

TYLER TECHNOLOGIES INC

Form 10-K

February 21, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES AND EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2017

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 (I.R.S. employer or organization) identification no.)

5101 Tennyson Parkway 75024  
Plano, Texas

(Address of principal executive offices) (Zip code)

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

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

Title of each class	Name of each exchange on which registered
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COMMON STOCK, \$0.01 PAR VALUE	NEW YORK STOCK EXCHANGE
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Securities registered pursuant to Section 12(g) of the Act:

NONE

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

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

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

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

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

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

(Check one):

Large accelerated filer

Accelerated filer

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

Smaller reporting company

Emerging growth company

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

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

The aggregate market value of the voting stock held by non-affiliates of the registrant was \$6,107,280,000 based on the reported last sale price of common stock on June 30, 2017, which is the last business day of the registrant's most recently completed second fiscal quarter.

The number of shares of common stock of the registrant outstanding on February 20, 2018 was 37,901,000

DOCUMENTS INCORPORATED BY REFERENCE

Certain information required by Part III of this annual report is incorporated by reference from the registrant's definitive proxy statement for its annual meeting of stockholders to be held on May 9, 2018.

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## PART I

### ITEM 1. BUSINESS.

#### DESCRIPTION OF BUSINESS

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

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

#### MARKET OVERVIEW

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

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

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

Although local governments generally face budgetary constraints in their operations, their primary revenue sources are usually property taxes, and to a lesser extent, utility billings and other fees, which historically tend to be relatively stable. In addition, the acquisition of new technology typically enables local governments to operate more efficiently, and often provides a measurable return on investment that justifies the purchase of software and related services.

Gartner, Inc., a leading information technology research and advisory company, estimates that state and local government application and vertical specific software spending will grow from \$14.7 billion in 2018 to \$18.3 billion in 2021. The professional services and support segments of the market are expected to expand from \$30.7 billion in 2018 to \$34.4 billion in 2021. Application and vertical specific software sales in the primary and secondary education segments of the market is expected to expand from \$2.6 billion in 2018 to \$3.3 billion in 2021 while professional services and support are expected to grow from \$2.3 billion in 2018 to \$2.5 billion in 2021.

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## PRODUCTS AND SERVICES

We provide a comprehensive and flexible suite of products and services that addresses the information technology needs of cities, counties, schools and other local government entities. We derive our revenues from five primary sources:

• Sales of software licenses and royalties

• Subscription-based arrangements

• Software services

• Maintenance and support

• Appraisal services

We design, develop, market and support a broad range of software solutions to serve mission-critical “back-office” functions of local governments. Many of our software applications include Internet-accessible solutions that allow for real-time public access to a variety of information or that allow the public to transact business with local governments via the Internet. Our software solutions and services are generally grouped in six major areas:

• Financial Management and Education

• Courts and Justice

• Public Safety

• Property Appraisal and

• Tax

• Planning, Regulatory and Maintenance

• Land and Vital Records Management

Each of our core software systems consists of several fully integrated applications. For clients who acquire software for use in-house, we generally license our systems under standard perpetual license agreements that provide the client with a fully paid, nonexclusive, nontransferable right to use the software. In some of the product areas, such as financial management and education and property appraisal and tax, we offer multiple solutions designed to meet the needs of different sized governments.

We also offer SaaS arrangements, which utilize the Tyler private cloud, for clients who do not wish to maintain, update and operate these systems or to make up-front capital expenditures to implement these advanced technologies. For these clients, the software and client data are hosted at our data centers or at third-party locations, and clients typically sign multi-year contracts for these subscription-based services.

Historically, we have had a greater proportion of our annual revenues in the second half of our fiscal year due to governmental budget and spending cycles and the timing of system implementations for clients desiring to “go live” at the beginning of the calendar year.

A description of our suites of products and services follows:

Software Licenses

Financial Management and Education

Our financial management and education solutions are enterprise resource planning systems for local governments, which integrate information across all facets of a client organization. Our financial management solutions include modular fund accounting systems that can be tailored to meet the needs of virtually any government agency or not-for-profit entity. Our financial management systems include modules for general ledger, budget preparation, fixed assets, requisitions, purchase orders, bid management, accounts payable, contract management, accounts receivable, investment management, inventory control, project and grant accounting, work orders, job costing, GASB reporting, payroll and human resources. All of our financial management systems are intended to conform to government auditing and financial reporting requirements and generally accepted accounting principles.

We sell utility billing systems that support the billing and collection of metered and non-metered services, along with multiple billing cycles. Our Web-enabled utility billing solutions allow clients to access information online such as average consumption and transaction history. In addition, our systems can accept secured Internet payments via credit cards and checks.

We also offer specialized products that automate numerous city functions, including municipal courts, parking tickets, equipment and project costing, animal licenses, business licenses, permits and inspections, code enforcement, citizen complaint tracking, ambulance billing, fleet maintenance, and cemetery records management.

In addition to providing financial management systems to K-12 schools, we sell student information systems for K-12 schools, which manage such activities as scheduling, grades and attendance. We also offer student transportation solutions to manage school bus routing optimization, fleet management, field trips and other related functions.

Tyler's financial management and education solutions include Web components that enhance local governments' service capabilities by facilitating online access to information for both employees and citizens and enabling online transactions.

#### Courts and Justice

We offer a complete, fully integrated suite of judicial solutions designed to handle complex, multi-jurisdictional county or statewide implementations as well as single county systems. Our solutions help eliminate duplicate data entry, promote more effective business procedures and improve efficiency across the entire justice process.

Our unified court case management system is designed to automate the tracking and management of information involved in all case types, including criminal, traffic, civil, family, probate and juvenile courts. It also tracks the status of cases, processes fines and fees and generates the specialized judgment and sentencing documents, notices and forms required in the court process. Documents received by the court can be scanned into the electronic case file and easily retrieved for viewing. Documents generated by the court can be electronically signed and automatically attached to the electronic case file. Additional modules automate the management of court calendars, coordinate judges' schedules and generate court dockets. Our targeted courtroom technologies allow courts to rapidly review calendars, cases and view documents in the courtroom. Courts may also take advantage of our related jury management system.

Our court and law enforcement systems allow the public to access, via the Internet, a variety of information, including non-confidential criminal and civil court records, jail booking and release information, bond and bondsmen information, and court calendars and dockets. In addition, our systems allow cities and counties to accept payments for traffic and parking tickets over the Internet, with a seamless and automatic interface to back-office justice and financial systems.

Our prosecutor system enables state attorney offices to track and manage criminal cases, including detailed victim information and private case notes. Investigative reports and charging instrument documents can be generated and stored for later viewing. Prosecutors can schedule and record the outcome of grand jury hearings. When integrated with the court system, prosecutors can view the electronic case file and related documents, as well as manage witness lists and subpoenas needed for court hearings.

Our supervision system allows pre-trial and probation offices to manage offender caseloads. Supervision officers can track contact schedules, risk/needs assessments and reassessments, detailed drug test results, employment histories, compliance with conditions and payments of fees and restitution. Documents and forms, like pre-sentence investigations or revocation orders, can be generated and stored for easy viewing. When integrated with the jail and court systems, supervision officers obtain easy access and quick notification of offenders that have court hearings scheduled, are arrested locally, and have new warrants issued.

We also offer a court case management solution that automates and tracks all aspects of municipal courts and offices. It is a fully integrated, graphical application that provides effective case management, document processing and cash/bond management. This system complies with all state reporting and conviction reports and includes electronic reporting and also integrates with certain of our financial management solutions and public safety solutions.



### Public Safety

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

Our 911 / CAD solutions provide real-time, critical response dispatch functions in either single- or multi-jurisdictional environments. When integrated with our records management software, a vital link exists between dispatch and the most comprehensive records database available. Within seconds, the dispatch operator and the officer in the field can access critical information, such as prior incidents and outstanding warrants, increasing officer knowledge and safety. The solutions offer strong geographic information systems integration to help dispatchers quickly locate and send the best response during an emergency. Tyler’s 911 / CAD solutions dramatically improve performance, response time and unit safety.

Our records management solutions for law enforcement and fire track statistical, operational, investigative and management data for inquiry and reporting. The systems create an efficient case processing workflow and help solve crimes with an accessible database that maintains central files on people, places, property, vehicles and criminal activity. Tyler’s public safety records management solutions enable easy access to information and simplify reporting. Our mobile computing solutions for law enforcement and fire provide instant access to local, state, regional and federal databases via mobile devices. Officers and firefighters can experience the benefits of obtaining critical, real-time information in the field, while saving time by preparing reports directly in their vehicles.

Our jail management systems document and manage information that meets the requirements of a modern jail facility. This includes the booking and housing of persons in custody, supervising defendants on a pre-trial release, maintaining offenders sentenced to local incarceration and billing other agencies for housing inmates. Searching, reporting and tracking features are integrated, allowing reliable, up-to-date access to current arrest and incarceration data, including digital mug shots. Our systems also provide warrant checks for visitors or book-ins, inmate classification and risk assessment, commissary, property and medical processing, automation of statistics, and state and federal reporting.

Our civil processing solutions manage civil process needs from document receipt through service, payment process and final closeout. We also have a mobile electronic citation solution through which law enforcement officers can easily enter citation information in a mobile device, which is automatically uploaded into the court or public safety records management systems, rather than hand-writing citations that must be re-entered into the systems.

We significantly expanded our presence in the public safety market with our acquisition of New World Systems Corporation in November 2015.

### Property Appraisal and Tax

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

### Planning, Regulatory and Maintenance

Our planning, regulatory and maintenance software solutions are designed for public sector agencies such as community development, planning, building, code enforcement, tax and revenues, public works, transportation, land control, environmental, fire safety, storm water management, regulatory controls and engineering. These solutions help public sector agencies better manage their day-to-day business functions while streamlining and automating the many aspects of their land management, permitting and planning systems. Our mobile solutions extend automation to the field and Web access brings online services to citizens 24 hours a day, 365 days a year.



#### Land and Vital Records Management

We also offer a number of specialized software applications designed to help local governments enhance and automate operations involving records and document management. These systems record, scan and index information for the many documents maintained by local governments, such as deeds, mortgages, liens, UCC financing statements and vital records (birth, death and marriage certificates). These applications include fully integrated imaging systems with batch and scan processing capabilities and fully integrated receipting and cashiering systems, as well as Web-enabled public access.

Our content management solutions allow state and local governments and school districts to capture, deliver, manage and archive electronic information. These solutions streamline the flow of digital information throughout the organization to increase efficiency by transforming paper forms and documents into electronic images that drive key business processes.

#### Subscription-Based Services

Subscription-based revenue is primarily derived from our SaaS arrangements, which utilize the Tyler private cloud, as well as our transaction based offerings such as e-filing solutions.

We are able to provide the majority of our software products through our SaaS model. The clients who choose this model typically do not wish to maintain, update and operate these systems or make up-front capital expenditures to implement these advanced technologies. The contract terms for these arrangements range from one to 10 years, but are typically contracted for initial periods of three to seven years. The majority of our SaaS or hosting arrangements include additional professional services as well as maintenance and support services. In certain arrangements, the client may also acquire a license to the software.

As part of our subscription-based services, we provide e-filing solutions that simplify the filing and management of court related documents for courts and law offices. Revenues for e-filing are included in subscription-based revenues and are derived from transaction fees and in some cases, fixed fee arrangements.

#### Software Services

We provide a variety of professional IT services to clients who utilize our software products. Virtually all of our clients contract with us for installation, training, and data conversion services in connection with their implementation of Tyler's software solutions. The complete implementation process for a typical system includes planning, design, data conversion, set-up and testing. At the culmination of the implementation process, a data implementation team is generally onsite at the client's facility to ensure the smooth go-live with the new system. Implementation fees are charged separately to clients on either a fixed-fee or hourly charge basis, depending on the contract.

Both in connection with the installation of new systems and on an ongoing basis, we provide extensive training services and programs related to our products and services. Training can be provided in our training centers, onsite at clients' locations, or at meetings and conferences and can be customized to meet clients' requirements. The vast majority of our clients contract with us for training services, both to improve their employees' proficiency and productivity and to fully utilize the functionality of our systems. Training services are generally billed on an hourly or daily basis, along with travel and other expenses.

#### Maintenance and Support

Following the implementation of our software systems, we provide ongoing software support services to assist our clients in operating the systems and to periodically update the software. Support is provided to clients over the phone or via the Web through help desks staffed by our client support representatives. For more complicated issues, our staff, with the clients' permission, can log on to clients' systems remotely. We maintain our clients' software largely through releases that contain improvements and incremental additions of features and functionality, along with updates necessary because of legislative or regulatory changes.

Virtually all of our software clients contract with us for maintenance and support; which provides us with a significant source of recurring revenue. We generally provide maintenance and support for our on-premises clients under annual, or in some cases, multi-year contracts, with a typical fee based on a percentage of the software product's license fee. These fees can generally be increased on renewal and may also increase as new license fees increase. Maintenance and support fees are generally paid annually in advance. Most maintenance contracts automatically renew unless the client or Tyler gives notice of termination prior to expiration. Similar support is provided to our SaaS clients and is

included in their subscription fees, which are classified as subscription-based revenues.

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### Appraisal Services

We are the nation's largest provider of property appraisal outsourcing services for local government taxing authorities. These services include

- The physical inspection of commercial and residential properties
- Data collection and processing
- Sophisticated computer analyses for property valuation
- Preparation of tax rolls
- Community education regarding the assessment process
- Arbitration between taxpayers and the assessing jurisdiction

Local government taxing authorities normally reappraise properties from time to time to update values for tax assessment purposes and to maintain equity in the taxing process. In some jurisdictions, law mandates reassessment cycles; in others, they are discretionary. While some taxing jurisdictions perform reappraisals in-house, many local governments outsource this function because of its cyclical nature and because of the specialized knowledge and expertise requirements associated with it. Our appraisal services business unit has been in this business since 1938. In some instances, we also sell property tax and/or appraisal software products in connection with appraisal outsourcing projects, while other clients may only engage us to provide appraisal services. Appraisal outsourcing services are somewhat seasonal in nature to the extent that winter weather conditions reduce the productivity of data collection activities in connection with those projects.

### STRATEGY

Our objective is to grow our revenue and earnings organically, supplemented by focused strategic acquisitions. The key components of our business strategy are to

- Provide high quality, value-added products and services to our clients. We compete on the basis of, among other things, delivering to clients our deep domain expertise in local government operations through the highest value products and services in the market. We believe we have achieved a reputation as a premium product and service provider to the local government market.
- Continue to expand our product and service offerings. While we already have what we believe to be the broadest line of software products for local governments, we continually upgrade our core software applications and expand our complementary product and service offerings to respond to technological advancements and the changing needs of our clients. In 2010, we began providing e-filing for courts and law offices, which simplifies the filing and management of court related documents. We believe revenue from e-filing solutions will continue to grow over time as more local and state governments mandate electronic document filings. We also offer solutions that allow the public to access data and conduct transactions with local governments, such as paying traffic tickets, property taxes and utility bills online. We believe that the addition of such features enhances the market appeal of our core products. We have also broadened our offerings of consulting and business process reengineering services. In November 2015, we significantly expanded our presence in the public safety software market through the acquisition of New World Systems Corporation.
- Expand our client base. We seek to establish long-term relationships with new clients primarily through our sales and marketing efforts. While we currently have clients in all 50 states, Canada, the Caribbean, the United Kingdom, Australia, and other international locations, not all of our solutions have achieved nationwide geographic penetration. We intend to continue to expand into new geographic markets by adding sales staff and targeting marketing efforts by solutions in those areas. We also intend to continue to expand our customer base to include more large governments. While our traditional market focus has primarily been on small and mid-sized governments, our increased size and market presence, together with the technological advances and improved scalability of certain of our solutions, are allowing us to achieve increasing success in selling to larger clients. We also expect to expand our presence in international markets by leveraging our leadership position in the United States through the disciplined pursuit of selected opportunities in other countries.
- Expand our existing client relationships. Our existing customer base offers significant opportunities for additional sales of solutions and services that we currently offer, but that existing clients do not fully utilize. Add-on sales to existing clients typically involve lower sales and marketing expenses than sales to new clients.



- Grow recurring revenues. We have a large recurring revenue base from maintenance and support and subscription-based services, which generated revenues of \$535.1 million, or 64% of total revenues, in 2017. We have historically experienced very low customer turnover (approximately 2% annually) and recurring revenues continue to grow as the installed customer base increases. Subscription-based revenues have been our fastest growing revenue category over the past five years, increasing from \$61.9 million in 2013 to \$173.5 million in 2017.
- Maximize economies of scale and take advantage of financial leverage in our business. We seek to build and maintain a larger client base to create economies of scale, enabling us to provide value-added products and services to our clients while expanding our operating margins. Because we sell primarily “off-the-shelf” software, increased sales of the same solutions result in incrementally higher gross margins. In addition, we believe that we have a marketing and administrative infrastructure in place that can be leveraged to accommodate significant long-term growth without proportionately increasing selling, general and administrative expenses.
- Attract and retain highly qualified employees. We believe that the depth and quality of our management and staff is one of our significant strengths, and that the ability to retain such employees is crucial to our continued growth and success. We believe that our stable management team, financial strength and growth opportunities, as well as our leadership position in the local government market, enhance our attractiveness as an employer for highly skilled employees.
- Pursue selected strategic acquisitions. While we expect to primarily grow internally, from time to time we selectively pursue strategic acquisitions that provide us with one or more of the following
  - New products and services to complement our existing offerings
  - Entry into new markets related to local governments
  - New clients and/or geographic expansion
- Establish strategic alliances. In January 2007, we announced a strategic alliance with Microsoft Corporation to jointly develop core public sector functionality for Microsoft Dynamics AX to address the unique accounting needs of public sector organizations worldwide. As part of this alliance, we are enhancing Microsoft Dynamics AX with public sector-specific functionality. The arrangement has broadened the functionality of Microsoft Dynamics AX, providing both Tyler and Microsoft with a public sector accounting platform to support their existing and prospective clients well into the future. Microsoft Dynamics AX with public sector functionality was released to the market in August 2011 and is being sold in the United States and internationally through Microsoft’s distribution channels. Tyler is also an authorized Microsoft reseller for the Microsoft Dynamics solutions developed under this arrangement. Tyler receives license and maintenance royalties on direct and indirect public-sector sales worldwide. Our contractual research and development commitment to develop public sector functionality for Microsoft Dynamics AX was amended in March 2016 and significantly reduced our development commitment through March 2018. However, we will continue to provide sustained engineering and technical support for the public sector functionality within Dynamics AX.

#### SALES, MARKETING, AND CLIENTS

We market our products and services through direct sales and marketing personnel located throughout the United States. Other in-house sales staff focus on add-on sales, professional services and support.

Sales of new systems are typically generated from referrals from other government offices or departments within a county or municipality, referrals from other local governments, relationships established between sales representatives and county or local officials, contacts at trade shows, direct mailings, and direct contact from prospects already familiar with us. We are active in numerous national, state, county, and local government associations, and participate in annual meetings, trade shows, and educational events.

Clients consist primarily of county and municipal agencies, school districts and other local government offices. In counties, clients include the auditor, treasurer, tax assessor/collector, county clerk, district clerk, county and district court judges, probation officers, sheriff, and county appraiser. At municipal government sites, clients include directors from various departments, including administration, finance, utilities, public works, code enforcement, personnel, purchasing, taxation, municipal court, and police. Contracts for software products and services are generally implemented over periods of three months to one year, although some complex implementations may span multiple years, with annually renewing maintenance and support update agreements thereafter. Although either the client or we

can terminate these agreements, historically almost all support and maintenance agreements are automatically renewed annually. During 2017, approximately 43% of our revenue was attributable to ongoing support and maintenance agreements. Contracts for appraisal outsourcing services are generally one to three years in duration.



## COMPETITION

We compete with numerous local, regional, and national firms that provide or offer some or many of the same solutions and services that we provide. Many of these competitors are smaller companies that may be able to offer less expensive solutions than ours. Many of these firms operate within a specific geographic area and/or in a narrow product or service niche. We also compete with national firms, some of which have greater financial and technical resources than we do, including Oracle Corporation, Infor, SAP AG, Workday, Inc., Superion, Thomson Reuters Corporation, and Constellation Software, Inc. In addition, we sometimes compete with consulting and systems integration firms, which develop custom systems, primarily for larger governments. We also occasionally compete with central internal information service departments of local governments, which requires us to persuade the end-user department to discontinue service by its own personnel and outsource the service to us.

We compete on a variety of factors, including price, service, name recognition, reputation, technological capabilities, and the ability to modify existing products and services to accommodate the individual requirements of the client. Our ability to offer an integrated system of applications for several offices or departments is often a competitive advantage. Local governmental units often are required to seek competitive proposals through a request for proposal process and some prospective clients use consultants to assist them with the proposal and vendor selection process.

## SUPPLIERS

Substantially all of the computers, peripherals, printers, scanners, operating system software, office automation software, and other equipment necessary for the implementation and provision of our software systems and services are presently available from several third-party sources. Hardware is purchased on original equipment manufacturer or distributor terms at discounts from retail. We have not experienced any significant supply problems.

## BACKLOG

At December 31, 2017, our estimated revenue backlog was approximately \$1.1 billion, compared to \$953.3 million at December 31, 2016. The backlog represents signed contracts under which the revenue has not been recognized as of year-end. Approximately \$578.2 million, or 52%, of the backlog is expected to be recognized during 2018.

## INTELLECTUAL PROPERTY, PROPRIETARY RIGHTS, AND LICENSES

We regard certain features of our internal operations, software, and documentation as confidential and proprietary and rely on a combination of contractual restrictions, trade secret laws and other measures to protect our proprietary intellectual property. We generally do not rely on patents. We believe that, due to the rapid rate of technological change in the computer software industry, trade secrets and copyright protection are less significant than factors such as knowledge, ability and experience of our employees, frequent product enhancements, and timeliness and quality of support services. We typically license our software products under non-exclusive license agreements, which are generally non-transferable and have a perpetual term.

## EMPLOYEES

At December 31, 2017, we had 4,069 employees. None of our employees are represented by a labor union or are subject to collective bargaining agreements. We consider our relations with our employees to be positive.

## INTERNET WEBSITE AND AVAILABILITY OF PUBLIC FILINGS

We file annual, quarterly, current and other reports, proxy statements and other information with the Securities and Exchange Commission, or SEC, pursuant to the Securities Exchange Act. You may read and copy any materials we file with the SEC at the SEC's Public Reference Room by calling the SEC at 1-800-732-0330. The SEC maintains an Internet site that contains reports, proxy and other information statements, and other information regarding issuers, including us, that file electronically with the SEC. The address of this site is <http://www.sec.gov>.

We also maintain a website at [www.tylertech.com](http://www.tylertech.com). We make available free of charge through this site our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Forms 4 and 5, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. In addition, copies of our annual report will be made available, free of charge upon written request.

Our "Code of Business Conduct and Ethics" is also available on our website. We intend to satisfy the disclosure requirements regarding amendments to, or waivers from, a provision of our Code of Business Conduct and Ethics by posting such information on our website.



## ITEM 1A. RISK FACTORS.

An investment in our common stock involves a high degree of risk. Investors evaluating our company should carefully consider the factors described below and all other information contained in this Annual Report. Any of the following factors could materially harm our business, operating results, and financial condition. Additional factors and uncertainties not currently known to us or that we currently consider immaterial could also harm our business, operating results, and financial condition. This section should be read in conjunction with the Financial Statements and related Notes and Management's Discussion and Analysis of Financial Condition and Results of Operations included in this Annual Report. We may make forward-looking statements from time to time, both written and oral. We undertake no obligation to revise or publicly release the results of any revisions to these forward-looking statements. Our actual results may differ materially from those projected in any such forward-looking statements due to a number of factors, including those set forth below and elsewhere in this Annual Report.

### Risks Associated with Our Software Products

Cyber-attacks and security vulnerabilities can disrupt our business and harm our competitive position.

Threats to IT security can take a variety of forms. Individuals and groups of hackers, and sophisticated organizations including state-sponsored organizations, may take steps that pose threats to our clients and our IT. They may develop and deploy malicious software to attack our products and services and gain access to our networks and data centers, or act in a coordinated manner to launch distributed denial of service or other coordinated attacks. Cyber threats are constantly evolving, thereby increasing the difficulty of detecting and successfully defending against them. Cyber threats can have cascading impacts that unfold with increasing speed across our internal networks and systems and those of our partners and clients. Breaches of our network or data security could disrupt the security of our internal systems and business applications, impair our ability to provide services to our clients and protect the privacy of their data, result in product development delays, compromise confidential or technical business information harming our competitive position, result in theft or misuse of our intellectual property or other assets, require us to allocate more resources to improve technologies, or otherwise adversely affect our business. Our business policies and internal security controls may not keep pace with these evolving threats.

Disclosure of personally identifiable information and/or other sensitive client data could result in liability and harm our reputation.

We store and process increasingly large amounts of personally identifiable and other confidential information of our clients. The continued occurrence of high-profile data breaches provides evidence of an external environment increasingly hostile to information security. Despite our efforts to improve security controls, it is possible our security controls over personal data, our training of employees on data security, and other practices we follow may not prevent the improper disclosure of client data that we store and manage. Disclosure of personally identifiable information and/or other sensitive client data could result in liability and harm our reputation.

Hosting services for some of our products are dependent upon the uninterrupted operation of data centers.

A material portion of our business is provided through software hosting services. These hosting services depend on the uninterrupted operation of data centers and the ability to protect computer equipment and information stored in these data centers against damage that may be caused by natural disaster, fire, power loss, telecommunications or Internet failure, acts of terrorism, unauthorized intrusion, computer viruses, and other similar damaging events. If any of our data centers were to become inoperable for an extended period, we might be unable to fulfill our contractual commitments. Although we take what we believe to be reasonable precautions against such occurrences, we can give no assurance that damaging events such as these will not result in a prolonged interruption of our services, which could result in client dissatisfaction, loss of revenue, and damage to our business.

We run the risk of errors or defects with new products or enhancements to existing products.

Our software products are complex and may contain errors or defects, especially when first introduced or when new versions or enhancements are released. Although we have not experienced material adverse effects from any such defects or errors to date, we cannot assure you that material defects and errors will not be found in the future. Any such defects could result in a loss of revenues or delay market acceptance. Our license agreements typically contain provisions designed to limit our exposure to potential liability. However, it is possible we may not always successfully negotiate such provisions in our client contracts or the limitation of liability provisions may not be effective due to

existing or future federal, state, or local laws, ordinances, or judicial decisions. Although we maintain errors and omissions and general liability insurance, and we try to structure contracts to limit liability, we cannot assure you that a successful claim could not be made or would not have a material adverse effect on our future operating results.

We must timely respond to technological changes to be competitive.

The market for our products is characterized by technological change, evolving industry standards in software technology, changes in client requirements, and frequent new product introductions and enhancements. The introduction of products embodying new technologies and the emergence of new industry standards can render existing products obsolete and unmarketable. As a result, our future success will depend, in part, upon our ability to enhance existing products and develop and introduce new products that keep pace with technological developments, satisfy increasingly sophisticated client requirements, and achieve market acceptance. We cannot assure you that we will successfully identify new product opportunities and develop and bring new products to market in a timely and cost-effective manner. The products, capabilities, or technologies developed by others could also render our products or technologies obsolete or noncompetitive. Our business may be adversely affected if we are unable to develop or acquire new software products or develop enhancements to existing products on a timely and cost-effective basis, or if such new products or enhancements do not achieve market acceptance.

We may be unable to protect our proprietary rights.

Many of our product and service offerings incorporate proprietary information, trade secrets, know-how, and other intellectual property rights. We rely on a combination of contracts, copyrights, and trade secret laws to establish and protect our proprietary rights in our technology. We cannot be certain that we have taken all appropriate steps to deter misappropriation of our intellectual property. There has also been significant litigation recently involving intellectual property rights. We are not currently involved in any material intellectual property litigation; however, we may be a party to such litigation in the future to protect our proprietary information, trade secrets, know-how, and other intellectual property rights. We cannot assure you that third-parties will not assert infringement or misappropriation claims against us with respect to current or future products. Any claims or litigation, with or without merit, could be time-consuming, costly, and a diversion to management. Any such claims and litigation could also cause product shipment delays or require us to enter into royalty or licensing arrangements. Such royalty or licensing arrangements, if required, may not be available on terms acceptable to us, if at all. Therefore, litigation to defend and enforce our intellectual property rights could have a material adverse effect on our business, regardless of the final outcome of such litigation.

Clients may elect to terminate our maintenance contracts and manage operations internally.

It is possible that our clients may elect to not renew maintenance contracts for our software, trying instead to maintain and operate the software themselves using their perpetual license rights (excluding software applications that we provide on a hosted or cloud basis). This could adversely affect our revenues and profits. Additionally, they may inadvertently allow our intellectual property or other information to fall into the hands of third-parties, including our competitors, which could adversely affect our business.

Material portions of our business require the Internet infrastructure to be further developed or adequately maintained. Part of our future success depends on the use of the Internet as a means to access public information and perform transactions electronically, including, for example, electronic filing of court documents. This in part requires the further development and maintenance of the Internet infrastructure. Among other things, this further development and maintenance will require a reliable network backbone with the necessary speed, data capacity, security, and timely development of complementary products for providing reliable Internet access and services. If this infrastructure fails to be further developed or be adequately maintained, our business would be harmed because users may not be able to access our government portals.

**Risks Associated with Selling Products and Services into the Public Sector Marketplace**

Selling products and services into the public sector poses unique challenges.

We derive substantially all of our revenues from sales of software and services to state, county, and city governments, other municipal agencies, and other public entities. We expect that sales to public sector clients will continue to account for substantially all of our revenues in the future. We face many risks and challenges associated with contracting with governmental entities, including

- Resource limitations caused by budgetary constraints, which may provide for a termination of executed contracts due to a lack of future funding

- Long and complex sales cycles

Contract payments at times being subject to achieving implementation milestones, and we may have differences with clients as to whether milestones have been achieved

Political resistance to the concept of contracting with third-parties to provide IT solutions

Legislative changes affecting a local government's authority to contract with third-parties

Varying bid procedures and internal processes for bid acceptance

Various other political factors, including changes in governmental administrations and personnel

Each of these risks is outside our control. If we fail to adequately adapt to these risks and uncertainties, our financial performance could be adversely affected.

A prolonged economic slowdown could harm our operations.

A prolonged economic slowdown or recession could reduce demand for our software products and services. Local and state governments may face financial pressures that could in turn affect our growth rate and profitability in the future.

There is no assurance that local and state spending levels will be unaffected by declining or stagnant general economic conditions, and if budget shortfalls occur, they may negatively impact local and state IT spending and could adversely affect our business.

The open bidding process creates uncertainty in predicting future contract awards.

Many governmental agencies purchase products and services through an open bidding process. Generally, a governmental entity will publish an established list of requirements requesting potential vendors to propose solutions for the established requirements. To respond successfully to these requests for proposals, we must accurately estimate our cost structure for servicing a proposed contract, the time required to establish operations for the proposed client, and the likely terms of any other third-party proposals submitted. We cannot guarantee that we will win any bids in the future through the request for proposal process, or that any winning bids will ultimately result in contracts on favorable terms. Our failure to secure contracts through the open bidding process, or to secure such contracts on favorable terms, may adversely affect our revenue and gross margins.

We face significant competition from other vendors and potential new entrants into our markets.

We believe we are a leading provider of integrated solutions for the public sector. However, we face competition from a variety of software vendors that offer products and services similar to those offered by us, as well as from companies offering to develop custom software. We compete based on a number of factors, including

The attractiveness of our "evergreen" business strategy

The breadth, depth, and quality of our product and service offerings

The ability to modify our offerings to accommodate particular clients' needs

Technological innovation

- Name recognition, reputation and references

Price

Our financial strength and stability

We believe the market is highly fragmented with a large number of competitors that vary in size, product platform, and product scope. Our competitors include consulting firms, publicly held companies that focus on selected segments of the public sector market, and a significant number of smaller, privately held companies. Certain competitors have greater technical, marketing, and financial resources than we do. We cannot assure you that such competitors will not develop products or offer services that are superior to our products or services or that achieve greater market acceptance.

We also compete with internal, centralized IT departments of governmental entities, which requires us to persuade the end-user to stop the internal service and outsource to us. In addition, our clients and prospective clients could elect to provide information management services internally through new or existing departments, which could reduce the market for our services.

We could face additional competition as other established and emerging companies enter the public sector software application market and new products and technologies are introduced. Increased competition could result in pricing pressure, fewer client orders, reduced gross margins, and loss of market share. Current and potential competitors may make strategic acquisitions or establish cooperative relationships among themselves or with third-parties, thereby increasing the ability of their products to address the needs of our prospective clients. It is possible that new competitors or alliances may emerge and rapidly gain significant market share. We cannot assure you that we will be able to compete successfully against current and future competitors, and the failure to do so would have a material adverse effect upon our business.

Fixed-price contracts may affect our profits.

Some of our contracts are structured on a fixed-price basis, which can lead to various risks, including

- The failure to accurately estimate the resources and time required for an engagement
- The failure to effectively manage our clients' expectations regarding the scope of services delivered for a fixed fee
- The failure to timely and satisfactorily complete fixed-price engagements within budget

If we do not adequately assess and manage these and other risks, we may be subject to cost overruns and penalties, which may harm our financial performance.

Changes in the insurance markets may affect our business.

Some of our clients, primarily those for our property appraisal services, require that we secure performance bonds before they will select us as their vendor. In addition, we have in the past been required to provide letters of credit as security for the issuance of a performance bond. We cannot guarantee that we will be able to secure such performance bonds in the future on terms that are favorable to us, if at all. Our inability to obtain performance bonds on favorable terms or at all could impact our future ability to win some contract awards, particularly large property appraisal services contracts, which could negatively impact revenues. In addition, the general insurance markets may experience volatility, which may lead to future increases in our general and administrative expenses and negatively impact our operating results.

Risks Associated with Our Periodic Results and Stock Price

Software revenue recognition rules may require us to delay revenue recognition into future periods.

We have in the past had to, and may in the future be required to, defer revenue recognition for software license fees due to several factors, including

- License agreements include applications that are under development or other undelivered elements
- Client contracts require the delivery of services considered essential to the functionality of the software, including significant modifications, customization, or complex interfaces, that could delay product delivery or acceptance
- The transaction involves customer acceptance criteria with a right to refund

Because of these factors and other specific requirements for software revenue recognition under generally accepted accounting principles in the United States, we must have very precise terms in our contracts to recognize revenue upon the delivery and installation of our software or performance of services. Negotiation of mutually acceptable terms and conditions may extend the sales cycle. We are not always able to negotiate terms and conditions that permit revenue recognition at the time of delivery or even upon project completion.



Fluctuations in quarterly revenue could adversely impact our operating results and stock price.

Our revenues and operating results are difficult to predict and may fluctuate substantially from quarter to quarter for a variety of reasons, including

• Prospective clients' contracting decisions are often made in the last few weeks of a quarter

• The size of license transactions can vary significantly

• Clients may unexpectedly postpone or cancel procurement processes due to changes in strategic priorities, project objectives, budget, or personnel

• Client purchasing processes vary significantly and a client's internal approval, expenditure authorization, and contract negotiation processes can be difficult and time consuming to complete, even after selection of a vendor

• The number, timing, and significance of software product enhancements and new software product announcements by us and our competitors may affect purchase decisions

• We may have to defer revenues under our revenue recognition policies

Clients may elect subscription-based arrangements, which result in lower software license revenues in the initial year as compared to traditional, on-premise software license arrangements, but generate higher overall subscription-based revenues over the term of the contract

In each fiscal quarter, our expense levels, operating costs, and hiring plans are based to some extent on projections of future revenues and are relatively fixed. If our actual revenues fall below expectations, we could experience a reduction in operating results. Also, if actual revenues or earnings for any given quarter fall below expectations, it may lead to a decline in our stock price.

Increases in service revenue as a percentage of total revenues could decrease overall margins.

We realize lower margins on software and appraisal service revenues than on license revenue. The majority of our contracts include both software licenses and software services. Therefore, an increase in the percentage of software service and appraisal service revenue compared to license revenue could have a detrimental impact on our overall gross margins and could adversely affect operating results.

Our stock price may be volatile.

The market price of our common stock may be volatile. Examples of factors that may significantly impact our stock price include

• Actual or anticipated fluctuations in our operating results

• Announcements of technological innovations, new products, or new contracts by us or our competitors

• Developments with respect to patents, copyrights, or other proprietary rights

• Conditions and trends in the software and other technology industries

• Adoption of new accounting standards affecting the software industry

• Changes in financial estimates by securities analysts

• General market conditions and other factors

In addition, the stock market has from time to time experienced significant price and volume fluctuations that have particularly affected the market prices of technology company stocks and may in the future adversely affect the market price of our stock. Sometimes, securities class action litigation is filed following periods of volatility in the market price of a particular company's securities. We cannot assure you that similar litigation will not occur in the future with respect to us. Such litigation could result in substantial costs and a diversion of management's attention and resources, which could have a material adverse effect upon our financial performance.

Our financial outlook may not be realized.

From time to time, in press releases and otherwise, we may publish forecasts or other forward-looking statements regarding our results, including estimated revenues or earnings. Any forecast of our future performance reflects various assumptions. These assumptions are subject to significant uncertainties, and as a matter of course, any number of them may prove to be incorrect. Further, the achievement of any forecast depends on numerous risks and other factors (including those described in this discussion), many of which are beyond our control. As a result, we cannot be certain that our performance will be consistent with any management forecasts or that the variation from such forecasts will not be material and adverse. Current and potential stockholders are cautioned not to base their entire analysis of our business and prospects upon isolated predictions, but instead are encouraged to utilize our entire publicly available mix of historical and forward-looking information, as well as other available information regarding us, our products and services, and the software industry when evaluating our prospective results of operations.

#### Risks Associated with Our Growth Strategy and Other General Corporate Risks

We may experience difficulties in executing our acquisition strategy.

A material portion of our historical growth has resulted from strategic acquisitions. Although our focus is on internal growth, we will continue to identify and pursue strategic acquisitions with suitable candidates. These transactions involve significant challenges and risks, including risks that a transaction does not advance our business strategy; that we do not achieve the expected return on our investment; that we have difficulty integrating business systems and technology; that we have difficulty retaining or integrating new employees; that the transactions distract management from our other businesses; that we acquire unforeseen liabilities; and other unanticipated events. Our future success will depend, in part, on our ability to successfully integrate future acquisitions into our operations. It may take longer than expected to realize the full benefits of these transactions, such as increased revenue, enhanced efficiencies, or increased market share, or the benefits may be ultimately less than we expected. Although we conduct due diligence reviews of potential acquisition candidates, we may not identify all material liabilities or risks related to acquisition candidates. There can be no assurance that any such strategic acquisitions will be accomplished on favorable terms or will result in profitable operations.

Our failure to properly manage growth could adversely affect our business.

We have expanded our operations significantly since 1998, when we entered the business of providing software solutions and services to the public sector. We intend to continue expansion in the foreseeable future to pursue existing and potential market opportunities. This growth places significant demands on management and operational resources. In order to manage growth effectively, we must implement and improve our operational systems, procedures, and controls on a timely basis. If we fail to implement these systems, our business may be materially adversely affected.

We may be unable to hire, integrate, and retain qualified personnel.

Our continued success will depend upon the availability and performance of our key management, sales, marketing, client support, and product development personnel. The loss of key management or technical personnel could adversely affect us. We believe that our continued success will depend in large part upon our ability to attract, integrate, and retain such personnel. We have at times experienced and continue to experience difficulty in recruiting qualified personnel. Competition for qualified software development, sales, and other personnel is intense, and we cannot assure you that we will be successful in attracting and retaining such personnel.

Compliance with changing regulation of corporate governance may result in additional expenses.

Changing laws, regulations, and standards relating to corporate governance and public disclosure can create uncertainty for public companies. The costs required to comply with such evolving laws are difficult to predict. To maintain high standards of corporate governance and public disclosure, we intend to invest all reasonably necessary resources to comply with evolving standards. This investment may result in an unforeseen increase in general and administrative expenses and a diversion of management's time and attention from revenue-generating activities, which may harm our operating results.

We don't foresee paying dividends on our common stock.

We have not declared nor paid a cash dividend since we entered the business of providing software solutions and services to the public sector in 1998. We intend to retain earnings for use in the operation and expansion of our

business. We do not anticipate paying any cash dividends on our common stock in the foreseeable future.

Provisions in our certificate of incorporation, bylaws, and Delaware law could deter takeover attempts. Our board of directors may issue up to 1,000,000 shares of preferred stock and may determine the price, rights, preferences, privileges, and restrictions, including voting and conversion rights, of these preferred shares. These determinations may be made without any further vote or action by our stockholders. The rights of the holders of our common stock will be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. The issuance of preferred stock may make it more difficult for a third-party to acquire a majority of our outstanding voting stock. In addition, some provisions of our Certificate of Incorporation, Bylaws, and the Delaware General Corporation Law could also delay, prevent, or make more difficult a merger, tender offer, or proxy contest involving us.

**ITEM 1B. UNRESOLVED STAFF COMMENTS.**

Not applicable.

**ITEM 2. PROPERTIES.**

We occupy approximately 1.0 million square feet of office space, of which approximately 746,000 square feet is in office facilities we own. We own or lease offices for our major operations in the states of Arizona, Arkansas, California, Colorado, Georgia, Iowa, Maine, Massachusetts, Michigan, Missouri, Montana, New Hampshire, New York, Ohio, Texas, Washington and Wisconsin, and in Ontario, Canada.

**ITEM 3. LEGAL PROCEEDINGS.**

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

**ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.**

Not applicable.

## PART II

ITEM MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND  
5. ISSUER PURCHASES OF EQUITY SECURITIES.

Our common stock is traded on the New York Stock Exchange under the symbol "TYL." At December 31, 2017, we had approximately 1,367 stockholders of record. Most of our stockholders hold their shares in street name; therefore, there are substantially more than 1,367 beneficial owners of our common stock.

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

	High	Low
2016 First Quarter	\$172.50	\$118.16
Second Quarter	168.19	126.70
Third Quarter	175.77	159.24
Fourth Quarter	172.24	139.61
2017 First Quarter	\$166.86	\$142.75
Second Quarter	178.09	152.00
Third Quarter	182.49	165.14
Fourth Quarter	188.22	168.12

We did not pay any cash dividends in 2017 or 2016. Our bank credit agreement contains restrictions on the payment of cash dividends. We intend to retain earnings for use in the operation and expansion of our business and do not anticipate paying a cash dividend in the foreseeable future.

The following table summarizes certain information related to our stock option plan and our employee stock purchase plan. There are no warrants or rights related to our equity compensation plans as of December 31, 2017.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights as of December 31, 2017	Weighted average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in initial column as of December 31, 2017)
Equity compensation plans approved by security shareholders:			
Stock option plan	4,817,241	\$ 107.91	2,128,560
Employee stock purchase plan	12,052	150.49	796,834
Equity compensation plans not approved by security shareholders	—	—	—

4,829,293    \$ 108.02    2,925,394

As of December 31, 2017, we had authorization to repurchase up to approximately 2.0 million additional shares of Tyler common stock. During 2017, we purchased approximately 44,000 shares of our common stock for an aggregate purchase price of \$6.6 million. A summary of the repurchase activity during 2017 is as follows:

Period	Total number of shares repurchased	Additional number of shares authorized that may be repurchased	Average price paid per share	Maximum number of shares that may be repurchased under current authorization
Three months ended March 31	41,896	—	\$147.30	1,976,160
Three months ended June 30	—	—	—	1,976,160
Three months ended September 30	—	—	—	1,976,160
October 1 through October 31	—	—	—	1,976,160
November 1 through November 30	2,600	—	169.93	1,973,560
December 1 through December 31	—	—	—	1,973,560
	44,496	—	\$148.62	

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 program from time to time.

Performance Graph

The following Performance Graph and related information shall not be deemed “soliciting material” or to be “filed” with the Securities and Exchange Commission, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that we specifically incorporate it by reference into such filing.

The following table compares total shareholder returns for Tyler over the last five years to the Standard and Poor’s 500 Stock Index and the Standard and Poor’s 600 Information Technology Index assuming a \$100 investment made on December 31, 2012. Each of the three measures of cumulative total return assumes reinvestment of dividends. The stock performance shown on the graph below is not necessarily indicative of future price performance.

Company / Index	12/31/12	12/31/13	12/31/14	12/31/15	12/31/16	12/31/17
Tyler Technologies, Inc.	100	210.84	225.93	359.87	294.74	365.50
S&P 500 Stock Index	100	132.39	150.51	152.59	170.84	208.14
S&P 600 Information Technology Index	100	144.91	164.17	171.80	229.96	253.61



## ITEM 6. SELECTED FINANCIAL DATA.

(In thousands, except per share data)

	FOR THE YEARS ENDED DECEMBER 31,				
	2017 (a)	2016 (b)	2015 (c)	2014	2013
<b>STATEMENT OF OPERATIONS DATA:</b>					
Revenues	\$840,662	\$756,043	\$591,022	\$493,101	\$416,643
Cost and expenses:					
Cost of revenues	441,522	400,692	313,835	259,730	223,440
Selling, general and administrative expenses	176,974	167,161	133,317	108,260	98,289
Research and development expense	47,324	43,154	29,922	25,743	23,269
Amortization of customer and trade name intangibles	13,912	13,731	5,905	4,546	4,517
Operating income	160,930	131,305	108,043	94,822	67,128
Other income (expense), net	698	(1,998)	381	(355)	(1,309)
Income before income taxes	161,628	129,307	108,424	94,467	65,819
Income tax (benefit) provision (a)	(2,317)	19,450	43,555	35,527	26,718
Net income	163,945	109,857	64,869	58,940	39,101
Net earnings per diluted share	\$4.18	\$2.82	\$1.77	\$1.66	\$1.13
Weighted average diluted shares (b)	39,246	38,961	36,552	35,401	34,590
<b>STATEMENT OF CASH FLOWS DATA:</b>					
Cash flows provided by operating activities (b)	\$195,755	\$191,859	\$134,327	\$142,839	\$94,297
Cash flows used by investing activities	(85,395)	(50,720)	(398,459)	(11,555)	(25,658)
Cash flows provided (used) by financing activities (b)	39,415	(138,075)	91,052	(3,993)	3,831
<b>BALANCE SHEET DATA:</b>					
Total assets	\$1,589,592	\$1,357,945	\$1,356,570	\$569,812	\$444,488
Revolving line of credit	—	10,000	66,000	—	—
Shareholders' equity	1,167,094	915,525	858,857	336,973	246,319

(a) 2017 includes the significant impact of the enactment of the Tax Cuts and Jobs Act ("Tax Act"). The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision is a \$21.6 million tax benefit due to the remeasurement of deferred tax assets and liabilities. Refer to Note - 7 "Income Tax" for further discussion on the impact of the Tax Act.

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

(c) On November 16, 2015, we completed the acquisition of New World Systems Corporation ("NWS"). Operating results for the twelve months ended December 31, 2015, include \$5.9 million for non-recurring financial advisory, legal, accounting, due diligence, valuation and other expenses necessary to complete the NWS acquisition.

ITEM MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF  
7. OPERATIONS.

FORWARD-LOOKING STATEMENTS

This document contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that are not historical in nature and typically address future or anticipated events, trends, expectations or beliefs with respect to our financial condition, results of operations or business. Forward-looking statements often contain words such as "believes," "expects," "anticipates," "foresees," "forecasts," "estimates," "plans," "intends," "continues," "may," "will," "should," "projects," "might," "could" or other similar words or phrases. Similarly, statements that describe our business strategy, outlook, objectives, plans, intentions or goals also are forward-looking statements. We believe there is a reasonable basis for our forward-looking statements, but they are inherently subject to risks and uncertainties and actual results could differ materially from the expectations and beliefs reflected in the forward-looking statements. We presently consider the following to be among the important factors that could cause actual results to differ materially from our expectations and beliefs: (1) changes in the budgets or regulatory environments of our clients, primarily local and state governments, that could negatively impact information technology spending; (2) our ability to protect client information from security breaches and provide uninterrupted operations of data centers; (3) our ability to achieve growth or operational synergies through the integration of acquired businesses, while avoiding unanticipated costs and disruptions to existing operations; (4) material portions of our business require the Internet infrastructure to be adequately maintained; (5) our ability to achieve our financial forecasts due to various factors, including project delays by our clients, reductions in transaction size, fewer transactions, delays in delivery of new products or releases or a decline in our renewal rates for service agreements; (6) general economic, political and market conditions; (7) technological and market risks associated with the development of new products or services or of new versions of existing or acquired products or services; (8) competition in the industry in which we conduct business and the impact of competition on pricing, client retention and pressure for new products or services; (9) the ability to attract and retain qualified personnel and dealing with the loss or retirement of key members of management or other key personnel; and (10) costs of compliance and any failure to comply with government and stock exchange regulations. A detailed discussion of these factors and other risks that affect our business are described in Item 1A, "Risk Factors." We expressly disclaim any obligation to publicly update or revise our forward-looking statements.

OVERVIEW

General

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

Our products generally automate six 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, and (6) land and vital records management. 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; and land and vital records management. 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.  
Total revenues increased 11% in 2017 compared to 2016.

## Recent Acquisitions

On November 29, 2017, we acquired audio and digital two-way radio communications technology and related assets from Radio 10-33, LLC an audio and digital two-way radio communications company. The total purchase price was \$1.4 million.

On August 2, 2017, we acquired substantially all of the assets and assumed certain liabilities of Digital Health Department, Inc. ("DHD"), a company that provides environmental health software, offering a 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 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.

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

On December 22, 2017, the Tax Act was enacted. The Tax Act amends the Internal Revenue Code to reduce tax rates and modify policies, credits and deductions for individuals and businesses. For businesses, the Tax Act reduces the U.S. corporate federal tax rate from 35% to 21% and transitions from a worldwide tax system to a territorial tax system. The impact of the rate reduction on our 2017 income tax provision is a \$21.6 million tax benefit due to the remeasurement of deferred tax assets and liabilities. Refer to Note 7 "Income Tax" for further discussion on the impact of the Tax Act.

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

**Revenues** – We derive our revenues from five primary sources: sale of software licenses and royalties; subscription-based arrangements; software services; maintenance; and appraisal services. Subscriptions and maintenance are considered recurring revenue sources and comprised approximately 64% of our revenue in 2017. The number of new SaaS clients and the number of existing clients who convert from our traditional software arrangements to our SaaS model are a significant driver to our business, together with new software license sales and maintenance rate increases. In addition, we also monitor our customer base and churn as we historically have experienced very low customer turnover. During 2017, based on our number of customers, turnover was approximately 2%.

**Cost of Revenues and Gross Margins** – Our primary cost component is personnel expenses in connection with providing software implementation, subscription-based services, maintenance and support, and appraisal services to our clients. We can improve gross margins by controlling headcount and related costs and by expanding our revenue base, especially from those products and services that produce incremental revenue with minimal incremental cost, such as software licenses and royalties, subscription-based services, and maintenance and support. Our appraisal projects are cyclical in nature, and we often employ appraisal personnel on a short-term basis to coincide with the life of a project. As of December 31, 2017, our total employee count increased to 4,069 from 3,831 at December 31, 2016.

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

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

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

## Recent Accounting Guidance not yet Adopted

Revenue from Contracts with Customers. On May 28, 2014, the Financial Accounting Standards Board ("FASB") issued ASU No. 2014-09, "Revenue from Contracts with Customers." This ASU is the result of a convergence project between the FASB and the International Accounting Standards Board. The core principle behind ASU No. 2014-09 is that an entity should recognize revenue to depict the transfer of promised goods and services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for delivering those goods and 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. The ASU allows two methods of adoption: a full retrospective approach where three years of financial information are presented in accordance with the new standard, and a modified retrospective approach where the ASU is applied to the most current period presented in the financial statements. We have adopted the new standard effective January 1, 2018 using the full retrospective method which will require each prior reporting period presented to be recast in future issuance of our financial statements. In preparation for adoption of the standard, we have implemented internal controls and key system functionality to enable the preparation of financial information and have reached conclusions on key accounting assessments related to the standard. During the fourth quarter of fiscal 2017, we have substantially completed data conversion activities required to recast our prior period results. We continue to perform an in-depth review of our preliminary results; therefore, we are in the process of completing our analysis necessary to recast prior period results. We do not believe there are any remaining significant implementation topics associated with the adoption of this ASU that have not yet been addressed.

This standard will have a material impact on our consolidated balance sheets and statement of shareholders' equity. The impact of the standard on consolidated revenue and costs of revenue will be dependent upon the mix of revenue streams due to our accounting for software license fees, allocation of discounts across all performance obligations and to the incremental costs of obtaining a contract. Specifically, under the new standard software license fees under perpetual agreements will no longer be subject to 100% discount allocations from other elements in the contract. Discounts in arrangements will be allocated across all deliverables 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) will be recognized at the point in time that control of the software license transfers to the customer versus our current policy of recognizing revenue only to the extent billable per the contractual terms. Time-based license fees currently recognized over the license term will no longer be recognized over the period of the license and will instead be recognized at the point in time that control of the software license transfers to the customer. Revenue related to our software as a service ("SaaS") offerings, post-contract customer support ("PCS") renewals and professional services remain substantially unchanged. Due to the complexity of certain contracts, the actual revenue recognition treatment required under the standard will be dependent on contract-specific terms and may vary in some instances from recognition at the time of billing.

Application of the new standard requires that incremental costs directly related to obtaining a contract (typically sales commissions plus any associated fringe benefits) 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. Currently, we defer sales commissions and recognize expense over the relevant initial contractual term. With the adoption of the new standard, amortization periods will extend past the initial term.

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

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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.

The ASU 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.

## Outlook

The local government software market continues to be active, and our backlog at December 31, 2017 reached \$1.1 billion, a 18% increase from last year. We expect to continue to achieve solid growth in revenue and earnings. With our strong financial position and cash flow, we plan to continue to make significant investments in product development to better position us to continue to expand our competitive position in the public sector software market over the long term.

## CRITICAL ACCOUNTING POLICIES AND ESTIMATES

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

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

**Revenue Recognition.** We recognize revenues in accordance with the provisions of Accounting Standards Codification (“ASC”) 605, Revenue Recognition and ASC 985-605, Software Revenue Recognition. Our revenues are derived from sales of software licenses and royalties, subscription-based services, appraisal services, maintenance and support, and services that typically range from installation, training and basic consulting to software modification and customization to meet specific customer needs. For multiple element software arrangements, which do not entail the performance of services that are considered essential to the functionality of the software, we generally record revenue when the delivered products or performed services result in a legally enforceable and non-refundable claim. We maintain allowances for doubtful accounts and sales adjustments, which are provided at the time the revenue is recognized. Because most of our customers are governmental entities, we rarely incur a loss resulting from the inability of a customer to make required payments. In a limited number of cases, we encounter a customer who is dissatisfied with some aspect of the software product or our service, and we may offer a “concession” to such customer. In those limited situations where we grant a concession, we rarely reduce the contract arrangement fee, but alternatively may perform additional services, such as additional training or creating additional custom reports. These amounts have historically been nominal. In connection with our customer contracts and the adequacy of related allowances and measures of progress towards contract completion, our project managers are charged with the responsibility to continually review the status of each customer on a specific contract basis. Also, we review, on at least a quarterly basis, significant past due accounts receivable and the adequacy of related reserves. Events or changes in circumstances that indicate that the carrying amount for the allowances for doubtful accounts and sales adjustments 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.

We use contract accounting, primarily the percentage-of-completion method, as discussed in ASC 605-35, Construction – Type and Certain Production – Type Contracts, for those software arrangements that involve significant production, modification or customization of the software, or where our software services are otherwise considered essential to the functionality of the software. We measure progress-to-completion primarily using labor hours incurred, or value added. In addition, we recognize revenue using the proportional performance method for our



property appraisal projects, some of which can range up to five years. These methods rely on estimates of total expected contract revenue, billings and collections and expected contract costs, as well as measures of progress toward completion. We believe reasonably dependable estimates of revenue and costs and progress applicable to various stages of a contract can be made. At times, we perform additional and/or non-contractual services for little to no incremental fee to satisfy customer expectations. If changes occur in delivery, productivity or other factors used in developing our estimates of expected costs or revenues, we revise our cost and revenue estimates, and any revisions are charged to income in the period in which the facts that give rise to that revision first become known. In connection with these and certain other contracts, we may perform the work prior to when the services are billable and/or payable pursuant to the contract. The termination clauses in most of our contracts provide for the payment for the value of products delivered and services performed in the event of an early termination.

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. If we determine that the customer has the contractual right to take possession of our software at any time during the hosting period without significant penalty and can feasibly maintain the software on the customer's hardware or enter into another arrangement with a third-party to host the software, we recognize the license, professional services and hosting services revenues pursuant to ASC 985-605, Software Revenue Recognition. For SaaS arrangements that do not meet the criteria for recognition under ASC 985-605, we account for the elements under ASC 605-25, Multiple Element Arrangements using all applicable facts and circumstances, including whether (i) the element has stand-alone value, (ii) there is a general right of return and (iii) the revenue is contingent on delivery of other elements. We allocate the contract value to each element of the arrangement that qualifies for treatment as a separate element based on vendor-specific objective evidence of fair value ("VSOE"), and if VSOE is not available, third-party evidence, and if third-party evidence is unavailable, estimated selling price. For professional services associated with SaaS arrangements that we determine do not have stand-alone value to the customer or are contingent on delivery of other elements, we recognize the services revenue ratably over the remaining contractual period once hosting has gone live and we may begin billing for the hosting services. 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.

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

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

When testing goodwill for impairment quantitatively, we first compare the fair value of each reporting unit with its carrying amount. If the carrying amount of a reporting unit exceeds its fair value, a second step is performed to measure the amount of potential impairment. In the second step, we compare the implied fair value of reporting unit goodwill with the carrying amount of the reporting unit's goodwill. If the carrying amount of reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized. The fair values calculated in our impairment tests are determined using discounted cash flow models involving several assumptions. The assumptions that are used are based upon what we believe a hypothetical marketplace participant would use in estimating fair value. We base our fair value estimates on assumptions we believe to be reasonable but that are unpredictable and inherently uncertain. We evaluate the reasonableness of the fair value calculations of our reporting units by comparing the total of the fair value of all of our reporting units to our total market capitalization.

Our annual goodwill impairment analysis, which we performed quantitatively during the second quarter of 2017, did not result in an impairment charge. During 2017, we did not identify any triggering events that would require an update to our annual impairment review.

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

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

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

#### ANALYSIS OF RESULTS OF OPERATIONS AND OTHER

The following discussion compares the historical results of operations on a basis consistent with GAAP for the years ended December 31, 2017, 2016 and 2015.

	Percentage of Total Revenues					
	Years Ended December 31,					
	2017		2016		2015	
Revenues:						
Software licenses and royalties	9.0	%	9.8	%	10.0	%
Subscriptions	20.6		18.9		18.9	
Software services	22.3		23.1		23.7	
Maintenance	43.0		42.7		41.6	
Appraisal services	3.0		3.5		4.2	
Hardware and other	2.1		2.0		1.6	
Total revenues	100.0		100.0		100.0	
Operating Expenses:						
Cost of software licenses, royalties and acquired software	3.0		3.3		1.0	
Cost of software services, maintenance and subscriptions	46.1		46.2		48.2	
Cost of appraisal services	1.9		2.2		2.7	
Cost of hardware and other	1.5		1.3		1.1	
Selling, general and administrative expenses	21.1		22.1		22.6	
Research and development expense	5.6		5.7		5.1	
Amortization of customer and trade name intangibles	1.7		1.8		1.0	
Operating income	19.1		17.4		18.3	
Other income (expense), net	0.1		(0.3 )		0.1	
Income before income taxes	19.2		17.1		18.4	
Income tax (benefit) provision	(0.3 )		2.6		7.4	
Net income	19.5	%	14.5	%	11.0	%

## 2017 Compared to 2016

## Revenues

## Software licenses and royalties.

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

(\$ in thousands)	2017	2016	Change	
			\$	%
ES	\$67,840	\$68,844	\$(1,004)	(1)%
A&T	7,854	5,462	2,392	44
Total software licenses and royalties revenue	\$75,694	\$74,306	\$1,388	2%

Software license and royalties revenue was flat compared to the prior year. Software license revenue declined as a percentage of the revenue mix due to an increase in the percentage of new software clients choosing our subscription-based option, rather than purchasing the software under a traditional perpetual license arrangement. Although the mix of new contracts between subscription-based and perpetual license arrangements may vary from quarter to quarter and year to year, we expect our longer-term software license growth rate to be negatively impacted by a growing number of customers choosing our subscription-based options, rather than purchasing the software under a traditional perpetual software license arrangement. Subscription-based arrangements result in lower software license revenue in the initial year as compared to perpetual software license arrangements but generate higher overall revenue over the term of the contract. Our new client mix in 2017 was approximately 53% selecting perpetual software license arrangements and approximately 47% selecting subscription-based arrangements compared to a client mix in 2016 of approximately 68% selecting perpetual software license arrangements and approximately 32% selecting subscription-based arrangements.

## Subscriptions.

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

(\$ in thousands)	2017	2016	Change	
			\$	%
ES	\$165,651	\$135,516	\$30,135	22%
A&T	7,859	7,188	671	9
Total subscriptions revenue	\$173,510	\$142,704	\$30,806	22%

Subscription-based 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 electronic document filing solutions (“e-filing”) that simplify the filing and management of court related documents for courts and law offices. E-filing revenue is derived from transaction fees and fixed fee arrangements.

Subscription-based revenue increased 22% compared to 2016. New SaaS clients as well as existing clients who converted to our SaaS model provided the majority of the subscriptions revenue increase. In 2017, we added 374 new SaaS clients and 88 existing clients elected to convert to our SaaS model. The average contract sizes in 2017 were 64% and 44% higher than 2016 for new clients and clients converting to our SaaS model, respectively. Also, e-filing services contributed approximately \$8.5 million of the subscriptions revenue increase in 2017. The increase in e-filing revenue is attributed to new e-filing clients, as well as increased volumes as the result of several existing clients mandating e-filing.

## Software services.

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

(\$ in thousands)	2017	2016	Change	
			\$	%
ES	\$167,934	\$158,478	\$9,456	6 %
A&T	19,215	16,326	2,889	18
Total software services revenue	\$187,149	\$174,804	\$12,345	7 %

Software services revenue primarily consists of professional services billed in connection with implementing our software, converting client data, training client personnel, custom development activities and consulting. New clients who purchase our proprietary software licenses generally also contract with us to provide for the related software services. Existing clients also periodically purchase additional training, consulting and minor programming services. Software services revenue grew 7% compared to the prior year period. This growth is partly due to additions to our implementation and support staff, which increased our capacity to deliver backlog and partially due to completing recognition of a majority of the acquisition-related deferred service revenue that was fair valued at rates below Tyler's average service rate in prior periods.

## Maintenance.

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

(\$ in thousands)	2017	2016	Change	
			\$	%
ES	\$339,951	\$304,380	\$35,571	12 %
A&T	21,618	18,589	3,029	16
Total maintenance revenue	\$361,569	\$322,969	\$38,600	12 %

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

## Appraisal services.

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

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

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

### Cost of Revenues and Gross Margins

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

(\$ in thousands)	2017	2016	Change	
			\$	%
Software licenses and royalties	\$3,321	\$2,964	\$357	12 %
Acquired software	21,686	22,235	(549)	(2)
Software services, maintenance and subscriptions	387,634	348,939	38,695	11
Appraisal services	16,286	16,411	(125)	(1)
Hardware and other	12,595	10,143	2,452	24
Total cost of revenues	\$441,522	\$400,692	\$40,830	10 %

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

	2017	2016	Change
Gross margin percentage			
Software licenses, royalties and acquired software	67.0%	66.1%	0.9 %
Software services, maintenance and subscriptions	46.3	45.5	0.8
Appraisal services	34.9	37.6	(2.7)
Hardware and other	28.9	32.3	(3.4)
Overall gross margin	47.5%	47.0%	0.5 %

Software licenses, royalties and acquired software. Cost of software licenses, royalties and acquired software is primarily comprised of amortization expense for acquired software and third-party software costs. We do not have any direct costs associated with royalties. The gross margin increase of 0.9% is due to higher incremental margins on software license revenues, in part due to slightly lower amortization expense for acquired software resulting from acquisitions.

Software services, maintenance and subscriptions. Cost of software services, maintenance and subscriptions primarily consists of personnel costs related to installation of our software, conversion of client data, training client personnel and support activities and various other services such as custom client development and on-going operation of SaaS and e-filing arrangements. In 2017, the software services, maintenance and subscriptions gross margin increased 0.8% compared to the prior year. Our implementation and support staff has grown by 220 employees since December 31, 2016. Many of these additions occurred in early to mid-2017 and are contributing to revenue in 2017. Costs related to maintenance and various other services such as SaaS and e-filing typically grow at a slower rate than related revenue due to leverage in the utilization of support and maintenance staff and economies of scale. Reduced recognition of acquisition-related deferred revenue associated with software services and maintenance obligations completed in prior periods also resulted in higher gross margins.

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

Our 2017 blended gross margin increased 0.5% compared to 2016. Our overall gross margin was positively impacted by a product mix that included more higher-margin recurring revenues from subscriptions and maintenance and improved margin on revenues from software licenses offset by the lower-margin revenues from appraisal services as described above.

### Selling, General and Administrative Expenses

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

(\$ in thousands)	2017	2016	Change	
			\$	%
Selling, general and administrative expenses	\$ 176,974	\$ 167,161	\$ 9,813	6%

SG&A as a percentage of revenue was 21.1% in 2017 compared to 22.1% in 2016. SG&A expense increased approximately 6% mainly due to compensation costs related to increased staff levels, merit increases and higher stock compensation expense. We have added 28 employees mainly to our sales and finance teams since December 31, 2016. In addition, our 2017 stock compensation expense rose \$4.7 million, mainly due to increases in our stock price over the last few years.

### Research and Development Expense

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

(\$ in thousands)	2017	2016	Change	
			\$	%
Research and development expense	\$ 47,324	\$ 43,154	\$ 4,170	10%

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

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

### Amortization of Customer and Trade Name Intangibles

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

(\$ in thousands)	2017	2016	Change	
			\$	%
Amortization of customer and trade name intangibles	\$ 13,912	\$ 13,731	\$ 181	1%

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



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

2018 \$13,819  
 2019 12,534  
 2020 11,402  
 2021 11,282  
 2022 10,792

Amortization expense relating to acquired leases will be recorded as a reduction to hardware and other revenue and is expected to be \$425,000 in 2018, \$373,000 in 2019, \$313,000 in 2020, \$312,000 in 2021, \$312,000 in 2022 and \$1.0 million thereafter.

#### Other

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

(\$ in thousands)	2017	2016	Change	
			\$	%
Other income (expense), net	\$698	\$(1,998)	\$2,696	N/M

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

#### Income Tax (Benefit) Provision

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

(\$ in thousands)	2017	2016	Change	
			\$	%
Income tax (benefit) provision	\$(2,317)	\$19,450	\$(21,767)	(112)%

Effective income tax rate (1.4 )% 15.0 %

The decrease in the income tax provision during 2017 was primarily driven by the enactment of the Tax Act which reduced the statutory U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision is a \$21.6 million tax benefit due to the remeasurement of deferred tax assets and liabilities. See Note 7 - "Income Tax" for additional information related to the Tax Act. The income tax provision is also lower due to the increase in the excess tax benefits from stock option exercises as compared to prior period. We experienced significant stock option exercise activity in 2017 and 2016 that generated excess tax benefits of \$40.6 million and \$29.6 million, respectively.

The change in the effective income tax rate in 2017 compared to 2016 is also primarily attributable to the impact of the Tax Act and the changes in excess tax benefits related to stock option exercises realized. Excluding the impact of the Tax Act and the excess tax benefits, our income tax provision and effective tax rate in 2017 would have been \$59.9 million and 37.1%, respectively. Excluding the excess tax benefits, our income tax provision and effective tax rate in 2016 would have been \$49.0 million and 37.9%, respectively.

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

## 2016 Compared to 2015

## Revenues

On November 16, 2015, we acquired NWS, which provides public safety and financial solutions for local governments. In May 2015, we acquired a company which provides mobile hand-held solutions primarily to law enforcement agencies for field accident reporting and electronically issuing citations. The results of their operations are included in our ES segment from their respective dates of acquisition. For comparative purposes, we have provided explanations for changes in operations to exclude results of operations for these acquisitions noting the exclusion.

## Software licenses and royalties.

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

(\$ in thousands)	2016	2015	Change	
			\$	%
ES	\$68,844	\$54,376	\$14,468	27%
A&T	5,462	4,632	830	18
Total software licenses and royalties revenue	\$74,306	\$59,008	\$15,298	26%

Excluding the results of acquisitions, software license revenue increased 3% compared to the prior year. The majority of this growth was due to a more active marketplace as the result of improvement in local government economic conditions, as well as our increasingly strong competitive position, which we attribute in part to our investment in product development in recent years. This increase was offset somewhat by lower sales to our existing customer base for courts and justice related add-on solutions that assist and support the transition to a paperless environment. By the end of 2015, the majority of our courts and justice clients had implemented these add-on solutions.

Although the mix of new contracts between subscription-based and perpetual license arrangements may vary from quarter to quarter and year to year, our longer-term software license growth rate is negatively impacted by a growing number of customers choosing our subscription-based options, rather than purchasing the software under a traditional perpetual software license arrangement. Subscription-based arrangements result in lower software license revenue in the initial year as compared to perpetual software license arrangements but generate higher overall revenue over the term of the contract. Our new client mix in 2016 was approximately 68% selecting perpetual software license arrangements and approximately 32% selecting subscription-based arrangements compared to a client mix in 2015 of approximately 76% selecting perpetual software license arrangements and approximately 24% selecting subscription-based arrangements. 250 new clients entered into subscription-based software arrangements in 2016 compared to 134 new clients in 2015.

## Subscriptions.

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

(\$ in thousands)	2016	2015	Change	
			\$	%
ES	\$135,516	\$107,090	\$28,426	27%
A&T	7,188	4,843	2,345	48
Total subscriptions revenue	\$142,704	\$111,933	\$30,771	27%

Subscription-based 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 electronic document filing solutions (“e-filing”) that simplify the filing and management of court related documents for courts and law offices. E-filing revenue is derived from transaction fees and fixed fee arrangements.

Excluding acquisitions, subscription-based revenue increased 24% compared to 2015. E-filing services contributed approximately \$4.9 million of the subscriptions revenue increase in 2016. Most of the e-filing revenue increase related to several statewide contracts, several of which implemented mandatory electronic filing during 2015 and throughout 2016. New SaaS clients as well as existing clients who converted to our SaaS model provided the remainder of the subscriptions revenue increase. In 2016, we added 250 new SaaS clients and 53 existing clients elected to convert to our SaaS model. The average contract sizes in 2016 were 1% and 9% higher than 2015 for new

clients and clients converting to our SaaS model, respectively.

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## Software services.

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

(\$ in thousands)	2016	2015	Change	
			\$	%
ES	\$158,478	\$129,068	\$29,410	23%
A&T	16,326	10,784	5,542	51
Total software services revenue	\$174,804	\$139,852	\$34,952	25%

Software services revenue primarily consists of professional services billed in connection with implementing our software, converting client data, training client personnel, custom development activities and consulting. New clients who purchase our proprietary software licenses generally also contract with us to provide for the related software services. Existing clients also periodically purchase additional training, consulting and minor programming services. Excluding the results of acquisitions, software services revenue grew 11% compared to the prior year period. This growth is partly due to additions to our implementation and support staff, which increased our capacity to deliver backlog, and a contract mix that included more custom development and other services.

## Maintenance.

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

(\$ in thousands)	2016	2015	Change	
			\$	%
ES	\$304,380	\$227,586	\$76,794	34%
A&T	18,589	17,951	638	4
Total maintenance revenue	\$322,969	\$245,537	\$77,432	32%

We provide maintenance and support services for our software products and certain third-party software. Excluding the results of acquisitions, maintenance revenue grew 9% compared to the prior year. Maintenance and support revenue increased mainly due to growth in our installed customer base from new software license sales as well as annual maintenance rate increases.

## Appraisal services.

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

(\$ in thousands)	2016	2015	Change	
			\$	%
ES	\$—	\$—	\$—	—%
A&T	26,287	25,065	1,222	5
Total appraisal services revenue	\$26,287	\$25,065	\$1,222	5%

The appraisal services business is somewhat cyclical and driven in part by statutory revaluation cycles in various states. In 2016, appraisal services revenue increased 5% compared to prior year primarily due to the Franklin County, Ohio, revaluation project, which began late in the fourth quarter of 2015.

### Cost of Revenues and Gross Margins

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

(\$ in thousands)	2016	2015	Change	
			\$	%
Software licenses and royalties	\$2,964	\$1,632	\$1,332	82 %
Acquired software	22,235	4,440	17,795	N/M
Software services, maintenance and subscriptions	348,939	285,340	63,599	22
Appraisal services	16,411	15,922	489	3
Hardware and other	10,143	6,501	3,642	56
Total cost of revenues	\$400,692	\$313,835	\$86,857	28 %

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

	2016	2015	Change
Gross margin percentage			
Software licenses, royalties and acquired software	66.1 %	89.7 %	(23.6) %
Software services, maintenance and subscriptions	45.5	42.6	2.9
Appraisal services	37.6	36.5	1.1
Hardware and other	32.3	32.5	(0.2 )
Overall gross margin	47.0 %	46.9 %	0.1 %

Software licenses, royalties and acquired software. Cost of software licenses, royalties and acquired software is primarily comprised of amortization expense for acquired software and third-party software costs. We do not have any direct costs associated with royalties. In 2016, our software licenses, royalties and acquired software gross margin percentage declined compared to the prior year due to much higher amortization expense for acquired software resulting from our acquisition of NWS. Excluding the results of NWS, our software license, royalties and acquired software gross margin was 93.9% in 2016 compared to 93.6% in 2015.

Software services, maintenance and subscriptions. Cost of software services, maintenance and subscriptions primarily consists of personnel costs related to installation of our software, conversion of client data, training client personnel and support activities and various other services such as custom client development and on-going operation of SaaS and e-filing arrangements. In 2016, the software services, maintenance and subscriptions gross margin increased 2.9% compared to the prior year. Our implementation and support staff grew by 169 employees in 2016. To support sales growth, we began making significant investments in our implementation and support staff in early 2015. Since December 31, 2014, excluding acquisitions, we added 369 implementation and support employees. These additions contributed to the revenue growth in 2016. In addition, the NWS revenue mix included a lower proportion of software services compared to Tyler's historical revenue mix, which also benefited the gross margin. Costs related to maintenance and various other services such as SaaS and e-filing typically grow at a slower rate than related revenue due to leverage in the utilization of support and maintenance staff and economies of scale. Maintenance and subscription price increases also resulted in slightly higher gross margins.

Appraisal services. Appraisal services revenue comprised approximately 3.5% of total revenue. The appraisal services gross margin increased 1.1% compared to 2015. A high proportion of the costs of appraisal services revenue are variable, as we often hire temporary employees to assist in appraisal projects, whose term of employment generally ends with the projects' completion.

Our 2016 blended gross margin remained consistent compared to 2015. Our overall gross margin was positively impacted by improved utilization of our support and maintenance staff; however, this benefit was offset by amortization expense for acquired software related to the NWS acquisition.

### Selling, General and Administrative Expenses

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

(\$ in thousands)	2016	2015	Change	
			\$	%
Selling, general and administrative expenses	\$167,161	\$133,317	\$33,844	25%

SG&A as a percentage of revenue was 22.1% in 2016 compared to 22.6% in 2015. In 2015, our SG&A expense included approximately \$5.9 million for financial advisory, legal, accounting, due diligence, valuation and other various expenses necessary to complete the NWS acquisition. Excluding NWS transaction costs and SG&A from acquisitions, SG&A expense increased approximately 12% mainly due to compensation costs related to increased staff levels, higher stock compensation expense and increased commission expense as a result of higher sales. We added 22 employees mainly to our sales and finance teams in 2016. In addition, our 2016 stock compensation expense rose \$6.4 million, mainly due to increases in our stock price over the last few years.

### Research and Development Expense

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

(\$ in thousands)	2016	2015	Change	
			\$	%
Research and development expense	\$43,154	\$29,922	\$13,232	44%

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

Excluding the results of acquisitions, research and development expense increased 1.5% in 2016 compared to the prior year period, mainly due to research and development efforts related to new Tyler product development initiatives. As a result of the Microsoft Dynamics AX amendment, we also redeployed certain development resources to enhance functionality on several existing solutions and these costs were recorded in cost of sales – software services, maintenance and subscriptions.

### Amortization of Customer and Trade Name Intangibles

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

(\$ in thousands)	2016	2015	Change	
			\$	%
Amortization of customer and trade name intangibles	\$13,731	\$5,905	\$7,826	133%

Amortization of customer and trade name intangibles increased substantially from the comparable prior year periods due to the acquisition of NWS in November 2015.

### Other

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

(\$ in thousands)	2016	2015	Change	
			\$	%
Other (expense) income, net	\$(1,998)	\$381	\$(2,379)	N/M

Other (expense) income is comprised of interest expense and non-usage and other fees associated with our revolving credit agreement as well as interest income from invested cash. In 2015, we had significantly higher invested cash balances and no outstanding debt until we completed the NWS acquisition on November 16, 2015.



## Income Tax Provision

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

(\$ in thousands)	2016	2015	Change	
			\$	%
Income tax provision	\$19,450	\$43,555	\$(24,105)	(55)%

Effective income tax rate 15.0 % 40.2 %

The decrease in the income tax provision during 2016 was primarily driven by the adoption of ASU No. 2016-09, which requires the excess tax benefits from stock option exercises to be recognized as a reduction of the income tax provision, whereas they previously were accounted for as an increase to shareholders' equity. The adoption of ASU No. 2016-09 resulted in a \$29.6 million decrease in our full year 2016 provision for income taxes.

Excluding the excess tax benefits, our income tax provision and effective tax rate in 2016 would have been \$49.0 million and 37.9%, respectively.

The effective income tax rates in both 2016 and 2015 also differed from the statutory United States federal income tax rate of 35% due to state income taxes, the domestic production activities deduction, non-deductible share-based compensation expense, disqualifying incentive stock option dispositions, and non-deductible business expenses. We realized a lower domestic production activities deduction as a result of taxable income limitations and non-deductible transaction costs related to the NWS acquisition negatively impacted our 2015 effective tax rate. In the past few years a relatively high amount of excess tax benefits related to stock option exercises have resulted in a reduction in our qualified manufacturing activities deduction. The qualified manufacturing activities deduction can be limited to a certain level of taxable income on the tax return. Therefore, any significant items that reduce taxable income, such as excess tax benefits on stock options, can reduce the amount of the qualified manufacturing activities deduction. We experienced significant stock option exercise activity in 2016 and 2015 that generated excess tax benefits of \$29.6 million and \$45.3 million, respectively.

## FINANCIAL CONDITION AND LIQUIDITY

As of December 31, 2017, we had cash and cash equivalents of \$185.9 million compared to \$36.2 million at December 31, 2016. We also had \$63.8 million invested in investment grade corporate bonds, municipal bonds and asset-backed securities as of December 31, 2017. These investments mature between 2017 through 2021 and we intend to hold these investments until maturity. Cash and cash equivalents consist of cash on deposit with several domestic banks and money market funds. As of December 31, 2017, we had no outstanding borrowings and one outstanding letter of credit totaling \$0.5 million in favor of a client contract. The letter of credit guarantees our performance under the contract and expires in 2018. We believe our revolving line of credit, cash from operating activities, cash on hand and access to the credit markets provide us with sufficient flexibility to meet our long-term financial needs.

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

(\$ in thousands)	2017	2016	2015
Cash flows provided (used) by:			
Operating activities	\$195,755	\$191,859	\$134,327
Investing activities	(85,395 )	(50,720 )	(398,459 )
Financing activities	39,415	(138,075 )	91,052
Net increase (decrease) in cash and cash equivalents	\$149,775	\$3,064	\$(173,080)

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





In 2017, operating activities provided cash of \$195.8 million compared to \$191.9 million in 2016. Operating activities that provided cash were primarily comprised of net income of \$163.9 million, non-cash depreciation and amortization charges of \$53.9 million and non-cash share-based compensation expense of \$37.3 million. Working capital, excluding cash, increased approximately \$63.6 million mainly due to higher accounts receivable related to annual maintenance and subscription billings as well as milestone billings for several contracts, timing of income tax payments, and the deferred taxes associated with stock option activity during the period. These increases were offset slightly by the growth in deferred revenue balances and timing of payments of payroll related taxes and vendor invoices.

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

Days sales outstanding in accounts receivable were 94 days at December 31, 2017, compared to 93 days at December 31, 2016. DSO is calculated based on quarter-end accounts receivable (excluding long-term receivables, but including unbilled receivables) divided by the quotient of annualized quarterly revenues divided by 360 days. Investing activities used cash of \$85.4 million in 2017 compared to \$50.7 million in 2016. We invested \$59.8 million and received \$28.8 million in proceeds from investment grade corporate bonds, municipal bonds and asset-backed securities with maturity dates ranging from 2017 through 2021. Approximately \$43.1 million was invested in property and equipment. We purchased an office building in Latham, New York for approximately \$2.9 million and paid \$2.1 million for building improvements. We paid \$19.4 million for construction to expand our office building in Yarmouth, Maine. We also made three small acquisitions with a combined cash purchase price of \$11.3 million. The remaining additions were for computer equipment, furniture and fixtures in support of internal growth, particularly with respect to our cloud-based offerings. These expenditures were funded from cash generated from operations.

In 2016, we made a small acquisition for approximately \$7.4 million and paid \$2.0 million related to the working capital holdback in connection with the NWS acquisition. We invested \$20.3 million in investment grade corporate and municipal bonds. We purchased an office building in Falmouth, Maine, that was previously leased from an entity owned by an executive's father and brother, for approximately \$9.7 million and paid \$8.0 million for construction to expand our office building in Yarmouth, Maine. The remaining use of cash was for capital expenditures related to computer equipment, furniture and fixtures in support of internal growth, particularly with respect to growth in our cloud-based offerings. These expenditures were funded from cash generated from operations.

In 2015, we completed the acquisition of NWS for the purchase price of \$337.5 million in cash, of which \$4.0 million was accrued at December 31, 2015, and 2.1 million shares of Tyler common stock valued at \$362.8 million. Also, we completed a small acquisition with a purchase price of \$6.1 million in cash and 12,500 shares of Tyler common stock valued at \$1.5 million and we made a \$15.0 million investment in convertible preferred stock representing a 20% interest in Record Holdings Pty Limited. We also invested \$30.9 million in investment grade corporate and municipal bonds. The remaining use of cash was for capital expenditures related to computer equipment, furniture and fixtures in support of internal growth, particularly with respect to growth in our cloud-based offerings. These expenditures were funded from cash generated from operations, cash on hand and bank borrowings.

Financing activities provided cash of \$39.4 million in 2017 compared to cash used of \$138.1 million in 2016. Financing activities in 2017 were comprised of \$10.0 million net payments on our revolving line of credit offset by collections of \$56.9 million from stock option exercises and employee stock purchase plan activity. We also purchased approximately 44,000 shares of our common stock for an aggregate purchase price of \$6.6 million. Financing activities in 2016 were comprised of \$56.0 million net payments on our revolving line of credit offset somewhat by collections of \$29.8 million from stock option exercises and employee stock purchase plan activity. We also purchased approximately 882,000 shares of our common stock for an aggregate purchase price of \$112.7 million, of which \$860,000 was accrued at December 31, 2016. Cash provided by financing activities in 2015 resulted from net borrowings of \$66.0 million and collections of \$27.8 million from stock option exercises and employee stock purchase plan activity. We also purchased approximately 5,400 shares of our common stock for an aggregate purchase

price of \$645,000 in 2015 and paid \$2.1 million in debt issuance costs.

On May 11, 2016, our board of directors authorized the repurchase of an additional 1.5 million shares of Tyler common stock. The repurchase program, which was approved by our board of directors, was announced in October 2002, and was amended at various times from 2003 through 2016. As of December 31, 2017, we had remaining authorization to repurchase up to 2.0 million additional shares of our common stock. Our share repurchase program allows us to repurchase shares at our discretion. Market conditions influence the timing of the buybacks and the number of shares repurchased, as well as the volume of employee stock option exercises. Share repurchases are generally funded using our existing cash balances and borrowings under our credit facility and may occur through open market purchases and transactions structured through investment banking institutions, privately negotiated transactions and/or other mechanisms. There is no expiration date specified for the authorization and we intend to repurchase stock under the plan from time to time.

On November 16, 2015, we entered into a \$300.0 million Credit Agreement (the “Credit Facility”) with the various lenders party thereto and Wells Fargo Bank, National Association, as Administrative Agent. The Credit Facility provides for a revolving credit line of up to \$300.0 million, including a \$10.0 million sublimit for letters of credit. The Credit Facility matures on November 16, 2020. Borrowings under the Credit Facility may be used for general corporate purposes, including working capital requirements, acquisitions and share repurchases. Borrowings under the Credit Facility bear interest at a rate of either (1) Wells Fargo Bank’s prime rate (subject to certain higher rate determinations) plus a margin of 0.25% to 1.00% or (2) the 30, 60, 90 or 180 day LIBOR rate plus a margin of 1.25% to 2.00%. As of December 31, 2017, our interest rate was 4.75% under the prime rate option or approximately 2.78% under the 30-day LIBOR option. The Credit Facility is secured by substantially all of our assets. The Credit Facility requires us to maintain certain financial ratios and other financial conditions and prohibits us from making certain investments, advances, cash dividends or loans, and limits incurrence of additional indebtedness and liens. As of December 31, 2017, we were in compliance with those covenants.

As of December 31, 2017, we had no outstanding borrowings and had unused borrowing capacity of \$299.5 million under the Credit Facility. We paid interest of \$804,000 in 2017, \$1.9 million in 2016, and \$223,000 in 2015. We paid income taxes, net of refunds received, of \$36.0 million in 2017, \$30.2 million in 2016, and \$27.3 million in 2015. In 2017, we experienced significant stock option exercise activity that generated net tax benefits of \$40.6 million and reduced tax payments accordingly. In 2016 and 2015, excess tax benefits were \$29.6 million and \$45.3 million, respectively.

The Tax Act, enacted on December 22, 2017, reduced the U.S. federal corporate income tax rate from 35% to 21% effective January 1, 2018. We expect that the Tax Act will have a positive impact on liquidity in future years due to the decrease in the U.S. corporate income tax rate.

We anticipate that 2018 capital spending will be between \$22 million and \$25 million, including approximately \$1 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 pursue such opportunities, which could require significant commitments of capital, we may be required to incur debt or to issue additional potentially dilutive securities in the future. No assurance can be given as to our future acquisition opportunities and how such opportunities will be financed.

We lease office facilities, as well as transportation, computer and other equipment used in our operations under non-cancelable operating lease agreements expiring at various dates through 2025. Most leases contain renewal options and some contain purchase options.

Summarized in the table below are our obligations to make future payments under our Credit Facility and lease obligations at December 31, 2017 (in thousands):

	2018	2019	2020	2021	2022	Thereafter	Total
Revolving line of credit	\$—	\$—	\$—	\$—	\$—	\$—	\$—
Lease obligations	5,428	4,201	3,644	2,366	812	499	16,950
Total future payment obligations	\$5,428	\$4,201	\$3,644	\$2,366	\$812	\$499	\$16,950

As of December 31, 2017, we do not have any off-balance sheet arrangements, guarantees to third-parties or material purchase commitments, except for the operating lease commitments listed above.

#### CAPITALIZATION

At December 31, 2017, our capitalization consisted of no outstanding borrowings and \$1.2 billion of shareholders’ equity.

**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.**

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

In 2017, our effective average interest rate for borrowings was 2.20%. As of December 31, 2017, our interest rate was 4.75% under the prime rate option or approximately 2.78% under the 30-day LIBOR option. The Credit Facility is secured by substantially all of our assets. Loans under the Credit Facility bear interest, at Tyler's option, at a per annum rate of either (1) the Wells Fargo Bank prime rate (subject to certain higher rate determinations) plus a margin of 0.25% to 1.00% or (2) the 30, 60, 90 or 180-day LIBOR rate plus a margin of 1.25% to 2.00%.

As of December 31, 2017, we had no outstanding borrowings under the Credit Facility and therefore are not subject to any interest risk.

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.**

The reports of our independent registered public accounting firm and our financial statements, related notes, and supplementary data are included as part of this Annual Report beginning on page F-1.

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.**

None.

**ITEM 9A. CONTROLS AND PROCEDURES.**

**Evaluation of Disclosure Controls and Procedures** — We maintain disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act) designed to provide reasonable assurance that the information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. These include controls and procedures designed to ensure that this information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosures. Management, with the participation of the chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2017. Based on this evaluation, the chief executive officer and chief financial officer have concluded that our disclosure controls and procedures were effective as of December 31, 2017.

**Management's Report on Internal Control Over Financial Reporting** — Tyler's management is responsible for establishing and maintaining effective internal control over financial reporting as defined in Securities Exchange Act Rule 13a-15(f). Tyler's internal control over financial reporting is designed to provide reasonable assurance to Tyler's management and board of directors regarding the preparation and fair presentation of published financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Management assessed the effectiveness of Tyler's internal control over financial reporting as of December 31, 2017. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Based on our assessment, we concluded that, as of December 31, 2017, Tyler's internal control over financial reporting was effective based on those criteria.

Tyler's internal control over financial reporting as of December 31, 2017 has been audited by Ernst & Young LLP, the independent registered public accounting firm who also audited Tyler's financial statements. Ernst & Young's attestation report on Tyler's internal control over financial reporting appears on page F-1 hereof.

**Changes in Internal Control Over Financial Reporting** — During the quarter ended December 31, 2017, there were no changes in our internal control over financial reporting, as defined in Securities Exchange Act Rule 13a-15(f), that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.



ITEM 9B. OTHER INFORMATION.

None.

PART III

See the information under the following captions in Tyler's definitive Proxy Statement, which is incorporated herein by reference. Only those sections of the Proxy Statement that specifically address the items set forth herein are incorporated by reference. Such incorporation by reference does not include the Compensation Discussion and Analysis, the Compensation Committee Report or the Audit Committee Report, which are included in the Proxy Statement.

Headings in Proxy Statement

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE.

"Tyler Management" and "Corporate Governance Principles and Board Matters"

ITEM 11. EXECUTIVE COMPENSATION. "Executive Compensation"

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

"Security Ownership of Certain Beneficial Owners and Management"

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

"Executive Compensation" and "Certain Relationships and Related Transactions"

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

The information required under this item may be found under the section captioned "Proposals For Consideration – Proposal Two – Ratification of Our Independent Auditors for Fiscal Year 2018" in our Proxy Statement.

## PART IV

## ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES.

The following documents are filed as part of this Annual Report:

(a) (1) The financial statements are filed as part of this Annual Report.

	Page
<u>Reports of Independent Registered Public Accounting Firm</u>	<u>F-1</u>
<u>Consolidated Statements of Comprehensive Income for the years ended December 31, 2017, 2016 and 2015</u>	<u>F-3</u>
<u>Consolidated Balance Sheets as of December 31, 2017 and 2016</u>	<u>F-4</u>
<u>Consolidated Statements of Shareholders' Equity for the years ended December 31, 2017, 2016 and 2015</u>	<u>F-5</u>
<u>Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016 and 2015</u>	<u>F-6</u>
<u>Notes to Consolidated Financial Statements</u>	<u>F-7</u>

(2) Financial statement schedules:

There are no financial statement schedules filed as part of this Annual Report, since the required information is included in the financial statements, including the notes thereto, or the circumstances requiring inclusion of such schedules are not present.

(3) Exhibits

Certain of the exhibits to this Annual Report are hereby incorporated by reference, as specified:

Exhibit Number	Description
3.1	Restated Certificate of Incorporation of Tyler Three, as amended through May 14, 1990, and Certificate of Designation of Series A Junior Participating Preferred Stock (filed as Exhibit 3.1 to our Form 10-Q for the quarter ended June 30, 1990, and incorporated by reference herein).
3.2	Certificate of Amendment to the Restated Certificate of Incorporation (filed as Exhibit 3.1 to our Form 8-K, dated February 19, 1998, and incorporated by reference herein).
<u>3.3</u>	<u>Amended and Restated By-Laws of Tyler Corporation, dated October 20, 2015 (filed as Exhibit 3.3 to our Form 10-Q for the quarter ended September 30, 2015, and incorporated by reference herein).</u>
<u>3.4</u>	<u>Certificate of Amendment dated May 19, 1999 to the Restated Certificate of Incorporation (filed as Exhibit 3.4 to our Form 10-K for the year ended December 31, 2000, and incorporated by reference herein).</u>
4.1	Specimen of Common Stock Certificate (filed as Exhibit 4.1 to our registration statement no. 33-33505 and incorporated by reference herein).
4.2	<u>Credit Agreement dated November 16, 2015, among Tyler Technologies, Inc. and Wells Fargo Bank, N. A. as Administrative Agent and other lenders party hereto (filed as Exhibit 10.1 to our Form 8-K dated November 16, 2015, and incorporated by reference herein).</u>
4.3	<u>Agreement and Plan of Merger, dated as of September 30, 2015, by and among Tyler Technologies, Inc., Brinston Acquisition, LLC, New World Systems Corporation, and Larry D. Leinweber, as the Principal Shareholder identified therein and the Shareholders' Representative identified therein. (filed as Exhibit 2.1 to our Form 8-K, dated October 1, 2015, and incorporated by reference herein).</u>
<u>10.2</u>	<u>Tyler Technologies, Inc. 2010 Stock Option Plan effective as of May 13, 2010 (filed as Exhibit 4.1 to our registration statement no. 333-168499 and incorporated by reference herein).</u>
<u>10.3</u>	<u>Employment and Non-Competition Agreement between Tyler Technologies, Inc. and John S. Marr Jr. dated February 5, 2013 (filed as Exhibit 10.3 to our Form 10-K for the year ended December 31, 2012 and incorporated by reference herein).</u>



Exhibit Number	Description
<u>10.4</u>	<u>Employment and Non-Competition Agreement between Tyler Technologies, Inc. and Dustin R. Womble dated February 5, 2013 (filed as Exhibit 10.4 to our Form 10-K for the year ended December 31, 2012 and incorporated by reference herein).</u>
<u>10.5</u>	<u>Employment and Non-Competition Agreement between Tyler Technologies, Inc. and Brian K. Miller dated February 5, 2013 (filed as Exhibit 10.5 to our Form 10-K for the year ended December 31, 2012 and incorporated by reference herein).</u>
<u>10.6</u>	<u>Employment and Non-Competition Agreement between Tyler Technologies, Inc. and H. Lynn Moore dated February 5, 2013 (filed as Exhibit 10.6 to our Form 10-K for the year ended December 31, 2012 and incorporated by reference herein).</u>
<u>10.7</u>	<u>Employee Stock Purchase Plan (filed as Exhibit 10.1 to our registration statement 333-182318 dated June 25, 2012 and incorporated by reference herein).</u>
<u>*23</u>	<u>Consent of Independent Registered Public Accounting Firm.</u>
<u>*31.1</u>	<u>Rule 13a-14(a) Certification by Principal Executive Officer.</u>
<u>*31.2</u>	<u>Rule 13a-14(a) Certification by Principal Financial Officer.</u>
<u>*32</u>	<u>Section 1350 Certification of Principal Executive Officer and Principal Financial Officer.</u>
*101	Instance Document
*101	Schema Document
*101	Calculation Linkbase Document
*101	Labels Linkbase Document
*101	Definition Linkbase Document
*101	Presentation Linkbase Document

\*— Filed herewith.

A copy of each exhibit may be obtained at a price of 15 cents per page, with a \$10.00 minimum order, by writing Investor Relations, 5101 Tennyson Parkway, Plano, Texas, 75024.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TYLER TECHNOLOGIES, INC.

Date: February 21, 2018 By: /s/ John S. Marr  
John S. Marr  
Chief Executive Officer and Chairman of the Board  
(principal executive officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, the following persons on behalf of the registrant and in the capacities and on the dates indicated have signed this report below.

Date: February 21, 2018 By: /s/ John S. Marr  
John S. Marr  
Chief Executive Officer and Chairman of the Board  
Director  
(principal executive officer)

Date: February 21, 2018 By: /s/ H. Lynn Moore  
H. Lynn Moore  
President and Director

Date: February 21, 2018 By: /s/ Brian K. Miller  
Brian K. Miller  
Executive Vice President and Chief Financial Officer  
(principal financial officer)

Date: February 21, 2018 By: /s/ W. Michael Smith  
W. Michael Smith  
Chief Accounting Officer  
(principal accounting officer)

Date: February 21, 2018 By: /s/ Donald R. Brattain  
Donald R. Brattain  
Director

Date: February 21, 2018 By: /s/ Glenn A. Carter  
Glenn A. Carter  
Director

Date: February 21, 2018 By: /s/ Brenda A. Cline  
Brenda A. Cline  
Director

Date: February 21, 2018 By: /s/ J. Luther King  
J. Luther King  
Director

Date: February 21, 2018 By: /s/ Daniel M. Pope  
Daniel M. Pope  
Director

Date: February 21, 2018 By: /s/ Dustin R. Womble  
Dustin R. Womble  
Director

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

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

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Tyler Technologies, Inc. (the Company) as of December 31, 2017 and 2016, the related consolidated statements of comprehensive income, cash flows and shareholders' equity for each of the three years in the period ended December 31, 2017, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 21, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

/s/ ERNST & YOUNG LLP

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

Dallas, Texas  
February 21, 2018

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## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

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

### Opinion on Internal Control over Financial Reporting

We have audited Tyler Technologies, Inc.'s internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Tyler Technologies, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), consolidated balance sheets of the Company as of December 31, 2017 and 2016, the related consolidated statements of comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and our report dated February 21, 2018 expressed an unqualified opinion thereon.

### Basis for Opinion

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

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

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

### Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ ERNST & YOUNG LLP

Dallas, Texas

February 21, 2018

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Tyler Technologies, Inc.  
Consolidated Statements of Comprehensive Income  
For the years ended December 31  
(In thousands, except per share amounts)

	2017	2016	2015
Revenues:			
Software licenses and royalties	\$75,694	\$74,306	\$59,008
Subscriptions	173,510	142,704	111,933
Software services	187,149	174,804	139,852
Maintenance	361,569	322,969	245,537
Appraisal services	25,023	26,287	25,065
Hardware and other	17,717	14,973	9,627
Total revenues	840,662	756,043	591,022
Cost of revenues:			
Software licenses and royalties	3,321	2,964	1,632
Acquired software	21,686	22,235	4,440
Software services, maintenance and subscriptions	387,634	348,939	285,340
Appraisal services	16,286	16,411	15,922
Hardware and other	12,595	10,143	6,501
Total cost of revenues	441,522	400,692	313,835
Gross profit	399,140	355,351	277,187
Selling, general and administrative expenses	176,974	167,161	133,317
Research and development expense	47,324	43,154	29,922
Amortization of customer and trade name intangibles	13,912	13,731	5,905
Operating income	160,930	131,305	108,043
Other income (expense), net	698	(1,998)	381
Income before income taxes	161,628	129,307	108,424
Income tax (benefit) provision	(2,317)	19,450	43,555
Net income	\$163,945	\$109,857	\$64,869
Earnings per common share:			
Basic	\$4.40	\$3.01	\$1.90
Diluted	\$4.18	\$2.82	\$1.77

See accompanying notes.



Tyler Technologies, Inc.  
Consolidated Balance Sheets  
(In thousands, except par value and share amounts)

	December 31, 2017	December 31, 2016
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 185,926	\$ 36,151
Accounts receivable (less allowance for losses of \$5,427 in 2017 and \$3,396 in 2016)	227,127	200,334
Short-term investments	43,159	20,273
Prepaid expenses	27,252	21,039
Income tax receivable	11,339	2,895
Other current assets	1,997	2,268
Total current assets	496,800	282,960
Accounts receivable, long-term	7,536	2,480
Property and equipment, net	152,315	124,268
Other assets:		
Goodwill	657,987	650,237
Other intangibles, net	236,444	267,259
Non-current investments and other assets	38,510	30,741
	\$ 1,589,592	\$ 1,357,945
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 8,174	\$ 7,295
Accrued liabilities	64,675	55,989
Deferred revenue	309,461	298,217
Total current liabilities	382,310	361,501
Revolving line of credit	—	10,000
Deferred revenue, long-term	1,274	2,140
Deferred income taxes	38,914	68,779
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, \$10.00 par value; 1,000,000 shares authorized; none issued	—	—
Common stock, \$0.01 par value; 100,000,000 shares authorized; 48,147,969 shares issued in 2017 and 2016	481	481
Additional paid-in capital	626,867	556,663
Accumulated other comprehensive loss, net of tax	(46	) (46
Retained earnings	599,821	435,876
Treasury stock, at cost; 10,262,182 and 11,381,733 shares in 2017 and 2016, respectively	(60,029	) (77,449
Total shareholders' equity	1,167,094	915,525
	\$ 1,589,592	\$ 1,357,945

See accompanying notes.



Tyler Technologies, Inc.  
Consolidated Statements of Shareholders' Equity  
For the years ended December 31, 2017, 2016 and 2015  
(In thousands)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock		Total Shareholders' Equity
	Shares	Amount				Shares	Amount	
Balance at December 31, 2014	48,148	\$ 481	\$ 201,389	\$ (46 )	\$ 261,150	(14,679)	\$(126,001)	\$ 336,973
Net income	—	—	—	—	64,869	—	—	64,869
Issuance of shares pursuant to stock compensation plan	—	—	4,332	—	—	1,118	18,828	23,160
Stock compensation	—	—	20,182	—	—	—	—	20,182
Issuance of shares pursuant to employee stock purchase plan	—	—	3,879	—	—	43	792	4,671
Federal income tax benefit related to exercise of stock options	—	—	45,314	—	—	—	—	45,314
Treasury stock purchases	—	—	—	—	—	(5 )	(645 )	(645 )
Issuance of shares for acquisition	—	—	332,659	—	—	2,149	31,674	364,333
Balance at December 31, 2015	48,148	481	607,755	(46 )	326,019	(11,374)	(75,352 )	858,857
Net income	—	—	—	—	109,857	—	—	109,857
Issuance of shares pursuant to stock compensation plan	—	—	(82,273 )	—	—	827	105,800	23,527
Stock compensation	—	—	29,747	—	—	—	—	29,747
Issuance of shares pursuant to employee stock purchase plan	—	—	1,434	—	—	47	4,802	6,236
Treasury stock purchases	—	—	—	—	—	(882 )	(112,699 )	(112,699 )
Balance at December 31, 2016	48,148	481	556,663	(46 )	435,876	(11,382)	(77,449 )	915,525
Net income	—	—	—	—	163,945	—	—	163,945
Issuance of shares pursuant to stock compensation plan	—	—	28,174	—	—	1,113	21,671	49,845
Stock compensation	—	—	37,348	—	—	—	—	37,348
Issuance of shares pursuant to employee stock purchase plan	—	—	4,682	—	—	51	2,362	7,044
Treasury stock purchases	—	—	—	—	—	(44 )	(6,613 )	(6,613 )
Balance at December 31, 2017	48,148	\$ 481	\$ 626,867	\$ (46 )	\$ 599,821	(10,262)	\$(60,029 )	\$ 1,167,094

See accompanying notes.

Tyler Technologies, Inc.  
Consolidated Statements of Cash Flows  
For the years ended December 31  
(In thousands)

	2017	2016	2015
Cash flows from operating activities:			
Net income	\$ 163,945	\$ 109,857	\$ 64,869
Adjustments to reconcile net income to cash provided by operations:			
Depreciation and amortization	53,925	50,301	19,574
Share-based compensation expense	37,348	29,747	20,182
Provision for losses - accounts receivable	4,110	4,484	1,756
Deferred income tax benefit	(29,865 )	(28,939 )	(7,956 )
Changes in operating assets and liabilities, exclusive of effects of acquired companies:			
Accounts receivable	(35,558 )	(30,227 )	(28,172 )
Income tax receivable	(8,444 )	18,185	24,255
Prepaid expenses and other current assets	(5,897 )	2,229	(3,054 )
Accounts payable	878	387	652
Accrued liabilities	6,050	10,717	490
Deferred revenue	9,263	25,118	41,731
Net cash provided by operating activities	195,755	191,859	134,327
Cash flows from investing activities:			
Cost of acquisitions, net of cash acquired	(11,344 )	(9,394 )	(339,961)
Purchase of cost method investment	—	—	(15,000 )
Purchase of marketable security investments	(59,779 )	(20,316 )	(31,907 )
Proceeds from marketable security investments	28,786	16,837	900
Additions to property and equipment	(43,057 )	(37,726 )	(12,501 )
(Increase) decrease in other	(1 )	(121 )	10
Net cash used by investing activities	(85,395 )	(50,720 )	(398,459)
Cash flows from financing activities:			
(Decrease) increase in net borrowings on revolving line of credit	(10,000 )	(56,000 )	66,000
Purchase of treasury shares	(7,474 )	(111,838 )	(645 )
Contributions from employee stock purchase plan	7,044	6,236	4,671
Proceeds from exercise of stock options	49,845	23,527	23,160
Debt issuance costs	—	—	(2,134 )
Net cash provided (used) by financing activities	39,415	(138,075 )	91,052
Net increase (decrease) in cash and cash equivalents	149,775	3,064	(173,080)
Cash and cash equivalents at beginning of period	36,151	33,087	206,167
Cash and cash equivalents at end of period	\$ 185,926	\$ 36,151	\$ 33,087

See accompanying notes.

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

## (1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### DESCRIPTION OF BUSINESS

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

### PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include our parent company and two subsidiaries, which are wholly-owned. All significant intercompany balances and transactions have been eliminated in consolidation. Comprehensive income (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) during the years ended December 31, 2017, 2016 and 2015.

### CASH AND CASH EQUIVALENTS

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

### REVENUE RECOGNITION

We earn revenue from software licenses, royalties, subscription-based services, software services, post-contract customer support (“PCS” or “maintenance”), hardware, and appraisal services.

#### Software Arrangements:

For the majority of our software arrangements, we provide services that range from installation, training, and basic consulting to software modification and customization to meet specific customer needs. If the arrangement does not require significant production, modification or customization or where the software services are not considered essential to the functionality of the software, revenue is recognized when all of the following conditions are met

- persuasive evidence of an arrangement exists
- delivery has occurred
- our fee is fixed or determinable
- collectability is probable

For multiple element arrangements, each element of the arrangement is analyzed and we allocate a portion of the total arrangement fee to the elements based on the relative fair value of the element using vendor-specific objective evidence of fair value (“VSOE”), regardless of any separate prices stated within the contract for each element. Fair value is considered the price a customer would be required to pay if the element was sold separately based on our historical experience of stand-alone sales of these elements to third-parties. For PCS, we use renewal rates for continued support arrangements to determine fair value. For software services, we use the fair value we charge our customers when those services are sold separately. We monitor our transactions to determine that we maintain and periodically revise VSOE to reflect fair value. In software arrangements in which we have the fair value of all undelivered elements but not of a delivered element, we apply the “residual method,” in compliance with Accounting Standards Codification (“ASC”) 985-605, Software Revenue Recognition. Under the residual method, if the fair value of all undelivered elements is determinable, the fair value of the undelivered elements is deferred and the remaining portion of the arrangement fee is allocated to the delivered element(s) and is recognized as revenue assuming the other revenue recognition criteria are met. In software arrangements in which we do not have VSOE for all undelivered elements, revenue is deferred until fair value is determined or all elements for which we do not have VSOE have been delivered. Alternatively, if sufficient VSOE does not exist and the only undelivered element is services that do not involve significant modification or customization of the software, the entire fee is recognized over the period during which the services are expected to be performed.

#### Software Licenses and Royalties

We recognize the revenue allocable to software licenses and specified upgrades upon delivery of the software product or upgrade to the customer, unless the fee is not fixed or determinable or collectability is not probable. If the fee is not fixed or determinable, software license revenue is generally recognized as payments become due from the customer. If collectability is not considered probable, revenue is recognized when the fee is collected. Arrangements that include software services, such as training or installation, are evaluated to determine whether those services are essential to the product’s functionality.

A majority of our software arrangements involve “off-the-shelf” software. We consider software to be off-the-shelf software if it can be added to an arrangement with minor changes in the underlying code and it can be used by the customer for the customer’s purpose upon installation. For off-the-shelf software arrangements, we recognize the software license fee as revenue after delivery has occurred, customer acceptance is reasonably assured, that portion of the fee represents a non-refundable enforceable claim and is probable of collection, and the 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 considered essential, we recognize revenue using contract accounting and apply the provisions of the Construction type and Production type Contracts as discussed in ASC 605-35. We generally use the percentage-of-completion method to recognize revenue from these arrangements. We measure progress-to-completion primarily using labor hours incurred, or value added. The percentage-of-completion method generally results in the recognition of reasonably consistent profit margins over the life of a contract because we have the ability to produce 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. For arrangements that include new product releases for which it is difficult to estimate final profitability except to assume that no loss will ultimately be incurred, we recognize revenue under the completed contract method. Under the completed contract method, revenue is recognized only when a contract is completed or substantially complete. Historically these amounts have been immaterial.

We recognize royalty revenue when earned under the terms of our third party royalty arrangements, provided the fees are considered fixed or determinable and realization of payment is probable. Currently, our third party royalties are

variable in nature and such amounts are not considered fixed or determinable until we receive notice of amounts earned. Typically, we receive notice of royalty revenues earned on a quarterly basis in the immediate quarter following the royalty reporting period.

#### Software Services

Some of our software arrangements include services considered essential for the customer to use the software for the customer's purposes. For these software arrangements, both the software license revenue and the services revenue are recognized as the services are performed using the percentage-of-completion contract accounting method. When software services are not considered essential, the fee allocable to the service element is recognized as revenue as we perform the services.

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#### Computer Hardware Equipment

Revenue allocable to computer hardware equipment is recognized when we deliver the equipment and collection is probable.

#### Post-Contract Customer Support

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

#### Subscription-Based Services:

Subscription-based services consist of revenues derived from SaaS arrangements, which utilize the Tyler private cloud, and electronic filing transactions.

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. In cases where the customer has the contractual right to take possession of our software at any time during the hosting period without significant penalty and 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 recognize the license, professional services and hosting services revenues pursuant to ASC 985-605, Software Revenue Recognition.

For SaaS arrangements that do not meet the criteria for recognition under ASC 985-605, we account for the elements under ASC 605-25, Multiple Element Arrangements, using all applicable facts and circumstances, including whether (i) the element has stand-alone value, (ii) there is a general right of return and (iii) the revenue is contingent on delivery of other elements. We allocate contract value to each element of the arrangement that qualifies for treatment as a separate element based on VSOE, and if VSOE is not available, third-party evidence, and if third-party evidence is unavailable, estimated selling price. 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 five to seven years. For professional services associated with SaaS arrangements that we determine do not have stand-alone value to the customer or are contingent on delivery of other elements, we recognize the services revenue ratably over the remaining contractual period once we have provided the customer access to the software and we may begin billing for hosting services. 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. The elements for these arrangements are accounted for under ASC 605-25. 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. 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 related SaaS hosting term.



#### Appraisal Services:

For our property appraisal projects, we recognize revenue using the proportional performance method of revenue recognition since many of these projects are implemented over one to three year periods and consist of various unique activities. Under this method of revenue recognition, we identify each activity for the appraisal project, with a typical project generally calling for bonding, office set up, training, routing of map information, data entry, data collection, data verification, informal hearings, appeals and project management. Each activity or act is specifically identified and assigned an estimated cost. Costs which are considered to be associated with indirect activities, such as bonding costs and office set up, are expensed as incurred. These costs are typically billed as incurred and are recognized as revenue equal to cost. Direct contract fulfillment activities and related supervisory costs such as data collection, data entry and verification are expensed as incurred. The direct costs for these activities are determined and the total contract value is then allocated to each activity based on a consistent profit margin. Each activity is assigned a consistent unit of measure to determine progress towards completion and revenue is recognized for each activity based upon the percentage complete as applied to the estimated revenue for that activity. Progress for the fulfillment activities is typically based on labor hours or an output measure such as the number of parcel counts completed for that activity. Estimated losses on uncompleted contracts are recorded in the period in which we first determine that a loss is apparent.

#### Allocation of Revenue in Statements of Comprehensive Income

In our statements of comprehensive income, we allocate revenue to software licenses, software services, maintenance and hardware and other based on the VSOE of fair value for elements in each revenue arrangement and the application of the residual method for arrangements in which we have established VSOE of fair value for all undelivered elements. In arrangements where we are not able to establish VSOE of fair value for all undelivered elements, revenue is first allocated to any undelivered elements for which VSOE of fair value has been established. We then allocate revenue to any undelivered elements for which VSOE of fair value has not been established based upon management's best estimate of fair value of those undelivered elements and apply a residual method to determine the license fee. Management's best estimate of fair value of undelivered elements for which VSOE of fair value has not been established is based upon the VSOE of similar offerings and other objective criteria.

#### Other

The majority of deferred revenue consists of unearned 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. 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 our contracts generally provide for the payment for the value of products delivered and services performed in the event of an early termination.

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

#### USE OF ESTIMATES

The preparation of our financial statements in conformity with accounting principles generally accepted in the United States ("GAAP") requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to such estimates and assumptions include the application of the percentage-of-completion and proportional performance methods of revenue recognition, the carrying amount and estimated useful lives of intangible assets, determination of share-based compensation expense and valuation allowance for receivables. Actual results could differ from estimates.

#### PROPERTY AND EQUIPMENT, NET

Property, equipment and purchased software are recorded at original cost and increased by the cost of any significant improvements after purchase. We expense maintenance and repairs when incurred. Depreciation and amortization is calculated using the straight-line method over the shorter of the asset's estimated useful life or the term of the lease in

the case of leasehold improvements. For income tax purposes, we use accelerated depreciation methods as allowed by tax laws.

**RESEARCH AND DEVELOPMENT COSTS**

We expensed research and development costs of \$47.3 million during 2017, \$43.2 million during 2016, and \$29.9 million during 2015.

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## INCOME TAXES

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

## SHARE-BASED COMPENSATION

We have a stock option plan that provides for the grant of stock options to key employees, directors and non-employee consultants. Stock options generally vest after three to six years of continuous service from the date of grant and have a contractual term of 10 years. We account for share-based compensation utilizing the fair value recognition pursuant to ASC 718, Stock Compensation. See Note 9 – “Share-Based Compensation” for further information.

## GOODWILL AND OTHER INTANGIBLE ASSETS

### Goodwill

Goodwill represents the excess of the purchase price over the fair value of net assets acquired, including identifiable intangible assets, in connection with our business combinations. Upon acquisition, goodwill is assigned to the reporting unit that is expected to benefit from the synergies of the business combination, which is the reporting unit to which the related acquired technology is assigned. A reporting unit is the operating segment, or a business unit one level below that operating segment, for which discrete financial information is prepared and regularly reviewed by executive management. We assess goodwill for impairment annually as of April, or more frequently whenever events or changes in circumstances indicate its carrying value may not be recoverable.

When testing goodwill for impairment quantitatively, we first compare the fair value of each reporting unit with its carrying amount. If the carrying amount of a reporting unit exceeds its fair value, a second step is performed to measure the amount of potential impairment. In the second step, we compare the implied fair value of reporting unit goodwill with the carrying amount of the reporting unit’s goodwill. If the carrying amount of reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized. The fair values calculated in our impairment tests are determined using discounted cash flow models involving several assumptions. The assumptions that are used are based upon what we believe a hypothetical marketplace participant would use in estimating fair value. We evaluate the reasonableness of the fair value calculations of our reporting units by comparing the total of the fair value of all of our reporting units to our total market capitalization.

Our annual goodwill impairment analysis, which we performed quantitatively during the second quarter of 2017, did not result in an impairment charge.

### Other Intangible Assets

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

undiscounted future cash flows expected to be generated by the asset. If the carrying amount of the assets exceeds their estimated future cash flows, an impairment charge is recognized for the amount by which the carrying amount of the assets exceeds the fair value of the assets.

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## IMPAIRMENT OF LONG-LIVED ASSETS

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

## COSTS OF COMPUTER SOFTWARE

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

## FAIR VALUE OF FINANCIAL INSTRUMENTS

Cash and cash equivalents, accounts receivables, accounts payables, short-term obligations and certain other assets at cost approximate fair value because of the short maturity of these instruments. The fair value of our revolving line of credit approximates book value as of December 31, 2017, because our interest rates reset approximately every 30 days or less. See Note 6 – "Revolving Line of Credit" for further discussion.

As of December 31, 2017, we have \$63.8 million in investment grade corporate bonds, municipal bonds and asset-backed securities with maturity dates ranging from 2017 through 2021. We intend to hold these bonds to maturity and have classified them as such. We believe cost approximates fair value because of the relatively short duration of these investments. The fair values of these securities are considered Level II as they are based on inputs from quoted prices in markets that are not active or from other observable market data. These investments are included in short-term investments and non-current investments and other assets.

As of December 31, 2017, we have \$15.0 million invested in convertible preferred stock representing a 20% interest in Record Holdings Pty Limited, a privately held Australian company specializing in digitizing the spoken word in court and legal proceedings. The investment in convertible preferred stock is accounted under the cost method because the Company does 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, the Company's cost method investments are assessed for impairment. The Company does 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 in the accompanying consolidated balance sheets.

## CONCENTRATIONS OF CREDIT RISK AND UNBILLED RECEIVABLES

Financial instruments that potentially subject us to significant concentrations of credit risk consist principally of cash and cash equivalents, accounts receivable from trade customers, and investments in marketable securities. Our cash and cash equivalents primarily consists of operating account balances and money market funds, which are maintained at several major domestic financial institutions and the balances often exceed insured amounts. As of December 31, 2017, we had cash and cash equivalents of \$185.9 million. We perform periodic evaluations of the credit standing of these financial institutions.

Concentrations of credit risk with respect to receivables are limited due to the size and geographical diversity of our customer base. Historically, our credit losses have not been significant. As a result, we do not believe we have any significant concentrations of credit risk as of December 31, 2017.

We maintain allowances for doubtful accounts and sales adjustments, which are provided at the time the revenue is recognized. Since most of our customers are domestic governmental entities, we rarely incur a loss resulting from the inability of a customer to make required payments. Events or changes in circumstances that indicate that the carrying amount for the allowances for doubtful accounts and sales adjustments 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.

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

	Years Ended December		
	31,		
	2017	2016	2015
Balance at beginning of year	\$3,396	\$1,640	\$1,725
Provisions for losses - accounts receivable	4,110	4,484	1,756
Collection of accounts previously written off	—	—	153
Deductions for accounts charged off or credits issued	(2,079 )	(2,728 )	(1,994 )
Balance at end of year	\$5,427	\$3,396	\$1,640

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. Our property appraisal outsourcing service contracts can range up to three years and, in a few cases, as long as five years, in duration. In connection with these contracts, as well as certain software service contracts, we may perform work prior to when the software and services are billable and/or payable pursuant to the contract. 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 proportional performance accounting in which the revenue is earned based upon activities performed in one accounting period but the billing normally occurs subsequently and may span another accounting period; (2) software services contracts accounted for using the percentage-of-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 objective evidence that the customer-specified objective criteria has been met but the billing has not yet been submitted to the customer; (4) some of our contracts 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, we may grant extended payment terms, generally to existing customers with whom we have a long-term relationship and favorable collection history.

We have recorded unbilled receivables of \$42.6 million and \$33.6 million at December 31, 2017 and 2016, respectively. Included in unbilled receivables are retention receivables of \$7.2 million and \$5.0 million at December 31, 2017 and 2016, respectively, and these retentions become payable upon the completion of the contract or completion of our fieldwork and formal hearings. Unbilled receivables and retention receivables expected to be collected in excess of one year have been included with accounts receivable, long-term portion in the accompanying consolidated balance sheets.

#### INDEMNIFICATION

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

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

#### RECLASSIFICATIONS

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





## NEW ACCOUNTING PRONOUNCEMENTS

### Recent Accounting Guidance not yet Adopted

Revenue from Contracts with Customers. On May 28, 2014, the Financial Accounting Standards Board ("FASB") issued ASU No. 2014-09, "Revenue from Contracts with Customers." This ASU is the result of a convergence project between the FASB and the International Accounting Standards Board. The core principle behind ASU No. 2014-09 is that an entity should recognize revenue to depict the transfer of promised goods and services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for delivering those goods and 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. The ASU allows two methods of adoption: a full retrospective approach where three years of financial information are presented in accordance with the new standard, and a modified retrospective approach where the ASU is applied to the most current period presented in the financial statements. We have adopted the new standard effective January 1, 2018 using the full retrospective method which will require each prior reporting period presented to be recast in future issuance of our financial statements. In preparation for adoption of the standard, we have implemented internal controls and key system functionality to enable the preparation of financial information and have reached conclusions on key accounting assessments related to the standard. During the fourth quarter of fiscal 2017, we have substantially completed data conversion activities required to recast our prior period results. We continue to perform an in-depth review of our preliminary results; therefore, we are in the process of completing our analysis necessary to recast prior period results. We do not believe there are any remaining significant implementation topics associated with the adoption of this ASU that have not yet been addressed.

This standard will have a material impact on our consolidated balance sheets and statement of shareholders' equity. The impact of the standard on consolidated revenue and costs of revenue will be dependent upon the mix of revenue streams due to our accounting for software license fees, allocation of discounts across all performance obligations and to the incremental costs of obtaining a contract. Specifically, under the new standard software license fees under perpetual agreements will no longer be subject to 100% discount allocations from other elements in the contract. Discounts in arrangements will be allocated across all deliverables 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) will be recognized at the point in time that control of the software license transfers to the customer versus our current policy of recognizing revenue only to the extent billable per the contractual terms. Time-based license fees currently recognized over the license term will no longer be recognized over the period of the license and will instead be recognized at the point in time that control of the software license transfers to the customer. Revenue related to our software as a service ("SaaS") offerings, post-contract customer support ("PCS") renewals and professional services remain substantially unchanged. Due to the complexity of certain contracts, the actual revenue recognition treatment required under the standard will be dependent on contract-specific terms and may vary in some instances from recognition at the time of billing.

Application of the new standard requires that incremental costs directly related to obtaining a contract (typically sales commissions plus any associated fringe benefits) 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. Currently, we defer sales commissions and recognize expense over the relevant initial contractual term. With the adoption of the new standard, amortization periods will extend past the initial term.

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

• A lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and

• A right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term.

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.

The ASU 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.

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## (2)ACQUISITIONS

2017

On November 29, 2017, we acquired audio and digital two-way radio communications technology and related assets from Radio 10-33, LLC. The total purchase price was \$1.4 million, all of which was paid in cash.

On August 2, 2017, we acquired substantially all of the assets and assumed certain liabilities of Digital Health Department, Inc. ("DHD"), a company that provides environmental health software, offering a 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, all of which was paid in cash.

The purchase price allocations for the acquisitions noted above are not yet complete. As of December 31, 2017, the preliminary estimates of fair values assumed at the acquisition dates for intangibles, liabilities, deferred revenue, and related deferred taxes are subject to change as valuations are finalized.

On May 30, 2017, we acquired all of the capital stock of Modria.com, Inc., a company that specializes in online dispute resolution for government and commercial entities. The total purchase price, net of debt assumed, was \$7.0 million, of which \$6.1 million was paid in cash and \$0.9 million was accrued as of December 31, 2017. As of December 31, 2017, the purchase price allocation for this acquisition is complete and our balance sheet reflects the allocation of the purchase price to the assets acquired based on their fair value at the date of 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.

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

2016

On May 31, 2016, we acquired all of the capital stock of ExecuTime Software, LLC, a leading provider of time, attendance, and advanced scheduling software solutions. The total purchase price, net of debt assumed, was \$7.4 million. The fair value of the assets and liabilities acquired are based on valuations using Level III, unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. The operating results of this acquisition are included in our results of operations of the Enterprise Software segment from the date of the acquisition. The impact of this acquisition on our operating results is not material.

2015

On November 16, 2015, we acquired all of the capital stock of New World Systems Corporation ("NWS"), which provides public safety and financial solutions for local governments. The purchase price, net of cash acquired of \$22.5 million, was comprised of \$337.5 million in cash, of which \$4.0 million was accrued at December 31, 2015, and 2.1 million shares of Tyler common stock valued at \$362.8 million, based on the closing price on November 16, 2015. We also incurred fees of approximately \$5.9 million for financial advisory, legal, accounting, due diligence, valuation and other various services necessary to complete the acquisition. These fees were expensed in 2015 and are included in selling, general and administrative expenses.

In 2016, we paid \$2.0 million related to the working capital holdback of \$4.0 million and reduced the accrued liability. Our final valuation of the fair market value of NWS' assets and liabilities resulted in adjustments to the preliminary opening balance sheet. These adjustments related to a reduction in deferred revenue and related deferred income taxes and additional reserves for accounts receivable and contingencies resulting in a net decrease to goodwill of approximately \$7.4 million.

On May 29, 2015, we acquired all of the capital stock of Brazos Technology Corporation ("Brazos"), which provides mobile hand held solutions, primarily to law enforcement agencies, for field accident reporting and electronically issuing citations. The purchase price, net of cash acquired of \$312,000 and including debt assumed of \$733,000, was \$6.1 million in cash and 12,500 shares of Tyler common stock valued at \$1.5 million.

The operating results of NWS and Brazos are included with the operating results of the Enterprise Software segment from their respective dates of 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.

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**(3)PROPERTY AND EQUIPMENT, NET**

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

	Useful Lives	2017	2016
	(years)		
Land	—	\$9,958	\$9,958
Building and leasehold improvements	5-39	116,214	94,924
Computer equipment and purchased software	3-5	72,531	55,627
Furniture and fixtures	5	24,834	19,897
Transportation equipment	5	476	447
		224,013	180,853
Accumulated depreciation and amortization		(71,698 )	(56,585 )
Property and equipment, net		\$152,315	\$124,268

Depreciation expense was \$17.3 million during 2017, \$13.4 million during 2016, and \$9.1 million during 2015.

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

In 2016, we purchased an office building in Falmouth, Maine, that was previously leased from an entity owned by an executive's father and brother, for approximately \$9.7 million, and paid \$8.0 million for construction to expand our office building in Yarmouth, Maine.

We own office buildings in Bangor, Falmouth and Yarmouth, Maine; Lubbock and Plano, Texas; Troy, Michigan; Latham, New York; and Moraine, Ohio. We lease space in some of these buildings to third-party tenants. These leases expire between 2019 and 2025 and are expected to provide rental income of approximately \$1.5 million during 2018, \$1.4 million during 2019, \$1.4 million during 2020, \$1.4 million during 2021, \$1.5 million during 2022, and \$4.3 million thereafter. Rental income from third-party tenants was \$1.5 million in 2017, \$1.7 million in 2016, and \$0.9 million in 2015.

**(4)GOODWILL AND OTHER INTANGIBLE ASSETS**

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

	2017	2016
Gross carrying amount of acquisition intangibles:		
Customer related intangibles	\$187,717	\$186,231
Acquired software	179,466	176,096
Trade names	11,435	11,065
Leases acquired	3,694	3,694
	382,312	377,086
Accumulated amortization	(145,868 )	(109,827 )
Total intangibles, net	\$236,444	\$267,259

Total amortization expense for intangibles was \$36.0 million in 2017, \$36.4 million in 2016, and \$10.3 million during 2015.

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

	December 31, 2017			December 31, 2016		
	Gross Carrying Amount	Weighted Average Amortization Period	Accumulated Amortization	Gross Carrying Amount	Weighted Average Amortization Period	Accumulated Amortization
Non-amortizable intangibles:						
Goodwill	\$657,987	—	\$ —	\$650,237	—	\$ —
Amortizable intangibles:						
Customer related intangibles	187,717	15 years	64,375	186,231	15 years	51,491
Acquired software	179,466	7 years	76,800	176,096	7 years	55,115
Trade names	11,435	11 years	3,768	11,065	12 years	2,740
Leases acquired	3,694	10 years	925	3,694	9 years	481

The changes in the carrying amount of goodwill for the two years ended December 31, 2017 are as follows:

	Enterprise Software	Appraisal and Tax	Total
Balance as of 12/31/2015	\$647,109	\$ 6,557	\$653,666
Goodwill acquired with acquisitions	3,943	—	3,943
Purchase price adjustments related to purchase of NWS	(7,372 )	—	(7,372 )
Balance as of 12/31/2016	643,680	6,557	650,237
Goodwill acquired with acquisitions	7,750	—	7,750
Balance as of 12/31/2017	\$651,430	\$ 6,557	\$657,987

Estimated annual amortization expense related to acquired leases will be recorded as a reduction to hardware and other revenue and is expected to be \$425,000 in 2018, \$373,000 in 2019, \$313,000 in 2020, \$312,000 in 2021, \$312,000 in 2022 and \$1.0 million thereafter. Estimated annual amortization expense related to acquisition intangibles, including acquired software, for which the amortization expense is recorded as cost of revenues, is as follows:

2018	\$35,278
2019	33,920
2020	32,495
2021	32,136
2022	28,665

#### (5) ACCRUED LIABILITIES

Accrued liabilities consist of the following at December 31:

	2017	2016
Accrued wages, bonuses and commissions	\$43,688	\$38,996
Other accrued liabilities	20,987	16,993
	\$64,675	\$55,989

**(6)REVOLVING LINE OF CREDIT**

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

Borrowings under the Credit Facility bear interest at a rate of either (1) Wells Fargo Bank’s prime rate (subject to certain higher rate determinations) plus a margin of 0.25% to 1.00% or (2) the 30, 60, 90 or 180-day LIBOR rate plus a margin of 1.25% to 2.00%. As of December 31, 2017, our interest rate was 4.75% under the prime rate option or approximately 2.78% under the 30-day LIBOR option. The Credit Facility is secured by substantially all our assets. The Credit Facility requires us to maintain certain financial ratios and other financial conditions and prohibits us from making certain investments, advances, cash dividends or loans, and limits incurrence of additional indebtedness and liens. As of December 31, 2017, we were in compliance with those covenants.

As of December 31, 2017, we had no outstanding borrowings and had unused borrowing capacity of \$299.5 million under the Credit Facility. In addition, as of December 31, 2017, we had one outstanding letter of credit for \$0.5 million in favor of a client contract. The letter of credit guarantees our performance under the contract and expires in 2018.

We paid interest of \$804,000 in 2017, \$1.9 million in 2016, and \$223,000 in 2015.

**(7)INCOME TAX**

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

	Years Ended December 31,		
	2017	2016	2015
Current:			
Federal	\$22,882	\$41,366	\$44,841
State	4,666	7,023	6,670
	27,548	48,389	51,511
Deferred	(29,865 )	(28,939 )	(7,956 )
	\$(2,317 )	\$19,450	\$43,555

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

	Years Ended December 31,		
	2017	2016	2015
Federal income tax expense at statutory rate	\$56,570	\$45,257	\$37,949
State income tax, net of federal income tax benefit	4,824	4,807	3,715
Domestic production activities deduction	(2,617 )	(3,947 )	(466 )
Excess tax benefits related to stock option exercises	(40,624 )	(29,582 )	—
Tax Act adjustments	(21,625 )	—	—
Tax credits	(3,578 )	—	—
Non-deductible business expenses	4,573	2,979	2,414
Other, net	160	(64 )	(57 )
	\$(2,317 )	\$19,450	\$43,555

On December 22, 2017, the Tax Act was enacted into law. The Tax Act amends the Internal Revenue Code to reduce tax rates and modify policies, credits and deductions for individuals and businesses. For businesses, the Tax Act reduces the U.S. corporate federal tax rate from a maximum of 35% to a flat 21% rate and transitions from a worldwide tax system to a territorial tax system. The Tax Act also adds many new provisions including changes to bonus depreciation, the deduction for executive compensation and a tax on global intangible low-taxed income (GILTI). The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision is a \$21.6 million tax benefit due to the remeasurement of deferred tax assets and liabilities. We have reported provisional amounts for the income tax effects of the Tax Act for which the accounting is incomplete but a reasonable estimate could be determined. There were no specific impacts of the Tax Act that could not be reasonably estimated which we accounted for under prior tax law. Based on a continued analysis of the estimates and further guidance on the application of the law, it is anticipated that additional revisions may occur throughout the allowable measurement period. Overall, the changes due to the Tax Act will favorably affect income tax expense and future U.S. earnings.

Due to the adoption of ASU No. 2016-09 in 2016, federal and state excess tax benefits from stock option exercises for years subsequent to 2015 are reflected as a reduction of the provision for income taxes, whereas they were previously accounted for as an increase to shareholders' equity.

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

	2017	2016
Deferred income tax assets:		
Operating expenses not currently deductible	\$ 11,232	\$ 18,721
Stock option and other employee benefit plans	15,932	19,665
Total deferred income tax assets	27,164	38,386
Deferred income tax liabilities:		
Intangible assets	(60,189 )	(103,754 )
Property and equipment	(5,699 )	(3,207 )
Other	(190 )	(204 )
Total deferred income tax liabilities	(66,078 )	(107,165 )
Net deferred income tax liabilities	\$(38,914)	\$(68,779)

Although realization is not assured, we believe it is more likely than not that all the deferred tax assets will be realized. Accordingly, we believe no valuation allowance is required for the deferred tax assets. However, the amount of the deferred tax asset considered realizable could be adjusted in the future if estimates of reversing taxable temporary differences are revised. There were no unrecognized tax benefits during any of the reported periods.

We are subject to U.S. federal tax, as well as income tax of multiple state, local and foreign jurisdictions. We are routinely subject to income tax examinations by these taxing jurisdictions, but we do not have a history of, nor do we expect any, material adjustments to result from these examinations. During 2017, the Internal Revenue Service issued a "no change" letter upon completion of their examination of our 2012 tax year. With few exceptions, major U.S. federal, state and foreign jurisdictions are no longer subject to examinations for years before 2013. As of February 20, 2018, no significant adjustments have been proposed by any taxing jurisdiction.

We paid income taxes, net of refunds received, of \$36.0 million in 2017, \$30.2 million in 2016, and \$27.3 million in 2015.



**(8)SHAREHOLDERS' EQUITY**

The following table details activity in our common stock:

	Years Ended December 31,					
	2017		2016		2015	
	Shares	Amount	Shares	Amount	Shares	Amount
Stock option exercises	1,113	\$49,845	827	\$23,527	1,118	\$23,160
Purchases of common stock	(44 )	(6,613 )	(882)	(112,699)	(5 )	(645 )
Employee stock plan purchases	51	7,044	47	6,236	43	4,671
Shares issued for acquisitions	—	—	—	—	2,149	364,333

As of February 20, 2018, we had authorization from our board of directors to repurchase up to 2.0 million additional shares of our common stock.

**(9)SHARE-BASED COMPENSATION****Share-Based Compensation Plan**

We have a stock option plan that provides for the grant of stock options to key employees, directors and non-employee consultants. Stock options generally vest after three to six years of continuous service from the date of grant and have a contractual term of 10 years. Once options become exercisable, the employee can purchase shares of our common stock at the market price on the date we granted the option. We account for share-based compensation utilizing the fair value recognition pursuant to ASC 718, Stock Compensation.

As of December 31, 2017, there were 2.1 million shares available for future grants under the plan from the 20.0 million shares previously approved by the shareholders.

**Determining Fair Value of Stock Compensation**

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

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

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

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

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

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

The following weighted average assumptions were used for options granted:

	Years Ended December 31,		
	2017	2016	2015
Expected life (in years)	6.0	6.0	6.0
Expected volatility	28.1 %	29.3 %	28.3 %
Risk-free interest rate	2.0 %	1.8 %	1.7 %
Expected forfeiture rate	— %	— %	1.7 %

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

	Years Ended December 31,		
	2017	2016	2015
Cost of software services, maintenance and subscriptions	\$9,415	\$6,548	\$3,380
Selling, general and administrative expenses	27,933	23,199	16,802
Total share-based compensation expenses	37,348	29,747	20,182
Tax benefit	(40,624)	(30,059)	(5,986)
Net (increase) decrease in net income	\$(3,276)	\$(312)	\$14,196

#### Stock Option Activity

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

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding at December 31, 2014	5,537	\$ 44.61		
Granted	747	145.71		
Exercised	(1,118)	20.71		
Forfeited	(2)	19.61		
Outstanding at December 31, 2015	5,164	64.43		
Granted	846	147.25		
Exercised	(827)	28.43		
Forfeited	(27)	95.33		
Outstanding at December 31, 2016	5,156	83.64		
Granted	824	176.26		
Exercised	(1,113)	44.80		
Forfeited	(50)	134.83		
Outstanding at December 31, 2017	4,817	107.91	7	\$ 334,940
Exercisable at December 31, 2017	2,355	78.40	6	\$ 232,366

We had unvested options to purchase 2.4 million shares with a weighted average grant date exercise price of \$136.51 as of December 31, 2017, and unvested options to purchase 2.8 million shares with a weighted average grant date exercise price of \$104.91 as of December 31, 2016. As of December 31, 2017, we had \$88.2 million of total unrecognized compensation cost related to unvested options, net of expected forfeitures, which is expected to be amortized over a weighted average amortization period of 3.2 years.

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

	2017	2016	2015
Weighted average grant-date fair value of stock options granted	\$ 55.56	\$ 46.89	\$ 45.17
Total intrinsic value of stock options exercised	137,699	103,703	149,542

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## Employee Stock Purchase Plan

Under our Employee Stock Purchase Plan (“ESPP”) participants may contribute up to 15% of their annual compensation to purchase common shares of Tyler. The purchase price of the shares is equal to 85% of the closing price of Tyler shares on the last day of each quarterly offering period. As of December 31, 2017, there were 797,000 shares available for future grants under the ESPP from the 2.0 million shares previously approved by the stockholders.

## (10) EARNINGS PER SHARE

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

	Years Ended December 31,		
	2017	2016	2015
Numerator for basic and diluted earnings per share:			
Net income	\$163,945	\$109,857	\$64,869
Denominator:			
Weighted-average basic common shares outstanding	37,273	36,448	34,137
Assumed conversion of dilutive securities:			
Stock options	1,973	2,513	2,415
Denominator for diluted earnings per share	39,246	38,961	36,552
- Adjusted weighted-average shares			
Earnings per common share:			
Basic	\$4.40	\$3.01	\$1.90
Diluted	\$4.18	\$2.82	\$1.77

Stock options representing the right to purchase common stock of 1,343,000 shares in 2017, 786,000 shares in 2016, and 417,000 shares in 2015 were not included in the computation of diluted earnings per share because their inclusion would have had an anti-dilutive effect.

## (11) LEASES

We lease office facilities for use in our operations, as well as transportation, computer and other equipment. Most of our leases are non-cancelable operating lease agreements and they expire at various dates through 2025. In addition to rent, the leases generally require us to pay taxes, maintenance, insurance and certain other operating expenses. Rent expense was approximately \$6.9 million in 2017, \$6.7 million in 2016, and \$7.2 million in 2015, which included rent expense associated with related party lease agreements of \$150,000 in 2017, \$330,000 in 2016, and \$1.8 million in 2015.

Future minimum lease payments under all non-cancelable leases at December 31, 2017 are as follows:

Years Ending December 31,	
2018	\$5,428
2019	4,201
2020	3,644
2021	2,366
2022	812
Thereafter	499
Total	\$16,950

#### (12)EMPLOYEE BENEFIT PLANS

We provide a defined contribution plan for the majority of our employees meeting minimum service requirements. The employees can contribute up to 30% of their current compensation to the plan subject to certain statutory limitations. We contribute up to a maximum of 3% of an employee's compensation to the plan. We made contributions to the plan and charged operating results \$7.9 million during 2017, \$6.9 million during 2016, and \$5.3 million during 2015.

#### (13)COMMITMENTS AND CONTINGENCIES

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

#### (14)SEGMENT AND RELATED INFORMATION

We are a major provider of integrated information management solutions and services for the public sector, with a focus on local and state governments.

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

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

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

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

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

ES segment capital expenditures included \$24.4 million in 2017 and \$17.7 million in 2016 for the expansion of existing buildings and purchases of buildings and land.



For the year ended December 31, 2017

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	\$ 67,840	\$ 7,854	\$—	\$ 75,694
Subscriptions	165,651	7,859	—	173,510
Software services	167,934	19,215	—	187,149
Maintenance	339,951	21,618	—	361,569
Appraisal services	—	25,023	—	25,023
Hardware and other	13,094	10	4,613	17,717
Intercompany	10,425	—	(10,425 )	—
Total revenues	\$ 764,895	\$ 81,579	\$(5,812 )	\$ 840,662
Depreciation and amortization expense	44,517	760	8,648	53,925
Segment operating income	228,254	20,238	(51,964 )	196,528
Capital expenditures	28,096	1,181	16,341	45,618
Segment assets	\$ 338,965	\$ 44,464	\$ 1,206,163	\$ 1,589,592

For the year ended December 31, 2016

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	\$ 68,844	\$ 5,462	\$—	\$ 74,306
Subscriptions	135,516	7,188	—	142,704
Software services	158,478	16,326	—	174,804
Maintenance	304,380	18,589	—	322,969
Appraisal services	—	26,287	—	26,287
Hardware and other	11,942	16	3,015	14,973
Intercompany	6,742	—	(6,742 )	—
Total revenues	\$ 685,902	\$ 73,868	\$(3,727 )	\$ 756,043
Depreciation and amortization expense	43,962	984	5,355	50,301
Segment operating income	190,817	18,286	(41,832 )	167,271
Capital expenditures	23,843	1,432	11,448	36,723
Segment assets	\$ 295,260	\$ 31,769	\$ 1,030,916	\$ 1,357,945

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For the year ended December 31, 2015

	Enterprise Software	Appraisal and Tax	Corporate	Totals
Revenues				
Software licenses and royalties	\$54,376	\$4,632	\$—	\$59,008
Subscriptions	107,090	4,843	—	111,933
Software services	129,068	10,784	—	139,852
Maintenance	227,586	17,951	—	245,537
Appraisal services	—	25,065	—	25,065
Hardware and other	6,935	12	2,680	9,627
Intercompany	4,025	—	(4,025)	—
Total revenues	\$529,080	\$63,287	\$(1,345)	\$591,022
Depreciation and amortization expense	15,413	867	3,294	19,574
Segment operating income	141,401	15,477	(38,490)	118,388
Capital expenditures	6,112	646	6,746	13,504
Segment assets	\$265,877	\$22,283	\$1,068,410	\$1,356,570

Reconciliation of reportable segment operating income to the Company's consolidated totals:	Years Ended December 31,		
	2017	2016	2015
Total segment operating income	\$196,528	\$167,271	\$118,388
Amortization of acquired software	(21,686)	(22,235)	(4,440)
Amortization of customer and trade name intangibles	(13,912)	(13,731)	(5,905)
Other income (expense), net	698	(1,998)	381
Income before income taxes	\$161,628	\$129,307	\$108,424

## (15) QUARTERLY FINANCIAL INFORMATION (unaudited)

The following table contains selected financial information from unaudited statements of income for each quarter of 2017 and 2016:

	Quarters Ended							
	2017				2016			
	Dec. 31 (a)	Sept. 30	June 30	Mar. 31	Dec. 31	Sept. 30	June 30	Mar. 31
Revenues	\$217,851	\$214,146	\$209,123	\$199,542	\$193,281	\$194,497	\$188,972	\$179,293
Gross profit	105,500	103,429	95,863	94,348	92,817	93,480	86,936	82,118
Income before income taxes	45,173	43,522	36,974	35,959	35,119	36,419	30,195	27,574
Net income	61,798	38,263	31,578	32,306	31,196	35,430	25,007	18,224
Earnings per diluted share	\$1.56	\$0.97	\$0.81	\$0.83	\$0.80	\$0.91	\$0.65	\$0.47
Shares used in computing diluted earnings per share	39,499	39,342	39,201	38,932	38,975	39,062	38,738	39,071

(a) Fourth quarter 2017 includes the significant impact of the enactment of the Tax Act. The most significant impact of the Tax Act to us is the reduction in the U.S. federal corporate income tax rate from 35% to 21%. The impact of the rate reduction on our 2017 income tax provision is a \$21.6 million tax benefit due to the remeasurement of deferred tax assets and liabilities. Refer to Note 7 - "Income Tax" for further discussion on the impact the Tax Act.