowledge of the Company, the Scheduled IP is subsisting and in full force and effect.

(c) To the Knowledge of the Company, except as set forth on Section 3.16(c) of the Company Disclosure Schedule, (i) the Group Companies, in the current operation of their business, have not in the past six (6) years infringed, violated or misappropriated any Intellectual Property of any third party, except for any infringement, violation or misappropriation that would not, individually or in the aggregate, result in a material liability to the Group Companies, and (ii) no third party is infringing, violating, or misappropriating any Owned Intellectual Property. Except as set forth on Section 3.16(c) of the Company Disclosure Schedule, the Group Companies have not received in the past two years any written notice (i) regarding the infringement, misappropriation or other violation of any Intellectual Property of any Person claiming that use of any Owned Intellectual Property infringes the Intellectual Property rights of any such Person or (ii) challenging the validity, enforceability, ownership or use of any Owned Intellectual Property (including cease and desist letters or invitations to take a license), or (iii) trademark oppositions, cancellation or invalidation actions of the Owned Intellectual Property, except as would not, individually or in the aggregate, result in a material liability to the Group Companies. Except as set forth on Section 3.16(c) of the Company Disclosure Schedule, the Group Companies do not have any pending claims against Persons alleging infringement of the Owned Intellectual Property or oppositions or cancellation actions against third-party trademark applications.

(d) Section 3.16(d)(i) of the Company Disclosure Schedule separately lists and identifies all Software that is owned by the Group Companies (the "Company Software"). The Group Companies employed commercially reasonable efforts to ensure that all material source code for the Company Software is documented in accordance with general software industry standards. Except as set forth on Section 3.16(d)(ii) of the Company Disclosure Schedule, all right, title and interest in and to the Company Software is owned by a Group Company free and clear of all Liens except for Permitted Liens. The Company Software performs in all material respects in accordance with the documentation and other written materials related thereto and, to the Knowledge of the Company, is free from any disabling codes or instructions and any "back door," "time bomb," "Trojan horse," "worm," "drop dead device," "virus" or other software routines or hardware components that permit unauthorized access or the unauthorized disruption, impairment, disablement or erasure of such Company Software.

(e) Except for shrink-wrap licenses and other licenses for Commercial-Off-The-Shelf Software, or standard licenses granted to the Company's customers in the Ordinary Course of Business, Section 3.16(e) of the Company Disclosure Schedule sets forth a complete list of all licenses under which any Group Company is a licensor or licensee or otherwise is authorized to use any material Intellectual Property ("Licensed Intellectual Property"). All such licenses are in full force and effect, and are binding obligations of the Group Company party thereto and, to the Knowledge of the Company, the other party or parties thereto, except (i) as enforceability may be limited by applicable Equitable Principles or (ii) where the failure to be legal, valid, binding or

enforceable would not have a Company Material Adverse Effect. Except as set forth in Section 3.16(e) of the Company Disclosure Schedule, no Group Company that is a party to such license is in default under any such license, and to the Knowledge of the Company, no other party or parties to any such license is in default thereunder. Except as set forth in Section 3.16(e) of the Company Disclosure Schedule, the Group Companies are not bound by or a party to any agreement materially restricting their use of any Owned Intellectual Property.

(f) The Group Companies have taken commercially reasonable efforts to maintain the secrecy of their trade secrets. To the Knowledge of the Company, no trade secret material to the business of the Group Companies as presently conducted has been authorized to be disclosed or has been actually disclosed by any Group Company other than pursuant to a binding and enforceable nondisclosure agreement or other obligation of confidentiality restricting the disclosure and use of the trade secrets.

(g) The Owned Intellectual Property and the Licensed Intellectual Property constitute all of the material Intellectual Property necessary for the conduct of the Group Companies' businesses as conducted on the date of this Agreement and as of the Closing Date.

3.17 Employee Benefit Plans.

(a) Section 3.17(a) of the Company Disclosure Schedule sets forth a list of each pension, benefit, retirement, compensation, employment, consulting, profit-sharing, deferred compensation, incentive, bonus, performance award, phantom equity, stock or stock-based, change in control, retention, severance, vacation, paid time off (PTO), medical, vision, dental, disability, welfare, Code Section 125 cafeteria, fringe benefit and other similar agreement, plan, policy or program (and any amendments thereto), in each case whether funded or unfunded, including each "employee benefit plan" within the meaning of Section 3(3) of ERISA, all benefit plans as defined in Section 6039D of the Code, (each a Benefit Plan" and, collectively, the "Benefit Plans") whether or not tax-qualified and whether or not subject to ERISA, which is or has been maintained, sponsored contributed to, or required to be contributed to by the Group Companies for the benefit of any current or former employee, officer, director, retiree, independent contractor or consultant of the Group Companies or any spouse or dependent of such individual, or under which the Group Companies have any Liability, contingent or otherwise. To the Knowledge of the Company, the Group Companies do not maintain, sponsor, or contribute to any "employee benefit plan" within the meaning of Section 3(3) of ERISA that has not been reduced to writing.

(b) With respect to each Benefit Plan, the Company has provided or made available to Parent accurate, current and complete copies of each of the following, to the extent applicable: (i) the plan document and all amendments thereto; (ii) the most recent summary plan description (and any summaries of material modifications with respect thereto); (iii) the most recent annual report on Form 5500 (with schedules and attachments); and (iv) the most recent IRS opinion or determination letter; (v) where applicable, copies of any trust agreements or other funding arrangements, custodial agreements, insurance policies and contracts, administration agreements and similar agreements, and investment management or investment advisory agreements, now in effect; (vi) in the case of any Benefit Plan that is intended to be qualified under Section 401(a) of the Code, a copy of the most recent determination, opinion or advisory letter from the IRS and any

legal opinions issued thereafter with respect to such Benefit Plan's continued qualification; (vii) actuarial valuations and reports related to any Benefit Plans with respect to the two most recently completed plan years; (viii) the most recent nondiscrimination tests performed under the Code; and (ix) copies of material notices, letters or other correspondence received during the preceding three (3) years from the IRS, Department of Labor, Department of Health and Human Services, Pension Benefit Guaranty Corporation or other Governmental Authority relating to the Benefit Plan. Each Benefit Plan may be terminated by the Company or an ERISA Affiliate, as applicable at any time without any liability, cost or expense, other than costs and expenses that are customary in connection with the termination of a Benefit Plan or payments required pursuant to the terms of such Benefit Plan. The Company has separately identified on Section 3.17(b) of the Company Disclosure Schedule (1) each Benefit Plan that contains a change in control provision and (2) each Benefit Plan that is maintained, sponsored, contributed to, or required to be contributed to by the Company primarily for the benefit of employees outside of the United States (a "Non-U.S. Benefit Plan").

(c) Except as set forth on Section 3.17(c) of the Company Disclosure Schedule, (i) no Benefit Plan is subject to Title IV of ERISA or Section 412 of the Code, and (ii) no Benefit Plan is a "multiemployer plan" within the meaning of Section 3(37) or 4001(a)(3) of ERISA. Except for Permitted Liens, to the Company's Knowledge, no Lien exists with respect to any of the Assets which were imposed pursuant to the terms of the Code or ERISA.

(d) With respect to each Benefit Plan, (i) such Benefit Plans have been operated in compliance in all material respects with ERISA, the Code and all Laws applicable to such Benefit Plans, and each Benefit Plan has been administered in a material respects in accordance with its terms; and (ii) all contributions to and payments from each Benefit Plan have been timely made under the requirements of all applicable Laws and the terms of the Benefit Plan, or to the extent any contributions are not yet due, have been adequately accrued on the Company Financial Statements to the extent required by GAAP, in each case except where the foregoing would not be reasonably expected to have a Company Material Adverse Effect. All Non-U.S. Benefit Plans that are intended to be funded and/or book-reserved are funded and/or book-reserved, as appropriate, based upon reasonable actuarial assumptions.

(e) No claim, Legal Proceeding, investigation, audit or other action (other than routine claims for benefits in the Ordinary Course of Business) is pending, or to the Knowledge of the Company, threatened against any Benefit Plan that could result in material liability to the Group Companies.

(f) Except as set forth on Section 3.17(f) of the Company Disclosure Schedule, none of the Benefit Plans provide retiree health or welfare insurance benefits to any current or former employee of the Company or its Subsidiaries, except as may be required by Section 4980B of the Code, Part 6 of Subtitle B of Title I of ERISA or any similar Law requiring group health plan continuation coverage. The Company does not have any current or future obligation or liability with respect to a Benefit Plan pursuant to the provisions of a collective bargaining agreement.

(g) Except as set forth on Section 3.17(g) of the Company Disclosure Schedule, neither the execution of this Agreement nor any of the Transactions will (either alone or upon the occurrence of any additional or subsequent events): (i) entitle any current or former director, officer,

employee, independent contractor or consultant of the Company to severance pay or any other payment under any Benefit Plan; (ii) accelerate the time of payment, funding or vesting, or increase the amount of compensation (including stock-based compensation) due to any such individual under any Benefit Plan; (iii) limit or restrict the right of the Company to merge, amend, or terminate any Benefit Plan; (iv) increase the amount payable under or result in any other material obligation pursuant to any Benefit Plan; (v) result in any payment under any Benefit Plan that could constitute "excess parachute payments" within the meaning of Section 280G(b) of the Code; or (vi) require a "gross-up" payment to any "disqualified individual" within the meaning of Section 280G(c) of the Code. The Company has made available to Parent true and correct copies of the Section 280G calculations prepared with respect to any disqualified individual in connection with the Transactions.

(h) Each Benefit Plan that is intended to be "qualified" within the meaning of Section 401(a) of the Code (a "Qualified Plan") is, and has been during the period from its adoption to date hereof, been covered by a favorable determination letter (or opinion letter, if applicable) from the IRS stating that such Qualified Plan is so qualified and each amendment thereto have been timely obtained, and, to the Knowledge of the Company, nothing has occurred that could reasonably be expected to adversely affect the qualified status of any Qualified Plan. To the Knowledge of the Company, nothing has occurred with respect to any Benefit Plan that has subjected or could reasonably be expected to subject the Company to a penalty under Section 502 of ERISA or to tax or penalty under Sections 4975 or 4980H of the Code.

(i) All required reports, documents and plan descriptions of the Benefit Plans have been, in all material respects, timely filed with the IRS and Department of Labor, as applicable, and/or, as appropriate, provided to participants in the Benefit Plans. True and complete copies of all such reports and other documents with respect to the past three (3) years for each Plan have been provided to Parent.

(j) Each Benefit Plan and any related trust has been established, administered and maintained in accordance in all material respects with its terms and in compliance in all material respects with all applicable Laws, including ERISA and the Code.

(k) There have been no terminations, partial terminations or discontinuances of contributions to any Qualified Plan during the preceding five (5) years without notice to and approval by the IRS and payment of all obligations and liabilities attributable to such Qualified Plan.

(l) Each Benefit Plan complies with and has been maintained in accordance with the requirements of Section 409A(a)(2), (3), and (4) of the Code and any U.S. Department of Treasury or Internal Revenue Service guidance issued thereunder applicable to such Benefit Plan, except where the failure to do so would not be reasonably expected to have a Company Material Adverse Effect. The Company does not have any obligation to gross up, indemnify or otherwise reimburse any individual for any excise taxes, interest or penalties incurred pursuant to Section 409A of the Code.

(m) The Company has complied with the continuation coverage provisions of COBRA and any applicable state laws mandating health insurance continuation coverage for employees, except where the failure to do so would not be reasonably expected to have a Company Material Adverse Effect.

(n) No "reportable event" (as defined in Section 4043 of ERISA) has occurred and is continuing with respect to any Benefit Plan. Neither the Company nor any ERISA Affiliate has engaged in any prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, in connection with any Benefit Plan for which exemption was not available.

(o) Notwithstanding any other provision of this Agreement to the contrary, this Section 3.17 contains the sole and exclusive representation and warranties of the Company with respect to employee benefit matters.

3.18 Labor.

(a) No Group Company is a party to any labor or collective bargaining agreement in respect of any employee or group of employees of the Group Companies. Except as set forth on Section 3.18(a) of the Company Disclosure Schedule, (i) there are no, and within the period starting on the Balance Sheet Date and ending on the date hereof, there have been no, material strikes, work stoppages, work slowdowns, lockouts, picketing or other material labor disputes pending or, to the Knowledge of the Company, threatened against any Group Company, and (ii) there are no material unfair labor practice charges, grievances or complaints pending or, to the Knowledge of the Company, threatened by or on behalf of any employee or group of employees of any of the Group Companies against any of the Group Companies before a Governmental Authority.

(b) Section 3.18(b) of the Company Disclosure Schedule sets forth a list of all employees of the Company as of the date that is two (2) Business Days prior to the date hereof, including each employee's name, title, date of hire and employment status (active or inactive). The Company has provided to Parent a true and complete list of each employee's current base salary (or wages), target bonus, and other cash incentive compensation.

(c) Except as set forth on Section 3.18(c) of the Company Disclosure Schedule, no bonus, incentive compensation, deferred compensation, change of control, termination, severance, golden parachute, deal bonus, or similar payments ("Change of Control Payments") will become payable to any Group Company employee solely as a result of the Merger.

(d) Since January 31, 2016, the Group Companies have withheld or caused to be withheld all amounts required by any Law or by agreement to be withheld from the wages, salaries, and other payments to the Group Companies' current and former employees and, the Group Companies are not liable for any arrearages of employee compensation (including wages, salaries, commissions, bonuses, or other compensation) or any penalty for failure to comply with any of the foregoing, including any state law regarding the timely payment of employee compensation (or, if any arrears, penalty, or interest were assessed against the Group Companies regarding the foregoing, it has been fully satisfied). To the Company's Knowledge, the Group Companies are not liable for any payment to any trust or other fund or to any Governmental Authority with respect to

unemployment compensation benefits, social security benefits, or other benefits or obligations for employees (other than routine payments to be made in the normal course of business and consistent with past practice).

(e) To the Company's Knowledge, all Persons characterized and treated by the Group Companies as independent contractors or consultants are properly treated as independent contractors under all applicable Laws, and all employees of the Group Companies classified as exempt under the Fair Labor Standards Act and state and local wage and hour laws are properly classified in all material respects. Section 3.18(e) of the Company Disclosure Schedule identifies all Persons treated by the Group Companies as independent contractors or consultants.

(f) Except as set forth on Section 3.18(f) of the Company Disclosure Schedule, there are no (i) pending claims against any Group Company under any workers' compensation plan or policy or for long-term disability or (ii) Group Company employees currently absent from work, or who have given notice of impending absence from work, in each case apart from or beyond any accrued personal time off, pursuant to any job-protected leave under a Group Company policy or applicable Law, including the Family and Medical Leave Act or the Uniformed Services Employment and Reemployment Rights Act.

(g) To the Company's Knowledge, all releases of employment claims in favor of any Group Company obtained from current or former employees during the three (3)-year period preceding the date of this Agreement and as of the Closing Date, if any, are effective and binding to release all employment claims for each such employee.

(h) To the Company's Knowledge, no current Group Company employee is subject to noncompetition or nonsolicitation covenants benefiting a third party, which limit, or would reasonably be expected to limit, the employee's ability to perform any services for a Group Company as part of his or her employment.

(i) This Section 3.18 constitutes the sole and exclusive representations and warranties of the Group Companies with respect to employment or labor matters.

3.19 Privacy; Business Systems; and Data Security.

(a) Each Group Company materially complies with Applicable Privacy and Security Laws, and with privacy and information security obligations to which it is subject under contract, privacy policy, or online terms of use. The Company maintains policies and procedures that materially comply with (i) Applicable Privacy and Security Laws and (ii) privacy and information security obligations to its customers, data subjects or other Persons, under contract, privacy policy, or online terms of use. Except as set forth on Section 3.19 of the Company Disclosure Schedule, to the Company's Knowledge, no Group Company has received any written notice from any Governmental Authority that it is under investigation for a material violation of any of the Applicable Privacy and Security Laws.

(b) The Group Companies own or have a valid and enforceable right to use all material internal-use Software and all firmware, computer hardware, networks, interfaces, telecommunications systems and related systems used by the Group Companies (collectively, the "Business Systems") are sufficient for the needs of their business as currently conducted. To the Company's Knowledge, in the last eighteen (18) months, there has been (i) no material disruption, interruption or outage to any material Business System, (ii) no material part of the Business Systems has been prone to material malfunction or error and (iii) no unauthorized material breaches of the security of the Business Systems. The Group Companies have safeguarded their Business Systems with information security controls, and disaster recovery and business continuity policies and practices and such controls, policies and practices are adequate to meet the needs of the business of the Group Companies as presently conducted.

3.20 Security Clearance. Except as may be prohibited by the Industrial Security Manual, Section 3.20 of the Company Disclosure Schedule sets forth all facility and personnel security clearances, and all personnel security clearances held by any officer, director, employee, consultant or agent of the Group Companies. To the Knowledge of the Company, there is no proposed or threatened termination of any such facility or personnel security clearances other than terminations arising in the ordinary course of business, including, but not limited to: personnel no longer needing access to classified information; a secure facility no longer being needed; personnel leaving a position for which the clearance was originally intended; or routine reviews of security clearances under the Industrial Security Manual.

3.21 Transactions With Related Parties. Except as set forth on Section 3.21 of the Company Disclosure Schedule, no present officer, director, member or stockholder of any of the Group Companies, nor any Affiliate of any Group Company (each a "Related Party"), is currently a party to any transaction or Contract with a Group Company, other than (i) employment or consulting agreements entered into with individuals in the Ordinary Course of Business, (ii) Contracts with respect to the acquisition by, or merger with, a Group Company, where the seller or surviving company (or an Affiliate of the seller or surviving company) thereunder became a Related Party in connection with such transaction, (iii) Contracts entered into in the Ordinary Course of Business on an arm's length basis and (iv) Contracts which will be terminated at or prior to Closing.

3.22 Insurance. Section 3.22 of the Company Disclosure Schedule contains a list of all material insurance policies owned or held by or on behalf of the Group Companies as of the date of this Agreement (the "Insurance Policies"). As of the date of this Agreement, all Insurance Policies are in full force and effect and the Group Companies have complied in all material respects with the provisions of such policies. All premiums due and payable on the Insurance Policies have been paid as of the date hereof. As of the date hereof, neither the Company nor any of the Operating Subsidiaries have received a written notice of cancellation of any Insurance Policy.

3.23 Corporate Records. The stock records and minute books of the Group Companies that have been made available to Parent are true and correct. Section 3.23 of the Company Disclosure Schedule sets forth, with respect to the Company, (a) its jurisdiction of organization and (b) each of the jurisdictions in which it is otherwise registered or qualified to do business. The Company was originally incorporated under the name of Gandalf Holdings, Inc. Section 3.23 of the Company Disclosure Schedule sets forth, with respect to each Operating Subsidiary, each of the jurisdictions in which it is registered or qualified to do business other than its jurisdiction of organization.

3.24 Financial Advisors. With the exception of Spurrier Capital Partners and certain parties to the Management Services Agreement (whose fees shall be included in the Transaction Expenses), no Person (i) has acted, directly or indirectly, as a broker, finder, agent, investment banker or financial advisor for the Sellers, the Group Companies and (ii) is entitled to any fee or commission or like payment based on the arrangements made by the Sellers, the Company or any of the Operating Subsidiaries in connection with the Transaction.

3.25 LIMITATIONS OF REPRESENTATIONS AND WARRANTIES EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES CONTAINED IN ARTICLE III (AS MODIFIED, SUBJECT TO THE LIMITATIONS AND QUALIFICATIONS SET FORTH SECTION 11.2(d) IN EACH CASE, BY THE COMPANY DISCLOSURE SCHEDULE), THE COMPANY MAKES NO, AND HAS NOT AUTHORIZED ANY OF ITS AFFILIATES TO MAKE OTHER, EXPRESS OR IMPLIED REPRESENTATION OR WARRANTY WITH RESPECT TO THE COMPANY OR OTHER GROUP COMPANIES OR THE TRANSACTION, AND THE COMPANY DISCLAIMS ANY OTHER REPRESENTATIONS OR WARRANTIES, WHETHER MADE BY THE COMPANY, ANY AFFILIATE OF THE COMPANY OR ANY OF THEIR RESPECTIVE OFFICERS, DIRECTORS, MANAGERS, EMPLOYEES, AGENTS OR REPRESENTATIVES AND IF MADE, SUCH REPRESENTATION OR WARRANTY MAY NOT BE RELIED UPON BY PARENT, MERGER SUB OR ANY OF THEIR RESPECTIVE AFFILIATES AND REPRESENTATIVES AS HAVING BEEN AUTHORIZED BY THE COMPANY OR ANY OF ITS AFFILIATES. EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES CONTAINED IN ARTICLE III (AS MODIFIED, SUBJECT TO THE LIMITATIONS AND QUALIFICATIONS SET FORTH SECTION 11.2(d) IN EACH CASE, BY THE COMPANY DISCLOSURE SCHEDULE), THE COMPANY HEREBY DISCLAIMS ALL LIABILITY AND RESPONSIBILITY FOR ANY REPRESENTATION, WARRANTY, OPINION, PROJECTION, FORECAST, STATEMENT, MEMORANDUM, PRESENTATION, ADVICE OR INFORMATION MADE, COMMUNICATED, OR FURNISHED (ORALLY OR IN WRITING) TO PARENT, MERGER SUB OR THEIR RESPECTIVE AFFILIATES OR REPRESENTATIVES (INCLUDING ANY OPINION, PROJECTION, FORECAST, STATEMENT, MEMORANDUM, PRESENTATION, ADVICE OR INFORMATION THAT MAY HAVE BEEN OR MAY BE PROVIDED TO PARENT OR MERGER SUB BY ANY DIRECTOR, OFFICER, EMPLOYEE, AGENT, CONSULTANT, OR REPRESENTATIVE OF THE COMPANY OR ANY OF ITS AFFILIATES, INCLUDING ANY INFORMATION MADE AVAILABLE IN ANY ELECTRONIC MEETING ROOM HOSTED BY THE COMPANY OR ANY OF ITS REPRESENTATIVES IN CONNECTION WITH THE TRANSACTION). THE COMPANY DOES NOT MAKE ANY REPRESENTATIONS OR WARRANTIES TO PARENT

OR MERGER SUB REGARDING THE PROBABLE SUCCESS OR PROFITABILITY OF THE BUSINESS CONTAINED BY THE GROUP COMPANIES.

ARTICLE IV REPRESENTATIONS AND WARRANTIES OF PARENT AND MERGER SUB

Except as set forth on the disclosure schedule delivered by Parent to the Representative and the Company concurrently with entry into this Agreement (the "Parent Disclosure Schedule"), which are subject to the limitations and qualifications set forth in Section 11.2(d), Parent and Merger Sub hereby represents and warrants to the Company as of the date hereof as follows:

4.1 Organization and Power. Parent is a corporation duly organized, validly existing and in good standing under the Laws of the State of Delaware. Merger Sub is a Delaware corporation duly organized, validly existing and in good standing under the Laws of State of Delaware. Each of Parent and Merger Sub has the requisite corporate power and authority to execute and deliver each Transaction Agreement to which it is a party, to perform its obligations hereunder and thereunder and to consummate the Transactions. Each of Parent and Merger Sub has the corporate power and authority to own or lease all of its properties and assets and to carry on its business as it is now being conducted. Each of Parent and Merger Sub is duly licensed or qualified to do business in each jurisdiction in which the nature of its business or the character or location of any properties or assets owned or leased by it makes such licensing or qualification necessary, except for those jurisdictions where the failure to be so licensed or qualified would not have, individually or in the aggregate, a Parent Material Adverse Effect.

4.2 Authorization of Agreement. The execution and delivery of the Transaction Agreements to which it is a party and the performance of its obligations thereunder have been duly authorized by the requisite corporate action on the part of each of Parent and Merger Sub. No other proceeding on the part of either Parent or Merger Sub (including by its respective equityholders) is necessary to authorize the Transaction Agreements to which it is a party or to consummate the Transactions. This Agreement has been, and each of the other Transaction Agreements to which it is a party will be, duly and validly executed and delivered by each of Parent and Merger Sub and (assuming the due authorization, execution and delivery by the other parties thereto) constitute or, with respect to such other Transaction Agreement will upon execution and delivery each constitute, the legal, valid and binding obligations of Parent or Merger Sub, as applicable, enforceable against it in accordance with its terms, subject to applicable Equitable Principles.

4.3 Conflicts; Consents of Third Parties.

(a) Assuming all Governmental Approvals contemplated by Section 4.3(b) have been obtained and are effective and all applicable waiting periods have expired or been terminated and all filings and notifications described in Section 3.3(b) of the Company Disclosure Schedule have been made, none of the execution, delivery and performance by either Parent or Merger Sub of the Transaction Agreements to which it is a party, or the consummation of the Transaction by Parent and Merger Sub, will conflict with, violate or constitute a default (with or without notice or lapse of time, or both) under or give rise to a right of termination, acceleration, modification or cancellation under any provision of (A) the Organizational Documents of Parent or Merger Sub, as

applicable; (B) any Contract or Permit which Parent or Merger Sub or any of their Affiliates, as applicable, is a party to or bound by, or by which Parent's or Merger Sub's or any of their Affiliates', as applicable, properties or assets are bound; or (C) any Law applicable to Parent or Merger Sub or any of their Affiliates, as applicable, except, in the case of clauses (B) and (C), where such conflict, violation acceleration, termination, modification, cancellation or default, would not have, individually or in the aggregate, a Parent Material Adverse Effect.

(b) Except as set forth on Section 4.3(b) of the Parent Disclosure Schedule, no Governmental Approval is required on the part of either Parent or Merger Sub in connection with the execution and delivery by such Party of the Transaction Agreements to which it is a party, or the consummation of the Transactions by such Party, except for any Governmental Approval (i) described in Section 3.3(b) of the Company Disclosure Schedule or (ii) the failure of which to make or obtain would not have, individually or in the aggregate, a Parent Material Adverse Effect.

4.4 Legal Proceedings. There are no pending or, to the knowledge of Parent or Merger Sub, threatened, Legal Proceedings against Parent or Merger Sub or their Affiliates that would have, individually or in the aggregate, a Parent Material Adverse Effect. There is no outstanding material Order imposed upon either Parent or Merger Sub or any of their assets or Affiliates, except for Legal Proceedings which, if adversely determined, would not have, individually or in the aggregate, a Parent Material Adverse Effect.

4.5 Financial Capability. Parent has, and will have as of the Closing, (i) sufficient cash on hand (without giving effect to any unfunded financing regardless of whether any such financing is committed) to pay the Merger Consideration and all related fees and expenses in connection with the Transactions, (ii) the resources and capabilities (financial and otherwise) to perform its obligations hereunder and (iii) has not incurred, and as of the Closing will not have incurred, any obligation, condition, commitment, restriction or liability of any kind that would impair or adversely affect such resources and capabilities.

4.6 Solvency. Upon consummation of the Merger, Parent and the Group Companies, on a consolidated basis, will not solely as a result of the consummation of such Transaction, (i) be insolvent or have incurred debts beyond their ability to pay such debts as they mature or (ii) have unreasonably small capital with which to engage in their respective businesses. No transfer of property is being made and no obligation is being incurred in connection with the Transaction with the intent to hinder, delay or defraud either present or future creditors of the Company or any of its Subsidiaries.

4.7 Investment. Parent is acquiring the equity securities of the Group Companies for its own account and for investment purposes and not with a view to the distribution thereof. Parent acknowledges that such equity securities have not been registered under the Securities Act or any state securities Law and Parent must bear the economic risk of its investment in such securities until and unless the offer and sale of such securities is subsequently registered under the Securities Act and all applicable state securities Laws or an exemption from such registration is applicable. Parent has conducted an examination of available information relating to the Group Companies and their respective businesses, Parent has such knowledge, sophistication and experience in business and financial matters that it is capable of evaluating an investment in such securities, and Parent can

bear the substantial economic risk of an investment in such securities for an indefinite period of time and can afford a complete loss of such investment.

4.8 Financial Advisors. Except as set forth on Section 4.8 of the Parent Disclosure Schedule, no Person has acted directly or indirectly, as a broker, finder, agent, investment banker or financial advisor for Parent, Merger Sub or their respective Affiliates and no Person is entitled to any fee or commission or like payment based on the arrangements made by Parent, Merger Sub or their respective Affiliates in connection with the Transaction.

4.9 No Other Representations and Warranties; No Reliance; Parent and Merger Sub Investigation.

(a) Each of Parent and Merger Sub acknowledges and agrees that, except as expressly set forth in ARTICLE II, the Company makes no promise, representation or warranty, express or implied, relating to the Group Companies or any of their respective businesses, operations, assets, liabilities, conditions or prospects or the Transaction, including with respect to merchantability, fitness for any particular or ordinary purpose, or as to the accuracy or completeness of any information regarding any of the foregoing, or as to any other matter, notwithstanding the delivery or disclosure to Parent and/or Merger Sub or any of its Affiliates or representatives of any documents, opinions, projections, forecasts, statements, memorandums, presentations, advice or information (whether communicated orally or in writing), and any such other promises, representations or warranties, or liability or responsibility therefor, are hereby expressly disclaimed. In addition, each of Parent and Merger Sub acknowledges and agrees that it has not executed or authorized the execution of this Agreement in reliance upon any promise, representation or warranty not expressly set forth in ARTICLE III.

(b) In respect of this Agreement and the Transaction, neither Parent nor Merger Sub has relied or is relying on any document or written or oral information (including, but not limited to, the confidential information packet prepared by Spurrier Capital Partners), statement, representation or warranty furnished to or discovered by it or any of its Affiliates other than the representations and warranties set forth in this Agreement.

(c) Each of Parent and Merger Sub acknowledges that it has made its own inquiry and is relying on its own independent investigation and analysis in entering into the Transaction. Each of Parent and Merger Sub is knowledgeable about the industries in which the Company operates and is capable of evaluating the merits and risks of the Transaction. Each of Parent and Merger Sub has been afforded full access to the books and records, facilities and personnel of the Company for purposes of conducting a due diligence investigation and has conducted a full due diligence investigation of the Company.

ARTICLE V COVENANTS

5.1 Conduct of Business. Except as contemplated by this Agreement, from and after the date hereof until the earlier of the Closing or the termination of this Agreement in accordance with its terms, the Company shall, and shall cause each other Group Company to, except as set forth on Section 5.1 of the Company Disclosure Schedule or as consented to in writing by Parent (which consent shall not be unreasonably withheld, conditioned, or delayed):

(a) conduct its business in the Ordinary Course of Business (including any conduct that is reasonably related, complementary or incidental thereto);

(b) use commercially reasonable efforts to preserve substantially intact its business organization and to preserve the present commercial relationships with key Persons with whom it does business; and

(c) not do any of the following:

(i) make any capital expenditure, other than a capital expenditure pursuant to the capital expenditure budget previously provided to Parent, in excess of \$100,000 individually or \$300,000 in the aggregate;

(ii) take or omit to take any action that would reasonably be expected to result in a Company Material Adverse Effect;

(iii) declare or pay a dividend on, or make any other distribution in respect of, its equity securities except dividends and distributions by an Operating Subsidiary to the Company or dividends or distributions solely in cash;

(iv) acquire or agree to acquire in any manner (whether by merger or consolidation, the purchase of an equity interest in or a material portion of the assets of or otherwise) any business or any Person or other business organization or division thereof of any other Person other than the acquisition of assets in the Ordinary Course of Business;

(v) enter into, amend, extend, renew or terminate any Material Contract, Material Government Contract or Real Property Lease, as applicable, other than any Contract, amendment, extension or renewal (A) with a term of less than one year, (B) which involve \$500,000 or less, or (C) in the Ordinary Course of Business;

(vi) change in any material respect the base compensation of, or enter into any new bonus or incentive agreement or arrangement (other than any Change of Control Payments that, in each case, are payable in connection with the transactions contemplated by this Agreement) with, any of its employees, other than changes made in accordance with normal compensation practices and consistent with past practices of the Group Companies or changes required by employment agreements, Benefit Plans or by any Law;

(vii) materially amend or enter into a new, Benefit Plan (except as required by Law, a Contract in effect on the date hereof or customary renewals of existing Benefit Plans in the Ordinary Course of Business) or collective bargaining;

(viii) incur any Indebtedness, as defined in clause (i) of the definition thereof, except borrowings under existing credit facilities;

(ix) issue any equity interests or grant any option or issue any warrant to purchase or subscribe for any such securities or issue any securities convertible into such securities (except in connection with the exercise or conversion of equity securities, options and warrants issued and outstanding as of the date hereof);

(x) adopt any amendments to their respective Organizational Documents;

(xi) make any material change in the accounting principles, methods, practices or policies applied in the preparation of the Financial Statements, unless such change is required by applicable Law or GAAP;

(xii) sell, or otherwise dispose of, any (A) intangible, or (B) material tangible assets in excess of \$200,000 in the aggregate, other than sales of software in the Ordinary Course of Business and personal property sold or otherwise disposed of in the Ordinary Course of Business and except for any tangible asset which is obsolete;

(xiii) make, change or revoke any material Tax election outside of the Ordinary Course of Business; change any annual Tax accounting period; change any Tax accounting principles, methods, practices or policies; file any amended Tax Return; enter into any Tax allocation agreement, Tax sharing agreement, or Tax indemnity agreement (other than commercial Contracts entered into in the Ordinary Course of Business that do not primarily relate to Taxes); or

(xiv) agree in writing to do anything contained in this clause (c).

5.2 Access to Information.

(a) From and after the date hereof until the earlier of the Closing Date or the termination of this Agreement in accordance with its terms, upon reasonable advance notice, and subject to the restrictions contained in the confidentiality agreements to which the Group Companies are subject, the Company shall provide to Parent and Parent's authorized representatives during normal business hours reasonable access to all books and records of the Group Companies (in a manner so as to not interfere with the normal business operations of any Group Company) for any reasonable purpose (provided, the continuation of due diligence shall not be deemed a reasonable purpose). All of such information shall be treated as confidential information pursuant to the terms of the Confidentiality Agreement. Notwithstanding anything to the contrary in this Agreement, the Company shall not be required to disclose any competitively sensitive information or disclose any other information to Parent or its representatives if such disclosure would be reasonably likely to (x) jeopardize any attorney-client or other legal privilege, (y) contravene any applicable Laws, fiduciary duty or binding agreement entered into prior to the date hereof, or (z) if the Parties are in an adversarial relationship in litigation or arbitration (in which case the furnishing of information, documents or records contemplated by this Section 5.2(a) shall be subject to applicable rules relating to discovery) (the matters referred to in this sentence with respect to any Person, the "Access Limitations").

(b) From and after the Closing Date, in connection with any reasonable business purpose, including the determination of any matter relating to the rights or obligations of the Sellers under this Agreement, upon reasonable prior request and subject to the Access Limitations, Parent shall, and shall cause the Group Companies to, (i) afford the Representative and its authorized representatives reasonable access, during normal business hours, to the offices, properties, books, records and other documents of Parent and its Affiliates in respect of the Group Companies and (ii) make available to the Representative and its authorized representatives the employees of the Company, Parent and its Affiliates in respect of the Group Companies whose assistance, expertise, testimony, notes and recollections or presence is necessary to assist the Representative in connection with the inquiries for any of the purposes referred to above, including the presence of such Persons as witnesses in hearings or trials for such purposes; provided, however, that (x) such requests shall not unreasonably interfere with the normal operations of Parent or any of its Affiliates, (y) that the auditors and accountants of Parent or its Affiliates shall not be obligated to make any work papers (to the extent such exist) available to any Person unless and until such Person has signed a customary agreement relating to such access to work papers in form and substance reasonably acceptable to such auditors or accountants, and (z) that if the Parties are in an adversarial relationship in litigation or arbitration, the furnishing of information, documents or records contemplated by this Section 5.3(b) shall be instead subject to applicable rules relating to discovery.

(c) During the period from the date of this Agreement until the earlier of the Closing Date or the termination of this Agreement in accordance with its terms, Parent hereby agrees that it is not authorized to and shall not (and shall not permit any of its employees, agents, representatives or Affiliates to) contact any customer, supplier, distributor, officer, employee or other material business relation of any Group Company regarding the Transactions without the prior written consent of the Company.

5.3 Exclusivity. The Company and Parent agree to the following exclusivity provisions from the date hereof and until the earlier of the Closing or the termination of this Agreement (the "Exclusivity Period");

(a) During the Exclusivity Period, the Company shall not intentionally, and will direct that its Affiliates and representatives shall not intentionally, directly or indirectly (whether or not in conjunction with a third party) solicit, encourage or initiate any offer or proposal from, or enter into, re-start, solicit, initiate or otherwise engage in any discussions or negotiations with, or seek, encourage, or respond to or provide or disclose any information to, or enter into any agreement, terms, arrangement or understanding (whether or not legally binding) with, any Person or group of Persons other than Parent, Merger Sub and their representatives with respect to any transaction involving any acquisition of or investment in, or any disposition (whether by way of sale, offer, transfer, assignment or otherwise) of, a material portion of the capital stock of the Company (or interest therein), or a material portion of the assets of the Company (any such transaction an "Alternative Transaction"), except in any such case to notify any such Person or group of Persons of the existence of this Section 5.3(a).

(b) If the Company or any of its representatives receives any bona fide proposal for, or inquiry respecting, any Alternative Transaction, or any request for nonpublic information in connection with any such Alternative Transaction, the Company will promptly notify Parent, describing in reasonable detail the identity of the Person or group of Persons making such proposal or inquiry and the terms and conditions of such proposal or inquiry.

5.4 Efforts; Regulatory Filings and Consents.

(a) Without prejudice to Parent's obligations set forth in Section 5.4(d), each of the Company, on the one hand, and Parent and Merger Sub, on the other hand, shall use its respective reasonable best efforts to take, or cause to be taken, all actions and to do, or cause to be done, and to assist and cooperate with the other Parties in doing, all things necessary, proper or advisable (i) to consummate and make effective as promptly as possible, but in no event later than the Termination Date, the Transactions, (ii) obtain or provide, or cause to be obtained, as set forth in Section 3.3(a), all consents or approvals by or notices to third parties that may be or become necessary for its execution and delivery of this Agreement and the performance of its obligations pursuant to this Agreement and the other Transaction Agreements, (iii) to obtain all Governmental Approvals of any Governmental Antitrust Authority required to be obtained by the Company, Parent or Merger Sub, or any of their respective Subsidiaries or Affiliates in connection with the Transactions or the taking of any action contemplated by this Agreement, (iv) to defend vigorously, lift, mitigate or rescind the effect of any litigation or administrative proceeding involving any Governmental Antitrust Authority (including a private party challenge) adversely affecting this Agreement or the Transactions, including promptly appealing any adverse court or administrative decision; provided, however, that neither the Company and its Affiliates, nor the Parent and Merger Sub, shall be required to make any material monetary expenditures, offer or grant any material accommodation (financial or otherwise) to any Person or commence or be a plaintiff in any litigation to satisfy their obligations under this Section 5.4(a); provided, further, that neither the Company and its Affiliates, nor the Parent and its Affiliates, shall be required to sell or otherwise dispose of any portion of the business

of the Group Companies or the Parent or its Subsidiaries in order to satisfy their obligations under this Section 5.4(a).

(b) Each of the Company and Parent shall (i) as soon as reasonably practicable (and in any event within five (5) Business Days following the date of this Agreement) file or cause to be filed with the United States Federal Trade Commission (the "FTC") and the United States Department of Justice (the "DOJ") the notification and report form, if any, required for the Transactions (which form shall request early termination of the waiting period under the HSR Act) and to supply as promptly as practicable any supplemental information requested in connection therewith pursuant to the HSR Act and (ii) as soon as reasonably practicable make all filings under the applicable Other Competition Laws, if any, required for the Transactions, and shall take all other actions necessary, proper or advisable to cause the expiration or termination of the applicable waiting period under the HSR Act and the applicable Other Competition Laws. Any such antitrust notification and report form or filing and supplemental information shall be in substantial compliance with the requirements of the HSR Act or the applicable Other Competition Laws, as the case may be. All other regulatory filings shall be in substantial compliance with the requirements of applicable Law. Each of Parent and the Company shall furnish to the other Party such necessary information and reasonable assistance as the other Party may request in connection with its preparation of any filing or submission that is necessary under the HSR Act, the applicable Other Competition Laws or other applicable Law, as the case may be. The Company and Parent shall use reasonable best efforts to comply promptly with any inquiries or requests for additional information from the FTC, the DOJ or other Governmental Antitrust Authorities and any other Governmental Authority having jurisdiction.

(c) Without limiting the generality of the undertakings set forth in Sections 5.4(a), 5.4(b) and 5.4(e) and subject to any appropriate confidentiality protections, the Company, on the one hand, and Parent and Merger Sub, on the other hand, shall each furnish to the other such necessary information and reasonable assistance as the other may reasonably request in connection with Section 5.4(b) and shall each promptly provide counsel for the other Party with copies of all filings made by such Party, and all correspondence between such Party (and its advisors) with any Governmental Antitrust Authority, other Governmental Authority or, in connection with any proceeding by a private party, and any other information supplied by such Party and such Party's Affiliates to a Governmental Antitrust Authority or other Governmental Authority in connection with this Agreement and the Transactions. Subject to applicable Law, the Company and Parent shall permit counsel for the other Party reasonable opportunity to review in advance, and shall consider in good faith the views of the other Party in connection with, any proposed written or, if practicable, oral communication to any Governmental Antitrust Authority or other Governmental Authority relating to the Transactions. Each of the Company and Parent agrees not to participate in any substantive meeting or discussion, either in person or by telephone, with any Governmental Antitrust Authority or other Governmental Authority in connection with the Transactions unless it consults with the other Party in advance and, to the extent not prohibited by such Governmental Antitrust Authority or other Governmental Authority, gives the other Party the opportunity to attend and participate.

(d) Without expanding any obligation set forth under this Section 5.4, Parent agrees to consider, on behalf of itself and its Affiliates and, as determined in its good faith, to take, or cause to be taken, such reasonable actions with respect to the Group Companies, post-Closing, that are identified by any Governmental Antitrust Authority as a condition to the granting of any Governmental Approval necessary for the consummation of the Transactions or as may be required to avoid, lift, vacate, reverse or resolve any legislative, administrative or judicial action (including any suit instituted (or threatened to be instituted) by the FTC, the DOJ or any other applicable Governmental Authority or any private party challenging the Transactions as a violation of the HSR Act or Other Competition Laws) that would otherwise reasonably be expected to materially impair or delay the consummation of the Transactions. Parent's consideration of any such reasonable action shall be undertaken in good faith, and if, after such good-faith consideration, Parent and its Affiliates determine that they will not undertake the action, such decision shall not constitute a breach of this Agreement. Without limiting the generality of the foregoing, the Group Companies understand and acknowledge that neither Parent, nor any of its Affiliates, will depreciate, sacrifice, limit, alter or cannibalize the pre-Closing existing lines of business or operations of the Parent and its Affiliates, even if such action is identified as a condition for consummation of the Transactions by a Governmental Antitrust Authority. Nothing contained in this Agreement shall be construed so as to require Parent or any of its Affiliates (other than, after the Closing, the Group Companies, to the extent such action is determined and agreed to by Parent under this Section 5.4(d)), to (i) sell, license, dispose of, hold separate or operate in any specified manner any of its respective assets or businesses (or to discuss, agree or commit to any of the foregoing), other than assets or businesses of the Group Companies, or (ii) enter into any consent decree, Order or agreement that alters its business or commercial practices in any way or that in any way limits or could reasonably be expected to limit the right of Parent to own, operate or retain all or any portion of Parent's assets, properties or businesses (other than, after the Closing, the Group Companies) or Parent's freedom of action with respect thereto. Further, Parent and/or its Affiliates shall be under no obligation to take such action as identified by a Governmental Antitrust Authority if not agreed to by the Company. To the extent Parent and/or its Affiliates do decide to take such action as identified by a Governmental Antitrust Authority with respect to the Group Companies, such action, provided it has been agreed to by the Company, shall not constitute a violation of Section 1.15(c).

(e) Without limiting any other obligation under this Agreement, during the period from the date of this Agreement until the Closing Date, Parent, Merger Sub and their respective Subsidiaries and Affiliates shall not take or agree to take any action that would reasonably be expected to prevent or delay the Parties from obtaining any Governmental Approval in connection with the Transactions, including entering into an agreement to acquire (whether via merger, consolidation, stock or asset purchase or otherwise) any material amount of assets of or any equity in any other Person or any business or division thereof if such agreement would be reasonably expected to create a material risk of making it more difficult to obtain the Governmental Approval of the FTC or DOJ or any other Governmental Antitrust Authority required in connection with the Transactions.

(f) The Company shall be responsible for all fees and expenses incurred with obtaining any consents or approvals from third parties or giving notices as set forth in clause (ii) of Section 5.4(a) (provided, however, that any such fees and expenses shall be paid by the Company in full prior to the Closing or accrued in full on the books and records of the Company prior to the Closing). Parent (i) shall be responsible for the filing of the Certificate of Merger and (ii) shall pay the filing fee under the HSR Act. Each of the Company and Parent shall otherwise be responsible for their respective fees and expenses in connection with their respective filings under the HSR Act.

5.5 Notification of Certain Matters. The Company shall give notice to Parent and Parent shall give notice to the Company, as promptly as reasonably practicable, upon becoming aware of (a) any fact, change, condition, circumstance, event, occurrence, or non-occurrence that has caused or is reasonably likely to cause any representation or warranty in this Agreement made by it to be untrue or inaccurate in any material respect at any time after the date of this Agreement and before the Effective Time that would cause the conditions set forth in Sections 6.2(a) and 6.2(b) or Sections 6.3(a) and 6.3(b), as applicable, not to be satisfied as of the Closing Date, (b) any material failure on its part to comply with or satisfy any covenant, condition or agreement to be complied with or satisfied by it under this Agreement, or (c) the institution of or a credible written threat of institution of any Legal Proceeding related to this Agreement or the Merger; provided, however, that the delivery of any notice in accordance with this Section 5.5 shall not limit or otherwise affect the remedies available under this Agreement to such Party (including the right to seek indemnification in accordance with ARTICLE VII or ARTICLE IX and the rights of the Representative to seek indemnification in accordance with Section 10.13), the representations or warranties of the Parties, or the conditions to the obligations of the Parties; provided further, however, that the unintentional failure to give notice under this Section 5.5 will not be deemed to be a breach of covenant under this Section 5.5 and will constitute only a breach of the underlying representation, warranty, condition or agreement, as the case may be.

5.6 Confidentiality. Each of Parent and Merger Sub acknowledges that the information provided to it and its representatives in connection with this Agreement (including Section 5.2(a)) and the Transaction is subject to the terms of the Confidentiality Agreement, dated September 19, 2018, by and between Parent and MicroPact, Inc. (the "Confidentiality Agreement"), the terms of which are incorporated herein by reference.

5.7 Preservation of Records. In addition to and not in limitation of the provisions of Section 5.2(a), Parent agrees to preserve and keep the records relating to the businesses of the Group Companies for a period of seven (7) years from the Closing Date and shall make such records and personnel available to the Representative as may be reasonably requested in connection with, among other things, any insurance claims by, Legal Proceedings (other than Legal Proceedings between the Representative and Parent related to this Agreement or the Transaction) or tax audits against, or governmental investigations of, the Group Companies or in order to enable the Representative to comply with its obligations under this Agreement and each other Transaction Agreement.

5.8 Publicity. None of the Representative or, prior to the Closing, the Company, on the one hand, or Parent, Merger Sub or, following the Closing, the Surviving Company, on the other hand, shall issue any press release or public announcement concerning this Agreement, the other

Transaction Agreements or the Transaction or make any other public disclosure containing or pertaining to the terms of this Agreement without obtaining the Representative's or Parent's, as applicable, prior written approval, which approval will not be unreasonably withheld or delayed, unless, in the judgment of the Party seeking to disclose, disclosure is otherwise required by applicable Law or by the applicable rules of any stock exchange on which such disclosing Party lists securities; provided that, to the extent any disclosure is required by applicable Law or stock exchange rule, the Party intending to make such disclosure shall use its commercially reasonable efforts consistent with applicable Law or stock exchange rule to consult with the Representative or Parent, as applicable, with respect to the text thereof and; provided, further, that (i) the Company and Representative, on the one hand, and Parent and its equityholders and Affiliates, on the other hand, shall be entitled to disclose such information to their respective directors, officers, executive employees, equity owners, partners, prospective partners, investors, prospective investors, professional advisors and lenders who have a need to know the information and who agree to keep such information confidential or are otherwise bound to confidentiality and (ii) Parent's financing sources and other professional advisors may publish "tombstones" or other customary announcements which do not contain pricing details that are not otherwise publicly available.

5.9 Director and Officer Liability; Indemnification.

(a) For a period of six (6) years after the Closing, Parent shall cause the Group Companies, to the fullest extent provided in the Organizational Documents thereof or in any other agreements disclosed on Section 5.9 of the Company Disclosure Schedule, in each case as in effect immediately prior to the Effective Time, to indemnify and hold harmless (and advance applicable expenses to) each Person who is as of the Effective Time, or has been at any time prior to the Effective Time, an officer, manager or director of a Group Company (each, a "D&O Indemnified Person") against any costs or expenses (including attorneys' fees) incurred in connection with any claim, threatened, pending or completed, whether civil, criminal, administrative or investigative, or Losses arising out of or pertaining to matters existing or occurring at or prior to the Closing Date and relating to the fact that the D&O Indemnified Person was an officer, manager or director of any Group Company.

(b) Prior to the Effective Time, the Company shall purchase and maintain in effect beginning on the Closing Date, and with a claims period of six (6) years thereafter without any lapses in coverage, a "tail" policy providing directors' and officers' liability insurance coverage for the benefit of those Persons who are covered by any Group Company's directors' and officers' liability insurance policies as of the date hereof or at the Closing with respect to matters occurring prior to the Effective Time. Such policy shall provide coverage that is at least equal to the coverage provided under the Group Companies' current directors' and officers' liability insurance policies; provided that the Company may substitute therefor policies of at least the same coverage containing terms and conditions which are no less advantageous to the beneficiaries thereof so long as such substitution does not result in gaps or lapses in coverage with respect to matters occurring prior to the Closing Date. The premium amounts for such tail policies shall be fully paid by the Company prior to the Closing or included as a Transaction Expense. Any such tail policies shall include a successor endorsement that names Parent and the Surviving Company as additional insureds. During the term of such tail policies, neither Parent nor the Surviving Company shall take any action

following the Closing to cause any such tail policy to be cancelled or any provision therein to be amended or waived.

(c) If Parent, the Surviving Company, any of the Operating Subsidiaries or any of their respective successors or assigns (i) consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger or (ii) transfers or conveys all or substantially all of its properties and other assets to any Person, then, and in each such case, Parent shall cause proper provision to be made so that the applicable successors and assigns or transferees expressly assume the obligations set forth in this Section 5.9.

5.10 Stockholder Approval. Concurrently with the execution of this Agreement, the Company has delivered to Parent the resolutions of the stockholders of the Company representing the Requisite Stockholder Approval.

5.11 Restrictive Covenants Agreements. Contemporaneously with the execution of this Agreement, as a material inducement to Parent's execution of this Agreement, each of those holders of Common Stock who are employees of any Group Company as of the date of this Agreement and whose names are set forth on Section 5.11 of the Parent Disclosure Schedule (the "Employee Sellers"), shall have entered into a Restrictive Covenants Agreement, to be effective upon the Closing Date subject to consummation of the Merger, in form and substance reasonably satisfactory to Parent (each, a "Restrictive Covenant Agreement").

5.12 Employees.

(a) Contemporaneously with the execution of this Agreement, as a material inducement to Parent's execution of this Agreement, the Company shall have entered into a mutually acceptable Employment Agreement with each of the individuals identified on Section 5.12(a) of the Parent Disclosure Schedule (the "Key Employees").

(b) The Company shall be responsible for the payment of any Change of Control Payments that are payable by any Group Company to any employee solely as a result of the occurrence of the Merger; provided, however, that any such Change of Control Payments shall be paid by the applicable Group Company in full on or before the Closing or included as a Transaction Expense to be paid at the Closing; and, provided further, that in no event shall any of the following be considered Change of Control Payments: (i) any payments made pursuant to any offer letter or any Contract entered into by a Group Company with any employee of the Company at the direction of Parent, and (ii) any bonus or other similar payments to any employee of a Group Company pursuant to any agreement or arrangement adopted or entered into by Parent, the Surviving Company or any of their Affiliates, or directed by Parent after the Effective Time.

(c) Prior to the Closing Date, the Company shall cause any written employment agreement between a Group Company and the individuals listed on Section 5.12(c) of the Parent Disclosure Schedule to have been terminated effective no later than as of the Effective Time, and the Company shall provide documentation thereof reasonably satisfactory to Parent.

5.13 Corporate Records.

(a) On or before the Closing, the Company shall exercise commercially reasonable efforts to deliver or caused to be delivered to Parent, each dated within a reasonable time prior to the Closing, (i) certificates of registration or qualification of each domestic Group Company from the Secretary of State (or comparable Governmental Authority) of each state other than its jurisdiction of organization in which, as set forth on Section 3.23 of the Company Disclosure Schedule, it is registered or qualified to do business, and (ii) a legal existence or good standing certificate for each domestic Operating Subsidiary from the Secretary of State (or comparable Governmental Authority) of its jurisdiction of organization, as set forth on Section 3.4(b) of the Company Disclosure Schedule.

(b) The Representative shall cause to be delivered to Parent, within ten (10) days after the Closing, all minute books of the Company in its possession.

(c) Prior to the Closing Date, the Company shall execute and deliver to Parent, or cause the applicable Group Company or Group Companies to execute and deliver to Parent, a letter or other document, in form and substance reasonably satisfactory to Parent, necessary and appropriate to change, at Parent's sole cost and expense, the broker of record with respect to any of the Group Companies' claims-made insurance policies listed on Section 3.22 of the Company Disclosure Schedule to be effective upon the Closing Date.

ARTICLE VI CONDITIONS TO CLOSING

6.1 Conditions to the Obligations of the Company, Parent and Merger Sub The obligations of the Company, Parent and Merger Sub to effect the Closing and to consummate the Transaction are subject to the satisfaction (or, if permitted by applicable Law, waiver in writing by the Party for whose benefit such condition exists) of the following conditions:

(a) any applicable waiting period under the HSR Act relating to the Transaction shall have expired or been terminated; and

(b) there shall not be in effect any Law or Order of a Governmental Authority of competent jurisdiction in the United States directing that the Transaction not be consummated as provided herein or which has the effect of rendering it impossible or illegal to consummate the Transaction; provided, however, that Parent shall have taken all actions required by Section 5.3(a) to prevent the occurrence or entry of any such Law or Order and to remove or appeal as promptly as possible any such Law or Order.

6.2 Other Conditions to the Obligations of Parent and Merger Sub The obligations of Parent and Merger Sub to effect the Closing and to consummate the Transaction are subject to the satisfaction (or, if permitted by applicable Law, waiver in writing by Parent) of the following further conditions:

(a) the Fundamental Representations shall be true and correct in all respects (in the case of any such representation or warranty qualified by materiality or Company Material Adverse Effect) or in all material respects (in the case of any representation or warranty not qualified by materiality or Company Material Adverse Effect) as of the date of this Agreement and on and as of the Closing Date as though made on and as of the Closing Date (other than such representations and warranties that are made on and as of a specified date, in which case such representations and warranties shall be true and correct only as of the specified date);

(b) the representations and warranties of the Company set forth in ARTICLE III (other than those referred to in Section 6.2(a)) shall be true and correct as of the date of this Agreement and on and as of the Closing Date as though made on and as of the Closing Date (other than such representations and warranties that are made on and as of a specified date, in which case such representations and warranties shall be so true and correct only as of the specified date), except to the extent that the facts, events and circumstances that cause such representations and warranties to not be true and correct as of such dates have not had a Company Material Adverse Effect (provided that for the purposes of the foregoing clause, qualifications as to materiality and Company Material Adverse Effect contained in such representations and warranties shall not be given effect);

(c) the Company shall have performed and complied in all material respects with all covenants required to be performed or complied with by the Company under this Agreement on or prior to the Closing Date;

(d) since the date hereof, there shall not have occurred a Company Material Adverse Effect; and

(e) prior to or at the Closing, the Company shall have delivered to Parent a certificate of an authorized officer of the Company, dated as of the Closing Date, in form and substance reasonably acceptable to Parent, to the effect that the conditions specified in Sections 6.2(a), 6.2(b), 6.2(c) and 6.2(d) have been satisfied.

6.3 Other Conditions to the Obligations of the Company The obligations of the Company to effect the Closing and to consummate the Transaction are subject to the satisfaction (or, if permitted by applicable Law, waiver in writing by the Representative) of the following further conditions:

(a) the representations and warranties of Parent and Merger Sub set forth in Section 4.1 (Organization and Power), Section 4.2 (Authorization of Agreement) and Section 4.8 (Financial Advisors) shall be true and correct in all respects (in the case of any such representation or warranty qualified by materiality or Parent Material Adverse Effect) or in all material respects (in the case of any representation or warranty not qualified by materiality or Parent Material Adverse Effect) as of the date of this Agreement and on and as of the Closing Date (other than such representations and warranties that are made on and as of a specified date, in which case such representations and warranties shall be true and correct only as of the specified date);

(b) the representations and warranties of Parent and Merger Sub set forth in ARTICLE IV (other than those referred to in Section 6.3(a)) shall be true and correct on and as of the Closing Date as of the date of this Agreement and on and as of the Closing Date (other than

such representations and warranties that are made on and as of a specified date, in which case such representations and warranties shall be true and correct only as of the specified date), except to the extent that the facts, events and circumstances that cause such representations and warranties to not be true and correct as of such dates have not had a Parent Material Adverse Effect (provided that for the purposes of the foregoing clause, qualifications as to materiality and Parent Material Adverse Effect contained in such representations and warranties shall not be given effect);

(c) Parent and Merger Sub shall have performed and complied in all material respects with all covenants required to be performed or complied with by it under this Agreement on or prior to the Closing Date; and

(d) prior to or at the Closing, Parent shall have delivered to the Representative a certificate of an authorized officer of Parent, dated as of the Closing Date, in form and substance reasonably acceptable to the Representative, to the effect that the conditions specified in Sections 6.3(a), 6.3(b) and 6.3(c) have been satisfied.

5.4 Frustration of Closing Conditions. No Party may rely on the failure of any condition set forth in this ARTICLE VI to be satisfied if such failure was caused by such Party's failure to use best efforts to cause the Closing to occur, as required by Section 5.3(a).

ARTICLE VII TERMINATION

7.1 Termination

(a) This Agreement may be terminated and the Transaction may be abandoned at any time prior to the Closing:

(i) by mutual written consent of Parent and the Representative;

(ii) by either the Representative or Parent, if any Governmental Authority of competent jurisdiction in the United States shall have issued an Order or taken any other action restraining, enjoining or otherwise prohibiting the Transaction (after giving effect to Parent's and Merger Sub's respective obligations under Section 5.4) and such Order or other action shall have become final and nonappealable;

(iii) by either the Representative or Parent, if the Closing does not occur on or prior to May 1, 2019 (such date, as it may be extended by the written mutual agreement of the Parties or as provided in this Section 7.1(a)(iii), the "Termination Date"; provided, however, that the right to terminate this Agreement pursuant to this Section 7.1(a)(iii) shall not be available to any Party whose breach of any provision of this Agreement has been a principal cause of, or resulted in, the failure of the Closing to occur on or before the Termination Date; and, provided further, that, if at any time prior to the Termination Date the DOJ or the FTC makes a request for additional information or documentary materials from either or both of the Company or Parent authorized by Section 7A(e) of the Clayton Act (a "Second Request"), then the Termination Date shall be extended for an additional

sixty (60) days unless Parent and the Representative by mutual written consent agree not to extend the Termination Date;

(iv) by the Representative, upon written notice to Parent, if there shall have been a breach of any of the representations, warranties, agreements or covenants set forth in this Agreement on the part of Parent or Merger Sub or any of such representations and warranties shall have become untrue in a manner that would result in any conditions set forth in Sections 6.3(a), 6.3(b) or 6.3(c) not being satisfied prior to the Termination Date, such breach or inaccuracy has not been waived by the Representative, and the breach or inaccuracy, if capable of being cured, has not been cured within thirty (30) days following the Representative's written notice to Parent of such breach or inaccuracy or is not capable of being cured on or prior to the Termination Date; provided that the right to terminate this Agreement under this Section 7.1(a)(iv) shall not be available to the Representative if the Company is then in material breach of any representation, warranty, covenant, or other agreement contained herein;

(v) by Parent, upon written notice to the Representative, if there shall have been a breach of any of the representations, warranties, agreements or covenants set forth in this Agreement on the part of the Company or any of such representations and warranties shall have become untrue in a manner that would result in any conditions set forth in Sections 6.2(a), 6.2(b) or 6.2(c) not being satisfied prior to the Termination Date, such breach or inaccuracy has not been waived by Parent, and the breach or inaccuracy, if capable of being cured, has not been cured within thirty (30) days following Parent's written notice to the Representative of such breach or inaccuracy or is not capable of being cured on or prior to the Termination Date; provided that the right to terminate this Agreement under this Section 7.1(a)(v) shall not be available to Parent if it is then in material breach of any representation, warranty, covenant, or other agreement contained herein;

(vi) by Parent if there has been a Company Material Adverse Effect since the date hereof;

(vii) by the Representative, whether or not the Representative or the Company has sought or is entitled to seek specific performance pursuant to Section 10.10, if (A) all of the conditions set forth in Sections 6.1 and 6.2 have been satisfied or waived (other than those conditions which by their terms cannot be satisfied until the Closing and those conditions that Parent's breach has caused not to be satisfied) and (B) Parent fails to consummate the Transactions within three (3) Business Days following the date on which the Closing was required to have occurred pursuant to Section 2.1; or

(viii) by the Company if there has been a Parent Material Adverse Effect since the date hereof.

(b) In the event of termination by the Representative or Parent pursuant to this Section 7.1, written notice thereof shall forthwith be given to the other and the Transaction shall be terminated, without further action by any Party. If the Transactions are terminated as provided herein, Parent shall return to the Company or destroy all documents and other material received

from the Company or the Representative relating to the Transaction, whether so obtained before or after the execution hereof.

7.2 Effect of Termination. If this Agreement is terminated and the Transaction is abandoned as described in Section 7.1, this Agreement shall become null and void and of no further force and effect, without any liability or obligation on the part of any Party or their respective directors, officers, employees, owners, representatives or Affiliates, and the Transaction shall be abandoned without further action by the Parties, except for (i) the penultimate sentence of Section 5.2(a) (Access to Information) and (ii) Sections 7.2 (Effect of Termination) and ARTICLE X (Miscellaneous), each of which, shall survive such termination. Nothing in this Section 7.2, however, shall be deemed to release any Party from any liability for any willful breach by such Party of the terms and provisions of this Agreement prior to termination. For purposes of this Sections 7.2, "willful" shall mean a breach that is a consequence of an act undertaken by the breaching Party with the knowledge (actual or constructive) that the taking of such act would, or would be reasonably expected to, cause a breach of this Agreement.

ARTICLE VIII TAX MATTERS

8.1 Intended Tax Treatment. The Parties are entering into this Agreement with the intention that the Merger qualify as a taxable purchase of the stock of the Company for federal income tax purposes, and none of the Parties or any Seller will take any position or actions inconsistent with such treatment.

8.2 Cooperation and Exchange of Information. The Representative, the Surviving Company, and Parent shall provide each other with such cooperation and information as any of them reasonably may request of the others, and at the sole cost and expense of the requesting party, in preparing or filing any Tax Return pursuant to this ARTICLE VII or in connection with any audit, examination or other Legal Proceeding in respect of Taxes of the Group Companies. Such cooperation and information shall include providing powers of attorney, copies of relevant Tax Returns or portions thereof, together with accompanying schedules, related work papers and documents relating to rulings or other determinations by tax authorities. Each of the Representative, the Surviving Company, and Parent shall retain all Tax Returns, schedules and work papers, records and other documents in its possession relating to Tax matters of The Company for any Taxable period beginning before the Closing Date until the expiration of the statute of limitations of the Taxable periods to which such Tax Returns and other documents relate, without regard to extensions except to the extent notified by any of the other parties in writing of such extensions for the respective Tax periods.

8.3 Tax Returns.

(a) The Company shall prepare and timely file, or cause to be prepared and timely filed, all Tax Returns of the Group Companies required to be filed by it that are due on or before the Closing Date (taking into account any extensions), and shall timely pay all Taxes that are due and payable on or before the Closing Date (taking into account any extensions). Any such Tax

Return shall be prepared in a manner consistent with past practice (unless otherwise required by applicable Tax Law).

(b) The Representative shall prepare and timely file, or cause to be prepared and timely filed, all Tax Returns required to be filed by the Group Companies after the Closing Date with respect to a Pre-Closing Tax Period (a 'Seller Tax Return'). Any such Seller Tax Return shall be prepared in a manner consistent with the Group Companies' past practice (unless otherwise required by Law) and, if it is an income or other material Tax Return, shall be submitted by the Representative to Parent (together with schedules, statements and, to the extent requested by Parent, supporting documentation) at least forty-five (45) days prior to the due date (including extensions) of such Tax Return. If Parent objects to any item on any such Seller Tax Return, Parent shall, within thirty (30) days after delivery of such Tax Return, notify the Representative in writing that it so objects, specifying with reasonable particularity any such item and stating with reasonable specificity the factual or legal basis for any such objection. If a notice of objection shall be duly delivered, Parent and the Representative shall negotiate in good faith and use their commercially reasonable best efforts to resolve such items. If Parent and the Representative are unable to reach such agreement within ten (10) days after receipt by the Representative of such notice, the disputed items shall be resolved by the Accounting Referee and any determination by the Accounting Referee shall be final. The Accounting Referee shall resolve any disputed items within twenty (20) days of having the item referred to it pursuant to such procedures as it may require. If the Accounting Referee is unable to resolve any disputed items before the due date for such Tax Return, the Tax Return shall be filed as prepared by the Representative and then amended to reflect the Accounting Referee's resolution. The costs, fees, and expenses of the Accounting Referee shall ultimately be borne by Parent, on the one hand, and the Sellers, on the other hand, in the same proportion as the aggregate amount of the disputed items that is unsuccessfully disputed (as determined by the Accounting Referee) by Parent and the Representative (on behalf of the Sellers), as applicable, bears to the total amount of the disputed items submitted to the Accounting Referee. Except as provided in the preceding sentence, all other costs and expenses incurred by the Parties in connection with resolving any dispute hereunder before the Accounting Referee shall be borne by the Party incurring such cost and expense.

(c) Parent shall prepare and timely file, or cause to be prepared and timely filed, all Tax Returns required to be filed by the Group Companies after the Closing Date with respect to a Straddle Period (a 'Parent Tax Return'). Any such Parent Tax Return shall be prepared in a manner consistent with the Group Companies' past practice (unless otherwise required by Law) and, if it is an income or other material Tax Return, shall be submitted by Parent to the Representative (together with schedules, statements and, to the extent requested by the Representative, supporting documentation) at least forty-five (45) days prior to the due date (including extensions) of such Tax Return. If the Representative objects to any item on any such Parent Tax Return that relates to a Pre-Closing Tax Period, the Representative shall, within thirty (30) days after delivery of such Tax Return, notify Parent in writing that it so objects, specifying with reasonable particularity any such item and stating with reasonable specificity the factual or legal basis for any such objection. If a notice of objection shall be duly delivered, Parent and the Representative shall negotiate in good faith and use their commercially reasonable best efforts to resolve such items. If Parent and the Representative are unable to reach such agreement within ten days after receipt by Parent of such

notice, the disputed items shall be resolved by the Accounting Referee and any determination by the Accounting Referee shall be final. The Accounting Referee shall resolve any disputed items within twenty (20) days of having the item referred to it pursuant to such procedures as it may require. If the Accounting Referee is unable to resolve any disputed items before the due date for such Tax Return, the Tax Return shall be filed as prepared by Parent and then amended to reflect the Accounting Referee's resolution. The costs, fees, and expenses of the Accounting Referee shall ultimately be borne by Parent, on the one hand, and the Sellers, on the other hand, in the same proportion as the aggregate amount of the disputed items that is unsuccessfully disputed (as determined by the Accounting Referee) by Parent and the Representative (on behalf of the Sellers), as applicable, bears to the total amount of the disputed items submitted to the Accounting Referee. Except as provided in the preceding sentence, all other costs and expenses incurred by the Parties in connection with resolving any dispute hereunder before the Accounting Referee shall be borne by the Party incurring such cost and expense. The preparation and filing of any Tax Return of the Group Companies that does not relate to a Straddle Period shall be exclusively within the control of Parent.

8.4 Straddle Period Taxes. To the extent permissible under applicable Laws, the Parties agree to elect (and have the Company and each Operating Subsidiary elect) to have each Tax year of the Company and each Operating Subsidiary to end on the Closing Date and, if such election is not permitted or required in a jurisdiction with respect to a specific Tax such that the Company or any Operating Subsidiary is required to file a Tax Return for a Straddle Period, to utilize the following convention for determining the amount of Taxes attributable to the portion of the Straddle Period ending on the Closing Date: (i) in the case of property Taxes and other similar Taxes imposed on a periodic basis, the amount attributable to the portion of the Straddle Period ending on the Closing Date shall equal the Taxes for the entire Straddle Period multiplied by a fraction, the numerator of which is the number of calendar days in the portion of the period ending on the Closing Date and the denominator of which is the total number of calendar days in the entire Straddle Period; and (ii) in the case of all other Taxes (including income Taxes, sales Taxes, employment Taxes, withholding Taxes, etc.), the amount attributable to the portion of the Straddle Period ending on the Closing Date shall be determined as if the Company or Operating Subsidiary filed a separate Tax Return with respect to such Taxes for the portion of the Straddle Period ending on and as of the end of the day on the Closing Date using a "closing of the books methodology." For purposes of clause (ii), (A) any item determined on an annual or periodic basis (including amortization and depreciation deductions) shall be allocated to the portion of the Straddle Period ending on the Closing Date based on the relative number of days in such portion of the Straddle Period ending on the Closing Date as compared to the number of days in the entire Straddle Period; and (B) any item (or Tax) resulting from a Parent Closing Date Transaction shall be attributed to the portion of the Straddle Period beginning after the Closing Date. For the avoidance of doubt, for purposes of allocating amounts required to be included by Parent or any Group Company in income under Section 951(a) or 951A of the Code with respect to any Straddle Period of a foreign Group Company, the taxable year of the relevant foreign Operating Subsidiary giving rise to the income required to be included shall be deemed to close on the Closing Date in the same manner as described above.

8.5 Contests. Parent agrees to give written notice to the Representative of the receipt of any written notice by a Group Company or the Surviving Company, Parent, or any of Parent's Affiliates which involves the assertion of any claim, or the commencement of any Legal Proceeding, in each case relating to Taxes and in respect of which an indemnity may be sought by Parent pursuant to Section 8.10 (a "Tax Claim"); provided that failure to comply with this provision shall not affect Parent's right to indemnification hereunder, except to the extent that the Sellers are materially prejudiced thereby. The Representative shall control the contest or resolution of any Tax Claim that relates solely to a Pre-Closing Tax Period (a "Seller Tax Claim"); provided, however, that the Representative shall obtain the prior written consent of Parent (which consent shall not be unreasonably withheld, conditioned, or delayed) before entering into any settlement of a Seller Tax Claim or ceasing to defend such Seller Tax Claim; and, provided, further, that Parent shall be entitled to participate in the defense of such Seller Tax Claim and to employ counsel of its choice for such purpose, the fees and expenses of which separate counsel shall be borne solely by Parent. Parent shall control the contest or resolution of any Tax Claim that relates to a Straddle Period (a "Parent Tax Claim"); provided, however, that Parent shall obtain the prior written consent of Representative (which consent shall not be unreasonably withheld, conditioned, or delayed) before entering into any settlement of a Parent Tax Claim or ceasing to defend such Parent Tax Claim; and, provided, further, that Representative shall be entitled to participate in the defense of such Parent Tax Claim and to employ counsel of its choice for such purpose, the fees and expenses of which separate counsel shall be borne solely by Representative (on behalf of the Sellers).

8.6 338(g) Elections. Neither Parent nor any Group Company shall make an election under Section 338(g) of the Code with respect to the Transactions, or make any other Tax election or take any other action that has the effect of increasing the amount of Taxes attributable to a Pre-Closing Tax Period.

8.7 Other Tax Matters. Parent shall cause the Group Companies that are U.S. entities to join Parent's "consolidated group" (as defined in Treasury Regulation Section 1.1502-76(h)) effective on the day after the Closing Date.

8.8 Transfer Taxes. Any Transfer Taxes payable in connection with the Transaction shall be borne solely by Parent. Except as otherwise required by Law, Parent shall duly and timely prepare and file any Tax Return relating to such Taxes. Parent shall give the Representative a copy of each such Tax Return for its review and comments at least fifteen (15) days prior to filing and shall give the Representative a copy of such Tax Return as filed, together with proof of payment of the Taxes shown thereon to be payable. The Parties further agree, upon request, to use their reasonable best efforts to obtain any certificate or other document from any Governmental Authority responsible for Taxes or any other Person as may be necessary to mitigate, reduce, or eliminate any Transfer Taxes (to the extent applicable) that could be imposed with the transactions contemplated under this Agreement.

8.9 Tax Refunds. Parent shall cause the Company to pay to the Representative for the benefit of the stockholders of the Company, promptly upon receipt thereof, any and all refunds of Taxes (including interest thereon if any received from any Governmental Authority with respect to such refund) received after the Closing Date with respect to, or attributable to any Pre-Closing Tax Period, except to the extent that such refund (i) arises as the result of a carryback of a loss or other Tax benefit from a period or portion thereof beginning after the Closing Date or (ii) is included in the calculation of Working Capital.

8.10 Tax Indemnification. Except to the extent treated as a liability in the calculation of Working Capital, Sellers shall (severally, but not jointly, based on each Seller's Pro Rata Share) indemnify Parent, the Surviving Company, and each Purchase Indemnitee and hold them harmless from and against (a) all income Taxes of the Group Companies or relating to the business of the Group Companies for all Pre-Closing Tax Periods; (b) all income Taxes of any member of an affiliated, consolidated, combined, or unitary group of which a Group Company (or any predecessor of a Group Company) is or was a member on or prior to the Closing Date by reason of a liability under Treasury Regulation Section 1.1502-6 or any comparable provisions of foreign, state, or local Law; (c) all income Taxes of any person imposed on a Group Company arising under the principles of transferee or successor liability or by Contract (other than a Contract entered into in the Ordinary Course of Business that does not primarily relate to Taxes), relating to an event or transaction occurring before the Closing Date, and (d) all Taxes arising from the transactions contemplated by this Agreement and incurred by a Group Company (except to the extent otherwise set forth in this Agreement) with respect to any Pre-Closing Tax Period, excluding, for the avoidance of doubt, all Transfer Taxes. In each of the above cases, Sellers shall (severally, but not jointly, based on each Seller's Pro Rata Share) reimburse Parent for any Taxes of the Group Companies that are the responsibility of Sellers pursuant to this Section 8.10 within sixty (60) Business Days after Parent or the Surviving Company provides written notice to the Representative of the payment of such Taxes, which notice shall set forth the amount and type of such Taxes with reasonable specificity, and certified evidence of payment thereof. The limitations on indemnification set forth in Section 9.4, including the limitations set forth in Section 9.4(a) and Section 9.4(b), shall apply to this Section 8.10 *mutatis mutandis*.

8.11 Tax Treatment of Indemnification Payments. Any indemnification payments pursuant to this Agreement shall be treated by the Parties as an adjustment for Tax purposes to the Merger Consideration, unless otherwise required by applicable Tax Law.

8.12 Survival. Notwithstanding anything in this Agreement to the contrary, the provisions of this ARTICLE VII shall survive until the earlier of (A) the expiration of all applicable statutes of limitations (giving effect to any waiver, mitigation, or extension thereof) plus 60 days and (B) the six (6)-year anniversary of the Closing Date.

8.13 Overlap. To the extent that any obligation or responsibility pursuant to ARTICLE IX may overlap with an obligation or responsibility pursuant to this ARTICLE VIII, the provisions of this ARTICLE VIII shall govern. The indemnities of Sellers set forth in this ARTICLE VII and the indemnities of Sellers set forth in ARTICLE IX to the extent relating to Taxes, shall be applied without duplication.

ARTICLE IX INDEMNIFICATION

9.1 Survival of Representations and Covenants Except as otherwise set forth in this Section 9.1, the representations and warranties of the Company, Parent and Merger Sub contained in ARTICLE III and ARTICLE IV, or in any certificate delivered pursuant to Section 6.2(e) or Section 6.3(d), shall survive the Closing until March 15, 2020. The representations and warranties in Section 3.1 (Organization and Power), Section 3.2 (Authorization of Agreement), Section 3.4 (Capitalization; Operating Subsidiaries), Section 3.24 (Financial Advisors), Section 4.1 (Organization and Power), Section 4.2 (Authorization of Agreement), Section 4.5 (Financial Capability), Section 4.6 (Solvency), and Section 4.8 (Financial Advisors) (collectively, the "Fundamental Representations") shall survive until the earlier of (A) the expiration of the statute of limitations applicable for breach of contract claims in the State of Delaware and (B) the six (6)-year anniversary of the Closing Date. The representations and warranties contained in Section 3.10 (Taxes) shall survive until the earlier of (A) the expiration of all applicable statutes of limitations (giving effect to any waiver, mitigation, or extension thereof) plus 60 days and (B) the six (6)-year anniversary of the Closing Date. All covenants set forth herein to be performed prior to or at the Closing shall terminate at the Closing, and all other covenants set forth herein to be performed after the Closing shall survive the Closing in accordance with their respective terms. It is the express intent of the Parties that, if an applicable survival period set forth in this Section 9.1 is shorter than the statute of limitations that would otherwise apply, then, by contract, the applicable statute of limitations shall be reduced to the survival period contemplated hereby. Any claim for indemnity under this Agreement with respect to any breach of any representation, warranty or covenant shall be deemed time-barred, and no such claim shall be made after the survival period specified in this Section 9.1; provided, however, that if a claim notice is delivered in good faith pursuant to and in accordance with the requirements of this ARTICLE IX with respect to any breach of any representation, warranty or covenant prior to the expiration of the applicable survival period, the indemnification claim under this ARTICLE IX with respect to such representation, warranty or covenant shall survive until such indemnification claim is finally resolved pursuant to this ARTICLE IX.

9.2 General Indemnification.

(a) Subject to the other provisions of this ARTICLE IX from and after the Closing, each Seller shall (severally but not jointly based on each Seller's Pro Rata Share), indemnify, defend and hold each of Parent, Merger Sub and/or their respective officers, directors, employees, Affiliates and agents (each a "Purchaser Indemnitee") harmless from any direct damages, losses, liabilities, obligations, claims of any kind, interest or expenses (including reasonable attorneys' fees and expenses) ("Loss") actually incurred as a result of (i) any breach of any representation or warranty made by the Company (A) contained in ARTICLE III or (B) in the certificate delivered pursuant to Section 6.2(e), (ii) any breach by any Seller of any of its covenants or agreements contained herein which are to be performed after the Closing Date, (iii) any claim made by any Seller relating to the calculations and determinations set forth on the Pre-Closing Statement of such Person's rights with respect to the Total Merger Consideration or any part thereof or (iv) the potential

material liability described as "Microsoft SPLA Matter" in Section 3.16(e) of the Company Disclosure Schedule (the "Potential Liability").

(b) Subject to the other provisions of this ARTICLE IX, from and after the Closing, Parent shall, and shall cause the Surviving Company to, indemnify, defend and hold each Seller and their respective Affiliates, officers, directors, employees and agents (each a "Seller Indemnitee" and, together with any Purchaser Indemnitee, an "Indemnified Party" and, collectively, the "Indemnified Parties") harmless from any Loss actually incurred as a result of (i) any breach of any representation or warranty made by Parent or Merger Sub (A) contained in ARTICLE IV or (B) in the certificate delivered pursuant to Section 6.3(d), or (ii) any breach by Parent or the Surviving Company (including by way of being the successor of Merger Sub and the Company) of any of their respective covenants or agreements contained herein which are to be performed by Parent or the Surviving Company, as applicable, after the Closing Date.

(c) The obligations to indemnify and hold harmless pursuant to this Section 9.2 shall survive the consummation of the transactions contemplated hereby for the applicable period set forth in Section 9.1, except for claims for indemnification asserted in good faith prior to the end of such applicable period (which such specific claims shall survive until final resolution thereof).

9.3 Notice of Claims; Third Party Claims.

(a) Notice of Claims.

(i) Any Indemnified Party seeking indemnification hereunder shall give promptly (and, in any event, within the applicable periods set forth in Section 9.1) to the party obligated to provide indemnification to such Indemnified Party (an "Indemnitor") a written notice (the "Notice of Claim") describing in reasonable detail the facts giving rise to the claim for indemnification hereunder and shall include in such Notice of Claim (if then known) the amount or the method of computation of the amount of such claim, and a reference to the provision of this Agreement upon which such claim is based; provided, however, that the failure of any Indemnified Party to give the Claim Notice promptly as required by this Section 9.3(a) shall not affect such Indemnified Party's rights under this ARTICLE IX except to the extent (x) such failure is actually prejudicial to the rights and obligations of the Indemnitor or (y) such Notice of Claim is delivered after the expiration of the applicable periods set forth in Section 9.1.

(ii) After the giving of any Claim Notice pursuant hereto, the amount of indemnification to which an Indemnified Party shall be entitled under this ARTICLE IX shall be determined: (i) by the written agreement between the Indemnified Party and the Indemnitor; (ii) by a final judgment or decree of any court of competent jurisdiction; or (iii) by any other means to which the Indemnified Party and the Indemnitor shall agree. The judgment or decree of a court shall be deemed final when the time for appeal, if any, shall have expired and no appeal shall have been taken or when all appeals taken shall have been finally determined. The Indemnified Party shall have the burden of proof in establishing the amount of Losses suffered by it. All amounts due to the Indemnified Party as so finally determined shall be paid by wire transfer within thirty (30) days after such final determination.

(b) Third Party Claims.

(i) If a claim, action, suit or proceeding by a Person who is not a Party or an Affiliate thereof (a "Third Party Claim") is made against any Indemnified Party, and if such Person intends to seek indemnity with respect thereto under this ARTICLE IX such Indemnified Party shall promptly (and, in any event, within the applicable periods set forth in Section 9.1) give a Notice of Claim to the Indemnitor; provided that the failure to give such Notice of Claim shall not relieve the Indemnitor of its obligations hereunder, except to the extent (x) such failure is actually prejudicial to the rights and obligations of the Indemnitor or (y) such Notice of Claim is delivered after the expiration of the applicable periods set forth in Section 9.1. Thereafter, the Indemnified Party shall deliver to the Indemnitor, within five (5) days after the Indemnified Party's receipt thereof, copies of all notices and documents (including court papers) received by the Indemnified Party relating to the Third Party Claim. Notwithstanding the foregoing, should a Person be physically served with a complaint with regard to a Third Party Claim the Indemnified Party must notify the Indemnitor with a copy of the complaint within five (5) days after receipt thereof and shall deliver to the Indemnitor, within five (5) days after the receipt of such complaint, copies of notices and documents (including court papers) received by the Indemnified Party relating to the Third Party Claim (or in each case such earlier time as may be necessary to enable the Indemnitor to respond to the court proceedings on a timely basis).

(ii) The Indemnitor shall have thirty (30) days after receipt of such notice to assume the conduct and control, at the expense of the Indemnitor, of the settlement or defense thereof, and the Indemnified Party shall, at its sole cost and expense, cooperate with the Indemnitor in connection therewith; provided that the Indemnitor shall permit the Indemnified Party to participate in such settlement or defense through counsel chosen by such Indemnified Party (and the fees and expenses of such counsel shall be borne by such Indemnified Party). So long as the Indemnitor is reasonably contesting any such claim in good faith, the Indemnified Party shall not pay or settle any such claim. If the Indemnitor elects to conduct the defense and settlement of a Third Party Claim, then the Indemnified Party shall have the right to pay or settle such Third Party Claim; provided, that, in such event, it shall waive any right to indemnity by the Indemnitor for all Losses related to such claim unless the Indemnitor shall have consented to such payment or settlement. If the Indemnitor does not notify the Indemnified Party within thirty (30) days after the receipt of the Indemnified Party's Notice of Claim hereunder that it elects to undertake the defense thereof, the Indemnified Party shall have the right to contest, settle or compromise the claim but shall not thereby waive any right to indemnity therefor pursuant to this Agreement. The Indemnitor shall not, except with the consent of the Indemnified Party (which shall not be unreasonably withheld or delayed), enter into any settlement that does not include as a term thereof the giving by the Person(s) asserting such claim to all Indemnified Parties of a release from all liability with respect to such claim or consent to entry of any judgment.

(iii) All of the Parties shall cooperate in the defense or prosecution of any Third Party Claim in respect of which indemnity may be sought hereunder and each of Parent and the Surviving Company (or a duly authorized representative of such Party) shall (and shall cause the Group Companies to) furnish such records, information and testimony, and attend such

conferences, discovery proceedings, hearings, trials and appeals, as may be reasonably requested in connection therewith.

9.4 Limitation on Indemnification Obligations The rights of the Purchaser Indemnitees and Seller Indemnitees to indemnification pursuant to Section 9.2 are subject to the following limitations:

(a) The Purchaser Indemnitees, on the one hand, and the Seller Indemnitees, on the other hand, shall not be entitled to recover Losses pursuant to Section 9.2(a)(i) or Section 9.2(b)(i) until the total amount which the Purchaser Indemnitees or the Seller Indemnitees, respectively, would recover thereunder (as limited by the provisions of Section 9.4(f) and Section 10.15), but for this Section 9.4(a), exceeds \$1,850,000 (the "Deductible"), in which case the Purchaser Indemnitees or the Seller Indemnitees, respectively, shall only be entitled to recover Losses in excess of such amount, subject to the other limitations herein; provided, that Losses indemnifiable in respect of (i) breaches of the Fundamental Representations, (ii) the Potential Liability, or (iii) any facts or circumstances which constitute Actual Fraud shall neither be applied toward, nor limited by, the Deductible.

(b) The maximum liability of Sellers under Section 9.2(a) or of Parent and the Surviving Company under Section 9.2(b) with respect to indemnifiable Losses (except with respect to breaches of Fundamental Representations, the Potential Liability or in cases of Actual Fraud) shall be an amount equal to \$9,000,000.

(c) The maximum liability of Sellers under Section 9.2(a) or of Parent and the Surviving Company under Section 9.2(b) with respect to indemnifiable Losses for breaches of Fundamental Representations and in cases of Actual Fraud shall not exceed the Final Closing Date Merger Consideration. The maximum liability of Sellers under Section 9.2(a)(iv) with respect to indemnifiable Losses related to the Potential Liability shall be not exceed the Special Holdback Amount.

(d) The Purchaser Indemnitees shall not be entitled to indemnification pursuant to Section 9.2(a) for any Loss to the extent that (i) prior to the date hereof the Group Companies recorded a reserve in their consolidated books and records with respect to such Loss or in a general category of items or matters similar in nature to the specific items or matters giving rise to such Loss, (ii) such Loss was taken into account in the Final Closing Date Merger Consideration or if Parent shall have requested a reduction in the Merger Consideration in a Dispute Notice on account of any matter forming the basis for such Loss or alleged Loss, (iii) the Purchaser Indemnitees could have, with commercially reasonable efforts, mitigated or prevented such Loss, or (iv) such Loss results from or is magnified by the action or inaction of any Purchaser Indemnitee after the Closing.

(e) Notwithstanding any provision of this Agreement to the contrary, Losses for which Sellers may be liable pursuant to Section 9.2(a)(i) shall exclude all Losses relating to the breach of any representation or warranty of the Company to the extent the Representative establishes to a reasonable certainty that Parent or Merger Sub had actual knowledge as of the Closing of material information that is materially inconsistent with the representation or warranty on which the claim of the Purchaser Indemnitee is based, and could reasonably be expected to have an

understanding of the relevance of such materially inconsistent information to such representation and warranty, and thereby it can reasonably be concluded that Parent or Merger Sub has waived the right to rely on such representation or warranty or should be estopped from asserting such claim as a result thereof. Parent and Merger Sub expressly acknowledge Sellers' and the Representative's right to establish that Parent or Merger Sub have waived such right or should otherwise be estopped from asserting such claim based on the breach of such representation or warranty due to such actual knowledge.

(f) The amount of any and all Losses shall be determined net of (i) any amounts recovered or recoverable by the Purchaser Indemnitees under insurance policies or other collateral sources (such as contractual indemnities of any Person which are contained outside of this Agreement) with respect to such Losses, in each case, net of costs of collection resulting from making any claim thereunder and (ii) any Tax benefits realizable by or accruing to the Purchaser Indemnitees with respect to such Losses.

(g) In the event that a Purchaser Indemnitee realizes Tax benefits or recovers, under insurance policies or from other collateral sources, any amount in respect of a matter for which such Purchaser Indemnitee was indemnified pursuant to Section 9.2(a), such Purchaser Indemnitee shall promptly pay over to an account or accounts designated by the Representative (on behalf of the Sellers) for distribution to the Sellers the amount so recovered (after deducting therefrom the amount of the expenses incurred by such Purchaser Indemnitee in procuring such recovery), but not in excess of the sum of (i) any amount previously so paid to or on behalf of such Purchaser Indemnitee in respect of such matter and (ii) any amount expended by the Sellers in pursuing or defending any claim arising out of such matter; and

(h) For purposes of determining Losses pursuant to Section 9.2(a)(i) or Section 9.2(b)(i) (but not for purposes of determining whether a breach has occurred), the representations and warranties set forth in this Agreement shall be considered without regard to any materiality qualification (including such terms as "material," "Company Material Adverse Effect" and "Parent Material Adverse Effect") set forth therein.

9.5 Manner of Payment.

(a) Except as provided in Section 9.5(b) with respect to the Potential Liability, any indemnification payment to be made by Indemnifying Party pursuant to this ARTICLE IX is to be paid by wire transfer of immediately available funds to an account designated by the Indemnified Party within five (5) Business Days after the date of the determination of the indemnification payment either by a mutual agreement of Parent and the Representative or by a final decision of a court of competent jurisdiction. Notwithstanding the foregoing sentence, in the event Sellers are the Indemnitors, then Purchaser may elect, in its sole discretion and upon written notice to the Representative, that all or any part of any indemnification payment to be made to the Purchaser Indemnitees (provided that such indemnification payment has been determined either by a mutual agreement of Parent and the Representative or by a final decision of a court of competent jurisdiction) is to be paid by reduction, dollar for dollar, of the Additional Merger Consideration Payment actually payable to Sellers.

(b) As soon as practicable following the Closing, the Surviving Company shall initiate an effort on behalf of Parent and the Surviving Company and use its best efforts to confirm and resolve, including with any necessary third party or third parties, the Potential Liability. This effort shall be led by Kristoffer Collo in his capacity as President, MicroPact, of the Surviving Company, or his designee (subject to reasonable approval by Parent), in consultation with Parent and the Representative. The Surviving Company's objective shall be to confirm and resolve the Potential Liability, while minimizing the costs, fees, expenses and settlement amounts payable in connection with such efforts, no later than one hundred eighty (180) days after Closing (the "Resolution Date"). Parent and the Representative acknowledge and agree that it may not be possible to determine with certainty the amount of the Potential Liability on or before the Resolution Date and, therefore, that the Resolution Date shall be extended for such additional period as reasonably necessary to make such determination, as mutually agreed in writing by Parent and the Representative. Once the Potential Liability is confirmed and resolved, (i) if the amount thereof (the "Resolved Amount") is greater than zero, the Special Holdback Amount shall be deemed automatically reduced by the Resolved Amount, (ii) if the Resolved Amount is less than the Special Holdback Amount (including if the Resolved Amount is zero), Parent shall disburse the balance of the Special Holdback Amount to the Paying Agent (for further distribution to the Sellers who delivered to Parent a duly completed and executed Letter of Transmittal and Surrendered Certificate(s) prior to such time). If the Resolved Amount is greater than the Special Holdback Amount, then the Representative may elect, in its sole discretion, to pay such excess amount by wire transfer of immediately available funds to an account designated by Parent within five (5) Business Days after the date of the determination of the Resolved Amount, or, in the event the Representative elects not to make such payment, Parent shall cause such excess amount to be recorded as a 2019 expense on the consolidated income statement of the Group Companies (regardless of whether Parent may have accrued a balance sheet reserve for any portion of the Potential Liability), which shall not constitute a violation of Section 1.15(c). If the amount of the Potential Liability has not been finally determined on or before the first anniversary of the Closing, Parent and the Representative agree to negotiate the release of the Special Holdback Amount (through the disbursement to the Paying Agent for further distribution to the Sellers) except to the extent all or any portion thereof is reasonably subject to continuing negotiations or dispute with a third party or third parties as to the amount of the Potential Liability. This Section 9.5(b) shall be the exclusive manner of payment by or on behalf Sellers with respect to the Potential Liability. Parent shall otherwise be responsible for any payment to a third party or third parties with respect to the Potential Liability.

9.6 Representative. Each Seller hereby appoints the Representative to act as the agent of the Sellers with full power to resolve all questions, disputes, conflicts and controversies concerning Losses as provided in this ARTICLE IX. Purchaser Indemnitees are entitled to rely on the acts and agreements of the Representative as the acts and agreements of the Sellers under this ARTICLE IX. With respect to any amount payable to the Seller Indemnitees under this ARTICLE IX by Parent, payment by Parent of such amount to the Representative shall be deemed a payment of such amount to the Seller Indemnitees, and upon making any such payment to the Representative, Parent shall have no further obligation or liability with respect thereto.

9.7 Exclusive Remedy. Except (a) with respect to the matters covered by Sections 1.10 and 1.15, (b) in the case where a Party seeks to obtain specific performance pursuant to Section 10.10, (c) a Party's right to seek and obtain any other equitable relief to which it shall be entitled under any other Transaction Agreement, (d) any Party's right to seek any remedy on account of the Company's Actual Fraud or actual common law fraud of Parent or Merger Sub arising under this Agreement, as applicable and (e) the Representative's rights to indemnification under Section 10.13, from and after the Closing, the rights of the Parties to indemnification pursuant to the provisions of this ARTICLE IX shall be the sole and exclusive remedy for the Parties with respect to any matter in any way arising from or relating to this Agreement or its subject matter. Subject to the foregoing, to the maximum extent permitted by law, the Parties hereby waive all other rights and remedies with respect to any matter in any way relating to this Agreement or arising in connection herewith, whether under any Law at common law, in equity or otherwise.

ARTICLE X MISCELLANEOUS

10.1 Expenses. Except as otherwise provided in this Agreement or the other Transaction Agreements, each Party shall bear its own costs and expenses incurred in connection with the negotiation and execution of this Agreement and the other Transaction Agreements and each other agreement, document and instrument contemplated hereby or thereby and the consummation of the Transaction. Parent shall be solely responsible for all governmental fees and charges applicable to any requests for Governmental Approvals or to the consummation of the Transaction. Parent, on the one hand, and the Representative, on the other hand, shall each pay one-half of all charges and expenses of the Paying Agent in connection with this Agreement.

10.2 GOVERNING LAW THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED ACCORDANCE WITH THE LAWS OF THE STATE OF DELAWARE WITHOUT GIVING EFFECT TO THE CHOICE OF LAW PRINCIPLES OF SUCH STATE THAT WOULD REQUIRE OR PERMIT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION.

10.3 SUBMISSION TO JURISDICTION; WAIVER ~~SUBJECT TO SECTION 1.10(d)(ii) AND SECTION 1.15(a)~~ (WHICH WILL GOVERN ANY DISPUTE RESPECTIVELY ARISING THEREUNDER), THE PARTIES AGREE THAT ANY DISPUTE, CONTROVERSY OR CLAIM ARISING OUT OF OR RELATING TO THE TRANSACTION UNDER THIS AGREEMENT, OR THE VALIDITY, INTERPRETATION, BREACH OR TERMINATION THEREOF, INCLUDING CLAIMS SEEKING REDRESS OR ASSERTING RIGHTS UNDER ANY LAW, SHALL BE RESOLVED EXCLUSIVELY IN THE STATE OR FEDERAL COURTS SITTING IN THE STATE OF DELAWARE (~~"THE DELAWARE COURTS"~~). IN THAT CONTEXT, AND WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, EACH PARTY AGREES TO SUBMIT IRREVOCABLY AND UNCONDITIONALLY:

(a) SUBMITS FOR ITSELF AND ITS PROPERTY IN ANY ACTION RELATING TO THE TRANSACTION OR TO THIS AGREEMENT, OR FOR RECOGNITION AND ENFORCEMENT OF ANY JUDGMENT IN RESPECT THEREOF, TO THE EXCLUSIVE JURISDICTION OF THE DELAWARE COURTS, AND APPEALS FROM SUCH COURTS HAVING

JURISDICTION OF APPEALS FROM ANY OF THE FOREGOING COURTS, AND AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION SHALL BE HEARD AND DETERMINED IN SUCH DELAWARE COURTS (TO THE EXTENT PERMITTED BY LAW, IN SUCH APPELLATE COURTS;

(b) CONSENTS THAT ANY SUCH ACTION MAY AND SHALL BE BROUGHT EXCLUSIVELY IN SUCH COURTS AND WAIVES ANY OBJECTION THAT IT MAY NOW OR HEREAFTER HAVE TO THE VENUE OR JURISDICTION OF ANY SUCH ACTION IN ANY SUCH COURT OR THAT SUCH ACTION WAS BROUGHT IN AN INCONVENIENT FORUM, AND AGREES NOT TO PLEAD OR CLAIM THE SAME;

(c) WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION (WHETHER BASED ON CONTRACT OR OTHERWISE) ARISING OUT OF OR RELATING TO THE TRANSACTION OR TO THIS AGREEMENT OR ITS PERFORMANCE UNDER OR THE ENFORCEMENT OF THIS AGREEMENT;

(d) AGREES THAT SERVICE OF PROCESS IN ANY SUCH ACTION MAY BE EFFECTED BY MAIL OR BY A COPY OF SUCH PROCESS BY REGISTERED OR CERTIFIED MAIL (OR ANY SUBSTANTIALLY SIMILAR METHOD OF MAIL), POSTAGE PREPAID, TO SUCH PARTY AT ITS ADDRESS AS PROVIDED IN SECTION 10.8; AND

(e) AGREES THAT NOTHING IN THIS AGREEMENT SHALL AFFECT THE RIGHT TO EFFECT SERVICE OF PROCESS IN ANY OTHER MANNER PERMITTED BY THE LAWS OF THE STATE OF DELAWARE.

10.4 Recovery of Costs and Attorneys' Fees . If there are any Legal Proceedings arising out of or relating to this Agreement or the transactions contemplated hereby, after the entry of a final written non-appealable order, if one Party has prevailed in the dispute, it shall be entitled to recover from the other Party all court costs, fees and expenses relating to such Legal Proceeding, including reasonable attorneys' fees that are specifically included in such court award.

10.5 Further Assurances. After the Closing, each Party shall from time to time, at the request of and without further cost or expense to the other, execute and deliver such other instruments of conveyance and assumption and take such other actions as may reasonably be requested in order to more effectively consummate the Transaction.

10.6 Entire Agreement. This Agreement (including the Schedules and Exhibits hereto), the documents delivered pursuant hereto and the other Transaction Agreements represent the entire understanding and agreement between the Parties with respect to the Transaction and supersedes all prior agreements among the Parties respecting the Transaction. The Parties have voluntarily agreed to define their rights, liabilities and obligations respecting the Transaction exclusively in contract pursuant to the express terms and provisions of this Agreement; and the Parties expressly disclaim that they are owed any duties or are entitled to any remedies not expressly set forth in this Agreement.

10.7 Amendments and Waivers. Prior to Closing, this Agreement can be amended, supplemented or changed; and any provision hereof can be waived, only by written instrument making specific reference to this Agreement signed by Parent and the Company. Following Closing, this Agreement can be amended, supplemented or changed, and any provision hereof can be waived, only by written instrument making specific reference to this Agreement signed by Parent and the Representative. The waiver by any Party of a breach of any provision of this Agreement shall not operate or be construed as a further or continuing waiver of such breach or as a waiver of any other or subsequent breach. No failure on the part of any Party to exercise, and no delay in exercising, any right, power or remedy hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of such right, power or remedy by such Party preclude any other or further exercise thereof or the exercise of any other right, power or remedy. In the event any provision of any other Transaction Agreement shall in any way conflict with the provisions of this Agreement (except where a provision therein expressly provides that it is intended to take precedence over this Agreement), this Agreement shall control.

10.8 Notices. All notices, requests, demands, and other communications to any Party or given under this Agreement will be in writing and delivered personally, by overnight delivery or courier, by registered mail, or by electronic transmission (with confirmation of receipt of electronic transmission) to the Parties at the address or electronic mail address specified below. Each notice, request, demand, or communication that is mailed, delivered, or transmitted in the manner described above shall be deemed sufficiently given, served, sent, and received for all purposes at such time as it is delivered to the addressee with the return receipt, the delivery receipt, the affidavit of messenger, the confirmation of receipt of electronic transmission, or at such time as delivery is refused by the addressee upon presentation. Each Party may designate by notice in writing a new address to which any notice, demand, request, or communication may thereafter be so given, served, or sent.

If to the Company (prior to the Closing) or the Representative, to:

c/o Arlington Capital Partners
5425 Wisconsin Avenue, Suite 200
Chevy Chase, MD 20815
Attention: Michael Lustbader
Facsimile: (202) 337-7525
Email: mlustbader@arlingtoncap.com

With a copy (which shall not constitute notice) to:

Sheppard Mullin Richter & Hampton LLP
2099 Pennsylvania Avenue, NW, Suite 100
Washington, DC 20006
Attention: Lucantonio N. Salvi
Facsimile: (202) 747-3811
Email: lsalvi@sheppardmullin.com

If to Parent or Merger Sub, or, following the Closing, the Surviving Company, to:

Tyler Technologies, Inc.
5101 Tennyson Parkway
Plano, TX 75024
Attention: H. Lynn Moore, Jr., President
Facsimile: (972) 713-3777
E-mail: Lynn.Moore@tylertech.com

With a copy (which shall not constitute notice) to:

Munck Wilson Mandala, LLP
12770 Coit Road, Suite 600
Dallas, TX 75251
Attention: Randall G. Ray
Fax: (972) 628-3613
E-mail: rray@munckwilson.com

10.9 Severability. If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced by any Law or public policy, all other terms or provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the Transaction is not affected in any manner materially adverse to any Party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the Parties shall negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in an acceptable manner in order that the Transaction is consummated as originally contemplated to the greatest extent possible.

10.10 Specific Performance.

(a) Each Party acknowledges and agrees that the other Parties would be irreparably damaged if any of the provisions of this Agreement are not performed in accordance with their specific terms and that any breach of this Agreement by the Company, Parent or Merger Sub could not be adequately compensated in all cases by monetary damages alone, even if available. Accordingly, in addition to any other right or remedy to which any Party may be entitled at law or in equity, before or after the Closing, each Party shall be entitled to enforce any provision of this Agreement by a decree of specific performance and to temporary, preliminary and permanent injunctive relief to prevent breaches or threatened breaches of any of the provisions of this Agreement, without posting any bond or other undertaking. Each of the Parties further agrees that it shall not object to, or take any position inconsistent with respect to, whether in a court of law or otherwise, (i) the appropriateness of the specific performance contemplated by this Section 10.10 and (ii) the exclusive jurisdiction of the courts set forth in Section 10.3 with respect to any action brought for any such remedy.

(b) Each Party further agrees that (i) by seeking the remedies provided for in this Section 10.10, a Party shall not in any respect waive its right to seek any other form of relief that may be available to such party under this Agreement or in the event that the remedies provided

for in this Section 10.10 are not available or otherwise are not granted, and (ii) nothing set forth in this Section 10.10 shall require any Party to institute any action for (or limit any Party's right to institute any action for) specific performance under this Section 10.10 prior or as a condition to exercising any termination right under ARTICLE VII, nor shall the commencement of any action pursuant to this Section 10.10 or anything set forth in this Section 10.10 restrict or limit any such Party's right to terminate this Agreement in accordance with ARTICLE VII, or pursue any other remedies under this Agreement that may be available then or thereafter.

10.11 No Third-Party Beneficiaries; No Recourse Against Affiliates Nothing in this Agreement, express or implied, is intended or shall be construed to give any rights to any Person or entity other than (a) the Parties and their successors and permitted assigns, (b) the Purchaser Indemnitees and the Seller Indemnitees and (c) each D&O Indemnified Person, who shall have the right to enforce the obligations of Parent and the Company solely with respect to Section 5.9. No past, present or future director, officer, employee, incorporator, member, partner, stockholder, Affiliate, agent, attorney or representative of the Company, any Operating Subsidiary, any Seller or any of its respective Affiliates shall have any liability (whether in Law or in equity or in contract or in tort) for any obligations or liabilities of the Company arising under, in connection with or related to this Agreement or for any claim based on, in respect of, or by reason of, the Transaction, including any alleged nondisclosure or misrepresentations made by any such Persons.

10.12 Assignment. No Party may assign or transfer this Agreement or any right, interest or obligation hereunder, directly or indirectly (by operation of Law or otherwise), without the prior written approval of Parent, on the one hand, and the Representative, on the other hand; provided, that each of Parent and Merger Sub may assign its rights, but not its obligations, under this Agreement to (a) any of its Affiliates or (b) its financing sources for collateral purposes; and, provided, further that any such assignment shall not relieve Parent or Merger Sub of its obligations hereunder. Any assignment in violation of this Section 10.12 shall be void. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns.

10.13 Authorization of Representative.

(a) By virtue of adoption of this Agreement by the Sellers, and without further action by any such Seller, the Representative is hereby appointed, authorized and empowered to act as an agent, representative and attorney-in-fact for each of the Sellers in connection with and to facilitate the consummation of the Transactions, including pursuant to the Paying Agent Agreement and the matters related to (w) the Merger Consideration contemplated by Section 1.10, (x) the payment of amounts from the Representative Expense Fund Amount, (y) the preparation and filing of the Tax Returns with respect to the Group Companies contemplated by ARTICLE VII and (z) all other such items and matters set forth in this Agreement and the other Transaction Agreements contemplating participation by the Representative (collectively, "Representative Actions"), in each case with the power and authority, including power of substitution, acting in the name of or for and on behalf of each Seller, and subject to the limitations set forth herein or therein: (i) to execute and deliver and receive such waivers and consents as the Representative, in its sole discretion, may deem necessary or desirable; (ii) to collect and receive all moneys and other proceeds

and property payable to the Representative from the Representative Expense Fund Amount, and, subject to any applicable withholding Laws, and, net of any out-of-pocket expenses incurred by the Representative, disburse and pay the same to each Seller in accordance with such Seller's Pro Rata Share; (iii) to authorize the set off, reduction, cancellation or the release of any funds from the Holdback Amounts in accordance with this Agreement; (iv) to authorize the release of any funds by the Paying Agent in accordance with this Agreement and the Paying Agent Agreement; (v) to enforce and protect the rights and interests of the Sellers and the Representative arising out of or under or in any manner relating to any Representative Action, and to take any and all actions which the Representative believes are necessary or appropriate in respect thereof, including asserting or pursuing any claim, action, proceeding or investigation (a "Claim") against Parent, Merger Sub and/or any of the Group Companies (after the Closing) or defending any Claim by Parent, Merger Sub and/or any of the Group Companies (after the Closing) against the Sellers relating to this Agreement, consenting to, compromising or settling any such Claims, conducting negotiations with Parent, Merger Sub, the Group Companies (after the Closing) and their representatives regarding such Claims; (vi) agree to, object to, negotiate, resolve, enter into settlements and compromises of, demand arbitration or litigation of, and comply with Orders with respect to, indemnification claims by Parent or any other Purchaser Indemnitee pursuant to ARTICLE IX (vii) to refrain from enforcing any right of any Seller or the Representative arising out of or under or in any manner relating to any Representative Action in connection with the foregoing; provided, that no such failure to act on the part of the Representative, except as otherwise provided in this Agreement shall be deemed a waiver of any such right or interest by the Representative or by the Sellers unless such waiver is in writing signed by the waiving party or by the Representative; (viii) to make, execute, acknowledge, deliver and receive all such other agreements, guarantees, Orders, receipts, endorsements, notices, requests, instructions, certificates, stock powers, letters and other writings, and, in general, to do any and all things and to take any and all action that the Representative, in its sole and absolute discretion, may consider necessary or proper or convenient in connection with or to carry out the Representative Actions, and all other agreements, documents or instruments executed in connection therewith; and (viii) take all such other actions as the Representative shall deem necessary or appropriate, in its discretion, for the accomplishment of the foregoing and the consummation of the Transactions. The Parties acknowledge and agree that the appointment, authorization and empowerment of the Representative set forth in this Section 10.13(a) shall not include any matter specifically reserved for a Seller in this Agreement.

(b) The Representative shall be entitled to the payment of all its out-of-pocket expenses incurred as the Representative subject to and in accordance with the terms and conditions set forth in this Agreement, including Section 1.9(b), which such amounts to be used by the Representative to pay expenses incurred by the Representative in its capacity as the Representative; provided, that if the Transaction is not consummated, the Company shall reimburse the Representative for all costs and expenses reasonably incurred by the Representative in connection with the Transaction and neither Parent nor Merger Sub shall have any liability to the Representative or the Company in connection therefor. Once the Representative determines, in its sole discretion, that the Representative will not incur any additional expenses in its capacity as the Representative, then the Representative will distribute the remaining unused Representative Expense Fund Amount, if any, to the Sellers in accordance with their Pro Rata Shares. If, however, the Representative incurs expenses, in its capacity as the Representative, in an amount exceeding the Representative

Expense Fund Amount, then the Representative shall be entitled to receive from the Sellers in accordance with their Pro Rata Shares an amount for the difference between the total expenses incurred by the Representative and the Representative Expense Fund Amount. Furthermore, the Representative shall be entitled to cause the Paying Agent to withhold and pay a portion of any Other Seller Payments to the Representative, by providing written notice thereof to the Paying Agent and Parent prior to its distribution of such Other Seller Payment, for the purpose of the Representative making any payments or paying any expenses under or in connection with this Agreement on behalf of the Sellers to satisfy costs, expenses and/or liabilities of the Representative in connection with the performance of its duties under this Agreement. In connection with this Agreement, and any instrument, agreement or document relating hereto or thereto, and in exercising or failing to exercise all or any of the powers conferred upon the Representative hereunder, (i) the Representative shall incur no responsibility whatsoever to any of the Sellers by reason of any error in judgment or other act or omission performed or omitted hereunder or any such other agreement, instrument or document, excepting only responsibility for any act or failure to act which represents willful misconduct, (ii) the Representative shall not be liable to Sellers for any apportionment or distribution of payments made by the Representative in good faith, and if any such apportionment or distribution is subsequently determined to have been made in error, the sole recourse of any Seller to whom payment was due, but not made or not made in full, shall be to recover from the other Sellers any payment in excess of the amount to which such Seller is determined to have been entitled, and (iii) the Representative shall be entitled to rely on the advice of counsel, public accountants or other independent experts experienced in the matter at issue, and any error in judgment or other act or omission of the Representative pursuant to such advice shall in no event subject the Representative to liability to any of the Sellers. Each Seller shall indemnify, on a pro rata basis (based on such Seller's Pro Rata Share), the Representative against all Losses (including any and all expense whatsoever reasonably incurred in investigating, preparing or defending against any litigation, commenced or threatened or any claims whatsoever), arising out of or in connection with any claim, investigation, challenge, action or proceeding or in connection with any appeal thereof, relating to the acts or omissions of the Representative hereunder. The foregoing indemnification shall not apply in the event of any action or proceeding which finally adjudicates the liability of the Representative hereunder for its willful misconduct.

(c) All of the indemnities, immunities and powers granted to the Representative under this Agreement shall survive the Closing Date and/or any termination of this Agreement. Each of Parent and Merger Sub shall have the right to rely upon all actions taken or omitted to be taken by the Representative pursuant to this Agreement, all of which actions or omissions shall be legally binding upon the Sellers. The grant of authority provided for herein (i) is coupled with an interest and shall be irrevocable and survives the death, incompetency, bankruptcy or liquidation of any of the Sellers and (ii) shall survive the Closing. Any amounts received by the Representative on account of the Sellers, whether pursuant to Section 1.9 or otherwise, shall be distributed to the Sellers, net of any reserve the Representative may deem necessary in its reasonable discretion, in accordance with Section 1.11.

(d) The Parties acknowledge and agree that the Representative shall have no liability to, and shall not be liable for any Losses of, any Party in connection with any obligations of the Representative under this Agreement or otherwise in respect of this Agreement or the Transaction.

(e) In the event of the death, incapacity, liquidation, dissolution or resignation of any Person serving as the Representative, as applicable, within twenty (20) days of such death, incapacity, liquidation, dissolution or resignation, the Sellers shall choose the successor representative by affirmative vote of the Sellers who hold a majority of the voting power of the Company based on their Pro Rata Share. Following such resignation, any reference to the Representative herein shall be deemed to include such successor representative.

10.14 Attorney Conflict Waiver. Recognizing that Sheppard Mullin Richter & Hampton LLP has acted as legal counsel to the Representative and its Affiliates and the Group Companies prior to the Closing, and that Sheppard Mullin Richter & Hampton LLP intends to act as legal counsel to the Representative and its Affiliates (which will no longer include the Group Companies) after the Closing, each of Parent and the Company hereby waives, on its own behalf and agrees to cause its Affiliates to waive, any conflicts that may arise in connection with Sheppard Mullin Richter & Hampton LLP representing the Representative or its Affiliates (including any of the Sellers) after the Closing as such representation may relate to Parent, any Group Company or the Transaction. In addition, all communications involving attorney-client confidences between the Representative, its Affiliates or any Group Company and Sheppard Mullin Richter & Hampton LLP in the course of the negotiation, documentation and consummation of the Transaction shall be deemed to be attorney-client confidences that belong solely to the Representative and its Affiliates (and not the Group Companies). Accordingly, the Group Companies shall not have access to any such communications, or to the files of Sheppard Mullin Richter & Hampton LLP relating to its engagement whether or not the Closing shall have occurred. Without limiting the generality of the foregoing, upon and after the Closing, (i) the Representative and its Affiliates (and not the Group Companies) shall be the sole holders of the attorney-client privilege with respect to such engagement, and none of the Group Companies shall be a holder thereof, (ii) to the extent that files of Sheppard Mullin Richter & Hampton LLP in respect of such engagement constitute property of the client, only the Representative and its Affiliates (and not the Group Companies) shall hold such property rights and (iii) Sheppard Mullin Richter & Hampton LLP shall have no duty whatsoever to reveal or disclose any such attorney-client communications or files to any of the Group Companies by reason of any attorney-client relationship between Sheppard Mullin Richter & Hampton LLP and any of the Group Companies or otherwise.

10.15 Limitation on Damages. Notwithstanding anything else to the contrary set forth herein, except with respect to punitive or exemplary damages required to be paid to a third party as part of a Third Party Claim under ARTICLE IX, no Party or other Indemnitor shall be liable for, and no breach of any representation, warranty or covenant contained herein or in any certificate delivered pursuant to this Agreement shall give rise to any right on the part of Parent, Merger Sub, the Company, any Seller or any other Indemnified Party to, any punitive, special, consequential, incidental, indirect, exemplary or remote damages or Losses based thereon, including regarding the loss of future revenue, income, profits, diminution of value or loss of business reputation or

opportunity, and no Party or other Indemnitor will be obligated to any other Person for any Loss determined as a multiple of income, increase factor, premium or revenue in connection with the transactions contemplated hereby.

10.16 Counterparts. This Agreement may be executed in one or more counterparts, including by facsimile or other electronic transmission (including e-mail), each of which shall be deemed to be an original copy of this Agreement and all of which, when taken together, shall be deemed to constitute one and the same agreement. Such delivery of counterparts shall be conclusive evidence of the intent to be bound hereby and to the extent applicable, the foregoing constitutes the election of the Parties to invoke any Law authorizing electronic signatures.

ARTICLE XI DEFINITIONS AND INTERPRETATIONS

11.1 Certain Definitions.

(a) For purposes of this Agreement, the following terms shall have the meanings specified in this Section 11.1:

"Accounting Referee" means BDO USA LLP.

"Accounting Rules" means, collectively, (i) the rules, principles and sample calculation of Working Capital set forth on Exhibit B (collectively, the "Agreed Principles"), and (ii) the same accounting principles, methods, practices, policies and procedures, with consistent classifications, judgments, and valuation and estimation methodologies, that were used in the preparation of the audited Company Financial Statements for the most recent audited fiscal year-end as if such accounts were being prepared and audited as of a fiscal year-end, including GAAP, applied in a manner consistent with its application to the preparation of the audited Company Financial Statements (collectively, the "Historical Principles"); provided, that notwithstanding any provisions or concepts of GAAP, no developments or events taking place after the Closing Date shall be taken into account; provided, further, that in the event of any conflict among the Agreed Principles and the Historical Principles, the Agreed Principles shall take precedence.

"Actual Fraud" means actual common law fraud by the Company in the making of its representations and warranties contained in ARTICLE III or in any certificate delivered pursuant to Section 6.2(e) of this Agreement.

"Adjustment Holdback Amount" means \$1,000,000.

"Adjustment Time" means 11:59 p.m., U.S. Eastern Time, on the Closing Date.

"Affiliate" means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, controls, is controlled by or is under common control with, such Person, and the term "control" (including the terms "controlled by" and "under common control with") means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through ownership of voting securities, by contract or otherwise.

"Applicable Privacy and Security Laws" means all applicable Laws and guidance issued by a Governmental Authority concerning the privacy or security of Personal Information or other confidential data, and all regulations promulgated and guidance issued by Governmental Authorities thereunder.

"Arlington Fees" means all accrued and unpaid fees and expenses payable to Arlington Capital II, L.P. as of the Closing Date (including as a result of the consummation of the Transaction) pursuant to the Management Services Agreement.

"Business Day" means any day of the year other than a Saturday, Sunday or any other day on which national banking institutions are authorized or obligated to close under the federal Laws of the United States.

"Cash and Cash Equivalents" means the sum of the fair market value (expressed in United States dollars) of (i) all cash and (ii) all cash equivalents (including deposits, amounts held in escrow, marketable securities and short term investments) of the Group Companies, in each case, determined in accordance with GAAP as of a specified time. Cash and Cash Equivalent shall (i) be reduced by issued but uncleared checks and drafts of the Group Companies, and (ii) be increased by inbound checks and drafts deposited for the account of the Group Companies, in each case as of such time.

"Closing Cash" means the aggregate amount of all Cash and Cash Equivalents of the Group Companies as of the Adjustment Time.

"Closing Date Indebtedness" means all Indebtedness of the Group Companies as of the Adjustment Time.

"Code" means the Internal Revenue Code of 1986, as amended.

"Commercial-Off-The-Shelf Software" means software that was obtained from a third party on general commercial terms widely and readily available for purchase by the general public on such commercial terms, and was licensed on a non-exclusive basis for fixed payments of less than \$50,000 in the aggregate or annual payments of less than \$50,000 per year.

"Common Stock" means the common stock of the Company, par value \$0.001.

"Company EBITDA" means, for any period of determination with respect to the Group Companies on a consolidated basis, earnings before interest, taxes, depreciation and amortization for the applicable fiscal period of the Company calculated in accordance with GAAP,

provided that, in making such determination: (a) the following shall not be treated as an expense: (i) any intercompany management fees, costs, expenses or interest, other than cost reimbursement for out-of-pocket expenses incurred in connection with Group Companies' customer service or business development, charged to the Group Companies by Parent or its Affiliates; (ii) any fees and expenses incurred by the Group Companies in connection with the transactions contemplated hereby; (iii) fees and expenses of outside auditors, accountants or financial personnel incurred in connection with the preparation of the Closing Statement and EBITDA Statements or the performance of any related audit thereof; (iv) any dividends or distributions made by the Company to its stockholder(s) or other equityholder(s); (v) any transaction expenses incurred in connection with any potential or contemplated acquisition by the Group Companies; (vi) any expense incurred by the Group Companies related to the unsuccessful enforcement by the Group Companies or Parent of this Agreement or the other Transaction Agreements against Sellers; (vii) in the event the employment of any Seller by the Group Companies is terminated and an individual is hired to replace such Seller, any severance expenses payable to such Seller; and, following the hiring of such Seller's replacement, expenses incurred in connection with locating such a replacement (including recruiting fees and sign on bonuses); (viii) any non-cash charges (other than any such non-cash item to the extent it represents an accrual of, or reserve for, anticipated cash expenditures in any future period); (ix) any extraordinary or non-recurring expenses, losses write-offs or charges; (x) (A) any costs (including fees and expenses) incurred to the extent actually reimbursed by a third party, (B) any costs incurred with respect to liability, casualty events or business interruption, to the extent covered by insurance, and (C) the amount of any non-recurring restructuring charge or reserve, integration cost, or other non-recurring business optimization expense or cost; (xi) any non-cash mark-to-market losses relating to any hedging arrangements; (xii) any net losses from discontinued or disposed operations; and (xiii) any purchase accounting adjustments; (b) any equity securities, or securities convertible into or exchangeable for, at any time, equity securities, received by the Group Companies in lieu of cash as fees for services (and any dividends, distributions or appreciation of such securities) shall be treated as income; (c) no proceeds from nor any dividends or refunds with respect to, nor any increases in the cash surrender value of any life insurance or disability policy under which any Group Company is the named beneficiary or otherwise entitled to recovery, shall be included in income, and the premium expense related thereto shall be excluded as an expense; (d) the reversal or other reduction of any accrued liability or reserve shall be charged to the calendar year during which such liability was accrued or such reserve was established; and (e) the one-time effect of changes in accounting principles shall be excluded.

"Company Material Adverse Effect" means any change, circumstance, condition, effect, event, occurrence, result or state of facts that is, individually or in the aggregate, materially adverse to the business, assets, properties, financial condition or results of operations of the Group Companies, taken as a whole; provided that no event, change, occurrence, circumstance or effect (by itself or taken together with any and all other events, changes, occurrences, circumstances or effects) that results from or arises out of or is related to any of the following shall constitute or be deemed to contribute to a "Company Material Adverse Effect", or be taken into account in determining whether a "Company Material Adverse Effect" has occurred or may, would or could occur: (i) changes in general economic conditions in the United States or any other country or region in the world, or changes in conditions in the global economy generally; (ii) changes in conditions in the financial markets, credit markets or capital markets in the United States or any other country

or region in the world; (iii) changes in political conditions in the United States or any other country or region in the world, acts of war, sabotage or terrorism (including any escalation or general worsening of any such acts of war, sabotage or terrorism), earthquakes, hurricanes, tsunamis, tornadoes, floods, mudslides, wildfires or other natural disasters, weather conditions and other force majeure events, in each case in the United States or any other country or region in the world; (iv) changes affecting the industry generally in which the Group Companies operate; (v) the announcement of this Agreement, the pendency of the Transaction or any investigation or challenge to the Transaction, or the consummation of the Transaction (including the loss of any employees, suppliers, customers, advertisers, assets or property interests resulting from the identity of Parent or Merger Sub); (vi) the taking of any action required or contemplated by this Agreement or undertaken with Parent's consent pursuant to the terms of this Agreement, or the failure to take any action prohibited by this Agreement or to which Parent refused to provide consent pursuant to the terms of this Agreement; (vii) changes in Law or other legal or regulatory conditions (or the interpretation thereof); (viii) changes in GAAP or other accounting standards (or the interpretation thereof); (ix) any failure, in and of itself, by the Group Companies to meet internal or external projections or forecasts or revenue or earnings predictions (provided that the cause or basis for the Company or its Subsidiaries failing to meet such projections or forecasts or revenue or earnings predictions may be considered in determining the existence of a Company Material Adverse Effect unless such cause or basis is otherwise excluded by this definition); or (x) any failure of Parent to obtain any waiver or consent from any Person required in connection with this Agreement.

"Company Stockholder Agreement" means that certain Amended and Restated Stockholders Agreement of the Company, dated August 14, 2015, by and among, the Company and the stockholders of the Company signatories thereto, as amended, restated or otherwise modified from time to time.

"Contract" means any written agreement, contract, indenture, note, mortgage bond, lease or license.

"Data Room" means the electronic documentation site established by Spurrier Capital Partners on behalf of the Company.

"Environmental Laws" means as enacted and in effect on or prior to the Closing Date, any applicable Law relating to (i) pollution or exposure to Hazardous Materials, (ii) the protection, preservation, or restoration of the environment, including laws relating to exposures to, or emissions, discharges, releases, or threatened releases of Hazardous Materials into ambient air, surface water, ground water, or land surface or subsurface strata, or (iii) the treatment, storage, transport, handling, or disposal of any Hazardous Materials. "Environmental Laws" include the Federal Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. §§ 9601 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq., the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251 et seq., the Toxic Substances Control Act, 15 U.S.C. §§ 2601 et seq., the Clean Air Act, 42 U.S.C. §§ 7401 et seq., the Safe Drinking Water Act, 42 U.S.C. §§ 300f et seq., the Hazardous Materials Transportation Act, 49 U.S.C. §§ 5101 et seq., the Atomic Energy Act, 42 U.S.C. §§ 2011 et seq., and the Federal

Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. §§ 136et seq., in each case as amended, and any other federal, state, or local Laws relating to any of the foregoing.

“Equitable Principles” means (i) bankruptcy, insolvency, reorganization, moratorium and similar Laws, in each case, affecting creditors’ rights and remedies generally, and (ii) general principles of equity (regardless of whether enforcement is sought in a proceeding at law or in equity).

“Equity Incentive Plan” means the MP Holdings Parent, Inc. Equity Incentive Plan dated as of May 9, 2011, as amended, restated or otherwise modified to date, or any other equity incentive plan or arrangement adopted or approved by the board of directors of the Company, and any award agreements issued pursuant thereto, in each case, as amended from time to time, and any successor equity incentive plans thereto.

“ERISA” means the Employee Retirement Income Security Act of 1974, as amended.

“ERISA Affiliate” means any corporation or trade or business under common control with the Company as determined under Sections 414(b), (c), (m), or (o) of the Code.

“Fully Diluted Shares” means the sum of all shares of Common Stock, including Vested Restricted Stock but excluding Unvested Restricted Stock, issued and outstanding immediately prior to the Effective Time.

“GAAP” means generally accepted accounting principles in the United States of America in effect from time to time.

“Government Bid” means any quotation, bid or proposal by the Company or any of its Subsidiaries that, if accepted or awarded, would lead to a Contract with a Governmental Authority, including a prime contractor or a higher tier subcontractor to the United States government or any foreign government, for the design, manufacture or sale of products or the provision of services by the Company or any of its Subsidiaries.

“Government Contract” means any Contract that (i) is between the Company or any of its Subsidiaries, on the one hand, and a Governmental Authority, on the other hand, or (ii) is entered into by the Company or any of its Subsidiaries as a subcontractor (at any tier) in connection with a Contract between another Person and a Governmental Authority.

“Governmental Antitrust Authority” shall mean any Governmental Authority with regulatory jurisdiction over any consent required for the consummation of the Transaction, under the HSR Act or under Other Competition Laws.

“Governmental Authority” means any government or governmental, judicial, administrative or regulatory body thereof, or political subdivision thereof, whether domestic, foreign, federal, state, provincial or local, or any agency, instrumentality or authority thereof, or any court or arbitrator (public or private), but excluding, in each case (except for purposes of the

definitions of "Governmental Contract" and Section 3.14), Governmental Authorities in their capacities as customers of the Company or its Subsidiaries.

"Group Companies" means (i) prior to the Closing, the Company and the Operating Subsidiaries and (ii) from and after the Closing, the Surviving Company and the Operating Subsidiaries.

"Hazardous Materials" means any substances, wastes or materials that are listed, regulated or defined as hazardous, toxic, pollutants, or contaminants under any Environmental Law, including petroleum or petroleum by-products, lead, or polychlorinated biphenyls.

"Holdback Amounts" means the Adjustment Holdback Amount and the Special Holdback Amount.

"HSR Act" shall mean the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and the rules and regulations promulgated thereunder.

"Indebtedness" of any Person means, without duplication, (i) the outstanding principal amount of and accrued and unpaid interest of (A) indebtedness of such Person or its Subsidiaries for borrowed money and (B) indebtedness evidenced by notes, debentures, bonds or other similar instruments for the payment of which such Person or its Subsidiaries is responsible or liable; (ii) all obligations of such Person or its Subsidiaries issued or assumed as the deferred purchase price of property, all conditional sale obligations of such Person and all obligations of such Person under any title retention agreement (but excluding accounts payable and other current liabilities arising in the Ordinary Course of Business); (iii) capitalized lease obligations of such Person or its Subsidiaries; (iv) all obligations of the type referred to in clauses (i) through (iii) of other Persons for the payment of which such Person or its Subsidiaries is responsible or liable, directly or indirectly, as obligor, guarantor or surety; and (v) all obligations of the type referred to in clauses (i) through (iv) of other Persons secured by any Lien on any property or asset of such Person or its Subsidiaries; provided, however, that Indebtedness shall not include (1) any amounts taken into account in the calculation of the Working Capital as of the Adjustment Time or Transaction Expenses, (2) any undrawn letter of credit or similar instrument or (3) any long-term or short-term deferred revenue and customer deposits.

"Industrial Security Manual" means the National Industrial Security Program Operating Manual (NISPOM) for Safeguarding Classified Information and all supplements thereto published by the United States Department of Defense (DoD 52220.22-M) prescribing the specific requirements, restrictions, and other safeguards necessary in the interest of national security for the safeguarding of classified information.

"Intellectual Property" means any and all of the following in the United States and foreign countries: (i) patents, patent disclosures, patented and patentable designs and inventions, all design, plant and utility patents, letters patent, utility models, pending patent applications and provisional applications, and all issuances, divisions, continuations, continuations-in-part, reissues, extensions, reexaminations and renewals of such patents and applications; (ii) trademarks, service marks, trade dress, corporate names, fictitious business names, logos, and slogans (and all

translations, adaptations, derivations, and combinations of the foregoing), together with all goodwill associated with each of the foregoing; (iii) Internet domain names; (iv) original works of authorship in any medium of expression, whether or not published, copyrights and copyrightable works; (v) registrations and applications for any of the foregoing; (vi) trade secrets, confidential information, technical data, know-how, and inventions; (vii) Software and Technology; and (viii) all rights to sue at law or in equity and recover and retain damages, costs and attorneys' fees for past, present and future infringement and any other rights relating to any of the foregoing, including the right to receive all proceeds therefrom (including without limitation license fees, royalties, income, payments, claims, damages, and proceeds of a suit in any country).

"IRS" means the United States Internal Revenue Service.

"Knowledge" means, with respect to the Company, the actual knowledge (without independent inquiry) of Dan Smith, Kris Collo, Growson Edwards and Michael Cerniglia.

"Law" means all foreign, federal, state, provincial and local laws statutes, codes, ordinances, rules, regulations, resolutions, and Orders.

"Leases" means any lease, license, sublease, sublicense, franchise, easement or other Contract pursuant to which a Person has the right to use any real, personal or intangible property. When used as a verb, the word "Lease" or "Leased" (or words having correlative meanings) means to lease, license, sublease, sublicense, obtain a franchise, acquire an easement or otherwise use any real, personal or intangible property.

"Legal Proceeding" means any judicial, administrative or arbitral action, suit, claim, review or other proceeding, whether public or private, by or before a Governmental Authority or arbiter.

"Lien" means any lien, encumbrance, pledge, mortgage, deed of trust or other security interest or similar restriction.

"Management Services Agreement" means that certain Professional Services Agreement, dated as of May 9, 2011, by and among the Company (as successor in interest to Indigo Holding Company, Inc., a Delaware corporation) and Arlington Capital II, L.P., as amended.

"Net EBITDA" means (i) the Company EBITDA for a particular period less (ii) capitalized software development costs of the Group Companies for the same period. For illustrative purposes, Exhibit D sets forth the calculation of Net EBITDA for the twelve (12)-month period ended December 31, 2018.

"Order" means any order, injunction, judgment, decree, determination, ruling, writ, assessment or arbitration or other award of a Governmental Authority.

"Ordinary Course of Business" means the ordinary and usual course of business of the Group Companies consistent with past practices.

"Organizational Documents" means, with respect to a particular Person (other than a natural person), the certificate/articles of formation/incorporation/organization, bylaws, partnership agreement, limited liability company agreement, trust agreement or other similar organizational document or agreement, as applicable, of such Person.

"Other Competition Laws" shall mean all Laws (other than the HSR Act) intended to prohibit, restrict or regulate actions having an anti-competitive effect or purpose, including competition, restraint of trade, anti-monopolization, merger control or antitrust Laws.

"Other Seller Payments" means any additional cash amounts (without interest) payable from time to time to the Sellers pursuant to Section 1.10(e), Section 1.15, Section 9.5(b) and Section 10.13(b) or any other funds payable to the Sellers hereunder after the Closing Date.

"Parent Closing Date Transaction" means any transactions or elections, including Tax elections, made on the Closing Date, after the Closing, by the Group Companies that are outside the Ordinary Course of Business.

"Parent Material Adverse Effect" means any event, change, occurrence, circumstance or effect that, when taken individually or together with all other adverse events, changes, occurrences, circumstances or effects, would, or is reasonably expected to, prevent or materially delay, Parent or its Affiliates from consummating the Transaction or performing its obligations under this Agreement.

"Per Share Merger Consideration" means an amount per share of Common Stock (including Vested Restricted Stock but excluding Unvested Restricted Stock) equal to (i) the Merger Consideration divided by (ii) the Fully Diluted Shares.

"Per Share Portion" means the quotient (expressed as a percentage) of (i) one (1), divided by (ii) the Fully Diluted Shares.

"Permits" means any approvals, authorizations, consents, licenses, permits or certificates of a Governmental Authority.

"Permitted Liens" means (i) all Liens disclosed in policies of title insurance and/or recorded in public records; (ii) Liens for Taxes, assessments or other governmental charges not yet due and payable or not yet delinquent (or which may be paid without interest or penalties) or the amount or validity of which is being contested in good faith by appropriate proceedings; (iii) mechanics', carriers', workers', repairers' and similar Liens arising or incurred in the Ordinary Course of Business or the amount or validity of which is being contested in good faith by appropriate proceedings; (iv) pledges, deposits or other Liens to the performance of bids, trade contracts (other than for borrowed money), Leases or statutory obligations (including, workers' compensation, unemployment insurance or other social security legislation, but excluding Liens for Taxes); (v) zoning, entitlement and other land use or Environmental Laws by any Governmental Authority; (vi) survey exceptions and matters as to the Leased Real Property which would be disclosed by an accurate survey or inspection of such real property and which do not materially impair the current occupancy or current use of such Leased Real Property; (vii) any Lien affecting the fee interest of

any Leased Real Property; (viii) title of a lessor under a capital or operating Lease; (ix) any Liens discharged or released at or in connection with Closing; and (x) such other imperfections in title, charges, easements, restrictions and encumbrances which do not or would not have, individually or in the aggregate, a Company Material Adverse Effect.

“Person” means any individual, corporation, partnership, firm, joint venture, association, joint-stock company, trust, unincorporated organization, Governmental Authority or other entity.

“Personal Information” means any information that identifies, or in combination with other information may identify, an individual, including name, address, telephone number, health information, social security number, driver’s license number, government-issued identification number, financial account number, or log-in information.

“Pre-Closing Tax Period” means (i) any taxable period ending on or before the Closing Date, and (ii) with respect to any Straddle Period, the portion of such Straddle Period ending on the Closing Date.

“Preferred Stock” means the preferred stock of the Company, par value \$0.001 per share.

“Pro Rata Share” means, with respect to each Seller, a percentage obtained by dividing (i) the aggregate number of shares of Common Stock, including Vested Restricted Stock but excluding Unvested Restricted Stock, held by such Person immediately prior to the Effective Time, by (ii) the total number of Fully Diluted Shares outstanding immediately prior to the Effective Time. The respective Pro Rata Shares of the Sellers are set forth in Exhibit C and shall be subject to update for any vesting occurring between the date of this Agreement and the Effective Time.

“Requisite Stockholder Approval” means, pursuant to Section 251 of the DGCL, the affirmative vote or written consent of the stockholders of the Company holding a majority of the outstanding shares of capital stock of the Company entitled to vote on the approval of this Agreement and transactions contemplated hereby, including the Merger.

“Restricted Stock” means each issued and outstanding share of Common Stock that is subject to restrictions under the Equity Incentive Plan and Restricted Stock Award Agreement(s) with the Company.

“Restricted Stock Award Agreement” means a restricted stock award agreement between any Person and the Company or its predecessor entered into pursuant to the Equity Incentive Plan.

“Schedules” means the Company Disclosure Schedule and/or the Parent Disclosure Schedule, as the case may be.

“Securities Act” means the Securities Act of 1933, as amended.

"Sellers" means, collectively, as of immediately prior to the Effective Time, each holder of Common Stock and Vested Restricted Stock.

"Software" means , any and all (a) computer programs, including any and all software implementations of algorithms, models, and methodologies, whether in source code or object code, (b) databases and compilations, including any and all data and collections of data, whether machine readable or otherwise, (c) descriptions, flow-charts, and other work product used to design, plan, organize, and develop any of the foregoing, screens, user interfaces, report formats, firmware, development tools, templates, menus, buttons, and icons, and (d) all documentation including user manuals and other training documentation related to any of the foregoing, but excluding Commercial-Off-The-Shelf Software.

"Special Holdback Amount" means \$650,000.

"Stock Certificate" means a certificate formerly representing any shares of Common Stock.

"Straddle Period" means any taxable period beginning on or before the Closing Date and ending after the Closing Date.

"Subsidiary" means any Person of which a majority of the outstanding share capital, voting securities or other equity interests is owned, directly or indirectly, by another Person.

"Surrendered Certificate(s)" means one or more Stock Certificates surrendered in accordance with this Agreement or, if any Stock Certificate has been lost, stolen or destroyed, compliance with Section 1.13(b) with respect to such applicable shares.

"Tax" or "Taxes" (or "Taxable" where the context requires) means any and all U.S. federal, state, local, or non-U.S. net or gross income, gross receipts, net proceeds, built-in gains, sales, use, transfer, ad valorem, value added, franchise, margins, withholding, payroll, employment, excise, real property, personal property, deed, stamp, alternative or add-on minimum, profits, windfall profits, transaction, license, lease, service, service use, occupation, severance, energy, unemployment, social security, workers' compensation, disability, capital, premium, recapture, environmental (including taxes under Section 59A of the Code), customs, duties, net worth, registration, business license fees, estimated and other taxes, fees, assessments, or charges, whether disputed or not, of any kind whatsoever together with any interest, penalties, additions to tax or additional amounts with respect thereto and any interest in respect of such additions or penalties.

"Tax Return" means any return, declaration, report, claim for refund, document or information return or statement or attachment thereto, and including any amendment thereof required to be filed with a Governmental Authority in respect of any Taxes.

"Technology" means, collectively, all designs, formulae, algorithms, procedures, methods, techniques, ideas, know-how, research and development, technical data, programs, subroutines, tools, materials, specifications, processes, inventions (whether patentable or unpatentable and whether or not reduced to practice), apparatus, creations, improvements, works

of authorship and other similar materials, and all recordings, graphs, drawings, reports, analyses, and other writings, and other tangible embodiments of the foregoing, in any form whether or not specifically listed herein, and all related technology, other than any in the form of Software.

"Transaction(s)" means the transactions contemplated by this Agreement and the other Transaction Agreements.

"Transaction Agreements" means this Agreement and each other agreement, document, instrument or certificate contemplated by this Agreement to which Parent, Merger Sub or the Company is a party or to be executed by Parent, Merger Sub or the Company in connection with the consummation of the Transaction.

"Transaction Expenses" means, without duplication and only to the extent not paid prior to Closing, the collective amount of all (i) out-of-pocket costs and expenses incurred by the Group Companies in connection with the Transaction payable by the Group Companies to outside legal counsel, accountants, advisors, brokers and other third parties, including, without limitation, the Arlington Fees, (ii) Change of Control Payments (other than those arising from actions of Parent taken after the Closing) that are due to any current or former employee, officer or director of the Group Companies directly as a result of the consummation of the Transaction pursuant to any Contract entered into by any Group Company prior to the Closing, (iii) the aggregate Unvested Restricted Stock Refund Payments, and any employment or other withholding Taxes related to the foregoing and (iv) accrued, but unpaid premiums for any "tail" director and officer insurance policies obtained pursuant to Section 5.9(b); provided, however, that Transaction Expenses shall not include (1) any amounts taken into account in the calculation of the Closing Date Indebtedness or (2) any prepayment penalties, redemption premiums, call premiums, make-whole payments or similar fees, costs, expenses and/or penalties incurred in relation to the payment of any Indebtedness.

"Transfer Taxes" means any and all sales, use, value-added, transfer, real property transfer, recording, documentary, stamp, registration, stock transfer and other similar Taxes or fees; provided, however, under no circumstance shall the term "Transfer Taxes" include income taxes, capital gains taxes, margins taxes, gross receipts taxes or similar taxes imposed upon Sellers.

"Unvested Restricted Stock" means each share of Restricted Stock that remains unvested as of the Effective Time.

"Unvested Restricted Stock Refund Payment" means the amount payable upon the consummation of the Merger to each holder of Unvested Restricted Stock pursuant to the Restricted Stock Award Agreement entered into by and between such holder and the Company.

"Vested Restricted Stock" means each share of vested Restricted Stock and each share of Restricted Stock that vests after the date of this Agreement and immediately prior to the Effective Time in accordance with the terms of the Equity Incentive Plan and the applicable Restricted Stock Award Agreements.

"Working Capital" means, with respect to the Group Companies, on a consolidated basis, (i) current assets of the Group Companies (including Closing Cash), as of the Adjustment

Time, that are included in the line item categories of current assets specifically identified on Exhibit B, reduced by (ii) those current liabilities of the Group Companies, as of the Adjustment Time, that are included in the line item categories of current liabilities specifically identified on Exhibit B, reduced by (iii) Closing Date Indebtedness, in each case, without duplication, and as determined in a manner strictly consistent with the Accounting Rules. Notwithstanding anything to the contrary contained herein, in no event shall "Working Capital" include any amounts with respect to (A) any fees, expenses or liabilities related to any financing by Parent and its Affiliates of the Transaction, (B) any intercompany accounts and transactions between or among the Group Companies, (C) any Transaction Expenses, (D) any liabilities of the Group Companies or any of their respective Affiliate which are being discharged, terminated or cancelled pursuant to Section 1.9, or (E) any prepayment penalties, redemption premiums, call premiums, make-whole payments or similar fees, costs, expenses and/or penalties incurred in relation to the repayment of any Indebtedness, which are being paid in connection with payment of the Closing Date Indebtedness pursuant to Section 1.9 or which have been waived. For purposes of this definition, including the calculation of current assets and current liabilities, the Parties shall disregard any adjustments arising from purchase accounting or otherwise arising out of the Transaction.

"Working Capital Target" means Zero dollars (\$0).

(b) Terms Defined Elsewhere in this Agreement. For purposes of this Agreement, the following terms have the meanings set forth in the sections indicated:

Access Limitations	Section 5.2(a)
Additional Merger Consideration Payment	Section 1.15(b)
Agreed Principles	Section 11.1(a)
Agreement	Preamble
Alternative Transaction	Section 5.3(a)
Balance Sheet	Section 3.5(a)(ii)
Balance Sheet Date	Section 3.5(a)(ii)
Benefit Plan(s)	Section 3.17(a)
Business Systems	Section 3.19(b)
Certificate of Merger	Section 2.2
Change of Control Payments	Section 3.18(e)
Claim	Section 10.13(a)
Closing	Section 2.1
Closing Date Balance Sheet	Section 1.10(c)
Closing Date	Section 2.1
Closing Date Merger Consideration	Section 1.10(c)
Closing Payment	Section 1.9
Closing Statement	Section 1.10(c)
Company	Preamble
Company Budget	1.15(c)
Company Disclosure Schedule	ARTICLE III

Company Financial Statements	Section 3.5(a)
Company Software	Section 3.16(c)
Confidentiality Agreement	Section 5.6
Delaware Courts	Section 10.3
Deductible	Section 9.4(a)
DGCL	Recitals
Dispute Notice	Section 1.10(d)(i)
Disputed Items	Section 1.10(d)(i)
Dissenting Shares	Section 1.6(d)
D&O Indemnifiable Claim	Section 5.9(a)
D&O Indemnified Person	Section 5.9(a)
EBITDA Statement	Section 1.15(a)
Effective Time	Section 2.2
Employee Sellers	Section 5.11
Employment Agreement	Section 5.12(a)
Environmental Permits	Section 3.12(a)(ii)
Estimated Closing Consideration	Section 1.9(a)
Estimated Merger Consideration	Section 1.10(a)
Exclusivity Period	Section 5.3
Final Closing Date Merger Consideration	Section 1.10(e)
FTC	Section 5.4(b)
Fundamental Representations	Section 9.1
Governmental Approval	Section 3.3(b)
Historical Principles	Section 11.1(a)
Insurance Policies	Section 3.22
Increase Amount	Section 1.10(e)(i)
Indemnified Party	Section 9.2(b)
Indemnitor	Section 9.3(a)
Key Employees	Section 5.12(a)
Lease(d)	Section 11.1(a)
Leased Real Property	Section 3.11(b)
Letter of Transmittal	Section 1.13
Licensed Intellectual Property	Section 3.16(e)
Loss	Section 9.2(a)
Material Contracts	Section 3.13(a)
Material Government Contracts	Section 3.14(a)
Measurement Period	Section 1.15(a)
Merger	Recitals
Merger Consideration	Section 1.8
Merger Sub	Preamble
Non-U.S. Benefit Plan	Section 3.17(b)
Notice of Claim	Section 9.3(a)

Operating Subsidiaries	Section 3.4(b)
Owned Intellectual Property	Section 3.16(a)
Parent	Preamble
Parent Disclosure Schedule	ARTICLE IV
Parent Tax Claim	Section 8.5
Parent Tax Return	Section 8.3(c)
Parties	Preamble
Party	Preamble
Paying Agent	Section 1.9(a)
Paying Agent Agreement	Section 2.4(b)
Potential Liability	Section 9.2(a)
Pre-Closing Statement	Section 1.10
Purchaser Indemnatee	Section 9.2(a)
Qualified Plan	Section 3.17(h)
Real Property Lease	Section 3.11(b)
Referred Disputed Items	Section 1.10(d)(ii)
Related Party	Section 3.21
Representative	Preamble
Representative Actions	Section 10.13(a)
Representative Expense Fund Amount	Section 1.9(b)
Resolution Date	Section 9.5(b)
Resolved Amount	Section 9.5(b)
Restrictive Covenant Agreement	Section 5.11
Scheduled IP	Section 3.16(b)
Seller Indemnatee	Section 9.2(b)
Seller Loan Balance	Section 1.7(a)
Seller Tax Claim	Section 8.5
Seller Tax Return	Section 8.3(b)
Single Employer Plan	Section 3.17(d)
Surviving Company	Recitals
Tax Claim	Section 8.5
Termination Date	Section 7.1(a)(iii)
Third Party Claim	Section 9.3(b)

11.2 Certain Interpretive Matters Unless otherwise expressly provided, for purposes of this Agreement, the following rules of interpretation shall apply:

(a) Time of the Essence; Calculation of Time Periods. Time is of the essence for each and every provision of this Agreement. When calculating the period of time before which, within which or following which any act is to be done or step taken pursuant to this Agreement, the

date that is the reference date in calculating such period shall be excluded. If the last day of such period is a non-Business Day, the period in question shall end on the next succeeding Business Day.

(b) Accounting Terms. Accounting terms that are not otherwise defined in this Agreement have the meanings given to them under GAAP, and if the definition of an accounting term defined in this Agreement is inconsistent with the meaning of such term under GAAP, the definition set forth in this Agreement will control.

(c) Dollars. Any reference in this Agreement to "\$" or dollars shall mean U.S. dollars.

(d) Exhibits/Schedules/Construction. The Exhibits and Schedules to this Agreement are an integral part of this Agreement and are hereby incorporated herein and made a part hereof as if set forth herein. Any capitalized terms used in any Schedule or Exhibit but not otherwise defined therein shall be defined as set forth in this Agreement. If a subject matter is addressed in more than one representation and warranty in this Agreement, each of Parent and Merger Sub shall be entitled to rely only on the most specific representation and warranty addressing such matter. Any disclosure set forth in one section of the Schedules shall apply to (i) the representations and warranties or covenants contained in the Section of this Agreement to which it corresponds in number, (ii) any representation and warranty or covenant to which it is referred by cross reference, and (iii) any other representation or warranty or covenant to the extent it is reasonably apparent from the wording of such disclosure that such disclosure is applicable to such representation or warranty or covenant.

(e) Gender and Number. Any reference in this Agreement to gender shall include all genders, and words imparting the singular number only shall include the plural and vice versa.

(f) Headings. The provision of the Table of Contents, the division of this Agreement into Articles, Sections and other subdivisions and the insertion of headings are for convenience of reference only and shall not affect or be utilized in construing or interpreting this Agreement. All references in this Agreement to any "Article," "Section" or other subdivision are to the corresponding Article, Section or other subdivision of this Agreement unless otherwise specified.

(g) Herein. The words such as "herein," "hereinafter," "hereof," "hereunder" and "hereto" refer to this Agreement as a whole and not merely to a subdivision in which such words appear unless the context otherwise requires.

(h) Including. The word "including" or any variation thereof mean "including, without limitation" and, if "without limitation" or the equivalent thereof are not present, shall not be construed to limit any general statement that it follows to the specific or similar items or matters immediately following it.

(i) Or. The term "or" has, except where otherwise indicated, the inclusive meaning represented by the phrase "and/or."

(j) Made Available. An item shall be considered “made available” to a Party hereto, to the extent such phrase appears in this Agreement, only if such item has been provided in writing (including via electronic mail) to such Party or its representatives or posted by the Company or its representatives in the Data Room.

(k) Reflected On or Set Forth In An item arising with respect to a specific representation or warranty shall be deemed to be “reflected on” or “set forth in” a balance sheet or financial statements, to the extent any such phrase appears in such representation or warranty, if (i) there is a reserve, accrual or other similar item underlying a number on such balance sheet or financial statements that related to the subject matter of such representation, (ii) such item is otherwise specifically set forth on the balance sheet or financial statements, or (iii) such item is reflected on the balance sheet or financial statements and is specifically set forth in the notes thereto.

(l) Days. The term “day” refers to a calendar day unless expressly identified as a Business Day.

(m) Material. As used in this Agreement, unless the context would require otherwise, the term “material” and the concept of the “material” nature of an effect upon the Group Companies or their business shall be measured relative to the Group Companies, taken as a whole, as their business is currently being conducted. There have been included in the Company Disclosure Schedule or the Parent Disclosure Schedule and may be included elsewhere in this Agreement items which are no “material” within the meaning of the immediately preceding sentence for informational purposes and in order to avoid any misunderstanding, and such inclusion shall not be deemed to be an agreement by the Parties that such items are “material” or to further define the meaning of such term for purposes of this Agreement.

(n) Joint Negotiation and Drafting The Parties have participated jointly in the negotiation and drafting of this Agreement and, in the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as jointly drafted by the Parties and no presumption or burden of proof shall arise favoring or disfavoring any Party by virtue of the authorship of any provision of this Agreement.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF the Parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized, as of the date first written above.

PARENT:

TYLER TECHNOLOGIES, INC.

By: _____

Name:

Title:

MERGER SUB:

TMP SUBSIDIARY, INC.

By: _____

Name:

Title:

THE COMPANY:
MP HOLDINGS PARENT, INC.

By: _____
Name:
Title:

REPRESENTATIVE:

ARLINGTON CAPITAL PARTNERS II, L.P.

By: Arlington Capital Group II, LLC, its general partner

By: _____

Name:

Title:

Exhibit A

Surviving Company Certificate of Incorporation

(See attached.)

Exhibit B

Sample Working Capital and Agreed Principles

Agreed Principles

The Pre-Closing Statement and the Closing Statement shall be prepared on a consolidated basis as of the Adjustment Time (except as otherwise expressly set forth in the Agreement) using the usual year end close-the-books processes of the Company. The Pre Closing Statement and the Closing Statement shall be prepared in accordance with the Accounting Rules, subject to adjustments provided for in this Exhibit B. A reconciliation between working capital prepared under Historical Principles and Working Capital prepared pursuant to the Accounting Rules will be included in the Pre-Closing Statement and the Post-Closing Statement. Adjustments will be made to eliminate the cost of investment in any Subsidiaries and to reconcile and eliminate any balances owed between Subsidiaries.

In preparing the Pre-Closing Statement and the Closing Statement, no item shall be included more than once.

The Pre-Closing Statement and the Closing Statement will be prepared in USD. Assets and liabilities in the Pre-Closing Statement and the Closing Statement denominated in a currency other than USD shall be converted into USD at the USD spot rate of exchange applicable to such other currency as quoted by The Wall Street Journal at or about the Adjustment Time on the Closing Date.

There should be no change in (i) the classification to a current liability of any particular liability that has not been previously categorized as a current liability, (ii) the classification to a long-term liability of any particular liability that has not been previously categorized as a long-term liability, (iii) the classification to a long-term asset of any particular asset that has not been previously categorized as a long-term asset, or (iv) the classification to a current asset of any particular asset that has not been previously categorized as a current asset, in each case, other than a change resulting solely from the passage of time.

The Deferred revenue adjustment should be equal to 50% of the deferred revenue balance as of the relevant date.

The following is an illustrative example of the Working Capital calculation utilizing the amounts for the corresponding line items set forth in the September 30, 2018, consolidated balance sheet of the Company. The following example is for illustrative purposes only and the Working Capital calculation remains subject to the terms and conditions of this Agreement.

(See attached.)

Exhibit C

Pro Rata Share

(See attached.)

Exhibit D

Net EBITDA Example

(See attached.)

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Exhibit 23

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 No. 333-225011) pertaining to the Tyler Technologies, Inc. 2018 Stock Option Plan,
- (2) Registration Statement (Form S-8 No. 333-182318) pertaining to the Tyler Technologies, Inc. Employee Stock Purchase Plan;

of our reports dated February 20, 2019, with respect to the consolidated financial statements of Tyler Technologies, Inc., and the effectiveness of internal control over financial reporting of Tyler Technologies, Inc., included in this Annual Report (Form 10-K) of Tyler Technologies, Inc. for the year ended December 31, 2018.

/s/ ERNST & YOUNG LLP

Dallas, Texas
February 20, 2019

Exhibit 31.1

CERTIFICATIONS

I, H. Lynn Moore, Jr., certify that:

1. I have reviewed this annual report on Form 10-K of Tyler Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over our financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for Tyler and have:
 - a. Designed such disclosure controls and procedures or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its divisions, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (The registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are

reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

- b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

Date: February 20, 2019

By: /s/ H. Lynn Moore, Jr.

H. Lynn Moore, Jr.

President and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, Brian K. Miller, certify that:

1. I have reviewed this annual report on Form 10-K of Tyler Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over our financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for Tyler and have:
 - a. Designed such disclosure controls and procedures or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its divisions, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (The registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

Date: February 20, 2019

By: /s/ Brian K. Miller

Brian K. Miller

Executive Vice President and Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

H. Lynn Moore, Jr., President and Chief Executive Officer of Tyler Technologies, Inc., (the "Company") and Brian K. Miller, Executive Vice President and Chief Financial Officer of the Company, each certify pursuant to section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

Date: February 20, 2019

By: /s/ H. Lynn Moore, Jr.

H. Lynn Moore, Jr.

President and Chief Executive Officer

By: /s/ Brian K. Miller

Brian K. Miller

Executive Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to Tyler Technologies, Inc. and will be retained by Tyler Technologies, Inc. and furnished to the Securities and Exchange Commission upon request.

REQUISITION

RQIT19000069 07/JUN/2019

VENDOR:		REQUISITIONER:	
TYLER TECHNOLOGIES, INC		IT DEPARTMENT OF INFORMATION TECH	
12 GOOSE LN		240 OLD COUNTRY ROAD	
		6TH FLOOR	
TOLLAND	CT 06084-0000	MINEOLA	NY 11501
		S.BARNETT/MARY MAHONEY(1-3159)	
TEL:(800)273-8605		TEL:(516)571-2233	
FAX:(860)872-9526		FAX:(516)571-3918	

ITEM	DESCRIPTION	QTY	U/M	UNIT COST	TOTAL	
001	920-45			1.00 EA	581,730.0000	581,730.00
	COMPUTER SOFTWARE MAINTENANCE/SUPPORT					
	2019 IAS MAINTENANCE RENEWAL 1/1/2019-12/31/2019			\$313,405.00		
	2019 ADAPT MAINTENANCE RENEWAL 1/1/2019-12/31/2019			\$268,325.00		
	ADAPT MAINTENANCE:			=====		
	TAX BILLING & COLLECTION			\$581,730.00		
	DELINQUENT TAX					
	APPEALS MANAGEMENT					
	EDMS INTERFACE (IDOC)					
	INCLUDES: UPGRADES, NEW ENHANCEMENT RELEASES, HOT BUG FIXES/PATCHES					
	MON-FRI 8:00 AM - 5:00 PM TOLL FREE TELEPHONE SUPPORT,					
	USER GROUP					
.....						
	BILL TO: I.T. ACCOUNTS PAYABLE					
	240 OLD COUNTRY ROAD 6TH FL					
	MINEOLA, NY, 11501					
	EMAIL TO: SBARNETT@NASSAUCOUNTYNY.GOV					
.....						
.....						

ESTIMATED TOTAL: 581,730.00

REQUISITION

RQIT19000069 07/JUN/2019

VENDOR:

TYLER TECHNOLOGIES, INC
12 GOOSE LN

TOLLAND

CT 06084-0000

TEL: (800) 273-8605

FAX: (860) 872-9526

REQUISITIONER:

IT DEPARTMENT OF INFORMATION TECH
240 OLD COUNTRY ROAD
6TH FLOOR

MINEOLA

NY 11501

S.BARNETT/MARY MAHONEY(1-3159)

TEL: (516) 571-2233

FAX: (516) 571-3918



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

3/28/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Hays Companies Inc. 133 Federal Street, 4th Floor Boston MA 02110		CONTACT NAME: Moira Crosby PHONE (A/C, No. Ext): E-MAIL ADDRESS: mcrosby@hayscompanies.com FAX (A/C, No):	
INSURED Tyler Technologies, Inc. 5101 Tennyson Parkway Plano TX 75024		INSURER(S) AFFORDING COVERAGE INSURER A: Hartford Fire Insurance Company 19682 INSURER B: Hartford Casualty Insurance Company 29424 INSURER C: Lloyds of London Syndicates 048337 & INSURER D: 048945 INSURER E: INSURER F:	

COVERAGES

CERTIFICATE NUMBER: 19-20 GL Auto

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☒ POLICY ☐ PRO-JECT ☐ LOC OTHER:			08UENAY8572	4/1/2019	4/1/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS ☒ HIRED AUTOS ☒ NON-OWNED AUTOS			08UENAY8572	4/1/2019	4/1/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	☒ UMBRELLA LIAB ☐ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE DED RETENTION \$			08XHUAZ8392	4/1/2019	4/1/2020	EACH OCCURRENCE \$ 25,000,000 AGGREGATE \$ 25,000,000 \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	08WHEL5271	4/1/2019	4/1/2020	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Cyber/Privacy Prof Liab			B0621PTYLE000218	12/17/2018	12/17/2019	Occurrence Limit \$20,000,000
C	Cyber/Privacy Prof Liab			B0621PTYLE000318	12/17/2018	12/18/2019	Aggregate Limit \$20,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Certificate Holder is listed as Additional Insured on the General Liability policy when required by written contract. Waiver of Subrogation is added to Workers Compensation in favor of Nassau County Assessor & Project Administrator.

CERTIFICATE HOLDER**CANCELLATION**

Nassau County Dept./Assessors 240 Old County Road Mineola, NY 11501	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE James Hays/MCROSB
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ACORD 25 (2014/01)

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