TYLER TECHNOLOGIES INC
Form 10-Q
October 31, 2018

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q

x QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the quarterly period ended September 30, 2018
OR
TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.
Commission File Number 1-10485
TYLER TECHNOLOGIES, INC.
(Exact name of registrant as specified in its charter)

DELAWARE	75-2303920
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification no.)

5101 TENNYSON PARKWAY
PLANO, TEXAS
75024
(Address of principal executive offices)
(Zip code)
(972) 713-3700
(Registrant's telephone number, including area code)

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 x 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 x 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 definition 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 x	Accelerated filer
Non-accelerated filer	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 x

The number of shares of common stock of registrant outstanding on October 30, 2018 was 38,823,257.

PART I. FINANCIAL INFORMATION

ITEM 1. Financial Statements
TYLER TECHNOLOGIES, INC.
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share amounts)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017 As Adjusted	2018	2017 As Adjusted
Revenues:				
Software licenses and royalties	$22,444	$ 22,762	$67,620	$63,826
Subscriptions	58,699	44,352	160,736	124,731
Software services	48,199	46,045	144,812	134,401
Maintenance	96,215	91,847	286,188	266,965
Appraisal services	5,544	6,290	16,470	19,268
Hardware and other	4,966	3,410	17,475	14,007
Total revenues	236,067	214,706	693,301	623,198
Cost of revenues:				
Software licenses and royalties	957	826	2,939	2,204
Acquired software	5,897	5,473	17,003	16,243
Software services, maintenance and subscriptions	111,508	98,036	327,080	287,748
Appraisal services	3,505	4,089	10,854	12,568
Hardware and other	2,574	2,293	11,718	10,408
Total cost of revenues	124,441	110,717	369,594	329,171
Gross profit	111,626	103,989	323,707	294,027
Selling, general and administrative expenses	52,605	44,513	152,471	130,293
Research and development expense	17,050	11,834	45,929	35,307
Amortization of customer and trade name intangibles	4,386	3,360	11,742	10,016
Operating income	37,585	44,282	113,565	118,411
Other income (expense), net	1,041	75	2,198	(216)
Income before income taxes	38,626	44,357	115,763	118,195
Income tax (benefit) provision	(298)	5,521	(147)	14,820
Net income	$38,924	$ 38,836	$115,910	$103,375
Earnings per common share:				
Basic	$1.00	$ 1.04	$3.01	$2.78
Diluted	$0.96	$ 0.99	$2.87	$2.63

See accompanying notes.

TYLER TECHNOLOGIES, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except par value and share amounts)

	September 30, 2018 (unaudited)	December 31, 2017 As Adjusted
ASSETS		
Current assets:		
Cash and cash equivalents	$ 219,452	$ 185,926
Accounts receivable [less allowance for doubtful accounts of $5,110 in 2018 and $5,427 in 2017]	281,523	246,188
Short-term investments	52,349	43,159
Prepaid expenses	32,790	32,206
Income tax receivable	13,281	11,339
Other current assets	2,299	1,997
Total current assets	601,694	520,815
Accounts receivable, long-term	12,966	12,107
Property and equipment, net	156,498	152,315
Other assets:		
Goodwill	749,502	657,987
Other intangibles, net	282,806	229,617
Non-current investments and other assets	61,156	38,510
Total assets	$ 1,864,622	$ 1,611,351
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 4,597	$ 8,174
Accrued liabilities	66,020	64,675
Deferred revenue	326,421	298,613
Total current liabilities	397,038	371,462
Deferred revenue, long-term	493	1,274
Deferred income taxes	44,965	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 and outstanding as of September 30, 2018 and December 31, 2017	481	481
Additional paid-in capital	724,935	626,867
Accumulated other comprehensive loss, net of tax	(46)	(46)
Retained earnings	740,373	624,463
Treasury stock, at cost; 9,179,922 and 10,262,182 shares in 2018 and 2017, respectively	(43,617)	(60,029)
Total shareholders' equity	1,422,126	1,191,736
Total liabilities and shareholders' equity	$ 1,864,622	$ 1,611,351

See accompanying notes.

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TYLER TECHNOLOGIES, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Nine Months Ended September 30, 2018	2017 As Adjusted
Cash flows from operating activities:		
Net income	$ 115,910	$ 103,375
Adjustments to reconcile net income to cash provided by operating activities:		
Depreciation and amortization	45,627	39,700
Share-based compensation expense	37,966	27,368
Deferred income tax benefit	(5,034)	(13,705)
Changes in operating assets and liabilities, exclusive of effects of acquired companies:		
Accounts receivable	(31,393)	(6,672)
Income taxes	(1,942)	(467)
Prepaid expenses and other current assets	983	(3,663)
Accounts payable	(4,729)	(2,733)
Accrued liabilities	1,523	1,316
Deferred revenue	20,442	(2,138)
Net cash provided by operating activities	179,353	142,381
Cash flows from investing activities:		
Additions to property and equipment	(23,460)	(37,734)
Purchase of marketable security investments	(92,638)	(49,905)
Proceeds from marketable security investments	60,208	21,175
Cost of acquisitions, net of cash acquired	(167,308)	(9,761)

Decrease in other	857	418
Net cash used by investing activities	(222,341)	(75,807)
Cash flows from financing activities:		
Decrease in net borrowings on revolving line of credit	—	(10,000)
Purchase of treasury shares	—	(7,032)
Proceeds from exercise of stock options	70,536	33,568
Contributions from employee stock purchase plan	5,978	5,342
Net cash provided by financing activities	76,514	21,878
Net increase in cash and cash equivalents	33,526	88,452
Cash and cash equivalents at beginning of period	185,926	36,151
Cash and cash equivalents at end of period	$ 219,452	$ 124,603

See accompanying notes.

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Tyler Technologies, Inc.
Notes to Condensed Consolidated Financial Statements
(Unaudited)
(Tables in thousands, except per share data)

(1) Basis of Presentation

We prepared the accompanying condensed consolidated financial statements following the requirements of the Securities and Exchange Commission (“SEC”) and accounting principles generally accepted in the United States, or GAAP, for interim reporting. As permitted under those rules, certain footnotes or other financial information that are normally required by GAAP can be condensed or omitted for interim periods. Balance sheet amounts are as of September 30, 2018, and December 31, 2017, and operating result amounts are for the three and nine months ended September 30, 2018, and 2017, respectively, and include all normal and recurring adjustments that we considered necessary for the fair summarized presentation of our financial position and operating results. As these are condensed financial statements, one should also read the financial statements and notes included in our latest Form 10-K for the year ended December 31, 2017. Revenues, expenses, assets and liabilities can vary during each quarter of the year. Therefore, the results and trends in these interim financial statements may not be the same as those for the full year.

Comprehensive income (loss) 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) for the three and nine months ended September 30, 2018 and 2017.

Effective January 1, 2018, we adopted the requirements of Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers, utilizing the full retrospective approach as discussed in Note 2 - Accounting Standards and Significant Accounting Policies. All amounts and disclosures set forth in this Form 10-Q have been updated to comply with the new standard, as indicated by the "as adjusted" footnote.

(2) Accounting Standards and Significant Accounting Policies

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Except for the accounting policies for revenue recognition and deferred commissions that were adjusted as a result of adopting ASU No. 2014-09, there have been no changes to our significant accounting policies described in the Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on February 21, 2018, that have had a material impact on our condensed consolidated financial statements and related notes.

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 standalone selling price (“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.

REVENUE RECOGNITION

Nature of Products and Services

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 utilize the Tyler private cloud, and electronic document filing solutions ("e-filing"). In addition, we provide property appraisal outsourcing services for taxing jurisdictions.

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 essential to the product's functionality. The transaction price is allocated to the distinct 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. 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 essential 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 trued up when we receive notice of amounts we are entitled to receive. Typically, we 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 essential 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 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 (traditional 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 12 - 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 allowance for doubtful accounts:

	September 30, 2018
Balance, beginning of period December 31, 2017	$ 5,427
Provisions for losses - accounts receivable	1,714
Collection of accounts previously written off	(212)
Deductions for accounts charged off or credits issued	(1,819)
Balance, end of period	$ 5,110

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 September 30, 2018, and December 31, 2017, total current and long-term accounts receivable, net of allowance for doubtful accounts, was $294.5 million and $258.3 million (as adjusted), respectively. We have recorded unbilled receivables of $86.9 million and $64.6 million (as adjusted) at September 30, 2018, and December 31, 2017, respectively. Included in unbilled receivables are retention receivables of $8.3 million and $7.2 million at September 30, 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 condensed 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 condensed 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 13 - 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 condensed consolidated statements of income. Refer to Note 5 - Deferred Commissions for further information.

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 ("Topic 605"), 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 condensed 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):

	Three Months Ended September 30, 2017			Nine Months Ended September 30, 2017		
	As Reported	Adjustments	As Adjusted	As Reported	Adjustments	As Adjusted
Statement of Income:						
Software licenses and royalties	$19,842	$ 2,920	$22,762	$55,172	$ 8,654	$63,826
Subscriptions	44,840	(488)	44,352	125,889	(1,158)	124,731
Software services	47,479	(1,434)	46,045	139,869	(5,468)	134,401
Maintenance	92,285	(438)	91,847	268,556	(1,591)	266,965
Appraisal services	6,290	—	6,290	19,268	—	19,268
Hardware and other	3,410	—	3,410	14,057	(50)	14,007
Total revenues	214,146	560	214,706	622,811	387	623,198
Selling, general and administrative expenses	44,656	(143)	44,513	131,249	(956)	130,293
Amortization of customer and trade name intangibles	3,492	(132)	3,360	10,413	(397)	10,016
Operating income	43,447	835	44,282	116,671	1,740	118,411
Income tax provision	5,259	262	5,521	14,308	512	14,820
Net income	$38,263	$ 573	$38,836	$102,147	$ 1,228	$103,375
Earnings per common share:						
Basic	$1.02		$1.04	$2.74		$2.78
Diluted	$0.97		$0.99	$2.60		$2.63

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 8 - Income Tax Provision for further information.

RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS

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 (except for 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.

Lessees (for capital and operating leases) and lessors (for sales-type, direct financing, and operating leases) must apply a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. The modified retrospective approach would not require any transition accounting for leases that expired before the earliest comparative period presented. Lessees and lessors may not apply a full retrospective transition approach.

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. We are assessing the financial impact of adopting the new standard; however, we are currently unable to provide a reasonable estimate regarding the financial impact. We will adopt the new standard in fiscal year 2019.

(3) Acquisitions

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 was $9.2 million, of which $9.1 million was paid in cash and approximately $150,000 was accrued as of September 30, 2018. The impact of this acquisition on our operating results is not material.

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. The impact of this acquisition on our operating results is not material.

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

Cash	$1,724
Accounts receivable	3,616
Other current assets	2,057
Other noncurrent assets	68
Identifiable intangible assets	75,000
Goodwill	78,909
Accounts payable	(1,254)
Accrued expenses	(1,717)
Deferred revenue	(5,915)
Deferred tax liabilities, net	(3,120)
Total consideration	$149,368

In connection with this transaction, we acquired total tangible assets of $7.5 million and assumed liabilities of approximately $8.9 million. We recorded goodwill of $78.9 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 liabilities of $3.1 million 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 $78.9 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. 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.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Revenues	$236,067	$220,825	$701,742	$642,034
Net income	38,924	34,119	107,763	89,599
Basic earnings per share	1.00	0.91	2.80	2.41
Diluted earnings per share	$0.96	$0.87	$2.67	$2.28

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 date specified or to project our results of operations for any future period.

As of September 30, 2018, the purchase price allocations for Socrata, Sage and CaseloadPRO are 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. The operating results of Socrata, Sage and CaseloadPRO 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 were approximately $5.4 million and $8.4 million and the net losses were $3.9 million and $7.9 million for both the three and nine months ended September 30, 2018, respectively. Revenues and operating results from Sage and CaseloadPRO included in 2018 results were not significant.

Our balance sheet as of September 30, 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.

(4) Shareholders’ Equity

The following table details activity in our common stock:

	Nine Months Ended September 30,			
	2018		2017	
	Shares	Amount	Shares	Amount
Purchases of treasury shares	—	$—	(42)	$(6,171)
Stock option exercises	1,048	70,536	787	33,568
Employee stock plan purchases	35	$5,978	40	$5,342

As of September 30, 2018, we had authorization from our board of directors to repurchase up to 2.0 million additional shares of Tyler common stock.

(5) 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 $21.4 million and $19.3 million (as adjusted) as of September 30, 2018, and December 31, 2017, respectively. Amortization expense was $3.8 million and $10.9 million for the three and nine months ended September 30, 2018, respectively, and $2.6 million and $7.9 million for the three and nine months ended September 30, 2017 (as adjusted), 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 condensed consolidated balance sheets. Amortization expense related to deferred commissions is included in selling, general and administrative expenses in the accompanying condensed consolidated statements of income.

(6) Other Assets

Cash and cash equivalents consist of cash on deposit with several domestic banks and money market funds.
As of September 30, 2018, we have $95.8 million in investment grade corporate and municipal bonds with maturity dates ranging 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 other observable market data. These investments are included in short-term investments and non-current investments and other assets.

We have a $15.0 million investment 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. This investment is included in non-current investments and other assets.

(7) Revolving Line of Credit

On November 16, 2015, we entered into a $300 million credit agreement with various lender parties and Wells Fargo Bank, National Association, as Administrative Agent (the “Credit Facility”). The Credit Facility provides for a revolving credit line up to $300 million, including a $10 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 September 30, 2018, the interest rates were 5.25% under the Wells Fargo Bank's prime rate and 3.49% under a 30-day LIBOR contract. 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 September 30, 2018, we were in compliance with those covenants.

As of September 30, 2018, we had no outstanding borrowings. Available borrowing capacity under the Credit Facility was $300 million.

(8) Income Tax Provision

We had an effective income tax rate of negative 0.8% and 0.1% for the three and nine months ended September 30, 2018, respectively, compared to 12.4% and 12.5% (as adjusted) for the three and nine months ended September 30, 2017, respectively. The effective income tax rates for the periods presented were different from the statutory United States federal income tax rate of 21% in 2018 and 35% in 2017 principally due to excess tax benefits related to stock option exercises. The excess tax benefit related to stock option exercises realized was $9.3 million and $30.0 million for the three and nine months ended September 30, 2018, respectively, compared to $9.0 million and $27.6 million for the three and nine months ended September 30, 2017, respectively. Excluding the excess tax benefits, the effective rate was 23.3% and 25.8% for the three and nine months ended September 30, 2018, respectively, compared to 32.8% and 35.9% (as adjusted) for the three and nine months ended September 30, 2017, respectively. Other differences from the federal statutory income tax rate include state income taxes, non-deductible business expenses, the tax benefit of research tax credits, provisional amounts associated with the Tax Act recorded in 2018, and in 2017, the tax benefit of the domestic production activities deduction.

The decrease in effective tax rate for the three and nine months ended September 30, 2018, as compared to the same periods in 2017 was due primarily to the reduction of the U.S. corporate tax rate from 35% to 21% as a result of the Tax Act, the increase in excess tax benefit related to stock option exercises and the research tax credit benefit, offset by the elimination of the domestic production activities deduction and the increased limitations on the deduction for executive compensation. In the fourth quarter of 2017, we recorded a $26.0 million (as adjusted under Topic 606) tax benefit due to the remeasurement of deferred tax assets and liabilities at a lower tax rate. As of September 30, 2018, we increased the provisional amounts for the income tax effects of the Tax Act recorded in 2017 to $27.7 million to reflect actual amounts reported in income tax returns filings. We will continue to analyze the estimates and further guidance on the application of the law, and additional revisions may occur throughout the allowable measurement period which will not exceed one year from the enactment of the Tax Act. Overall, the changes due to the Tax Act will favorably affect income tax expense and future U.S. earnings.
We made tax payments of $6.8 million and $29.0 million in the nine months ended September 30, 2018, and 2017, respectively.

(9) Earnings Per Share

The following table details the reconciliation of basic earnings per share to diluted earnings per share:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017 As Adjusted	2018	2017 As Adjusted
Numerator for basic and diluted earnings per share:				
Net income	$38,924	$ 38,836	$115,910	$103,375
Denominator:				
Weighted-average basic common shares outstanding	38,761	37,391	38,533	37,238
Assumed conversion of dilutive securities:				
Stock options	1,767	1,951	1,812	2,028
Denominator for diluted earnings per share - Adjusted weighted-average shares	40,528	39,342	40,345	39,266
Earnings per common share:				
Basic	$1.00	$ 1.04	$3.01	$2.78
Diluted	$0.96	$ 0.99	$2.87	$2.63

For the three and nine months ended September 30, 2018, stock options representing the right to purchase common stock of approximately 350,000 and 734,000 shares were not included in the computation of diluted earnings per share because their inclusion would have had an anti-dilutive effect. For the three and nine months ended September 30, 2017, stock options representing the right to purchase common stock of approximately 1,499,000 and 1,303,000 shares were not included in the computation of diluted earnings per share because their inclusion would have had an anti-dilutive effect.

(10) Share-Based Compensation

The following table summarizes share-based compensation expense related to share-based awards recorded in the condensed consolidated statements of income, pursuant to ASC 718, Stock Compensation:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Cost of software services, maintenance and subscriptions	$3,909	$2,524	$9,640	$6,874
Selling, general and administrative expenses	10,567	7,267	28,326	20,494
Total share-based compensation expense	$14,476	$9,791	$37,966	$27,368

(11) 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, planning, regulatory and maintenance, and land and vital records management software solutions unit; courts and justice and public safety software solutions unit; and the data and insights solutions unit meet the criteria for aggregation and are presented in one reportable segment, the Enterprise Software ("ES") segment. 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 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.
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 non-cash amortization of intangible assets associated with their acquisitions, 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.

For the three months ended September 30, 2018

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	$19,544	$ 2,900	$—	$22,444
Subscriptions	56,220	2,479	—	58,699
Software services	41,640	6,559	—	48,199
Maintenance	90,072	6,143	—	96,215
Appraisal services	—	5,544	—	5,544
Hardware and other	4,999	—	(33)	4,966
Intercompany	3,373	—	(3,373)	—
Total revenues	$215,848	$ 23,625	$(3,406)	$236,067
Segment operating income	$59,334	$ 6,695	$(18,161)	$47,868

For the nine months ended September 30, 2018

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	$60,224	$ 7,396	$—	$67,620
Subscriptions	153,541	7,195	—	160,736
Software services	126,928	17,884	—	144,812
Maintenance	267,681	18,507	—	286,188
Appraisal services	—	16,470	—	16,470
Hardware and other	12,525	33	4,917	17,475
Intercompany	9,696	—	(9,696)	—
Total revenues	$630,595	$ 67,485	$(4,779)	$693,301
Segment operating income	$174,365	$ 16,845	$(48,900)	$142,310

For the three months ended September 30, 2017

As Adjusted	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	$21,143	$ 1,619	$—	$22,762
Subscriptions	42,338	2,014	—	44,352
Software services	40,861	5,184	—	46,045
Maintenance	86,138	5,709	—	91,847
Appraisal services	—	6,290	—	6,290
Hardware and other	3,412	—	(2)	3,410
Intercompany	2,660	—	(2,660)	—
Total revenues	$196,552	$ 20,816	$(2,662)	$214,706
Segment operating income	$61,243	$ 5,450	$(13,578)	$53,115

For the nine months ended September 30, 2017

As Adjusted	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	$58,805	$ 5,021	$—	$63,826
Subscriptions	119,033	5,698	—	124,731
Software services	120,190	14,211	—	134,401
Maintenance	251,457	15,508	—	266,965
Appraisal services	—	19,268	—	19,268
Hardware and other	9,385	—	4,622	14,007
Intercompany	7,309	—	(7,309)	—
Total revenues	$566,179	$ 59,706	$(2,687)	$623,198
Segment operating income	$167,767	$ 14,371	$(37,468)	$144,670

Reconciliation of reportable segment operating income to the Company's consolidated totals:	Three Months Ended September 30, 2018	Three Months Ended September 30, 2017	Nine Months Ended September 30, 2018	Nine Months Ended September 30, 2017
		As Adjusted		As Adjusted
Total segment operating income	$47,868	$53,115	$142,310	$144,670
Amortization of acquired software	(5,897)	(5,473)	(17,003)	(16,243)
Amortization of customer and trade name intangibles	(4,386)	(3,360)	(11,742)	(10,016)
Other income (expense), net	1,041	75	2,198	(216)
Income before income taxes	$38,626	$44,357	$115,763	$118,195

(12) 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 three months ended September 30, 2018

	Products and services transferred at a point in time	Products and services transferred over time	Total
Revenues			
Software licenses and royalties	$ 17,373	$ 5,071	$22,444
Subscriptions	—	58,699	58,699
Software services	—	48,199	48,199
Maintenance	—	96,215	96,215
Appraisal services	—	5,544	5,544
Hardware and other	4,966	—	4,966
Total	$ 22,339	$ 213,728	$236,067

For the nine months ended September 30, 2018

	Products and services transferred at a point in time	Products and services transferred over time	Total
Revenues			
Software licenses and royalties	$ 53,697	$ 13,923	$67,620
Subscriptions	—	160,736	160,736
Software services	—	144,812	144,812
Maintenance	—	286,188	286,188
Appraisal services	—	16,470	16,470
Hardware and other	17,475	—	17,475
Total	$ 71,172	$ 622,129	$693,301

For the three months ended September 30, 2017

As Adjusted	Products and services transferred at a point in time	Products and services transferred over time	Total
Revenues			
Software licenses and royalties	$ 18,007	$ 4,755	$22,762
Subscriptions	—	44,352	44,352
Software services	—	46,045	46,045
Maintenance	—	91,847	91,847
Appraisal services	—	6,290	6,290
Hardware and other	3,410	—	3,410
Total	$ 21,417	$ 193,289	$214,706

For the nine months ended September 30, 2017

As Adjusted	Products and services transferred at a point in time	Products and services transferred over time	Total
Revenues			
Software licenses and royalties	$ 51,257	$ 12,569	$63,826
Subscriptions	—	124,731	124,731
Software services	—	134,401	134,401
Maintenance	—	266,965	266,965
Appraisal services	—	19,268	19,268
Hardware and other	14,007	—	14,007
Total	$ 65,264	$ 557,934	$623,198

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 three months ended September 30, 2018

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Recurring revenues	$146,292	$ 8,622	$—	$154,914
Non-recurring revenues	66,183	15,003	(33)	81,153
Intercompany	3,373	—	(3,373)	—
Total revenues	$215,848	$ 23,625	$(3,406)	$236,067

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For the nine months ended September 30, 2018

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Recurring revenues	$421,222	$ 25,702	$—	$446,924
Non-recurring revenues	199,677	41,783	4,917	246,377
Intercompany	9,696	—	(9,696)	—
Total revenues	$630,595	$ 67,485	$(4,779)	$693,301

For the three months ended September 30, 2017

As Adjusted	Enterprise Software	Appraisal and Tax	Corporate	Totals
Recurring revenues	$128,476	$ 7,723	$—	$136,199
Non-recurring revenues	65,416	13,093	(2)	78,507
Intercompany	2,660	—	(2,660)	—
Total revenues	$196,552	$ 20,816	$(2,662)	$214,706

For the nine months ended September 30, 2017

As Adjusted	Enterprise Software	Appraisal and Tax	Corporate	Totals
Recurring revenues	$370,490	$ 21,206	$—	$391,696
Non-recurring revenues	188,380	38,500	4,622	231,502
Intercompany	7,309	—	(7,309)	—
Total revenues	$566,179	$ 59,706	$(2,687)	$623,198

(13) Deferred Revenue and Performance Obligations

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

	September 30, 2018	December 31, 2017 As Adjusted
Enterprise Software	$ 307,872	$ 277,198
Appraisal and Tax	16,450	20,387
Corporate	2,592	2,302
Totals	$ 326,914	$ 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:

	September 30, 2018
Balance, beginning of period December 31, 2017 (As Adjusted)	$299,887
Deferral of revenue	649,152
Recognition of deferred revenue	(622,125)
Balance, end of period	$326,914

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 September 30, 2018 was $1.2 billion, of which we expect to recognize approximately 51% as revenue over the next 12 months and the remainder thereafter.

(14) 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.

(15) Subsequent Events

The following events and transactions occurred subsequent to September 30, 2018:

On October 1, 2018, we acquired all of the capital stock of TradeMaster, Inc. dba 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 $4.8 million in cash, subject to certain post-closing adjustments.

ITEM 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

CAUTIONARY NOTE CONCERNING 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 pl 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.

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 that utilize the Tyler private cloud such as e-filing, which simplifies the filing and management of court related documents. 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) records and documents, 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; records and documents; and data and insights. 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 4,447 at September 30, 2018, from 4,039 at September 30, 2017.

For the three and nine months ended September 30, 2018, total revenues increased 10% and 11%, respectively, compared to the prior year periods. Organic revenue growth was 7% and 9% for the three and nine months ended September 30, 2018, respectively compared to the prior year periods and revenues from acquisitions completed as of September 30, 2018 contributed 3% and 2% of growth for the three and nine months ended September 30, 2018, respectively.

Subscriptions revenue grew 32% and 29% for the three and nine months ended September 30, 2018, respectively, 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. Organic subscriptions revenue increased 22% and 23% for the three and nine months ended September 30, 2018, respectively.

Our backlog at September 30, 2018 was $1.2 billion, a 7% increase from last year.

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 2 to our condensed consolidated financial statements in this report.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The discussion and analysis of our financial condition and results of operations are based upon our condensed consolidated financial statements. These condensed consolidated financial statements have been prepared following the requirements of accounting principles generally accepted in the United States ("GAAP") for the interim period and require us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition and amortization and potential impairment of intangible assets and goodwill and share-based compensation expense. As these are condensed financial statements, one should also read expanded information about our critical accounting policies and estimates provided in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," included in our Form 10-K for the year ended December 31, 2017. Except for the accounting policies for revenue recognition, trade and other receivables, and deferred commissions that were updated as a result of adopting ASU No. 2014-09, there have been no material changes to our critical accounting policies and estimates from the information provided in our Form 10-K for the year ended December 31, 2017.

ANALYSIS OF RESULTS OF OPERATIONS

	Percent of Total Revenues			
	Third Quarter		Nine Months Ended	
	2018	2017 As Adjusted	2018	2017 As Adjusted
Revenues:				
Software licenses and royalties	9.5 %	10.6 %	9.8 %	10.2 %
Subscriptions	24.9	20.7	23.2	20.0
Software services	20.4	21.4	20.9	21.6
Maintenance	40.8	42.8	41.2	42.9
Appraisal services	2.3	2.9	2.4	3.1
Hardware and other	2.1	1.6	2.5	2.2
Total revenues	100.0	100.0	100.0	100.0
Cost of revenues:				
Software licenses, royalties and acquired software	2.9	2.9	2.9	3.0
Software services, maintenance and subscriptions	47.2	45.7	47.2	46.2
Appraisal services	1.5	1.9	1.6	2.0
Hardware and other	1.1	1.1	1.7	1.7
Selling, general and administrative expenses	22.3	20.7	22.0	20.9
Research and development expense	7.2	5.5	6.6	5.7
Amortization of customer and trade name intangibles	1.9	1.6	1.7	1.6
Operating income	15.9	20.6	16.3	18.9
Other income (expense), net	0.4	—	0.3	(0.2)
Income before income taxes	16.3	20.6	16.6	18.7
Income (benefit) tax provision	(0.1)	2.6	—	2.4
Net income	16.4 %	18.0 %	16.6 %	16.3 %

Revenues

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 for 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 September 30, 2018, which is included in our condensed consolidated statements of income:

	Third Quarter	Nine Months Ended
Revenues:		
Software licenses and royalties	$ —	$ —
Subscriptions	4,733	7,209
Software services	644	1,183
Maintenance	—	—
Appraisal services	—	—
Hardware and other	20	20
Total revenues	$ 5,397	$ 8,412

On August 31, 2018, we acquired CaseloadPRO, L.P. ("CaseloadPRO"), a company that provides a fully featured probation case management system. On April 30, 2018, we also acquired Sage Data Security, LLC ("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.

Software licenses and royalties

The following table sets forth a comparison of our software licenses and royalties revenue for the periods presented as of September 30:

	Third Quarter		Change		Nine Months Ended		Change	
($ in thousands)	2018	2017 As Adjusted	$	%	2018	2017 As Adjusted	$	%
ES	$19,544	$21,143	$(1,599)	(8)%	$60,224	$58,805	$1,419	2 %
A&T	2,900	1,619	1,281	79	7,396	5,021	2,375	47
Total software licenses and royalties revenue	$22,444	$22,762	$(318)	(1)%	$67,620	$63,826	$3,794	6 %

Software licenses and royalties revenue decreased 1% and increased 6% for the three and nine months ended September 30, 2018, respectively, compared to the prior year period. The decline for the three months ended September 30, 2018 was primarily due to an increase in the number of new software clients choosing our subscription-based options, rather than purchasing the software under a traditional perpetual software license arrangement. The increase in software licenses and royalties revenue for the nine months ended September 30, 2018, 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 slow as a growing number of clients choose 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 for the nine months ended September 30, 2018, was approximately 43% perpetual software license arrangements and approximately 57% subscription-based arrangements compared to a client mix for the nine months ended September 30, 2017, of approximately 51% perpetual software license arrangements and approximately 49% subscription-based arrangements.

Subscriptions

The following table sets forth a comparison of our subscriptions revenue for the periods presented as of September 30:

	Third Quarter		Change		Nine Months Ended		Change	
($ in thousands)	2018	2017 As Adjusted	$	%	2018	2017 As Adjusted	$	%
ES	$56,220	$42,338	$13,882	33%	$153,541	$119,033	$34,508	29%
A&T	2,479	2,014	465	23	7,195	5,698	1,497	26
Total subscriptions revenue	$58,699	$44,352	$14,347	32%	$160,736	$124,731	$36,005	29%

Subscriptions revenue primarily consists of revenue derived from our SaaS arrangements, which utilize the Tyler private cloud. As part of our subscription-based services, we also provide e-filing arrangements 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, subscriptions revenue grew 22% and 23% for the three and nine months ending September 30, 2018, respectively, compared to the prior year. New SaaS clients as well as existing clients who converted to our SaaS model provided the majority of the subscriptions revenue increase. In the three and nine months ending September 30, 2018, respectively, we added 81 and 329 new SaaS clients and 31 and 89 existing on-premises clients converted to our SaaS model. Since September 30, 2017, we have added 412 new SaaS clients while 108 existing on-premises clients converted to our SaaS model. Also, e-filing services contributed approximately $1.4 million and $5.6 million to the subscriptions revenue increase for the three and nine months ended September 30, 2018, respectively, due to the addition of 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 periods presented as of September 30:

	Third Quarter		Change		Nine Months Ended		Change	
($ in thousands)	2018	2017 As Adjusted	$	%	2018	2017 As Adjusted	$	%
ES	$41,640	$40,861	$779	2 %	$126,928	$120,190	$6,738	6 %
A&T	6,559	5,184	1,375	27	17,884	14,211	3,673	26
Total software services revenue	$48,199	$46,045	$2,154	5 %	$144,812	$134,401	$10,411	8 %

Software services revenue primarily consists of professional services delivered in connection with implementing our software, converting client data, training client personnel, custom development activities and consulting. New clients who acquire our software generally also contract with us to provide the related software services. Existing clients also periodically purchase additional training, consulting and minor programming services. Excluding the results from acquisitions, for the three and nine months ended September 30, 2018, respectively, software services revenue decreased 1% and increased 5% compared to the prior year period. For the three months ended, the slight decrease is attributed to delays in the delivery and recognition of services on certain new contracts because of extended sales processes and client-driven schedules. For the nine months ended, the increase is due to higher new contract volume and the addition of professional services staff to grow our capacity to deliver backlog. Excluding employees added with acquisitions, our implementation and support staff has grown by 86 employees since September 30, 2017.

Maintenance

The following table sets forth a comparison of our maintenance revenue for the periods presented as of September 30:

	Third Quarter		Change		Nine Months Ended		Change	
($ in thousands)	2018	2017 As Adjusted	$	%	2018	2017 As Adjusted	$	%
ES	$90,072	$86,138	$3,934	5%	$267,681	$251,457	$16,224	6 %
A&T	6,143	5,709	434	8	18,507	15,508	2,999	19
Total maintenance revenue	$96,215	$91,847	$4,368	5%	$286,188	$266,965	$19,223	7 %

We provide maintenance and support services for our software products and certain third-party software. Maintenance revenue grew 5% and 7% for the three and nine months ended September 30, 2018, respectively, compared to the prior year period. Maintenance revenue increased mainly due to annual maintenance rate increases and growth in our installed customer base from new software license sales partially offset by clients converting from on-premises license arrangements to SaaS.

Appraisal services

The following table sets forth a comparison of our appraisal services revenue for the periods presented as of September 30:

($ in thousands)	Third Quarter 2018	Third Quarter 2017 As Adjusted	Change $	Change %	Nine Months Ended 2018	Nine Months Ended 2017 As Adjusted	Change $	Change %
ES	$—	$ —	$—	— %	$—	$ —	$—	— %
A&T	5,544	6,290	(746)	(12)	16,470	19,268	(2,798)	(15)
Total appraisal services revenue	$5,544	$ 6,290	$(746)	(12)%	$16,470	$ 19,268	$(2,798)	(15)%

Appraisal services revenue for the three and nine months ended September 30, 2018, respectively, decreased by 12% and 15% 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 periods presented as of September 30:

($ in thousands)	Third Quarter 2018	Third Quarter 2017 As Adjusted	Change $	Change %	Nine Months Ended 2018	Nine Months Ended 2017 As Adjusted	Change $	Change %
Software licenses and royalties	$957	$826	$131	16 %	$2,939	$2,204	$735	33 %
Acquired software	5,897	5,473	424	8	17,003	16,243	760	5
Software services, maintenance and subscriptions	111,508	98,036	13,472	14	327,080	287,748	39,332	14
Appraisal services	3,505	4,089	(584)	(14)	10,854	12,568	(1,714)	(14)
Hardware and other	2,574	2,293	281	12	11,718	10,408	1,310	13
Total cost of revenues	$124,441	$110,717	$13,724	12 %	$369,594	$329,171	$40,423	12 %

The following table sets forth a comparison of gross margin percentage by revenue type for the periods presented as of September 30:

	Third Quarter 2018	Third Quarter 2017 As Adjusted	Change	Nine Months Ended 2018	Nine Months Ended 2017 As Adjusted	Change
Software licenses, royalties and acquired software	69.5%	72.3 %	(2.8)%	70.5%	71.1 %	(0.6)%
Software services, maintenance and subscriptions	45.1	46.2	(1.1)	44.7	45.3	(0.6)
Appraisal services	36.8	35.0	1.8	34.1	34.8	(0.7)
Hardware and other	48.2	32.8	15.4	32.9	25.7	7.2
Overall gross margin	47.3%	48.4 %	(1.1)%	46.7%	47.2 %	(0.5)%

Software licenses, royalties and acquired software. Amortization expense for acquired software comprises the majority of costs of software licenses, royalties and acquired software. We do not have any direct costs associated with royalties. In the three and nine months ended September 30, 2018, respectively, our software licenses, royalties and acquired software gross margin decreased 2.8% and 0.6% compared to the prior year period due to higher amortization expense for acquired software resulting from acquisitions. Excluding the impact of acquisitions amortization expense, our software license, royalties and acquired software gross margin was 71.7% for the both three and nine months ended September 30, 2018, respectively.

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 ongoing operation of SaaS and e-filing arrangements. The software services, maintenance and subscription gross margin in the three and nine months ended September 30, 2018, respectively, decreased 1.1% and 0.6% from the comparable prior year period. Excluding employees added through acquisitions, our implementation and support staff has grown by 86 employees since September 30, 2017, as we accelerated hiring to ensure that we are well-positioned to deliver our current backlog and anticipated new business.

Appraisal services. Appraisal services revenue was approximately 2% of total revenue for both the three and nine months ended September 30, 2018, respectively. The appraisal services gross margin for the three and nine months ended September 30, 2018, respectively, increased 1.8% and decreased 0.7% compared to the same period in 2017. During the three months ended September 30, 2018, appraisal gross margin increased due to lower headcount of appraisal staff. During the nine months ended September 30, 2018, appraisal gross margin decreased primarily due to the completion of certain higher-margin projects in 2017 and a lower volume of revenues in the current period to cover relatively fixed costs. The appraisal services business is somewhat cyclical and driven in part by statutory revaluation cycles in various states.

For the three and nine months ended September 30, 2018, respectively, our overall gross margin decreased 1.1% and 0.5% compared to the prior year period. Our overall gross margin decrease for the both three and nine months period is mainly attributed to additions to our implementation staff combined with lower margin revenues from software licenses, in part due to higher amortization expense for acquired software resulting from acquisitions.

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 periods presented as of September 30:

	Third Quarter		Change		Nine Months Ended		Change	
($ in thousands)	2018	2017 As Adjusted	$	%	2018	2017 As Adjusted	$	%
Selling, general and administrative expenses	$52,605	$44,513	$8,092	18%	$152,471	$130,293	$22,178	17%

SG&A as a percentage of revenues was 22% for both the three and nine months ended September 30, 2018, compared to 21% for both the three and nine months ended September 30, 2017. SG&A expense increased 18% and 17% for the three and nine months ended September 30, 2018, respectively. This increase is mainly due to higher share-based compensation expense, increased staffing levels, and an increase in commission expense as a result of higher sales. Excluding employees added with acquisitions, we have added 30 SG&A employees, mainly to our sales and finance teams, since September 30, 2017. For the three and nine months ended September 30, 2018, respectively, stock compensation expense rose $3.3 million and $7.8 million compared to the same period in 2017, mainly due to an increase in share-based awards issued in connection with our stock compensation plan coupled with the higher fair value of each share-based award due to the increase in our stock price.

Research and Development Expense

The following table sets forth a comparison of our research and development expense for the periods presented as of September 30:

	Third Quarter		Change		Nine Months Ended		Change	
($ in thousands)	2018	2017	$	%	2018	2017	$	%
Research and development expense	$17,050	$11,834	$5,216	44%	$45,929	$35,307	$10,622	30%

Research and development expense consists mainly of costs associated with development of new products and technologies from which we do not currently generate significant revenue.

Research and development expense in the three and nine months ended September 30, 2018, respectively, increased 44% and 30% compared to prior period mainly due to a number of new Tyler product development initiatives across our product suites. To support these initiatives, our research and development staff has grown by 133 since September 30, 2017.

Amortization of Customer and Trade Name Intangibles

Acquisition intangibles are composed of the excess of the purchase price over the fair value of net tangible assets acquired that is allocated to acquired software and customer and trade name intangibles. The remaining excess purchase price is allocated to goodwill that is not subject to amortization. Amortization of customer and trade name intangibles increased substantially from the comparable prior year periods due to the acquisition of Socrata in April 2018. 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 following table sets forth a comparison of amortization of customer and trade name intangibles for the periods presented as of September 30:

	Third Quarter		Change		Nine Months Ended		Change	
($ in thousands)	2018	2017 As Adjusted	$	%	2018	2017 As Adjusted	$	%
Amortization of customer and trade name intangibles	$4,386	$ 3,360	$1,026	31%	$11,742	$ 10,016	$1,726	17%

Other Income (Expense), Net

The following table sets forth a comparison of our other income (expense), net, for the periods presented as of September 30:

	Third Quarter		Change		Nine Months Ended		Change	
($ in thousands)	2018	2017	$	%	2018	2017	$	%
Other income (expense), net	$1,041	$ 75	$966	NM	$2,198	$(216)	$2,414	NM

Other income (expense), net, 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. The change in other income (expense), net, in the three and nine months ended September 30, 2018, respectively, compared to the prior period is due to increased interest income from significantly higher levels of cash 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

The following table sets forth a comparison of our income tax provision for the periods presented as of September 30:

	Third Quarter		Change		Nine Months Ended		Change	
($ in thousands)	2018	2017 As Adjusted	$	%	2018	2017 As Adjusted	$	%
Income tax (benefit) provision	$(298)	$5,521	$(5,819)	(105)%	$(147)	$14,820	$(14,967)	(101)%
Effective income tax rate	(0.8)%	12.4 %			(0.1)%	12.5 %		

The decrease in effective tax rate for the three months ended September 30, 2018, as compared to the same period in 2017 was due primarily to the reduction of the U.S. corporate tax rate from 35% to 21% as a result of the Tax Act, the increase in the excess tax benefit related to share-based compensation and research tax credit benefit, offset by the elimination of the domestic production activities deduction and the increased limitations on the deduction for executive compensation. The effective income tax rates for the three and nine months ended September 30, 2018 and 2017, respectively, were different from the statutory United States federal income tax rates of 21% and 35%, respectively, principally due to excess tax benefits related to stock option exercises. The excess tax benefit related to stock option exercises realized was $9.3 million and $30.0 million for the three and nine months ended September 30, 2018, respectively, compared to $9.0 million and $27.6 million for the three and nine months ended September 30, 2017, respectively. Excluding the excess tax benefits, the effective rate was 23.3% and 25.8% for the three and nine months ended September 30, 2018, respectively, compared to 32.8% and 35.9% (as adjusted) for the three and nine months ended September 30, 2017, respectively. Other differences from the federal statutory income tax rate include state income taxes, non-deductible business expenses, the tax benefit of research tax credits, provisional amounts associated with the Tax Act recorded in 2018, and in 2017, the tax benefit of the domestic production activities deduction.

FINANCIAL CONDITION AND LIQUIDITY

As of September 30, 2018, we had cash and cash equivalents of $219.5 million compared to $185.9 million at December 31, 2017. We also had $95.8 million invested in investment grade corporate and municipal bonds as of September 30, 2018. These investments mature through 2022, and we intend to hold these investments until maturity.

As of September 30, 2018, we believe our cash from operating activities, revolving line of credit, cash on hand and access to the capital markets provides us with sufficient flexibility to meet our long-term financial needs.

The following table sets forth a summary of cash flows for the nine months ended September 30:

($ in thousands)	2018	2017
Cash flows provided (used) by:		
Operating activities	$179,353	$142,381
Investing activities	(222,341)	(75,807)
Financing activities	76,514	21,878
Net increase in cash and cash equivalents	$33,526	$88,452

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 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.

For the nine months ended September 30, 2018, operating activities provided cash of $179.4 million. Operating activities that provided cash were primarily comprised of net income of $115.9 million, non-cash depreciation and amortization charges of $45.6 million and non-cash share-based compensation expense of $38.0 million. Working capital, excluding cash, increased approximately $20.2 million mainly due to higher accounts receivable because of an increase in unbilled receivables attributed to revenues recognized prior billings, the timing of payments related to bonuses, timing of tax payments and the deferred taxes associated with stock option activity during the period. These increases were offset by an increase in deferred revenue attributed to growth in our installed software maintenance customer base and growth in subscription-based arrangements.

Our days sales outstanding ("DSO") was 107 days at September 30, 2018, compared to 102 days (as adjusted) at December 31, 2017 and 94 days (as adjusted) at September 30, 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, as well as 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. 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 divided by the quotient of annualized quarterly revenues divided by 360 days.

Investing activities used cash of $222.3 million in the nine months ending September 30, 2018. On August 31, 2018, we acquired all of the assets of CaseloadPRO, L.P., a company that provides a fully featured probation case management system. The purchase price was $9.2 million, of which $9.1 million was paid in cash and approximately $150,000 was accrued as of September 30, 2018. 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 for state local and government agencies including cloud-based data integration, visualization, analysis, and reporting solutions. The purchase price, net of cash acquired of $1.7 million, was $147.6 million paid in cash. On April 30, 2018, we also 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. Approximately $23.5 million was invested in property and equipment including $1.8 million for real estate construction costs. The remaining additions were for computer equipment, furniture and fixtures in support of internal growth, particularly with respect to data centers supporting growth in our cloud-based offerings.

Investing activities used cash of $75.8 million in the nine months ending September 30, 2017. Approximately $37.7 million was invested in property and equipment. We purchased an office building in Latham, New York, for approximately $2.9 million and paid $12.9 million for construction to expand a building in Yarmouth, Maine.
On August 2, 2017, we acquired all of the capital stock of Digital Health Department, Inc., a company that provides environmental health software, offering a software-as-a-service (SaaS) solution for public health compliance and inspections processes. The total purchase price, net of debt assumed, was $3.9 million, On May 30, 2017, we also 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 $0.9 million was accrued as of September 30, 2017. The impact of these acquisitions on our operating results is not material.
Financing activities provided cash of $76.5 million in the nine months ended September 30, 2018 and were comprised of proceeds from stock option exercises and employee stock purchase plan activity. We did not repurchase any shares of our common stock during the nine months ended September 30, 2018.
Financing activities provided cash of $21.9 million in the nine months ended September 30, 2017, and were comprised of purchases of treasury shares, proceeds from stock option exercises and employee stock purchase plan activity. During the nine months ended September 30, 2017, we purchased 42,000 shares of our common stock for an aggregate purchase price of $6.2 million at an average price paid per share of $147.30.
We had authorization from our board of directors to repurchase up to 2.0 million additional shares of Tyler common stock as of September 30, 2018. 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 2016. There is no expiration date specified for the authorization, and we intend to repurchase stock under the plan from time to time.
Subsequent to September 30, 2018 and through October 31, 2018, we purchased approximately 155,000 shares of our common stock for an aggregate cash purchase price of $32.3 million.

We made tax payments of $6.8 million in the nine months ended September 30, 2018, compared to tax payments of $29.0 million in the nine months ended September 30, 2017.

Excluding acquisitions, we anticipate that 2018 capital spending will be between $23 million and $26 million, including approximately $2 million related to real estate. We expect the majority of the other capital spending will consist of computer equipment and software for infrastructure replacements and expansion. We currently do not expect to capitalize significant amounts related to software development in 2018, but the actual amount and timing of those costs, and whether they are capitalized or expensed may result in additional capitalized software development. Capital spending is expected to be funded from existing cash balances, cash flows from operations and borrowings under our revolving line of credit.
From time to time we engage in discussions with potential acquisition candidates. In order to consummate any such opportunities, which could require significant commitments of capital, we may incur debt or issue potentially dilutive securities in the future. No assurance can be given as to our future acquisitions and how such acquisitions may be financed.

ITEM 3. 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.
As of September 30, 2018, we had no outstanding borrowings under the Credit Facility. 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 September 30, 2018, our interest rate was 5.25% under the Wells Fargo Bank prime rate and 3.49% under a 30-day LIBOR contract. The Credit Facility is secured by substantially all of our assets.

ITEM 4. 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 period 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 the end of the period covered by this report. Based on this evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of September 30, 2018.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) during the three months ended September 30, 2018, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Part II. OTHER INFORMATION

ITEM 1. 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 1A. Risk Factors

In addition to the other information set forth in this report, one should carefully consider the discussion of various risks and uncertainties contained in Part I, "Item 1A. Risk Factors" in our 2017 Annual Report on Form 10-K. We believe those risk factors are the most relevant to our business and could cause our results to differ materially from the forward-looking statements made by us. Please note, however, that those are not the only risk factors facing us. Additional risks that we do not consider material, or of which we are not currently aware, may also have an adverse impact on us. Our business, financial condition and results of operations could be seriously harmed if any of these risks or uncertainties actually occurs or materializes. In that event, the market price for our common stock could decline, and our shareholders may lose all or part of their investment. During the three months ended September 30, 2018, there were no material changes in the information regarding risk factors contained in our Annual Report on Form 10-K for the year ended December 31, 2017.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

None

ITEM 3. Defaults Upon Senior Securities

None

ITEM 4. Submission of Matters to a Vote of Security Holders

None

ITEM 5. Other Information

None

ITEM 6. Exhibits

Exhibit 31.1	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
Exhibit 31.2	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
Exhibit 32.1	Certifications Pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
Exhibit 10.1	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).
Exhibit 10.2	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).
Exhibit 10.3	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).
Exhibit 10.4	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).
Exhibit 10.5	Employee Stock Purchase Plan (filed as Exhibit 10.1 to our registration statement 333-225011 dated May 17, 2018 and incorporated by reference herein).
Exhibit 101	Instance Document
Exhibit 101	Schema Document
Exhibit 101	Calculation Linkbase Document
Exhibit 101	Labels Linkbase Document
Exhibit 101	Definition Linkbase Document
Exhibit 101	Presentation Linkbase Document

SIGNATURES

Pursuant to the requirements 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.

TYLER TECHNOLOGIES, INC.

By: /s/ Brian K. Miller
Brian K. Miller
Executive Vice President and Chief Financial Officer
(principal financial officer and an authorized signatory)

Date: October 31, 2018

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