ASPEN TECHNOLOGY INC /DE/
Form 10-K
August 11, 2016

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

FORM 10-K
(Mark One)
ý ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended June 30, 2016
or
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission file number: 0-24786

Aspen Technology, Inc.
(Exact name of registrant as specified in its charter)

Delaware	04-2739697
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
20 Crosby Drive Bedford, MA (Address of principal executive offices)	01730 (Zip Code)

Registrant's telephone number, including area code: 781-221-6400

Securities registered pursuant to Section 12(b) of the Act:
None
Securities registered pursuant to Section 12(g) of the Act:
Common stock, $0.10 par value per share
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ý No o
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No ý
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 ý No o
Indicate by checkmark 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 (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý No o
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) 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 this Form 10-K or any amendment to this Form 10-K. ý
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller

reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ý	Accelerated filer o	Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

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

As of December 31, 2015, the aggregate market value of common stock (the only outstanding class of common equity of the registrant) held by non-affiliates of the registrant was $2,753,103,878 based on a total of 72,910,590 shares of common stock held by non-affiliates and on a closing price of $37.76 on December 31, 2015 for the common stock as reported on The NASDAQ Global Select Market.

There were 79,737,554 shares of common stock outstanding as of August 4, 2016.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement related to its 2016 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Form 10-K are incorporated by reference in Part III, Items 10-14 of this Form 10-K.

Table of Contents

TABLE OF CONTENTS

Our registered trademarks include aspenONE and Aspen Plus. All other trademarks, trade names and service marks appearing in this Form 10-K are the property of their respective owners.
Our fiscal year ends on June 30, and references to a specific fiscal year are the twelve months ended June 30 of such year (for example, "fiscal 2016" refers to the year ended June 30, 2016).

Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND INDUSTRY DATA

This Form 10-K 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. Forward-looking statements relate to future events or our future financial performance. We generally identify forward-looking statements by terminology such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "potential," "should," "target," or the negative of these terms or other similar words. These statements are only predictions. The outcome of the events described in these forward-looking statements is subject to known and unknown risks, uncertainties and other factors that may cause our, our customers' or our industry's actual results, levels of activity, performance or achievements expressed or implied by these forward-looking statements, to differ. "Item 1. Business," "Item 1A. Risk Factors" and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" as well as other sections in this Form 10-K, discuss some of the factors that could contribute to these differences. The forward-looking statements made in this Form 10-K relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make. The industry in which we operate is subject to a high degree of uncertainty and risk due to variety of factors, including those described in "Item 1A. Risk Factors." Unless the context indicates otherwise, references in this report to "we", "us", "our" and other similar references mean Aspen Technology, Inc. and its subsidiaries.

PART I

Item 1. Business.

Overview

We are a leading global provider of process optimization software solutions designed to manage and optimize plant and process design, operational performance, and supply chain planning. Our aspenONE software and related services have been developed specifically for companies in the process industries, including the energy, chemicals, and engineering and construction industries. Customers use our solutions to improve their competitiveness and profitability by increasing throughput and productivity, reducing operating costs, enhancing capital efficiency, and decreasing working capital requirements.

Our software incorporates our proprietary mathematical and empirical models of manufacturing and planning processes and reflects the deep domain expertise we have amassed from focusing on solutions for the process industries for 35 years. We have developed our applications to design and optimize processes across three principal business areas: engineering, manufacturing and supply chain. We are a recognized market and technology leader in providing process optimization software for each of these business areas.

We have established sustainable competitive advantages within our industry based on the following strengths:

- Innovative products that can enhance our customers' profitability;
- Long-term customer relationships;
- Large installed base of users of our software; and
- Long-term license contracts.

We have approximately 2,100 customers globally. Our customers consist of companies engaged in process industries such as energy, chemicals, engineering and construction, as well as consumer packaged goods, power, metals and mining, pulp and paper, pharmaceuticals and biofuels.

Industry Background

The process industries consist of companies that typically manufacture finished products by applying a controlled chemical process either to a raw material that is fed continuously through the plant or to a specific batch of raw material.

Process manufacturing is often complex because small changes in the high-volume feedstocks used, or to the chemical process applied, can have a significant impact on the efficiency and cost-effectiveness of manufacturing operations. As a result, process manufacturers, as well as the engineering and construction firms that partner with these manufacturers, have extensive technical requirements and need sophisticated, integrated software to help design, operate and manage their complex manufacturing environments. The unique characteristics associated with process manufacturing create special demands for

3

Table of Contents

business applications that frequently exceed the capabilities of generic software applications or non-process manufacturing software packages.

Industry Specific Challenges Facing the Process Industries

Companies in different process industries face specific challenges that are driving the need for software solutions that design, operate and manage manufacturing environments more effectively:

Energy. Our energy markets are comprised of three primary sectors: Exploration and Production, also called "upstream," Gas Production and Processing, also called "midstream," and Refining and Marketing, also called "downstream":

- Companies engaged in Exploration and Production explore for and produce hydrocarbons. They target reserves in increasingly diverse geographies involving geological, logistical and political challenges. They need to design and develop ever larger, more complex and more remote production, gathering and processing facilities as quickly as possible with the objective of optimizing production and ensuring regulatory compliance.
- Companies engaged in Gas Production and Processing produce and gather natural gas from well heads, clean it, process it and separate it into dry natural gas and natural gas liquids in preparation for transport to downstream markets. The number of gas processing plants in North America has increased significantly in recent years to process gas extracted from shale deposits.
- Companies engaged in Refining and Marketing convert crude oil through a chemical manufacturing process into end products such as gasoline, jet and diesel fuels and into intermediate products for downstream chemical manufacturing companies. These companies are characterized by high volumes and low operating margins. In order to deliver better margins, they focus on optimizing feedstock selection and product mix, reducing energy and capital costs, maximizing throughput, and minimizing inventory, all while operating safely and in accordance with regulations.

Chemicals. The chemicals industry includes both bulk and specialty chemical companies:

- Bulk chemical producers, which manufacture commodity chemicals and who compete primarily on price, are seeking to achieve economies of scale and manage operating margin pressure by building larger, more complex plants located near feedstock sources.
- Specialty chemical manufacturers, which primarily manufacture highly differentiated customer-specific products, face challenges in managing diverse product lines, multiple plants, complex supply chains and product quality.

Engineering and construction. Engineering and construction firms that work with process manufacturers compete on a global basis by bidding on and executing on complex, large-scale projects. They need a digital environment in which optimal plant designs can be produced quickly and efficiently, incorporating highly accurate modeling, analysis and cost estimation technology. In addition, these projects require software that enables significant collaboration internally, with the manufacturer, and in many cases, with other engineering and construction firms.

Companies in the consumer packaged goods, power, metals and mining, pulp and paper, pharmaceuticals and biofuels industries are also seeking process optimization solutions that help them deliver improved financial and operating results in the face of varied process manufacturing challenges.

Complexity of the Process Industries

Companies in the process industries constantly face pressure on margins causing them to continually seek ways to operate more efficiently. At the same time, these manufacturers face complexity as a result of the following:

Globalization of markets. Process manufacturers are continuously expanding their operations in order to take advantage of growing demand and more economically viable sources of feedstocks. Process manufacturers must be able to design, build and operate plants efficiently and economically, and they need to economically manage and optimize ever broadening supply chains.

Market volatility. Process manufacturers must react quickly to frequent changes in feedstock prices, temporary or longer-term feedstock shortages, and rapid changes in finished product prices. Unpredictable commodity markets strain the manufacturing and supply chain operations of process manufacturers, which must consider, and when appropriate implement, changes in inventory levels, feedstock inputs, equipment usage and operational processes in order to remain competitive.

Table of Contents

Environmental and safety regulations. Process companies must comply with an expanding array of data maintenance and reporting requirements under governmental and regulatory mandates, and the global nature of their operations can subject them to numerous regulatory regimes. These companies often face heightened scrutiny and oversight because of environmental, safety and other implications of their products and manufacturing processes. These companies increasingly are relying upon software applications to model potential outcomes, store operating data and develop reporting capabilities.

Market Opportunity

Technology solutions play a major role in helping companies in the process industries improve their manufacturing productivity. In the 1980s, process manufacturers implemented distributed control systems, or DCS, to automate the management of plant hardware. DCS use computer hardware, communication networks and industrial instruments to measure, record and automatically control process variables. In the 1990s, these manufacturers adopted enterprise resource planning, or ERP, systems to streamline back office functions and interact with DCS. These systems allowed process manufacturers to track, monitor and report the performance of each plant, rather than rely on traditional paper and generic desktop spreadsheets.

Many process manufacturers have implemented both DCS and ERP systems but have realized that their investments in hardware and back-office systems are inadequate. DCS are only able to control and monitor processes based on fixed sets of parameters and cannot dynamically react to changes in the manufacturing process unless instructed by end users. ERP systems can only record what is produced in operations. Although DCS and ERP systems help manage manufacturing performance, neither of these systems can optimize what is produced, how it is produced or where it is produced. Moreover, neither can help a process manufacturer understand how to improve its processes or how to identify opportunities to decrease operating expenses.

Process optimization software addresses the gap between DCS and ERP systems. Process optimization software focuses on the design and optimization of the manufacturing process; how the process is run and the economics of the process. By connecting DCS and ERP systems with intelligent, dynamic applications, process optimization software allows a manufacturer to make better, faster economic decisions. Examples of how process optimization software can optimize a manufacturing environment include incorporating process manufacturing domain knowledge, supporting real-time decision making, and providing the ability to forecast and simulate potential actions. Furthermore, these solutions can optimize the supply chain by helping a manufacturer to understand the operating conditions in each plant, which enables a manufacturer to decide where best to manufacture products.

Process manufacturers employ highly skilled technical personnel specializing in areas such as process design, equipment design, control engineering, manufacturing operations, planning, scheduling, and supply chain management. To drive efficiency and improve operating margins, these personnel need to collaborate across functional areas and increasingly rely on software to enable this collaboration as well as automate complex tasks associated with their jobs. Process companies must adapt to the changing nature of the technical workforce. A generation of highly experienced plant operators and engineers is nearing retirement. Companies are looking for intelligent software applications that capture and automate expert knowledge and are intuitive and easy-to-learn.

aspenONE Solutions

We provide integrated process optimization software solutions designed and developed specifically for the process industries. Customers use our solutions to improve their competitiveness and profitability by increasing throughput and productivity, reducing operating costs, enhancing capital efficiency, enabling collaboration among different functions and decreasing working capital requirements. Our aspenONE software applications are organized into two suites, which are centered on our principal business areas of engineering, manufacturing and supply chain:

aspenONE Engineering. Our engineering software is used to develop process designs of new plants, re-vamp existing plants, and simulate and optimize existing processes.

aspenONE Manufacturing and Supply Chain. Our manufacturing software is used to optimize day-to-day processing activities, enabling process manufacturers to make better, more profitable decisions and to improve plant performance. Our supply chain management software is designed to enable process manufacturers to reduce inventory levels, increase asset efficiency, respond rapidly to market demands and optimize supply chain operations.

Our aspenONE licensing model is a subscription offering under which customers receive access to all of the products within the aspenONE suite(s) they license, including the right to any new unspecified future software products and updates that may be introduced into a licensed aspenONE software suite. This affords customers the ability to use our software whenever required and to experiment with different applications to best solve whatever critical business challenges they face.

Table of Contents

We offer customer support, professional services and training services to our customers. Under our aspenONE licensing model, software maintenance and support is included for the term of the arrangement. Professional services are offered to customers as a means to further implement and extend our technology across their corporations.
The key benefits of our aspenONE solutions include:
Broad and comprehensive software suites. We believe we are the only software provider that has developed comprehensive suites of software applications addressing the engineering, manufacturing and supply chain requirements of process manufacturers. While some competitors offer solutions in one or two principal business areas, no other vendor can match the breadth of our aspenONE offerings. In addition, we have developed an extensive array of software applications that address extremely specific and complex industry and end user challenges, such as feedstock selection and production scheduling for petroleum companies.
Integrated software solutions. aspenONE provides a standards-based framework that integrates applications, data and models within each of our software suites. Process manufacturers seeking to improve their business operations can use the integrated software applications in the aspenONE Manufacturing and Supply Chain suite to support real-time decision making both for individual production facilities and across multiple sites.
Flexible commercial model. Our aspenONE licensing model provides a customer with access to all of the applications within the aspenONE suite(s) the customer licenses, including the right to any new unspecified future software products and updates that may be introduced into the licensed aspenONE software suite. The customer can change or alternate the use of multiple applications in a licensed suite through the use of exchangeable units of measurement, or tokens, licensed in quantities determined by the customer. This enables the customer to use those applications whenever required and to experiment with different applications to best solve whatever critical business challenges the customer faces. The customer can easily increase its usage of our software as their business requirements evolve.
Our Competitive Strengths
In addition to the breadth and depth of our integrated aspenONE software and the flexibility of our aspenONE licensing model, we believe our key competitive advantages include the following:
Industry-leading innovation based on substantial process expertise. Over the past 35 years, our significant investment in research and development has led to a number of major process engineering advances considered to be industry-standard applications. Our development organization is comprised of software engineers, chemical engineers and data scientists. This combination of expertise has been essential to the development of leading products embedded with chemical engineering principles, optimization algorithms, and the process industries’ workflows and best practices.
Rapid, high return on investment. Many customers purchase our software because they believe it will provide rapid, demonstrable and significant returns on their investment and increase their profitability. For some customers, cost reductions in the first year following installation have exceeded the total cost of our software. For many customers, even a relatively small improvement in productivity can generate substantial recurring benefits due to the large production volumes and limited profit margins typical in process industries. In addition, our solutions can generate organizational efficiencies and operational improvements that can further increase a process company's profitability.
Growth Strategy
We seek to maintain and extend our position as a leading global provider of process optimization software and related services to the process industries. In the last twelve months we have introduced a new strategy to evolve our scope of optimization from the process units in a plant to the process and the equipment in the plant or entire asset. We plan to expand our reach in optimization from conceptualization and design, operations, and supply chain to the maintenance aspects of the plant. We plan to build on our expertise in process optimization, our installed base, and long term customer relationships to expand our reach in the maintenance area of the plant. By focusing on asset optimization we would be able to optimize the design and operations of a plant taking into account the relevant maintenance performance of process equipment as to optimize the full asset lifecycle. Our primary growth strategy is to expand organically within our core verticals by leveraging our market leadership position and driving increased usage and product adoption of the broad capabilities in our aspenONE offerings. Additionally, we seek acquisitions to accelerate our overall growth in the design and operations of the process, and acquisitions that will begin to build our maintenance solution to deliver asset optimization. To accomplish these goals, we will pursue the following activities:

Continue to provide innovative, market-leading solutions. Our recent innovations include adaptive process control, modeling of solids processes, rundown blending optimization, crude assays characterization using molecular science, electrolyte and biofuel characterizations, process safety, sulfur recovery, and methodologies for carbon management. We intend

Table of Contents

to continue to invest in research and development in order to develop and offer new and enhanced solutions for our aspenONE suites. We have pioneered a number of industry standard and award-winning software applications. For example, Aspen Plus, our process modeling tool for the chemicals industry, has won the Chemical Processing magazine Readers' Choice Award for "Process Simulation Software" multiple times. We have also been recognized by R&D Magazine for innovation in out of the box modeling capabilities that we developed with the National Institute of Standards and Technology.

Further penetrate existing customer base. We have an installed base of approximately 2,100 customers. Many of our customers only use a fraction of our products. We work with our customers to identify ways in which they can improve their business performance by using the entire licensed suite of aspenONE applications, both at an individual user level and across all of their plant locations. Our customers are segmented based on their size and complexity. Our large complex customers are serviced by our Field Sales organization, while our other customers are serviced by our inside sales group. Additionally, we regularly enhance our products to make them easier to use and seek to increase productivity of users by offering more integrated workflows.

Invest in high growth markets. Companies in the process industries are expanding their operations to take advantage of growing demand in markets such as China, Latin America, the Middle East, and Russia. Additionally, process manufacturers with existing plants in these markets are beginning to recognize the value of upgrading their operations to take advantage of process optimization solutions. We believe we can further extend our presence in these markets by growing our regional operations in these markets. In addition, we will continue to expand our inside sales organization to address new opportunities in certain market segments.

Deploy a comprehensive digital engagement strategy. We have a broad user base spanning our vertical industries and geographies, and they possess a variety of skills, experience and business needs. In order to reach our user base in an effective, productive and leveraged manner, we utilize digital customer engagement solutions including webinars, digital communities, social media, videos, email and other digital means. We intend to capitalize increasingly on segmentation to ensure we deliver targeted messages intended to address the specific needs of each market, customer and user.

Pursue acquisitions. As part of our ongoing make-vs-buy analysis, we regularly explore and evaluate acquisitions. We have made several small acquisitions in recent years and believe the opportunity exists to do more, especially as we seek to evolve our strategy to asset optimization and the maintenance area of the plant.

Expand our total addressable market. Our focus on innovation also means introducing product capabilities or new product categories that create value for our customers and therefore expand our total addressable market.

Build an ecosystem. The relevance of our solutions in the markets we serve means that we have the opportunity to leverage third parties interested in building or expanding their businesses to expand our market penetration. The types of relationships that we establish will depend on the profile of the third-party company and the objectives specified to be achieved from the promotion and implementation of our products and solutions.

Products

Our integrated process optimization software solutions are designed and developed specifically for the process industries. Customers use our solutions to improve their competitiveness and profitability by increasing throughput and productivity, reducing operating costs, enhancing capital efficiency, and decreasing working capital requirements. We have designed and developed our software applications across three principal business areas:

Engineering. Our engineering software applications are used during both the design and the ongoing operation of plant facilities to model and improve the way engineers develop and deploy manufacturing assets. Process manufacturers must address a variety of challenges including design, operational improvement, collaborative engineering and economic evaluation. They must, for example, determine where they should locate facilities, how they can lower capital and manufacturing costs, what they should produce and how they can maximize plant efficiency.

Manufacturing. Our manufacturing software products focus on optimizing day-to-day processing activities, enabling customers to make better, faster decisions that lead to improved plant performance and operating results. These solutions include desktop and server applications that help customers make real-time decisions, which can reduce fixed and variable costs and improve product yields. Process manufacturers must address a wide range of manufacturing challenges such as optimizing execution efficiency, reducing costs, selecting the right raw materials, scheduling and coordinating production processes, and identifying an appropriate balance between turnaround times, delivery schedules, product quality, cost and inventory.

Table of Contents

Supply chain management. Our supply chain management solutions include desktop and server applications that help customers optimize critical supply chain decisions in order to reduce inventory, increase asset efficiency, and respond more quickly to changing market conditions. Process manufacturers must address numerous challenges as they strive to effectively and efficiently manage raw materials inventory, production schedules and feedstock purchasing decisions. Supply chain managers face these challenges in an environment of ever-changing market prices, supply constraints and customer demands.

Our software applications are currently offered in two suites: aspenONE Engineering and aspenONE Manufacturing and Supply Chain. These suites are integrated applications that allow end users to design process manufacturing environments, forecast and simulate potential actions, monitor operational performance, and manage planning and scheduling activities as well as collaborate across these functions and activities. The two suites are designed around core modules and applications that allow customers to design, manage and operate their process manufacturing environments, as shown below:

aspenONE Engineering

Business Area	aspenONE Module	Major Products	Product Description
Engineering	Engineering	Aspen HYSYS	Process modeling software for the design and optimization of hydrocarbon processes, including complete pressure relief analysis
		Aspen Plus	Process modeling software for the design and optimization of chemical processes
		Aspen Economic Evaluation	Economic evaluation software for estimating project capital costs and lifecycle asset economics—from conceptual definition through detailed engineering
		Aspen Exchanger Design and Rating	Software for the design, simulation and rating of various types of heat exchangers
		Aspen Basic Engineering	Process engineering platform for producing front-end design deliverables such as multi-disciplinary datasheets, process flow diagrams, piping and instrument diagrams, and equipment lists

Table of Contents

aspenONE Manufacturing and Supply Chain

Business Area	aspenONE Module	Major Products	Product Description
Manufacturing	Advanced Process Control	Aspen DMC3	Multi-variable controller software for maintaining processes at their optimal operating point under changing process conditions
	Manufacturing Execution Systems	Aspen Info Plus.21	Data historian software for storing, visualizing and analyzing large volumes of data to improve production execution and enhance performance management
		AspenONE Process Explorer	Software for combining process measurements, product characteristics, alarms, events and unstructured data for a complete view of production
Supply Chain	Petroleum Supply Chain	Aspen PIMS Advanced Optimization	Refinery planning software for optimizing feedstock selection, product slate and operational execution
		Aspen Petroleum Scheduler	Refinery scheduling software for scheduling and optimization of refinery operations with integration to refinery planning, blending and dock operations
		Aspen Petroleum Supply Chain Planner	Economic planning software for optimizing the profitability of the petroleum distribution network, including transportation, raw materials, sales demands, and processing facilities
		Aspen Collaborative Demand Manager	Software for forecasting market demand and managing forecast through changes in the business environment by combining historical and real time data
		Aspen Fleet Optimizer	Software for inventory management and truck transportation optimization in secondary petroleum distribution
		Aspen Plant Scheduler	Software for generating optimal production schedules to meet total demand
	Supply Chain Management	Aspen Supply Planner	Software for determining the optimal production plan taking into account labor and equipment, feedstock, inbound /outbound transportation, storage capacity, and other variables

Our product development activities are currently focused on strengthening the integration of our applications and adding new capabilities that address specific operational business processes in each industry. As of June 30, 2016, we had a total of 456 employees in our research and development group, which is comprised of product management, software development and quality assurance. Research and development expenses were $67.2 million in fiscal 2016, $69.6 million in fiscal 2015 and $68.4 million in fiscal 2014.

Sales and Marketing

We employ a value-based sales approach, offering our customers a comprehensive suite of software and services that enhance the efficiency and productivity of their engineering, manufacturing and supply chain operations. We have increasingly focused on positioning our products as a strategic investment and therefore devote an increasing portion of our sales efforts to our customers’ senior management, including senior decision makers in manufacturing, operations and technology. Our aspenONE solution strategy supports this value-based approach by broadening the scope of optimization across the entire enterprise and expanding the use of process models in the operations environment. We offer a variety of training programs focused on illustrating the capabilities of our applications as well as online training built into our applications. We have implemented incentive compensation programs for our sales force to reward efforts that increase customer usage of our products. Furthermore, we believe our aspenONE licensing model enables our sales force to develop consultative sales relationships with our customers.

Historically, most of our license sales have been generated through our direct Field Sales organization. In order to market the specific functionality and other technical features of our software, our account managers work with specialized teams of technical sales personnel and product specialists organized for each sales and marketing effort. Our technical sales personnel typically have degrees in chemical engineering or related disciplines and actively consult with a customer’s plant engineers. Product specialists share their detailed knowledge of the specific features of our software solutions as they apply to the unique business processes of different vertical industries. In addition to our direct Field Sales organization, we employ an inside sales team that targets customers in certain market segments.

Table of Contents

We have established channel relationships with select companies that we believe can help us pursue opportunities in non-core target markets. We also license our software products to universities that agree to use our products in teaching and research. We believe that students' familiarity with our products will stimulate future demand once the students enter the workplace.

We supplement our sales efforts with a variety of marketing initiatives, including industry analyst and public relations activities, campaigns to promote product usage and adoption, user group meetings and customer relationship programs. Our broad user base spans multiple verticals and geographies and these users possess a variety of skills, experience and business needs. In order to reach each of them in an effective, productive and leveraged manner we will increasingly capitalize on digital customer engagement solutions. Using webinars, digital communities, social media, videos, email and other digital means, we seek to engage our extensive user base with targeted messages intended to address the specific needs of each market, customer and user.

Our overall sales force, which consists of sales account managers, technical sales personnel, indirect-channel personnel, inside sales personnel, and marketing personnel, consisted of 445 employees as of June 30, 2016.

Software Maintenance and Support, Professional Services and Training

Software maintenance and support (“SMS”) consists primarily of providing customer technical support and access to software fixes and upgrades. Customer technical support services are provided throughout the world by our three global call centers as well as via email and through our support website. For license term arrangements entered into subsequent to our transition to a subscription-based licensing model, SMS is included with the license arrangement. For license arrangements that don’t include SMS, customers can purchase standalone SMS.

We offer professional services focused on implementation of our solution. Our professional services team primarily consists of project engineers with degrees in chemical engineering or a similar discipline, or who have significant relevant industry experience. Our employees include experts in fields such as thermophysical properties, distillation, adsorption processes, polymer processes, industrial reactor modeling, the identification of empirical models for process control or analysis, large-scale optimization, supply distribution systems modeling and scheduling methods. Our primary focus is the successful implementation and usage of our software, and in many instances, this work can be professionally performed by qualified third parties. As a result, we often compete with third-party consulting firms when bidding for professional services contracts, particularly in developed markets. We offer our services on either a time-and-material or fixed-price basis.

We offer a variety of training solutions ranging from standardized training, which can be delivered in a public forum, on-site at a customer's location or over the Internet, to customized training sessions, which can be tailored to fit customer needs. We have also introduced a wide range of online computer-based training courses offering customers on-demand training in basic and advanced features of our products directly from within the products. As of June 30, 2016, we had a total of 293 employees in our customer support, professional services and training groups.

Business Segments

We have two operating and reportable segments: i) subscription and software and ii) services. The subscription and software segment is engaged in the licensing of process optimization software solutions and associated support services. The services segment includes professional services and training.

Competition

Our markets in general are competitive, and we expect the intensity of competition in our markets to increase as existing competitors enhance and expand their product and service offerings and as new participants enter the market. Increased competition may result in price reductions, reduced profitability and loss of market share. We cannot ensure that we will be able to compete successfully against existing or future competitors. Some of our customers and companies with which we have strategic relationships also are, or may become, competitors.

Many of our current and potential competitors have greater financial, technical, marketing, service and other resources than we have. As a result, these companies may be able to offer lower prices, additional products or services, or other incentives that we cannot match or offer. These competitors may be in a stronger position to respond more quickly to new technologies and may be able to undertake more extensive marketing campaigns. We believe they also have adopted and may continue to pursue more aggressive pricing policies and make more attractive offers to potential customers, employees and strategic partners. For example, some competitors may be able to initiate relationships through sales and installations of hardware and then seek to expand their customer relationships by offering process optimization software at a discount. In addition, competitors with greater financial resources may make strategic acquisitions to increase their ability to gain market

Table of Contents

share or improve the quality or marketability of their products. Furthermore, we face challenges in selling our solutions to large companies in the process industries that have internally developed their own proprietary software solutions.

We seek to develop and offer integrated suites of targeted, high-value vertical industry solutions that can be implemented with relatively limited service requirements. We believe this approach provides us with an advantage over many of our competitors that offer software products that are point solutions or are more service-based. Our key competitive differentiators include:

- breadth, depth and integration of our aspenONE software offering;
- rapid return on investment and increase in profitability;
- domain expertise of chemical engineering personnel;
- focus solely on software for the process industries;
- flexibility of our usage-based aspenONE licensing model; and
- consistent global support.

Intellectual Property

Our software is proprietary. Our strategy is to rely on a combination of copyright, patent, trademark and trade secret laws in the United States and other jurisdictions, and to rely on license and confidentiality agreements and software security measures to further protect our proprietary technology and brand. The laws of many countries in which our products are licensed may not protect our intellectual property rights to the same extent as the laws of the United States.

We have obtained or applied for patent protection with respect to some of our intellectual property, but generally do not rely on patents as a principal means of protecting intellectual property.

We conduct business under our trademarks and use trademarks on some of our products. We believe that having distinctive marks may be an important factor in marketing our products. We have registered or applied to register some of our significant trademarks in the United States and in selected other countries. Although we have a foreign trademark registration program for selected marks, the laws of many countries protect trademarks solely on the basis of registration and we may not be able to register or use such marks in each foreign country in which we seek registration. We actively monitor use of our trademarks and have enforced, and will continue to enforce, our rights to our trademarks.

We rely on trade secrets to protect certain elements of our technology. We generally seek to protect these trade secrets by entering into non-disclosure agreements with our employees and customers, and historically have restricted access to our software and source code, which we regard as proprietary information. In certain cases, we have provided copies of code to customers for the purpose of special product customization or have deposited the source code with a third party escrow agent as security for ongoing service and license obligations. In these cases, we rely on non-disclosure and other contractual provisions to protect our proprietary rights. Trade secrets may be difficult to protect, and it is possible that parties may breach their confidentiality agreements with us.

The steps we have taken to protect our proprietary rights may not be adequate to deter misappropriation of our technology or independent development by others of technologies that are substantially equivalent or superior to our technology. Any misappropriation of our technology or development of competitive technologies could harm our business. We could incur substantial costs in protecting and enforcing our intellectual property rights.

We believe that the success of our business depends more on the quality of our proprietary software products, technology, processes and know-how than on trademarks, copyrights or patents. While we consider our intellectual property rights to be valuable, we do not believe that our competitive position in the industry is dependent simply on obtaining legal protection for our software products and technology. Instead, we believe that the success of our business depends primarily on our ability to maintain a leadership position by developing proprietary software products, technology, information, processes and know-how. Nevertheless, we attempt to protect our intellectual property rights with respect to our products and development processes through trademark, copyright and patent registrations, both foreign and domestic, whenever appropriate as part of our ongoing research and development activities.

Key License Agreements

Honeywell

11

Table of Contents

We acquired Hyprotech Ltd. and related subsidiaries of AEA Technology plc in May 2002. Following an administrative complaint filed in August 2003 by the U.S. Federal Trade Commission, we entered into a consent decree with the Federal Trade Commission in December 2004 to resolve allegations that the acquisition was improperly anticompetitive. In connection with the consent decree, we and certain of our subsidiaries entered into a purchase and sale agreement with Honeywell International Inc. and certain of its subsidiaries, pursuant to which we sold intellectual property and other assets to Honeywell relating to our operator training business and our Hyprotech engineering software products.

Under the terms of the transactions, we retained a perpetual, irrevocable, worldwide, royalty-free non-exclusive license to the Hyprotech engineering software and have the right to continue to develop, license and sell the Hyprotech engineering products.

Massachusetts Institute of Technology

In March 1982, we entered into a System License Agreement with the Massachusetts Institute of Technology, or MIT, granting us a worldwide, perpetual non-exclusive license (with the right to sublicense) to use, reproduce, distribute and create derivative works of the computer programs known as "ASPEN". The ASPEN program licensed from MIT provides a framework for simulating the steady-state behavior of chemical processes that we utilize in the simulation engine for our Aspen Plus product. MIT agreed that we would own any derivative works and enhancements. A one-time license fee of $30,000 was paid in full. MIT has the right to terminate the agreement if we breach the agreement and do not cure the breach within 90 days after receiving a written notice from MIT; if we cease to carry on our business; or if certain bankruptcy or insolvency proceedings are commenced and not dismissed. In the event of such termination, sublicenses granted to our customers prior to termination will remain in effect.

Employees

As of June 30, 2016, we had a total of 1,396 full-time employees, of whom 775 were located in the United States. None of our employees is represented by a labor union, except for one employee of our subsidiary Hyprotech UK Limited who belongs to the Prospect union for professionals. We have experienced no work stoppages and believe that our employee relations are satisfactory.

Corporate Information

Aspen Technology, Inc. was formed in Massachusetts in 1981 and reincorporated in Delaware in 1998. Our principal executive offices are at 20 Crosby Drive, Bedford, MA 01730, and our telephone number at that address is (781) 221-6400. Our website address is http://www.aspentech.com. The information on our website is not part of this Form 10-K, unless expressly noted.

Available Information

We file reports with the Securities and Exchange Commission, or the SEC, which we make available on our website free of charge. These reports include annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to such reports, each of which is provided on our website as soon as reasonably practicable after we electronically file such materials with or furnish them to the SEC. You can also read and copy any materials we file with the SEC at the SEC’s Public Reference Room at 100 F Street, N.E., Washington, DC 20549. You can obtain additional information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains a website (http://www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including us.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below before purchasing our common stock. The risks and uncertainties described below are not the only ones facing our company. Additional risks and uncertainties may also impair our business operations. If any of the following risks actually occurs, our business, financial condition, results of operations or cash flows would likely suffer. In that case, the trading price of our common stock could fall, and you may lose all or part of your investment in our common stock.

Risks Related to Our Business

If we fail to increase usage and product adoption of our aspenONE offerings, or fail to continue to provide innovative, market-leading solutions, we may be unable to implement our growth strategy successfully, and our business could be seriously harmed.

Table of Contents

The maintenance and extension of our market leadership and our future growth is largely dependent upon our ability to develop new software products that achieve market acceptance with acceptable operating margins, and increase usage and product adoption of our aspenONE offerings. Enterprises are requiring their application software vendors to provide greater levels of functionality and broader product offerings. We must continue to enhance our current product line and develop and introduce new products and services that keep pace with increasingly sophisticated customer requirements and the technological developments of our competitors. Our business and operating results could suffer if we cannot successfully execute our strategy and drive usage and product adoption.

We have implemented a product strategy that unifies our software solutions under the aspenONE brand with differentiated aspenONE vertical solutions targeted at specific process industry segments. We cannot ensure that our product strategy will result in products that will continue to meet market needs and achieve significant usage and product adoption. If we fail to increase usage and product adoption or fail to develop or acquire new software products that meet the demands of our customers or our target markets, our operating results and cash flows from operations will grow at a slower rate than we anticipate and our financial condition could suffer.

Our business could suffer if the demand for, or usage of, our aspenONE software declines for any reason, including declines due to adverse changes in the process industries.

Our aspenONE suites account for a significant majority of our revenue and will continue to do so for the foreseeable future. If demand for, or usage of, our software declines for any reason, our operating results, cash flows from operations and financial position would suffer. Our business could be adversely affected by:

- any decline in demand for or usage of our aspenONE suites;
- the introduction of products and technologies that serve as a replacement or substitute for, or represent an improvement over, our aspenONE suites;
- technological innovations that our aspenONE suites do not address;
- our inability to release enhanced versions of our aspenONE suites on a timely basis; and
- adverse changes in the process industries or otherwise that lead to reductions, postponements or cancellations of customer purchases of our products and services, or delays in the execution of license agreement renewals in the same quarter in which the original agreements expire.

Because of the nature of their products and manufacturing processes and their global operations, companies in the process industries are subject to risk of adverse or even catastrophic environmental, safety and health accidents or incidents and are often subject to changing standards and regulations worldwide.

In addition, worldwide economic downturns and pricing pressures experienced by energy, chemical, engineering and construction, and other process industries have led to consolidations and reorganizations. In particular, we believe that the volatility in oil prices has impacted and may continue to impact the operating levels and capital spending by certain of our customers in the engineering and construction market, which has resulted and could continue to result in less predictable and lower demand for our products and services.

Any such adverse environmental, safety or health incident, change in regulatory standards, or economic downturn that affects the process industries, including continued challenges and uncertainty among customers whose business is adversely affected by volatility in oil prices, as well as general domestic and foreign economic conditions and other factors that reduce spending by companies in these industries, could harm our operating results in the future.

Unfavorable economic and market conditions or a lessening demand in the market for process optimization software could adversely affect our operating results.

Our business is influenced by a range of factors that are beyond our control and difficult or impossible to predict. If the market for process optimization software grows more slowly than we anticipate, demand for our products and services could decline and our operating results could be impaired. Further, the state of the global economy may deteriorate in the future. Our operating results may be adversely affected by unfavorable global economic and market conditions, including significant volatility in oil prices, as well as a lessening demand for process optimization software generally.

Customer demand for our products is linked to the strength of the global economy. If weakness in the global economy persists, many customers, including those whose businesses are negatively impacted by lower oil prices, may delay or reduce technology purchases. This could result in reductions in sales of our products, longer sales cycles, slower adoption of new technologies, increased price competition or reduced use of our products by our customers. We will lose revenue if demand for our products is reduced because potential customers experience weak or deteriorating economic conditions, catastrophic environmental or other events, and our business, results of operations, financial condition and cash flow from operations would likely be adversely affected.

The majority of our revenue is attributable to operations outside the United States, and our operating results therefore may be materially affected by the economic, political, military, regulatory and other risks of foreign operations or of transacting business with customers outside the United States.

As of June 30, 2016, we operated in 31 countries. We sell our products primarily through a direct sales force located throughout the world. In the event that we are unable to adequately staff and maintain our foreign operations, we could face difficulties managing our international operations.

Customers outside the United States accounted for the majority of our total revenue during the fiscal years ended June 30, 2016, 2015 and 2014. We anticipate that revenue from customers outside the United States will continue to account for a significant portion of our total revenue for the foreseeable future. Our operating results attributable to operations outside the United States are subject to additional risks, including:

- unexpected changes in regulatory or environmental requirements, tariffs and other barriers, including, for example, changes in climate regulations, sanctions or other regulatory restrictions imposed by the United States or foreign governments; and the effects of the referendum in the United Kingdom relating to leaving the European Union;
- less effective protection of intellectual property;
- requirements of foreign laws and other governmental controls;
- delays in the execution of license agreement renewals in the same quarter in which the original agreements expire;
- difficulties in collecting trade accounts receivable in other countries;
- adverse tax consequences; and
- the challenges of managing legal disputes in foreign jurisdictions.

Fluctuations in foreign currency exchange rates could result in declines in our reported revenue and operating results.

During fiscal 2016, 2015 and 2014, 11.5%, 13.8% and 15.7% of our total revenue was denominated in a currency other than the U.S. dollar. In addition, certain of our operating expenses incurred outside the United States are denominated in currencies other than the U.S. dollar. Our reported revenue and operating results are subject to fluctuations in foreign exchange rates. Foreign currency risk arises primarily from the net difference between non-U.S. dollar receipts from customers outside the United States and non-U.S. dollar operating expenses for subsidiaries in foreign countries. Currently, our largest exposures to foreign exchange rates exist primarily with the Euro, Pound Sterling, Canadian dollar and Japanese Yen against the U.S. dollar. During fiscal 2016, 2015 and 2014, we did not enter into, and were not a party to any, derivative financial instruments, such as forward currency exchange contracts, intended to manage the volatility of these market risks. We cannot predict the impact of foreign currency fluctuations, and foreign currency fluctuations in the future may adversely affect our revenue and operating results. Any hedging policies we may implement in the future may not be successful, and the cost of those hedging techniques may have a significant negative impact on our operating results.

Competition from software offered by current competitors and new market entrants, as well as from internally developed solutions by our customers, could adversely affect our ability to sell our software products and related services and could result in pressure to price our products in a manner that reduces our margins.

Our markets in general are competitive and differ among our principal product areas: engineering, manufacturing, and supply chain management. We face challenges in selling our solutions to large companies in the process industries that have internally developed their own proprietary software solutions, and we face competition from well-established vendors to the process industries as well as new entrants in our markets. Many of our current and potential competitors have greater financial, technical, marketing, service and other resources than we have. As a result, these companies may be able to offer lower prices, additional products or services, or other incentives that we cannot match or offer. These competitors may be in a stronger position to respond more quickly to new technologies and may be able to undertake more extensive marketing campaigns. We believe they also have adopted and may continue to pursue more aggressive pricing policies and make more attractive offers to potential customers, employees and strategic partners. For example, some competitors may be able to initiate relationships through sales and installations of hardware and then seek to expand their customer relationships by offering process optimization software at a discount. In addition, many of our competitors have established, and may in the future continue to establish, cooperative relationships with third parties to improve their product offerings and to increase the availability of their

Table of Contents

products in the marketplace. Competitors with greater financial resources may make strategic acquisitions to increase their ability to gain market share or improve the quality or marketability of their products.

Competition could seriously impede our ability to sell additional software products and related services on terms favorable to us. Businesses may continue to enhance their internally developed solutions, rather than investing in commercial software such as ours. Our current and potential commercial competitors may develop and market new technologies that render our existing or future products obsolete, unmarketable or less competitive. In addition, if these competitors develop products with similar or superior functionality to our products, we may need to decrease the prices for our products in order to remain competitive. If we are unable to maintain our current pricing due to competitive pressures, our margins will be reduced and our operating results will be negatively affected. We cannot ensure that we will be able to compete successfully against current or future competitors or that competitive pressures will not materially adversely affect our business, financial condition and operating results.

Defects or errors in our software products could harm our reputation, impair our ability to sell our products and result in significant costs to us.

Our software products are complex and may contain undetected defects or errors. We have not suffered significant harm from any defects or errors to date, but we have from time to time found defects in our products and we may discover additional defects in the future. We may not be able to detect and correct defects or errors before releasing products. Consequently, we or our customers may discover defects or errors after our products have been implemented. We have in the past issued, and may in the future need to issue, corrective releases of our products to remedy defects or errors. The occurrence of any defects or errors could result in:

- lost or delayed market acceptance and sales of our products;
- delays in payment to us by customers;
- product returns;
- injury to our reputation;
- diversion of our resources;
- increased service and warranty expenses or financial concessions;
- increased insurance costs; and
- legal claims, including product liability claims.

Defects and errors in our software products could result in claims for substantial damages against us.

Potential acquisitions could be difficult to consummate and integrate into our operations, and they and investment transactions could disrupt our business, dilute stockholder value or impair our financial results.

As part of our business strategy, we may continue from time to time to seek to grow our business through acquisitions of or investments in new or complementary businesses, technologies or products that we believe can improve our ability to compete in our existing customer markets or allow us to enter new markets. The potential risks associated with acquisitions and investment transactions include, but are not limited to:

- failure to realize anticipated returns on investment, cost savings and synergies;
- difficulty in assimilating the operations, policies and personnel of the acquired company;
- unanticipated costs associated with acquisitions;
- challenges in combining product offerings and entering into new markets in which we may not have experience;
- distraction of management’s attention from normal business operations;
- potential loss of key employees of the acquired company;
- difficulty implementing effective internal controls over financial reporting and disclosure controls and procedures;
- impairment of relationships with customers or suppliers;
- possibility of incurring impairment losses related to goodwill and intangible assets; and

Table of Contents

• other issues not discovered in due diligence, which may include product quality issues or legal or other contingencies

Acquisitions and/or investments may also result in potentially dilutive issuances of equity securities, the incurrence of debt and contingent liabilities, the expenditure of available cash, and amortization expenses or write-downs related to intangible assets such as goodwill, any of which could have a material adverse effect on our operating results or financial condition. Investments in immature businesses with unproven track records and technologies have an especially high degree of risk, with the possibility that we may lose our entire investment or incur unexpected liabilities. We may experience risks relating to the challenges and costs of closing a business combination or investment transaction and the risk that an announced business combination or investment transaction may not close. There can be no assurance that we will be successful in making additional acquisitions in the future or in integrating or executing on our business plan for existing or future acquisitions.

We may be subject to significant expenses and damages because of product-related claims.

In the ordinary course of business, we are, from time to time, involved in product-related lawsuits, claims, investigations, proceedings and threats of litigation. These matters include an April 2004 claim by a customer that certain of our software products and implementation services failed to meet the customer’s expectations. In March 2014, a judgment was issued by the trial court in favor of the claimant customer against us in the amount of approximately €1.9 million plus interest and a portion of legal fees. We subsequently filed an appeal of that judgment. As of June 2016, the appellate court determined that we are liable for damages in the amount of approximately €1.7 million plus interest, with the possibility of additional damages to be determined in further proceedings by the appellate court.

The amount of damages cannot be predicted with certainty, and could materially adversely affect our results of operations, cash flows or financial position.

Claims that we infringe the intellectual property rights of others may be costly to defend or settle and could damage our business.

We cannot be certain that our software and services do not infringe patents, copyrights, trademarks or other intellectual property rights, so infringement claims might be asserted against us. In addition, we have agreed, and may agree in the future, to indemnify certain of our customers against infringement claims that third parties may assert against our customers based on use of our software or services. Such claims may have a material adverse effect on our business, may be time-consuming and may result in substantial costs and diversion of resources, including our management's attention to our business. Furthermore, a party making an infringement claim could secure a judgment that requires us to pay substantial damages and could also include an injunction or other court order that could prevent us from selling our software or require that we re-engineer some or all of our products. Claims of intellectual property infringement also might require us to enter costly royalty or license agreements. We may be unable to obtain royalty or license agreements on terms acceptable to us or at all. Our business, operating results and financial condition could be harmed significantly if any of these events were to occur, and the price of our common stock could be adversely affected.

We may not be able to protect our intellectual property rights, which could make us less competitive and cause us to lose market share.

Our software is proprietary. Our strategy is to rely on a combination of copyright, patent, trademark and trade secret laws in the United States and other jurisdictions, and to rely on license and confidentiality agreements and software security measures to further protect our proprietary technology and brand. We have obtained or applied for patent protection with respect to some of our intellectual property, but generally do not rely on patents as a principal means of protecting our intellectual property. We have registered or applied to register some of our trademarks in the United States and in selected other countries. We generally enter into non-disclosure agreements with our employees and customers, and historically have restricted third-party access to our software and source code, which we regard as proprietary information. In certain cases, we have provided copies of source code to customers for the purpose of special product customization or have deposited copies of the source code with a third-party escrow agent as security for ongoing service and license obligations. In these cases, we rely on non-disclosure and other contractual provisions to protect our proprietary rights.

The steps we have taken to protect our proprietary rights may not be adequate to deter misappropriation of our technology or independent development by others of technologies that are substantially equivalent or superior to our technology. Our intellectual property rights may expire or be challenged, invalidated or infringed upon by third parties or we may be unable to maintain, renew or enter into new licenses on commercially reasonable terms. Any misappropriation of our technology or development of competitive technologies could harm our business and could diminish or cause us to lose the competitive advantages associated with our proprietary technology, and could subject us to substantial costs in protecting and enforcing our intellectual property rights, and/or temporarily or permanently disrupt our sales and marketing of the affected products or services. The laws of some countries in which our products are licensed do not protect our intellectual property

Table of Contents

rights to the same extent as the laws of the United States. Moreover, in some non-U.S. countries, laws affecting intellectual property rights are uncertain in their application, which can affect the scope of enforceability of our intellectual property rights.

Our software research and development initiatives and our customer relationships could be compromised if the security of our information technology is breached as a result of a cyber-attack. This could have a material adverse effect on our business, operating results and financial condition, and could harm our competitive position.

We devote significant resources to continually updating our software and developing new products, and our financial performance is dependent in part upon our ability to bring new products and services to market. Our customers use our software to optimize their manufacturing processes, and they rely on us to provide updates and releases as part of our software maintenance and support services, and to provide remote on-line troubleshooting support. The security of our information technology environment is therefore important to our research and development initiatives, and an important consideration in our customers' purchasing decisions. If the security of our systems is impaired, our development initiatives might be disrupted, and we might be unable to provide service. Our customer relationships might deteriorate, our reputation in the industry could be harmed, and we could be subject to liability claims. This could reduce our revenues, and expose us to significant costs to detect, correct and avoid recurrences of any breach of security and to defend any claims against us.

Risks Related to Our Common Stock

Our common stock may experience substantial price and volume fluctuations.

The equity markets have from time to time experienced extreme price and volume fluctuations, particularly in the high technology sector, and those fluctuations often have been unrelated to the operating performance of particular companies. In addition, the market price of our common stock may be affected by other factors, such as: (i) our financial performance; (ii) becoming a U.S. corporate cash taxpayer in fiscal 2016; (iii) announcements of technological innovations or new products by us or our competitors; and (iv) market conditions in the computer software or hardware industries.

In the past, following periods of volatility in the market price of a public company's securities, securities class action litigation has often been instituted against that company. This type of litigation against us could result in substantial liability and costs and divert management's attention and resources.

Our corporate documents and provisions of Delaware law may prevent a change in control or management that stockholders may consider desirable.

Section 203 of the Delaware General Corporation Law, our charter and our by-laws contain provisions that might enable our management to resist a takeover of our company. These provisions include:

- limitations on the removal of directors;
- a classified board of directors, so that not all members of the board are elected at one time;
- advance notice requirements for stockholder proposals and nominations;
- the inability of stockholders to act by written consent or to call special meetings;
- the ability of the board to make, alter or repeal our by-laws; and
- the ability of the board to designate the terms of and issue new series of preferred stock without stockholder approval.

These provisions could:

- have the effect of delaying, deferring or preventing a change in control of our company or a change in our management that stockholders may consider favorable or beneficial;
- discourage proxy contests and make it more difficult for stockholders to elect directors and take other corporate actions; and
- limit the price that investors might be willing to pay in the future for shares of our common stock.

Item 1B. Unresolved Staff Comments.

None.

Table of Contents

Item 2. Properties.

Our principal executive offices are located in leased facilities in Bedford, Massachusetts, consisting of approximately 143,000 square feet of office space to accommodate our product development, sales, marketing, operations, finance and administrative functions. The lease for our Bedford executive offices commenced in November 2014 and is scheduled to expire March 2025. Subject to the terms and conditions of the lease, we may extend the term of the lease for two successive terms of five years each.

We also lease approximately 63,000 square feet in Houston, Texas to accommodate sales, services and product development functions. In addition to our Bedford and Houston locations, we lease office space in Shanghai, Reading (UK), Singapore, Bahrain and Tokyo, to accommodate sales, services and product development functions.

In the remainder of our other locations, the majority of our leases have lease terms of one year or less that are generally based on the number of workstations required. We believe this facilities strategy provides us with significant flexibility to adjust to changes in our business environment. We do not own any real property. We believe that our leased facilities are adequate for our anticipated future needs.

Item 3. Legal Proceedings.

None.

Item 4. Mine Safety Disclosures

None.

Table of Contents

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information

Our common stock currently trades on The NASDAQ Global Select Market under the symbol "AZPN." The closing price of our common stock on June 30, 2016 was $40.24. The following table sets forth, for the periods indicated, the high and low sales prices per share of our common stock as reported by The NASDAQ Global Select Market:

	2016		2015	
Period	Low	High	Low	High
Quarter ended June 30	$34.81	$40.31	$38.10	$46.52
Quarter ended March 31	30.15	37.58	32.25	39.93
Quarter ended December 31	37.17	44.16	32.59	40.33
Quarter ended September 30	36.45	45.75	36.69	47.05

Holders

On August 4, 2016, there were 430 holders of record of our common stock. The number of record holders does not include persons who held our common stock in nominee or "street name" accounts through brokers.

Dividends

We have never declared or paid cash dividends on our common stock. We do not anticipate paying cash dividends on our common stock in the foreseeable future. We are party to a credit agreement that restricts us from declaring or paying dividends in cash on our capital stock if our Leverage Ratio is in excess of 2.75 to 1.00 (refer to “Item 7. Management’s Discussion and Analysis and Results of Operations-Recent Events-Acquisition Bid and Credit Agreement” and Note 9, Credit Agreement, of our Consolidated Financial Statements for further discussion of the credit agreement). Our Leverage Ratio is below 2.75 to 1.00 as of June 30, 2016. Any future determination relating to our dividend policy will be made at the discretion of the Board of Directors and will depend on a number of factors, including our future earnings, capital requirements, financial condition and future prospects and such other factors as the Board of Directors may deem relevant.

Purchases of Equity Securities by the Issuer

As of June 30, 2016, the total number of shares of common stock repurchased since November 1, 2010 under all programs approved by the Board of Directors was 21,854,010 shares.

On January 28, 2015, our Board of Directors approved a share repurchase program for up to $450 million worth of our common stock. On April 26, 2016, the Board of Directors approved a $400 million increase in the current share repurchase plan. As of June 30, 2016, the total remaining value under the share repurchase program was approximately $521.3 million. Under the share repurchase program, purchases can be made from time to time using a variety of methods, which may include open market purchases, accelerated buyback programs, and others. The specific timing, price and size of purchases will depend on prevailing stock prices, general market and economic conditions, and other considerations, including the amount of cash generated in the United States and other potential uses of cash, such as acquisitions. Purchases may be made through a Rule 10b5-1 plan pursuant to predetermined metrics set forth in such plan. The Board of Directors' authorization of the share repurchase program does not obligate us to acquire any particular amount of common stock, and the program may be suspended or discontinued at any time.

Table of Contents

The following table sets forth, for the month indicated, our purchases of common stock during the fourth quarter of fiscal 2016:

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased	Average Price Paid per Share (1)	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (2)
April 1 to 30, 2016	225,493	$ 36.34	225,493	
May 1 to 31, 2016	851,539	37.56	851,539	
June 1 to 30, 2016	887,414	39.24	887,414	
	1,964,446	$ 38.18	1,964,446	$ 521,292,659

(1) The total average price paid per share is calculated as the total amount paid for the repurchase of our common stock during the period divided by the total number of shares repurchased.

(2) As of June 30, 2016, the total remaining value under the share repurchase program approved on January 28, 2015 and as amended on April 26, 2016 was approximately $521.3 million.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information about the securities authorized for issuance under our equity compensation plans as of June 30, 2016:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plans approved by security holders	1,807,474	$ 34.81	3,537,843
Equity compensation plans not approved by security holders	—	—	—
Total	1,807,474	$ 34.81	3,537,843

Equity compensation plans approved by security holders consist of our 2010 equity incentive plan. Options issuable under the equity incentive plan have a maximum term of ten years.

Stockholder Return Comparison

The information included in this section is not deemed to be "soliciting material" or to be "filed" with the SEC or subject to Regulation 14A or 14C under the Securities Exchange Act or to the liabilities of Section 18 of the Securities Exchange Act, and will not be deemed to be incorporated by reference into any filing under the Securities Act or the Securities Exchange Act, except to the extent we specifically incorporate it by reference into such a filing.

The graph below matches the cumulative 5-year total return of holders of our common stock with the cumulative total returns of the NASDAQ Composite index and the NASDAQ Computer & Data Processing index. The graph assumes that the value of the investment in our common stock and in each of the indexes (including reinvestment of dividends) was $100 on June 30, 2011 and tracks it through June 30, 2016.

Table of Contents

*$100 invested on 6/30/11 in stock or index, including reinvestment of dividends.
Fiscal year ending June 30.
The stock price performance included in this graph is not necessarily indicative of future stock price performance.

	Year Ended June 30,					
	2011	2012	2013	2014	2015	2016
Aspen Technology, Inc.	$100.00	$134.75	$167.58	$270.08	$265.13	$234.23
NASDAQ Composite	$100.00	$108.58	$128.19	$169.08	$192.10	$187.57
NASDAQ Computer & Data Processing	$100.00	$106.63	$129.03	$175.05	$194.57	$221.88

Item 6. Selected Financial Data.

The following tables present selected consolidated financial data for Aspen Technology, Inc. The consolidated statements of operations data set forth below for fiscal 2016, 2015 and 2014 and the consolidated balance sheets data as of June 30, 2016, and 2015, are derived from our consolidated financial statements included beginning on page F-1 of this Form 10-K. The consolidated statements of operations data for fiscal 2013 and 2012 and the consolidated balance sheet data as of June 30, 2014, 2013, and 2012 are derived from our consolidated financial statements that are not included in this Form 10-K. The data presented below should be read in conjunction with our consolidated financial statements and accompanying notes beginning on page F-1 and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

Our historical results should not be viewed as indicative of results expected for any future period.

Table of Contents

	Year Ended June 30,				
	2016	2015	2014	2013	2012
	(in Thousands, except per share data)				
Consolidated Statements of Operations Data:					
Revenue(1)	$472,344	$440,401	$391,453	$311,387	$243,134
Gross profit	423,733	390,825	338,765	261,039	190,857
Income (loss) from operations	211,381	179,792	129,724	55,600	(15,007)
Net income (loss)	$139,951	$118,407	$85,783	$45,262	$(13,808)
Basic income (loss) per share	$1.69	$1.34	$0.93	$0.48	$(0.15)
Diluted income (loss) per share	$1.68	$1.33	$0.92	$0.47	$(0.15)
Weighted average shares outstanding—Basic	82,892	88,398	92,648	93,586	93,780
Weighted average shares outstanding—Diluted	83,309	89,016	93,665	95,410	93,780

(1) In July 2009, we introduced our aspenONE licensing model under which license revenue is recognized over the term of a license contract. We previously recognized a substantial majority of our license revenue upfront, upon shipment of software. We substantially completed our transition to the aspenONE licensing model in fiscal 2015. Refer to “Item 7. Management’s Discussion and Analysis and Results of Operations-Transition to the aspenONE Licensing Model."

	Year Ended June 30,				
	2016	2015	2014	2013	2012
	(in Thousands)				
Consolidated Balance Sheet Data:					
Cash and cash equivalents	$318,336	$156,249	$199,526	$132,432	$165,242
Marketable securities	3,006	62,244	98,889	92,368	—
Working capital	(71,300)	(32,836)	63,178	69,890	65,744
Accounts receivable, net	20,476	30,721	38,532	36,988	31,450
Installments receivable, net	267	1,842	1,451	14,732	47,230
Collateralized receivables, net	—	—	—	—	6,297
Total assets	419,738	315,361	407,972	382,748	368,335
Deferred revenue	282,078	288,887	274,882	231,353	187,173
Borrowings(1)	140,000	—	—	—	10,756
Total stockholders' (deficit) equity	(75,034)	(48,546)	83,676	101,898	113,592

(1) In February 2016, we entered into a credit agreement and borrowed $140.0 million under the agreement. Refer to “Item 7. Management’s Discussion and Analysis and Results of Operations-Recent Events-Acquisition Bid and Credit Agreement” and Note 9, Credit Agreement, of our Consolidated Financial Statements for further discussion of the credit agreement.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion in conjunction with our consolidated financial statements and related notes beginning on page F-1. In addition to historical information, this discussion contains forward-looking statements that involve risks and uncertainties. You should read “Item 1A. Risk Factors” for a discussion of important factors that could cause our actual results to differ materially from our expectations.

Our fiscal year ends on June 30, and references to a specific fiscal year are the twelve months ended June 30 of such year (for example, "fiscal 2016" refers to the year ended June 30, 2016).

Table of Contents

Business Overview

We are a leading global provider of process optimization software solutions designed to manage and optimize plant and process design, operational performance, and supply chain planning. Our aspenONE software and related services have been developed specifically for companies in the process industries, including the energy, chemicals, and engineering and construction industries. Customers use our solutions to improve their competitiveness and profitability by increasing throughput and productivity, reducing operating costs, enhancing capital efficiency, and decreasing working capital requirements.

Our software incorporates our proprietary mathematical and empirical models of manufacturing and planning processes and reflects the deep domain expertise we have amassed from focusing on solutions for the process industries for 35 years. We have developed our applications to design and optimize processes across three principal business areas: engineering, manufacturing and supply chain. We are a recognized market and technology leader in providing process optimization software for each of these business areas.

We have established sustainable competitive advantages within our industry based on the following strengths:

- Innovative products that can enhance our customers' profitability;
- Long-term customer relationships;
- Large installed base of users of our software; and
- Long-term license contracts.

We have approximately 2,100 customers globally. Our customers consists of companies engaged in process industries such as energy, chemicals, engineering and construction, as well as consumer packaged goods, power, metals and mining, pulp and paper, pharmaceuticals and biofuels.

We license our software products primarily through a subscription offering which we refer to as our aspenONE licensing model. Our aspenONE products are organized into two suites: 1) engineering and 2) manufacturing and supply chain, or MSC. The aspenONE licensing model provides customers with access to all of the products within the aspenONE suite(s) they license. Customers can change or alternate the use of multiple products in a licensed suite through the use of exchangeable units of measurement, called tokens, licensed in quantities determined by the customer. This licensing system enables customers to use products as needed and to experiment with different products to best solve whatever critical business challenges they face. Customers can increase their usage of our software by purchasing additional tokens as business needs evolve. We believe easier access to all of the aspenONE products will lead to increased software usage and higher revenue over time.

Recent Events

Acquisition of Fidelis

In June 2016, we completed the acquisition of all the outstanding shares of Fidelis Group, LLC, a provider of asset reliability software used to predict and optimize asset performance. The purchase price consisted of $8.0 million of cash paid at closing and up to $2.0 million payment to be paid in December 2017.

Acquisition Bid and Credit Agreement

In January 2016 we placed an offer to acquire the share capital of KBC Advanced Technologies plc (“KBC”) for 185 Pence Sterling per share, which valued KBC at approximately £158 million ("the Acquisition Bid"). The Acquisition Bid would have been funded by cash on hand of approximately $91.0 million and $140.0 million to be funded by a credit facility. On February 26, 2016, we entered into a $250.0 million credit agreement (the “Credit Agreement”) and borrowed $140.0 million (refer to Note 9, Credit Agreement, of our Consolidated Financial Statements for further discussion of the Credit Agreement). In February 2016, KBC announced it had agreed to accept an acquisition offer of 210 Pence Sterling per share from Yokogawa Electric Corporation (“Yokogawa”) and we announced we did not intend to revise our offer. In April 2016 KBC was acquired by Yokogawa. During the year ended June 30, 2016, we incurred $5.2 million of costs related to the Acquisition Bid, as well as $3.4 million of foreign exchange losses, which were recognized in our results of operations as a component of general and administrative expenses and other income (expense), net, respectively.

Transition to the aspenONE Licensing Model

Prior to fiscal 2010, we offered term or perpetual licenses to specific products, or specifically defined sets of products, which we refer to as point products. The majority of our license revenue was recognized under an "upfront revenue model," in

23

which the net present value of the aggregate license fees was recognized as revenue upon shipment of the point products, provided all revenue recognition criteria were met. Customers typically received one year of post-contract software maintenance and support, or SMS, with their license agreements and then could elect to renew SMS annually. Revenue from SMS was recognized ratably over the period in which the SMS was delivered.

In fiscal 2010, we introduced the following changes to our licensing model:

(i) We began offering our software on a subscription basis allowing our customers access to all products within a licensed suite (aspenONE Engineering or aspenONE Manufacturing and Supply Chain). SMS is included for the entire term of the arrangement and customers are entitled to any software products or updates introduced into the licensed suite. We refer to this license arrangement as our aspenONE licensing model.

(ii) We began to include SMS for the entire term on our point product term arrangements.

In fiscal 2012, we introduced Premier Plus SMS. As part of this offering, customers receive 24x7 support, faster response times, dedicated technical advocates and access to web-based training modules. Premier Plus SMS is exclusively available as a component of our term contract arrangements and we are unable to establish vendor-specific objective evidence ("VSOE") for this deliverable because we don't offer it on a stand-alone basis.

Revenue related to our aspenONE licensing model and point product arrangements with Premier Plus SMS are both recognized over the term of the arrangement on a ratable basis. The changes to our licensing model resulted in a significant reduction in license revenue in fiscal 2010, as compared to fiscal periods preceding our licensing model changes. From fiscal 2010 through fiscal 2015, as customer license arrangements previously executed under the upfront revenue model reached the end of their terms, and were renewed under the aspenONE licensing model, we recognized increasing amounts of subscription revenue and deferred revenue. The value of our installed base of software licenses was also growing during this period, which further contributed to growth in subscription and deferred revenue. Many of our license arrangements were five or six years in duration when the aspenONE licensing model was introduced at the start of fiscal 2010, and consequently, a number of arrangements executed under the upfront revenue model did not reach the end of their original term until the end of fiscal 2015. The changes to our licensing model did not have any material impact on subscription revenue or deferred revenue for fiscal 2016, and we do not expect any material impact on subscription revenue or deferred revenue for fiscal 2017 and beyond.

The changes to our licensing model introduced in fiscal 2010 did not change the method or timing of customer billings or cash collections. In addition, the changes to our licensing model did not impact the incurrence or timing of our expenses. Since there was no corresponding expense reduction to offset the lower revenue during fiscal years 2010 through 2015, operating income was lower than what would have been reported under a fully transitioned revenue model.

Business Segments

We have two operating and reportable segments: i) subscription and software and ii) services. The subscription and software segment is engaged in the licensing of process optimization software solutions and associated support services. The services segment includes professional services and training.

Key Components of Operations

Revenue

We generate revenue primarily from the following sources:

Subscription and Software Revenue. We provide integrated process optimization software solutions designed specifically for process industries. We license our software products, together with SMS, primarily on a term basis, and we offer extended payment options for our term license agreements that generally require annual payments, which we also refer to as installments. We provide customers technical support, access to software fixes and updates and the right to any new unspecified future software products and updates that may be introduced into the licensed aspenONE software suite. Our technical support services are provided from our customer support centers throughout the world, as well as via email and through our support website.

Our subscription and software revenue consists of product and related revenue from the following sources:

(i) aspenONE licensing model;

(ii) point product arrangements with our Premier Plus SMS offering included for the contract term (referred to as point product arrangements with Premier Plus SMS);

24

Table of Contents

(iii) legacy arrangements including (a) amendments to existing legacy term arrangements, (b) renewals of legacy term arrangements and (c) legacy arrangements that are being recognized over time as a result of not previously meeting one or more of the requirements for recognition under the upfront revenue model;
(iv) legacy SMS arrangements; and
(v) perpetual arrangements.

Services and Other Revenue. We provide training and professional services to our customers. Our professional services are focused on implementing our technology in order to improve customers' plant performance and gain better operational data. Customers who use our professional services typically engage us to provide those services over periods of up to 24 months. We charge customers for professional services on a time-and-materials or fixed-price basis. We provide training services to our customers, including on-site, Internet-based and customized training.
Our services and other revenue consists primarily of revenue related to professional services and training. The amount and timing of this revenue depend on a number of factors, including:

- whether the professional services arrangement was sold as a single arrangement with, or in contemplation of, a new aspenONE licensing arrangement;
- the number, value and rate per hour of service transactions booked during the current and preceding periods;
- the number and availability of service resources actively engaged on billable projects;
- the timing of milestone acceptance for engagements contractually requiring customer sign-off;
- the timing of collection of cash payments when collectability is uncertain; and
- the size of the installed base of license contracts.

Cost of Revenue
Cost of Subscription and Software. Our cost of subscription and software revenue consists of (i) royalties, (ii) amortization of capitalized software and purchased technology intangibles, (iii) distribution fees, (iv) costs of providing Premier Plus SMS bundled with our aspenONE licensing and point product arrangements; and (v) costs of providing legacy SMS.
Cost of Services and Other. Our cost of services and other revenue consists primarily of personnel-related and external consultant costs associated with providing customers professional services and training.
Operating Expenses
Selling and Marketing Expenses. Selling expenses consist primarily of the personnel and travel expenses related to the effort expended to license our products and services to current and potential customers, as well as for overall management of customer relationships. Marketing expenses include expenses needed to promote our company and our products and to conduct market research to help us better understand our customers and their business needs.
Research and Development Expenses. Research and development expenses consist primarily of personnel expenses related to the creation of new software products, enhancements and engineering changes to existing products and costs of acquired technology prior to establishing technological feasibility.
General and Administrative Expenses. General and administrative expenses include the costs of corporate and support functions, such as executive leadership and administration groups, finance, legal, human resources and corporate communications, and other costs, such as outside professional and consultant fees and provision for bad debts.
Other Income and Expenses
Interest Income. Interest income is recorded for the accretion of interest on the installment payments of our term software license contracts when revenue is recognized upfront at net present value, and from the investment in marketable securities and short-term money market instruments.
Interest Expense. During fiscal 2016, interest expense is primarily related to our Credit Agreement. During fiscal 2015 and 2014, interest expense was comprised of miscellaneous interest charges.

Table of Contents

Other Income (Expense), Net. Other income (expense), net is comprised primarily of foreign currency exchange gains (losses) generated from the settlement and remeasurement of transactions denominated in currencies other than the functional currency of our operating units.

Provision for Income Taxes. Provision for income taxes is comprised of domestic and foreign taxes. Benefits from income taxes are comprised of any deferred benefit for tax deductions and credits that we expect to utilize in the future. We record interest and penalties related to income tax matters as a component of income tax expense. We expect the amount of income tax expense to vary each reporting period depending upon fluctuations in our taxable income by jurisdiction.

Key Business Metrics

Background

The changes to our licensing model in fiscal 2010 resulted in a reduction to license revenue in fiscal 2010, as compared to the fiscal years preceding our licensing model changes. By fiscal 2013, the number of license arrangements renewed on the aspenONE licensing model resulted in sufficient ratable revenue to generate an operating profit, but we would not recognize levels of revenue reflective of the value of our active license agreements until all term license agreements executed under our upfront revenue model (i) reached the end of their original terms; and (ii) were renewed. As a result, we believed that until the revenue transition was completed, a number of our performance indicators based on GAAP, including revenue, gross profit, operating income (loss), net income (loss), and trend in deferred revenue, should be reviewed in conjunction with certain non-GAAP and other business measures in assessing our performance, growth and financial condition. During the transition period, from fiscal year 2010 through 2015, we utilized the following non-GAAP and other key business metrics to track our business performance.

- Total term contract value;
- Annual spend;
- Adjusted total costs; and
- Free cash flow.

As of June 30, 2015, we had fully transitioned our term license arrangements to the aspenONE licensing model. The changes to our licensing model did not have any material impact on subscription revenue results for fiscal 2016, and we do not expect any material impact on subscription revenue results for fiscal 2017 and beyond. Consequently, we believe our performance indicators based on GAAP, including revenue, gross profit, operating income (loss), net income (loss), and trend in deferred revenue, now provide a more meaningful representation of business performance. Nonetheless, we will continue to utilize certain key non-GAAP and other business measures to track and assess the performance of our business and we plan to make these measures available to investors. We have refined the set of appropriate business metrics in the context of our evolving business and in consideration of the completion of the revenue transition and now expect to use the following non-GAAP business metrics in addition to GAAP measures, to track our business performance:

- Annual spend;
- Free cash flow; and
- Non-GAAP operating income.

The annual spend metric is closely related to the total term contract metric because both provide insight into the growth component of license bookings during a fiscal period. However, we believe that annual spend is a more meaningful metric because its value and growth rate are more closely related to the value and growth rate of subscription and software revenue. We now use non-GAAP operating income instead of adjusted total costs because non-GAAP operating income provides additional insight into our business and financial performance and incorporates the elements of adjusted total cost.

None of these metrics should be considered as an alternative to any measure of financial performance calculated in accordance with GAAP.

Annual Spend

Annual spend is an estimate of the annualized value of our portfolio of term license arrangements, as of a specific date. Annual spend is calculated by summing the most recent annual invoice value of each of our active term license contracts. Annual spend also includes the annualized value of standalone SMS agreements purchased in conjunction with term license

26

Table of Contents

agreements. Comparing annual spend for different dates can provide insight into the growth and retention rates of our business, and since annual spend represents the estimated annualized billings associated with our active term license agreements, it provides insight into the future value of subscription and software revenue.

Annual spend increases as a result of:

- New term license agreements with new or existing customers;
- Renewals or modifications of existing term license agreements that result in higher license fees due to price escalation or an increase in the number of tokens (units of software usage) or products licensed; and
- Escalation of annual payments in our active term license contracts.

Annual spend is adversely affected by term license and standalone SMS agreements that are not renewed.

We estimate that annual spend grew by approximately 5.3% during fiscal 2016, from $419.3 million at June 30, 2015 to $441.4 million at June 30, 2016. We estimate that annual spend grew by approximately 10.5% during fiscal 2015, from $379.5 million at June 30, 2014 to $419.3 million at June 30, 2015. The growth was attributable primarily to an increase in the number of tokens or products sold.

Free Cash Flow

We use a non-GAAP measure of free cash flow to analyze cash flows generated from our operations. Management believes that this financial measure is useful to investors because it permits investors to view our performance using the same tools that management uses to gauge progress in achieving our goals. We believe this measure is also useful to investors because it is an indication of cash flow that may be available to fund investments in future growth initiatives and a basis for comparing our performance with that of our competitors. The presentation of free cash flow is not meant to be considered in isolation or as an alternative to cash flows from operating activities as a measure of liquidity.

Free cash flow is calculated as net cash provided by operating activities adjusted for the net impact of (a) purchases of property, equipment and leasehold improvements, (b) capitalized computer software development costs, (c) excess tax benefits from stock-based compensation, (d) non-capitalized acquired technology and (e) other nonrecurring items, such as acquisition and litigation related payments.

The following table provides a reconciliation of net cash flows provided by operating activities to free cash flow for the indicated periods:

	June 30,		
	2016	2015	2014
	(Dollars in Thousands)		
Net cash provided by operating activities	$153,744	$191,985	$200,131
Purchase of property, equipment, and leasehold improvements	(3,483)	(7,645)	(4,011)
Capitalized computer software development costs	(269)	(359)	(685)
Excess tax benefits from stock-based compensation	2,208	37,024	727
Non-capitalized acquired technology	1,250	2,621	3,856
Litigation related payments	3,040	—	—
Acquisition bid costs	8,649	—	—
Free cash flow (non-GAAP)	$165,139	$223,626	$200,018

Fiscal 2016 Compared to Fiscal 2015

Total free cash flow decreased $58.5 million during fiscal 2016 as compared to the prior fiscal year primarily due to higher net income tax payments of $65.3 million.

During the twelve months ended June 30, 2016, we incurred $8.6 million of operating expenses related to the bid to acquire KBC;, of which $3.4 million of foreign exchange losses and fees were recognized as a component of other income (expense), net.

Excess tax benefits are related to stock-based compensation tax deductions in excess of book compensation expense and reduce our income taxes payable. We have included the impact of excess tax benefits within free cash flow to be consistent with the treatment of other tax benefits.

Table of Contents

In fiscal 2016, 2015 and 2014, we acquired technology that did not meet the accounting requirements for capitalization and therefore the cost of the acquired technology was expensed as research and development. We have excluded the payment for the acquired technology from free cash flow to be consistent with transactions where the acquired technology assets were capitalized.

Fiscal 2015 Compared to Fiscal 2014

Total free cash flow increased $23.6 million during fiscal 2015 as compared to the prior fiscal year.

We realized steadily improving free cash flow due to growth of our portfolio of term license contracts as well as from the renewal of customer contracts on an installment basis that were previously paid upfront.

Non-GAAP Operating Income

Non-GAAP operating income excludes certain non-cash and non-recurring expenses, and is used as a supplement to operating income presented on a GAAP basis. We believe that non-GAAP operating income is a useful financial measure because removing certain non-cash and other items provides additional insight into recurring profitability and cash flow from operations.

The following table presents our net income, as adjusted for stock-based compensation expense, non-capitalized acquired technology and amortization of purchased technology intangibles, and other items, such as acquisition related expenses, for the indicated periods:

	June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
GAAP income from operations	$211,381	$179,792	$129,724	$31,589	17.6 %	$50,068	38.6 %
Plus:							
Stock-based compensation	15,727	14,584	14,056	1,143	7.8 %	528	3.8 %
Non-capitalized acquired technology	250	3,277	4,841	(3,027)	-92.4 %	(1,564)	-32.3 %
Amortization of purchased technology intangibles	147	748	922	(601)	-80.3 %	(174)	-18.9 %
Acquisition bid costs	5,213	—	—	5,213	100.0 %	—	— %
Non-GAAP operating income	$232,718	$198,401	$149,543	$34,317	17.3 %	$48,858	32.7 %

Non-GAAP operating income increased $34.3 million, or approximately 17%, in fiscal year 2016 as compared to the prior year primarily due to a larger base of license arrangements recognized on a ratable basis amounting to $34.8 million. Non-GAAP operating income increased $48.9 million, or approximately 33%, in 2015 as compared to the prior year primarily due to a larger base of license arrangements recognized on a ratable basis amounting to $55.1 million, partially offset by lower costs of services and other revenue amounting to $4.1 million.

In fiscal 2016, 2015 and 2014, we acquired technology that did not meet the accounting requirements for capitalization and therefore the cost of the acquired technology was expensed as research and development. We have excluded the expense of the acquired technology from non-GAAP operating income to be consistent with transactions where the acquired assets were capitalized.

Table of Contents

Results of Operations

The following table sets forth the results of operations, percentage of total revenue and the year-over-year percentage change in certain financial data for fiscal 2016, 2015 and 2014:

	Year Ended June 30,						2016 Compared to 2015 %	2015 Compared to 2014 %
	2016		2015		2014			
	(Dollars in Thousands)							
Revenue:								
Subscription and software	$440,408	93.2 %	$405,640	92.1 %	$350,486	89.5 %	8.6 %	15.7 %
Services and other	31,936	6.8	34,761	7.9	40,967	10.5	(8.1)	(15.1)
Total revenue	472,344	100.0	440,401	100.0	391,453	100.0	7.3	12.5
Cost of revenue:								
Subscription and software	20,376	4.3	21,165	4.8	20,141	5.2	(3.7)	5.1
Services and other	28,235	6.0	28,411	6.5	32,547	8.3	(0.6)	(12.7)
Total cost of revenue	48,611	10.3	49,576	11.3	52,688	13.5	(1.9)	(5.9)
Gross profit	423,733	89.7	390,825	88.7	338,765	86.5	8.4	15.4
Operating expenses:								
Selling and marketing	91,536	19.4	92,736	21.1	94,827	24.2	(1.3)	(2.2)
Research and development	67,152	14.2	69,584	15.8	68,410	17.5	(3.5)	1.7
General and administrative	53,664	11.4	48,713	11.1	45,804	11.7	10.2	6.4
Total operating expenses	212,352	45.0	211,033	47.9	209,041	53.4	0.6	1.0
Income from operations	211,381	44.8	179,792	40.8	129,724	33.1	17.6	38.6
Interest income	441	0.1	487	0.1	1,124	0.3	(9.4)	(56.7)
Interest expense	(1,212)	(0.3)	(30)	—	(37)	—	3,940.0	(18.9)
Other income (expense), net	29	—	(778)	(0.2)	(2,278)	(0.6)	(103.7)	(65.8)
Income before provision for income taxes	210,639	44.6	179,471	40.8	128,533	32.8	17.4	39.6
Provision for income taxes	70,688	15.0	61,064	13.9	42,750	10.9	15.8	42.8
Net income	$139,951	29.6 %	$118,407	26.9 %	$85,783	21.9 %	18.2 %	38.0 %

Revenue

Fiscal 2016 Compared to Fiscal 2015

Total revenue increased by $32.0 million during fiscal 2016 as compared to the prior fiscal year. The increase was due to higher subscription and software revenue of $34.8 million, partially offset by lower services and other revenue of $2.8 million.

Total revenue recognized during fiscal 2016 included $6.1 million related to the completion of customer arrangements recognized under completed contract accounting. This amount was recognized as $5.1 million of subscription and software revenue and $1.0 million of services and other revenue. We did not have a comparable event in fiscal 2015.

Fiscal 2015 Compared to Fiscal 2014

Total revenue increased by $48.9 million during fiscal 2015 as compared to the prior fiscal year. The increase was due to higher subscription and software revenue of $55.1 million, partially offset by lower services and other revenue of $6.2 million.

Total revenue recognized during fiscal 2014 included $7.6 million related to the completion of a significant customer arrangement recognized under completed contract accounting. This amount was recognized as $4.9 million of subscription and software revenue and $2.7 million of services and other revenue. We did not have a comparable event in fiscal 2015.

Table of Contents

Subscription and Software Revenue

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Subscription and software revenue	$440,408	$405,640	$350,486	$34,768	8.6%	$55,154	15.7%
As a percent of revenue	93.2 %	92.1 %	89.5 %				

Fiscal 2016 Compared to Fiscal 2015

The increase in subscription and software revenue during fiscal 2016 as compared to the prior fiscal year was primarily the result of a larger base of license arrangements being recognized on a ratable basis.

The subscription and software revenue for fiscal 2016 included $5.1 million related to the completion of customer arrangements recognized under completed contract accounting, as noted above. We did not have a comparable event in fiscal 2015.

Fiscal 2015 Compared to Fiscal 2014

The increase in subscription and software revenue during fiscal 2015 as compared to the prior fiscal year was primarily the result of a larger base of license arrangements being recognized on a ratable basis. The subscription and software revenue for fiscal 2014 included $4.9 million of revenue on a significant customer arrangement recognized under completed contract accounting, as noted above. We did not have a comparable event in fiscal 2015.

Services and Other Revenue

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Services and other revenue	$31,936	$34,761	$40,967	$(2,825)	(8.1)%	$(6,206)	(15.1)%
As a percent of revenue	6.8 %	7.9 %	10.5 %				

Services and other revenue consists primarily of revenue related to professional services and training.

Fiscal 2016 Compared to Fiscal 2015

The decrease in services and other revenue of $2.8 million during fiscal 2016 as compared to the prior fiscal year was attributable to lower professional services revenue of $1.8 million and lower training revenue of $1.0 million.

Professional services revenue during fiscal 2016 included $1.0 million related to the completion of customer arrangements recognized under completed contract accounting, as noted above. We did not have a comparable event in fiscal 2015.

Under the aspenONE licensing model, revenue from committed professional service arrangements that are sold as a single arrangement with, or in contemplation of, a new aspenONE licensing transaction is deferred and recognized on a ratable basis over the longer of (a) the period the services are performed or (b) the term of the related software arrangement. As our typical contract term approximates five years, professional services revenue on these types of arrangements will usually be recognized over a longer period than the period over which the services are performed. Revenue from professional service arrangements bundled with and recognized over the term of aspenONE transactions was consistent year-over-year.

Fiscal 2015 Compared to Fiscal 2014

The decrease in services and other revenue of $6.2 million during fiscal 2015 as compared to the prior fiscal year was attributable to lower professional services revenue of $5.1 million and lower training revenue of $1.1 million.

The year-over-year decrease in professional services revenue of $5.1 million was attributable to the recognition, in fiscal 2014, of $2.7 million of previously deferred professional services revenue on the significant customer arrangement noted above, combined with lower levels of professional service activity in fiscal year 2015.

Table of Contents

Cost of Revenue

Cost of Subscription and Software Revenue

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Cost of subscription and software revenue	$20,376	$21,165	$20,141	$(789)	(3.7)%	$1,024	5.1%
As a percent of revenue	4.3%	4.8%	5.1%				

Cost of subscription and software revenue decreased by $0.8 million during fiscal 2016 as compared with the prior fiscal year and increased during fiscal year 2015 as compared with the prior fiscal year. Subscription and software gross profit margin was 95.4% in fiscal 2016 and increased from 94.8% and 94.3% in fiscal years 2015 and 2014 respectively. Subscription and software gross margins increased due to revenue growth exceeding increases in cost of revenue over the periods shown.

Cost of Services and Other Revenue

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Cost of services and other revenue	$28,235	$28,411	$32,547	$(176)	(0.6)%	$(4,136)	(12.7)%
As a percent of revenue	6.0%	6.5%	8.3%				

Cost of services and other revenue includes the cost of providing professional services and training.

Fiscal 2016 Compared to Fiscal 2015

Cost of services and other revenue decreased by $0.2 million during fiscal 2016 as compared to the prior fiscal year. The decrease was due to lower cost of professional services revenue of $0.4 million, slightly offset by higher cost of training revenue of $0.2 million.

The year-over-year decrease of $0.4 million in cost of professional services revenue is attributable to lower costs of revenue of $0.9 million related to lower professional service business activity during fiscal year 2016, partially offset by higher cost of revenue of $0.5 million related to projects accounted for under the completed contract method.

Gross profit margin on services and other revenue decreased from 18.3% during fiscal 2015 to 11.6% during fiscal 2016 primarily due to lower services and other revenue and flat costs.

Fiscal 2015 Compared to Fiscal 2014

Cost of services and other revenue decreased by $4.1 million during fiscal 2015 as compared to the prior fiscal year. The decrease was due to lower cost of professional services revenue of $4.3 million, slightly offset by higher cost of training revenue of $0.2 million.

The year-over-year decrease of $4.3 million in cost of professional services revenue is attributable to lower cost of revenue of $2.6 million related to projects accounted for under the completed contract method and lower costs of revenue of $1.7 million related to lower professional service business activity during fiscal year 2015.

The timing of revenue and expense recognition on professional service arrangements can impact the comparability of cost of professional services revenue from year to year. During fiscal 2014, we recognized net costs of $2.3 million on a significant customer arrangement recognized under completed contract accounting, as discussed in the "Revenue" section.

Gross profit margin on services and other revenue decreased from 20.5% during fiscal 2014 to 18.3% during fiscal 2015 primarily due to lower revenue and flat costs.

Table of Contents

Gross Profit

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Gross profit	$423,733	$390,825	$338,765	$32,908	8.4%	$52,060	15.4%
As a percent of revenue	89.7%	88.7%	86.5%				

Fiscal 2016 Compared to Fiscal 2015

Gross profit increased by $32.9 million during fiscal 2016 as compared to the prior fiscal year and gross profit margin increased to 89.7% in fiscal 2016 from 88.7% in fiscal 2015. The year-to-year increase in gross profit and gross margin was primarily attributable to the growth of our subscription and software revenue, as well as decreases in costs of subscription and software revenue.

Fiscal 2015 Compared to Fiscal 2014

Gross profit increased by $52.1 million during fiscal 2015 as compared to the prior fiscal year and gross profit margin increased to 88.7% in fiscal 2015 from 86.5% in fiscal 2014. The year-to-year increase in gross profit and gross margin was primarily attributable to the growth of our subscription and software revenue, partially offset by a $1.1 million increase in our costs of subscription and software revenue.

Operating Expenses

Selling and Marketing Expense

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Selling and marketing expense	$91,536	$92,736	$94,827	$(1,200)	(1.3)%	$(2,091)	(2.2)%
As a percent of revenue	19.4%	21.1%	24.2%				

Fiscal 2016 Compared to Fiscal 2015

The year-over-year decrease in selling and marketing expense in fiscal 2016 as compared to the prior fiscal year was primarily the result of lower commissions expense of $5.6 million, partially offset by higher compensation costs of $2.0 million, higher stock-based compensation of $1.3 million and higher overhead allocations of $1.1 million. Overhead allocations consist of information systems costs, facility costs and certain benefit costs. The overhead expenses are allocated to departments based on relative headcount, geographic location and total salary.

Fiscal 2015 Compared to Fiscal 2014

The year-over-year decrease in selling and marketing expense in fiscal 2015 as compared to the prior fiscal year was primarily the result of lower compensation expense of $1.7 million, lower severance costs of $0.7 million, lower third-party commissions of $0.6 million and lower net other costs of $1.3 million. These lower expense items were partially offset by higher overhead allocations of $1.5 million and higher marketing costs of $0.7 million related to our global customer conference held in fiscal 2015. We typically host our global customer conference every other fiscal year.

Research and Development Expense

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Research and development expense	$67,152	$69,584	$68,410	$(2,432)	(3.5)%	$1,174	1.7%
As a percent of revenue	14.2%	15.8%	17.5%				

Fiscal 2016 Compared to Fiscal 2015

Table of Contents

Research and development expenses decreased by approximately $2.4 million during fiscal 2016 as compared to the prior fiscal year. The decrease resulted primarily from lower costs of acquired technology of $3.0 million and lower stock-based compensation of $0.5 million, partially offset by higher compensation costs of $0.6 million and higher overhead allocations of $0.4 million.

In fiscal 2016 and 2015, we acquired technology in two separate transactions for $0.3 million and $3.3 million, respectively. At the time we acquired the technology, the projects to develop commercially available products did not meet the accounting definition of having reached technological feasibility and therefore the cost of the acquired technology was expensed as a research and development expense.

Fiscal 2015 Compared to Fiscal 2014

Research and development expenses increased by approximately $1.2 million during fiscal 2015 as compared to the prior fiscal year. The increase resulted primarily from higher overhead allocations of $2.0 million, higher compensation costs of $0.4 million and higher other net costs of $0.3 million, partially offset by lower costs of acquired technology of $1.6 million.

In fiscal 2015 and 2014, we acquired technology in two separate transactions for $3.3 million and $4.9 million, respectively. At the time we acquired the technology, the projects to develop commercially available products did not meet the accounting definition of having reached technological feasibility and therefore the cost of the acquired technology was expensed as a research and development expense.

General and Administrative Expense

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
General and administrative expense	$53,664	$48,713	$45,804	$4,951	10.2%	$2,909	6.4%
As a percent of revenue	11.4 %	11.1 %	11.7 %				

Fiscal 2016 Compared to Fiscal 2015

The year-over-year increase in general and administrative expense during fiscal 2016 as compared to the prior fiscal year was primarily attributable to the Acquisition Bid costs of $5.2 million, higher compensation expense of $0.9 million, higher bad debt expense of $0.8 million and a benefit in fiscal 2015 of $0.9 million associated with the collection of a business tax refund. These increases were partially offset by lower legal and litigation related expenses of $2.2 million and lower consulting costs of $1.0 million.

Fiscal 2015 Compared to Fiscal 2014

The year-over-year increase in general and administrative expense during fiscal 2015 as compared to the prior fiscal year was primarily attributable to higher consulting and contractor costs of $1.2 million, higher allocation costs of $1.0 million, higher stock-based compensation expense of $1.0 million, and higher compensation costs of $0.8 million. These increases were partially offset by a $0.9 million business tax refund and lower other net costs of $0.1 million.

Interest Income

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Interest income	$441	$487	$1,124	$(46)	(9.4)%	$(637)	(56.7)%
As a percent of revenue	0.1 %	0.1 %	0.3 %				

Fiscal 2016 Compared to Fiscal 2015

The year-over-year decrease in interest income during fiscal 2016 as compared to the prior fiscal year was attributable to a lower level of interest income from investments.

Fiscal 2015 Compared to Fiscal 2014

Table of Contents

The year-over-year decrease in interest income during fiscal 2015 as compared to fiscal 2014 was primarily attributable to the decrease of our installments receivable portfolio. Interest income continued to decrease as our installments receivable balance continued to decrease.

Interest Expense

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Interest expense	$(1,212)	$(30)	$(37)	$(1,182)	3,940.0%	$7	(18.9)%
As a percent of revenue	(0.3)%	—%	—%				

Fiscal 2016 Compared to Fiscal 2015

The year-over-year increase in interest expense during fiscal 2016 as compared to the prior fiscal year was primarily attributable to interest expenses related to our Credit Agreement.

Fiscal 2015 Compared to Fiscal 2014

Interest expense in fiscal 2015 was consistent with fiscal 2014.

Other Income (Expense), Net

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Other income (expense), net	$29	$(778)	$(2,278)	$807	(103.7)%	$1,500	(65.8)%
As a percent of revenue	—%	(0.2)%	(0.6)%				

Other income (expense), net is comprised primarily of unrealized and realized foreign currency exchange gains and losses generated from the settlement and remeasurement of transactions denominated in currencies other than the functional currency of our operating units. Other income (expense), net also includes miscellaneous non-operating gains and losses.

During fiscal 2016, other income (expense), net was less than $0.1 million of net currency gains, which was comprised primarily of $(3.4) million of foreign currency exchange losses related to the Acquisition Bid, offset by $3.5 million of net currency gains. During fiscal 2015 and 2014, other income (expense), net was $(0.8) million and $(2.3) million, respectively, which was comprised primarily of net currency losses.

Provision for Income Taxes

	Year Ended June 30,			2016 Compared to 2015		2015 Compared to 2014	
	2016	2015	2014	$	%	$	%
	(Dollars in Thousands)						
Provision for income taxes	$70,688	$61,064	$42,750	$9,624	15.8%	$18,314	42.8
Effective tax rate	33.6%	34.0%	33.3%				

Fiscal 2016 Compared to Fiscal 2015

The effective tax rate for the periods presented is primarily the result of income earned in the U.S. taxed at U.S. federal and state statutory income tax rates, income earned in foreign tax jurisdictions taxed at the applicable rates, as well as the impact of permanent differences between book and tax income.

Our effective tax rate was 33.6% and 34.0% during fiscal 2016 and 2015, respectively.

We recognized an income tax expense of $70.7 million during fiscal 2016 compared to $61.1 million during fiscal 2015. The $9.6 million year-over-year increase was generally attributable to additional income tax expense of $10.9 million primarily resulting from higher U.S. pre-tax profit and foreign income inclusion. These increases were partially offset by an increased tax benefit of $1.3 million related to a Domestic Production Activity Deduction.

Table of Contents

As of June 30, 2016, we maintained a valuation allowance in the U.S. primarily for certain deferred tax assets related to capital losses that are anticipated to expire unused. We also maintain a valuation allowance on certain foreign subsidiary NOL carryforwards because it is more likely than not that a benefit will not be realized. As of June 30, 2016 and 2015, our total valuation allowance was $10.1 million.

We made cash tax payments totaling $69.4 million during fiscal 2016. We paid $62.4 million for U.S. federal taxes, $4.0 million for foreign tax liabilities and $3.0 million for state tax liabilities. These payments were partially offset by cash tax refunds of $0.4 million. The significant increase in U.S. cash payments over the prior period was a function of using all U.S. tax attributes carried forward in fiscal 2015.

Fiscal 2015 Compared to Fiscal 2014

The effective tax rate for the periods presented is primarily the result of income earned in the United States taxed at U.S. federal and state statutory income tax rates, income earned in foreign tax jurisdictions taxed at the applicable rates, as well as the impact of permanent differences between book and tax income.

Our effective tax rate was 34.0% and 33.3% during fiscal 2015 and 2014, respectively.

We recognized an income tax expense of $61.1 million during fiscal 2015 compared to $42.8 million during fiscal 2014. The $18.3 million year-over-year increase was generally attributable to additional income tax expense of $19.4 million resulting from higher U.S. pre-tax profit offset by an increased tax benefit of $1.1 million related to a Domestic Production Activity Deduction.

As of June 30, 2015, we maintained a valuation allowance in the U.S. primarily for certain deferred tax assets related to capital losses that are anticipated to expire unused. We also maintain a valuation allowance on certain foreign subsidiary NOL carryforwards because it is more likely than not that a benefit will not be realized. As of June 30, 2015 and 2014, our total valuation allowance was $10.1 million and $10.0 million, respectively.

We made cash tax payments totaling $4.6 million during fiscal 2015. We paid $3.0 million for foreign tax liabilities and $1.6 million for state tax liabilities. These payments were partially offset by cash tax refunds of $0.9 million.

Liquidity and Capital Resources

Resources

In recent years, we have financed our operations with cash generated from operating activities. As of June 30, 2016, our principal sources of liquidity consisted of $318.3 million in cash and cash equivalents and $3.0 million of marketable securities. As of June 30, 2015, our principal sources of liquidity consisted of $156.2 million in cash and cash equivalents and $62.2 million of marketable securities.

We believe our existing cash and cash equivalents and marketable securities, together with our cash flows from operating activities, will be sufficient to meet our anticipated cash needs for at least the next twelve months. We may need to raise additional funds in the event we decide to make one or more acquisitions of businesses, technologies or products. If additional funding is required, we may not be able to effect a receivable, equity or debt financing on terms acceptable to us or at all.

Credit Agreement

On February 26, 2016, in conjunction with the Acquisition Bid, we entered into a $250.0 million Credit Agreement with various lenders. The Credit Agreement matures on February 26, 2021. Prior to the maturity of the Credit Agreement, any amounts borrowed may be repaid and, subject to the terms and conditions of the Credit Agreement, borrowed again whole or in part without penalty. As of June 30, 2016, we had $140.0 million in outstanding borrowings under the Credit Agreement.

For a more detailed description of the Acquisition Bid and the Credit Agreement, see Note 4, Acquisitions, and Note 9, Credit Agreement, of our Consolidated Financial Statements.

Cash Equivalents and Cash Flows

Our cash equivalents of $286.2 million and $130.2 million as of June 30, 2016 and 2015, respectively, consisted primarily of money market funds. Our investments in marketable securities of $3.0 million and $62.2 million as of June 30, 2016 and 2015 consisted primarily of investment grade fixed income corporate debt securities with maturities ranging from less than two months and less than one month to 14 months, respectively. The fair value of our portfolio is affected by interest rate movements, credit and liquidity risks. The objective of our investment policy is to manage our cash and investments to preserve principal and maintain liquidity, while earning a return on our investment portfolio by investing available funds. We diversify

Table of Contents

our investment portfolio by investing in multiple types of investment-grade securities and attempt to mitigate a risk of loss by using a third-party investment manager.

The following table summarizes our cash flow activities for the periods indicated:

	Year Ended June 30,		
	2016	2015	2014
	(Dollars in Thousands)		
Cash flow provided by (used in):			
Operating activities	$153,744	$191,985	$200,131
Investing activities	47,221	27,466	(13,187)
Financing activities	(38,659)	(261,259)	(120,170)
Effect of exchange rates on cash balances	(219)	(1,469)	320
Increase (decrease) in cash and cash equivalents	$162,087	$(43,277)	$67,094

Operating Activities

Our primary source of cash is from the annual installments associated with our software license arrangements and related software support services, and to a lesser extent from professional services and training. We believe that cash inflows from our term license business will grow as we benefit from the continued growth of our portfolio of term license contracts.

Fiscal 2016

Cash from operating activities provided $153.7 million during fiscal 2016. This amount resulted from net income of $140.0 million, adjusted for non-cash items of $21.2 million, and net uses of cash of $7.4 million due to decreases in operating assets of $3.3 million and decreases in operating liabilities of $10.7 million.

During fiscal 2015 and 2014, we utilized tax credits and net operating losses to offset US corporate income taxes payable and paid net taxes of $3.7 million and $7.2 million, respectively. We became a tax payer in fiscal year 2016, and paid taxes of $69.4 million.

Cash flow from operations for fiscal 2016 was reduced by our expensing a $1.3 million payment related to the purchase of non-capitalized acquired technology. Other past acquisitions of technology qualified for capitalization and therefore the cash outflow was shown in the investing section of the consolidated statements of cash flows. Refer to the ‘Key Business Metrics - Free Cash Flow” and “Non-GAAP Operating Income” for further discussion of the non-capitalized acquired technology transaction.

Non-cash expenses within net income consisted primarily of stock-based compensation expense of $15.7 million, depreciation and amortization expense of $6.1 million, and net foreign currency gains of $3.7 million.

A decrease in operating assets of $3.3 million and a decrease in operating liabilities of $10.7 million reduced net cash from operating activities by $7.4 million. Uses of cash consisted of decreases in deferred revenue of $6.2 million, net decreases in accounts payable, accrued expenses and other current liabilities of $4.5 million, and increases in prepaid expenses, prepaid income taxes and other assets totaling $7.7 million. Partially offsetting these sources of cash were decreases in accounts receivable of $9.4 million and decreases in installment receivables of $1.6 million.

Fiscal 2015

Cash from operating activities provided $192.0 million during fiscal 2015. This amount resulted from net income of $118.4 million, adjusted for non-cash items of $40.5 million, and net sources of cash of $33.1 million due to decreases in operating assets of $12.3 million and increases in operating liabilities of $20.8 million.

Cash flow from operations for fiscal 2015 was reduced by our expensing a $2.6 million payment related to the purchase of non-capitalized acquired technology. Other past acquisitions of technology qualified for capitalization and therefore the cash outflow was shown in the investing section of the consolidated statements of cash flows. Refer to the 'Key Business Metrics—Free Cash Flow" and "Non-GAAP Operating Income" for further discussion of the non-capitalized acquired technology transaction.

Non-cash expenses within net income consisted primarily of deferred income tax expense of $20.1 million, stock-based compensation expense of $14.6 million, and depreciation and amortization expense of $6.2 million.

Table of Contents

A decrease in operating assets of $12.3 million and an increase in operating liabilities of $20.8 million contributed $33.1 million to net cash from operating activities. Sources of cash consisted of increases in deferred revenue of $14.9 million, decreases in accounts receivable of $8.0 million, net increases in accounts payable, accrued expenses and other current liabilities of $5.9 million, decreases in prepaid expenses, prepaid income taxes and other assets totaling $4.1 million and decreases in unbilled services of $0.5 million. Partially offsetting these sources of cash were increases in installment receivables of $0.4 million.

Investing Activities

Fiscal 2016

During fiscal 2016, we provided $47.2 million of cash from investing activities. The source of cash was from $59.0 million related to the maturity of marketable securities. Partially offsetting this source of cash were a $8.0 million use of cash for business acquisitions, a $3.5 million use of cash for capital expenditures and a $0.3 million use of cash related to the capitalization of internally developed software costs.

Fiscal 2015

During fiscal 2015, we provided $27.5 million of cash from investing activities. The source of cash was from $85.5 million related to the maturity of marketable securities. Partially offsetting this source of cash were a $50.1 million use related to the purchases of marketable securities, a $7.6 million use of cash for capital expenditures, primarily related to our new principal executive offices located in Bedford, Massachusetts, and a $0.4 million use of cash related to the capitalization of internally developed software costs.

Financing Activities

Fiscal 2016

During fiscal 2016, we used $38.7 million of cash for financing activities. We paid $178.6 million for repurchases of our common stock, paid withholding taxes of $4.5 million on vested and settled restricted stock units and paid $1.7 million for issuance costs in connection with the Credit Agreement. Sources of cash in the period included $140.0 million in proceeds from the Credit Agreement, $2.2 million related to stock-based compensation tax deductions in excess of book compensation expense that reduced taxes payable and increased additional paid in capital and proceeds of $3.9 million from the exercise of employee stock options.

Fiscal 2015

During fiscal 2015, we used $261.3 million of cash for financing activities. We paid $297.2 million for repurchases of our common stock and paid withholding taxes of $5.7 million on vested and settled restricted stock units. Sources of cash in the period included $37.0 million related to stock-based compensation tax deductions in excess of book compensation expense that reduced taxes payable and increased additional paid in capital and proceeds of $4.7 million from the exercise of employee stock options.

Contractual Obligations and Requirements

Our contractual obligations consisted primarily of borrowings and interest under our credit agreement, operating lease commitments for our headquarters and other facilities, royalty and other obligations and were as follows as of June 30, 2016:

Table of Contents

	Payments due by Period				
	Total	Less than 1 Year	1 to 3 Years	3 to 5 Years	More than 5 Years
Contractual Cash Obligations:					
Credit agreement	$142,974	$142,974	$—	$—	$—
Operating leases	49,679	5,973	14,290	12,713	16,703
Fixed fee royalty obligations	2,997	1,770	928	197	102
Contractual royalty obligations	2,186	2,186	—	—	—
Other obligations	21,584	6,762	10,142	2,869	1,811
Total contractual cash obligations	$219,420	$159,665	$25,360	$15,779	$18,616
Other Commercial Commitments:					
Standby letters of credit	$3,513	$2,343	$889	$—	$281
Total commercial commitments	$222,933	$162,008	$26,249	$15,779	$18,897

Except for the commitments under the aforementioned lease agreement, we are not currently a party to any other material purchase contracts related to future capital expenditures, and we do not expect our future investment in capital expenditures to be materially different from recent levels.

The standby letters of credit were issued by Silicon Valley Bank in the United States and secure our performance on professional services contracts and certain facility leases.

The above table does not reflect a liability for uncertain tax positions of $23.5 million as of June 30, 2016. We estimate that none of this amount will be paid within the next year and we are currently unable to reasonably estimate the timing of payments for the remainder of the liability.

Off-Balance Sheet Arrangements

As of June 30, 2016, we did not have any significant off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

Critical Accounting Estimates and Judgments

Our consolidated financial statements are prepared in accordance with GAAP. The preparation of our financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, expenses and related disclosures. We base our estimates on historical experience and 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 that the assumptions and estimates associated with the following critical accounting policies have the greatest potential impact on our consolidated financial statements:

- revenue recognition;
- accounting for income taxes; and
- loss contingencies.

For further information on our significant accounting policies, refer to Note 2, Significant Accounting Policies, of our Consolidated Financial Statements.

Revenue Recognition

Four basic criteria must be satisfied before software license revenue can be recognized: persuasive evidence of an arrangement between us and an end user; delivery of our product has occurred; the fee for the product is fixed or determinable; and collection of the fee is probable.

Persuasive evidence of an arrangement—We use a signed contract as evidence of an arrangement for software licenses and SMS. For professional services we use a signed contract and a work proposal to evidence an arrangement. In cases where both a signed contract and a purchase order are required by the customer, we consider both taken together as evidence of the arrangement.

Table of Contents

Delivery of our product—Software and the corresponding access keys are generally delivered to customers via disk media with standard shipping terms of Free Carrier, our warehouse (i.e., FCA, named place) or electronic delivery. Our software license agreements do not contain conditions for acceptance.

Fee is fixed or determinable—We assess whether a fee is fixed or determinable at the outset of the arrangement. Significant judgment is involved in making this assessment.

Under our historical upfront revenue model, we are able to demonstrate that the fees are fixed or determinable for all arrangements, including those for our term licenses that contain extended payment terms. We have an established history of collecting under the terms of these contracts without providing concessions to customers. In addition, we also assess whether a contract modification to an existing term arrangement constitutes a concession. In making this assessment, significant analysis is performed to ensure that no concessions are given. Our software license agreements do not include a right of return or exchange. For license arrangements executed under the historical upfront revenue model, we recognize license revenue upon delivery of the software product, provided all other revenue recognition requirements are met.

We cannot assert that the fees under our aspenONE licensing model and point product arrangements with Premier Plus SMS are fixed or determinable because the rights provided to customers, and the economics of the arrangements, are not comparable to our transactions with other customers under the upfront revenue model. As a result, the amount of revenue recognized for these arrangements is limited by the amount of customer payments that become due.

Collection of fee is probable—We assess the probability of collecting from each customer at the outset of the arrangement based on a number of factors, including the customer's payment history, its current creditworthiness, economic conditions in the customer's industry and geographic location, and general economic conditions. If in our judgment collection of a fee is not probable, revenue is recognized as cash is collected, provided all other conditions for revenue recognition have been met.

Vendor-Specific Objective Evidence of Fair Value

We have established VSOE for professional services and certain training offerings, but not for our software products or our SMS offerings. We assess VSOE for SMS, professional services, and training based on an analysis of standalone sales of these offerings using the bell-shaped curve approach. We do not have a history of selling our Premier Plus SMS offering to customers on a standalone basis, and as a result are unable to establish VSOE for this deliverable. As of July 1, 2014, we were no longer able to establish VSOE for legacy SMS offerings sold with our perpetual license arrangements. As of July 1, 2015, we were no longer able to establish VSOE for SMS offerings sold with our legacy term license arrangements. As a result, all perpetual license agreements and legacy term agreements that include legacy SMS entered into subsequent to June 30, 2014 and June 30, 2015, respectively, are recognized ratably over the legacy SMS service period. Loss of VSOE on legacy SMS offerings sold with our perpetual license and legacy term arrangements did not have a material impact on our revenue in fiscal 2016 and is not expected to have a material impact on our revenue in future periods.

We allocate the arrangement consideration among the elements included in our multi-element arrangements using the residual method. Under the residual method, the VSOE of the undelivered elements is deferred and the remaining portion of the arrangement fee is recognized as revenue upon delivery of the software, assuming all other revenue recognition criteria are met. If VSOE does not exist for an undelivered element in an arrangement, revenue is deferred until such evidence does exist for the undelivered elements, or until all elements are delivered, whichever is earlier. Under the upfront revenue model, the residual license fee is recognized upon delivery of the software provided all other revenue recognition criteria were met. Arrangements that qualified for upfront recognition during fiscal 2014 and prior periods included sales of perpetual licenses, amendments to existing legacy term arrangements and renewals of legacy term arrangements.

Subscription and Software Revenue

Subscription and software revenue consists of product and related revenue from our (i) aspenONE licensing model; (ii) point product arrangements with our Premier Plus SMS offering included for the contract term; (iii) legacy arrangements including (a) amendments to existing legacy term arrangements, (b) renewals of legacy term arrangements and (c) legacy arrangements that are being recognized over time as a result of not previously meeting one or more of the requirements for recognition under the upfront revenue model; (iv) legacy SMS arrangements; and

(v) perpetual arrangements.

When a customer elects to license our products under our aspenONE licensing model, our Premier Plus SMS offering is included for the entire term of the arrangement and the customer receives, for the term of the arrangement, the right to any new unspecified future software products and updates that may be introduced into the licensed aspenONE software suite. Due to our obligation to provide unspecified future software products and updates, we are required to recognize revenue ratably over the term of the arrangement, once the other revenue recognition criteria noted above have been met.

Table of Contents

Our point product arrangements with Premier Plus SMS include SMS for the term of the arrangement. Since we do not have VSOE for our Premier Plus SMS offering, the SMS element of our point product arrangements is not separable. As a result, revenue associated with point product arrangements with Premier Plus SMS included for the contract term is recognized ratably over the term of the arrangement, once all other revenue recognition criteria have been met.

Perpetual and legacy term license arrangements do not include the same rights as those provided to customers under the aspenONE licensing model and point product arrangements with Premier Plus SMS. Legacy SMS revenue is generated from legacy SMS offerings provided in support of perpetual and legacy term license arrangements. Customers typically receive SMS for one year and then can elect to renew SMS annually. During fiscal 2014 and prior periods, we had VSOE for certain legacy SMS offerings sold with perpetual and term license arrangements and could therefore separate the undelivered elements. Accordingly, license fee revenue for perpetual and legacy term license arrangements was recognized upon delivery of the software products using the residual method, provided all other revenue recognition requirements were met. VSOE of fair value for the undelivered SMS component sold with our perpetual and term license arrangements was deferred and subsequently amortized into revenue ratably over the contractual term of the SMS arrangement. As of July 1, 2014, we were no longer able to establish VSOE for legacy SMS offerings sold with our perpetual license arrangements. As of July 1, 2015, we were no longer able to establish VSOE for SMS offerings sold with our legacy term license arrangements. As a result, all perpetual license agreements and legacy term agreements that include legacy SMS entered into subsequent to June 30, 2014 and June 30, 2015, respectively, are recognized ratably over the legacy SMS service period. Loss of VSOE on legacy SMS offerings sold with our perpetual license and legacy term arrangements did not have a material impact on our revenue in fiscal 2016 and is not expected to have a material impact on our revenue in future periods.

Services and Other Revenue

Professional Services Revenue

Professional services are provided to customers on a time-and-materials (T&M) or fixed-price basis. We recognize professional services fees for our T&M contracts based upon hours worked and contractually agreed-upon hourly rates. Revenue from fixed-price engagements is recognized using the proportional performance method based on the ratio of costs incurred to the total estimated project costs. Project costs are typically expensed as incurred. The use of the proportional performance method is dependent upon our ability to reliably estimate the costs to complete a project. We use historical experience as a basis for future estimates to complete current projects. Additionally, we believe that costs are the best available measure of performance. Out-of-pocket expenses which are reimbursed by customers are recorded as revenue.

In certain circumstances, professional services revenue may be recognized over a longer time period than the period over which the services are performed. If the costs to complete a project are not estimable or the completion is uncertain, the revenue is recognized upon completion of the services. In circumstances in which professional services are sold as a single arrangement with, or in contemplation of, a new aspenONE license or point product arrangement with Premier Plus SMS, revenue is deferred and recognized on a ratable basis over the longer of (i) the period the services are performed, or (ii) the license term. When we provide professional services considered essential to the functionality of the software, we recognize the combined revenue from the sale of the software and related services using the completed contract or percentage-of-completion method.

We have occasionally been required to commit unanticipated additional resources to complete projects, which resulted in losses on those contracts. Provisions for estimated losses on contracts are made during the period in which such losses become probable and can be reasonably estimated.

Training Revenue

We provide training services to our customers, including on-site, Internet-based, public and customized training. Revenue is recognized in the period in which the services are performed. In circumstances in which training services are sold as a single arrangement with, or in contemplation of, a new aspenONE license or point product arrangement with Premier Plus SMS, revenue is deferred and recognized on a ratable basis over the longer of (i) the period the services are performed or (ii) the license term.

Accounting for Income Taxes

We utilize the asset and liability method of accounting for income taxes in accordance with ASC 740. Under this method, deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and tax bases of assets and liabilities. Deferred tax assets and liabilities are measured using the enacted tax rates and statutes that will be in effect when the differences are expected to reverse. Deferred tax assets can result from unused operating losses, research and development (R&D) and foreign tax credit carryforwards and deductions recorded for financial statement purposes prior to them being deductible on a tax return.

Table of Contents

The realization of deferred tax assets is dependent upon the generation of future taxable income and the reversal of taxable temporary differences. Valuation allowances are provided against net deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. Significant management judgment is required in determining any valuation allowance recorded against deferred tax assets. We consider, among other available information, projected future taxable income, limitations on the availability of net operating loss ("NOLs") and tax credit carryforwards, scheduled reversals of deferred tax liabilities and other evidence assessing the potential realization of deferred tax assets. Adjustments to the valuation allowance are included in the provision for (benefit from) income taxes in our consolidated statements of operations in the period they become known.

Our provision for (benefit from) income taxes includes amounts determined under the provisions of ASC 740, and is intended to satisfy additional income tax assessments, including interest and penalties, that could result from any tax return positions for which the likelihood of sustaining the position on an audit does not meet a threshold of "more likely than not." Penalties and interest are recorded as a component of our provision for (benefit from) income taxes. Tax liabilities under the provisions of ASC 740 were recorded as a component of our income taxes payable and other non-current liabilities. The ultimate amount of taxes due will not be known until examinations are completed and settled or the audit periods are closed by statutes.

Our U.S. and foreign tax returns are subject to periodic compliance examinations by various local and national tax authorities through periods defined by the tax code in applicable jurisdictions. The years prior to 2007 are closed in the United States, although the utilization of net operating loss carryforwards and tax credits generated in earlier periods will keep these periods open for examination. Similarly, the years prior to 2010 are closed in the United Kingdom, although the utilization of net operating loss carryforwards generated in earlier periods will keep the periods open for examination. Our Canadian subsidiaries are subject to audit from 2007 forward, and certain other of our international subsidiaries are subject to audit from 2003 forward. In connection with examinations of tax filings, tax contingencies can arise from differing interpretations of applicable tax laws and regulations relative to the amount, timing or proper inclusion or exclusion of revenue and expenses in taxable income or loss. For periods that remain subject to audit, we have asserted and unasserted potential assessments that are subject to final tax settlements.

Loss Contingencies

The outcomes of legal proceedings and claims brought against us are subject to significant uncertainty. We accrue estimated liabilities for loss contingencies arising from claims, assessments, litigation and other sources when it is probable that a liability has been incurred and the amount of the claim, assessment or damages can be reasonably estimated. Disclosure of a contingency is required if there is at least a reasonable possibility that a loss has been incurred. In determining whether a loss should be accrued we evaluate, among other factors, the degree of probability of an unfavorable outcome and the ability to make a reasonable estimate of the loss amount. Change in these factors could materially impact our consolidated financial statements.

Under the terms of substantially all of our license agreements, we have agreed to indemnify customers for costs and damages arising from claims against such customers based on, among other things, allegations that our software products infringe the intellectual property rights of a third party. In most cases, in the event of an infringement claim, we retain the right to procure for the customer the right to continue using the software product or to replace or modify the software product to eliminate the infringement while providing substantially equivalent functionality. These indemnification provisions are accounted for in accordance with ASC Topic 460, Guarantees. In most cases, and where legally enforceable, the indemnification refund is limited to the amount of the license fees paid by the customer.

Recent Accounting Pronouncements

Refer to Note 2 (u) "Recent Accounting Pronouncements," of our Consolidated Financial Statements for information about recent accounting pronouncements.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

In the ordinary course of conducting business, we are exposed to certain risks associated with potential changes in market conditions. These market risks include changes in currency exchange rates and interest rates which could affect operating results, financial position and cash flows. We manage our exposure to these market risks through our regular operating and financing activities and, if considered appropriate, we may enter into derivative financial instruments such as forward currency exchange contracts.

Foreign Currency Risk

Table of Contents

During fiscal 2016 and 2015, 11.5% and 13.8% of our total revenue was denominated in a currency other than the U.S. dollar. In addition, certain of our operating costs incurred outside the United States are denominated in currencies other than the U.S. dollar. We conduct business on a worldwide basis and as a result, a portion of our revenue, earnings, net assets, and net investments in foreign affiliates is exposed to changes in foreign currency exchange rates. We measure our net exposure for cash balance positions and for cash inflows and outflows in order to evaluate the need to mitigate our foreign exchange risk. We may enter into foreign currency forward contracts to minimize the impact related to unfavorable exchange rate movements, although we have not done so during fiscal 2016 and fiscal 2015. Our largest exposures to foreign currency exchange rates exist primarily with the Euro, Pound Sterling, Canadian Dollar, and Japanese Yen.

During fiscal 2016 and fiscal 2015, we recorded less than $0.1 million and $(0.8) million of net foreign currency exchange gains (losses) related to the settlement and remeasurement of transactions denominated in currencies other than the functional currency of our operating units. Our analysis of operating results transacted in various foreign currencies indicated that a hypothetical 10% change in the foreign currency exchange rates could have increased or decreased the consolidated results of operations by approximately $5.0 million for fiscal 2016 and 2015, respectively.

Interest Rate Risk

We place our investments in money market instruments and high quality, investment grade, fixed-income corporate debt securities that meet high credit quality standards, as specified in our investment guidelines.

We mitigate the risks by diversifying our investment portfolio, limiting the amount of investments in debt securities of any single issuer and using a third-party investment manager. Our debt securities are short-to intermediate-term investments with maturities ranging from less than 2 months as of June 30, 2016 and less than 1 month to 14 months as of June 30, 2015, respectively. We do not use derivative financial instruments in our investment portfolio.

Our analysis of our investment portfolio and interest rates at June 30, 2016 and 2015 indicated that a hypothetical 100 basis point increase or decrease in interest rates would not have a material impact on the fair value of our investment portfolio determined in accordance with an income-based approach utilizing portfolio future cash flows discounted at the appropriate rates.

We maintain a revolving Credit Agreement that allows us to borrow up to $250.0 million. At June 30, 2016, we had $140.0 million in outstanding borrowings under our Credit Agreement. A hypothetical 10% increase or decrease in interest rates paid on outstanding borrowings under the Credit Agreement would not have a material impact on our financial position, results of operations or cash flows.

Item 8. Financial Statements and Supplementary Data.

The following consolidated financial statements specified by this Item, together with the reports thereon of KPMG LLP, are presented following Item 15 of this Form 10-K:

Financial Statements:

Report of Independent Registered Public Accounting Firm
Consolidated Statements of Operations for the years ended June 30, 2016, 2015 and 2014
Consolidated Statements of Comprehensive Income for the years ended June 30, 2016, 2015 and 2014
Consolidated Balance Sheets as of June 30, 2016 and 2015
Consolidated Statements of Stockholders' (Deficit) Equity for the years ended June 30, 2016, 2015 and 2014
Consolidated Statements of Cash Flows for the years ended June 30, 2016, 2015 and 2014
Notes to Consolidated Financial Statements

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures

a) Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2016. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act, means controls and other procedures of a

Table of Contents

company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Securities Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Securities Exchange Act is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of June 30, 2016, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective.

b) Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for our company. Internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) promulgated under the Exchange Act, as a process designed by, or under the supervision of, a company's principal executive and principal financial officers and effected by the Company's board of directors, management and other personnel, 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, and includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;
- 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 in accordance with authorizations of management and directors of the company; and
- 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. 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.

Our management, including our chief executive officer and chief financial officer, assessed the effectiveness of our internal control over financial reporting as of June 30, 2016 based on criteria established in "Internal Control—Integrated Frameworks (2013) issued by the Committee of Sponsors Organizations of the Treadway Commission ("COSO"), and concluded that, as of June 30, 2016, our internal control over financial reporting was effective.

KPMG LLP, our independent registered public accounting firm, has audited our consolidated financial statements and the effectiveness of our internal control over financial reporting as of June 30, 2016. This report appears below.

c) Changes in Internal Control over Financial Reporting

During the three months ended June 30, 2016, no changes were identified to our internal controls over financial reporting that materially affected, or were reasonably likely to materially affect, our internal controls over financial reporting.

Table of Contents

Report of Independent Registered Public Accounting Firm
The Board of Directors and Stockholders
Aspen Technology, Inc.:

We have audited Aspen Technology, Inc.'s and subsidiaries (the "Company") internal control over financial reporting as of June 30, 2016, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of June 30, 2016, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of the Company as of June 30, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, stockholders' (deficit) equity, and cash flows for each of the years in the three-year period ended June 30, 2016, and our report dated August 11, 2016 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP
Boston, Massachusetts
August 11, 2016

Item 9B. Other Information.

None.

Table of Contents

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Certain information required under this Item 10 will appear under the sections entitled “Executive Officers of the Registrant,” “Election of Directors,” “Information Regarding our Board of Directors and Corporate Governance,” “Code of Business Conduct and Ethics,” and “Section 16(a) Beneficial Ownership Reporting Compliance” in our definitive proxy statement for our 2016 annual meeting of stockholders, and is incorporated herein by reference.

Item 11. Executive Compensation.

Certain information required under this Item 11 will appear under the sections entitled “Director Compensation,” “Compensation Discussion and Analysis,” “Executive Compensation” and “Employment and Change in Control Agreements” in our definitive proxy statement for our 2016 annual meeting of stockholders, and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Certain information required under this Item 12 will appear under the sections entitled “Stock Owned by Directors, Executive Officers and Greater-than 5% Stockholders” and “Securities Authorized for Issuance Under Equity Compensation Plans” in our definitive proxy statement for our 2016 annual meeting of stockholders, and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Certain information required under this Item 13 will appear under the sections entitled “Information Regarding the Board of Directors and Corporate Governance” and “Related Party Transactions” in our definitive proxy statement for our 2016 annual meeting of stockholders, and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services.

Certain information required under this Item 14 will appear under the section entitled “Independent Registered Public Accountants” in our definitive proxy statement for our 2016 annual meeting of stockholders, and is incorporated herein by reference.

Table of Contents

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a)(1) Financial Statements

The consolidated financial statements appear immediately following page 48 ("Signatures").

(a)(2) Financial Statement Schedules

All schedules are omitted because they are not required or the required information is shown in the consolidated financial statements or notes thereto.

(a)(3) Exhibits

The exhibits listed in the accompanying exhibit index are filed or incorporated by reference as part of this Form 10-K.

Table of Contents

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.

ASPEN TECHNOLOGY, INC.

Date: August 11, 2016 By: /s/ ANTONIO J. PIETRI
Antonio J. Pietri
President and Chief Executive Officer

Date: August 11, 2016 By: /s/ KARL E. JOHNSEN
Karl E. Johnsen
Senior Vice President and
Chief Financial Officer

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

Signature	Title	Date
/s/ ANTONIO J. PIETRI Antonio J. Pietri	President and Chief Executive Officer and Director (Principal Executive Officer)	August 11, 2016
/s/ KARL E. JOHNSEN Karl E. Johnsen	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	August 11, 2016
/s/ ROBERT M. WHELAN, JR. Robert M. Whelan, Jr.	Chairman of the Board of Directors	August 11, 2016
/s/ DONALD P. CASEY Donald P. Casey	Director	August 11, 2016
/s/ GARY E. HAROIAN Gary E. Haroian	Director	August 11, 2016
/s/ JOAN C. MCARDLE Joan C. McArdle	Director	August 11, 2016
/s/ SIMON OREBI GANN Simon Orebi Gann	Director	August 11, 2016
/s/ R. HALSEY WISE R. Halsey Wise	Director	August 11, 2016

Table of Contents

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Table of Contents

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Aspen Technology, Inc.:

We have audited the accompanying consolidated balance sheets of Aspen Technology, Inc. and subsidiaries (the "Company") as of June 30, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, stockholders' (deficit) equity, and cash flows for each of the years in the three-year period ended June 30, 2016. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of June 30, 2016 and 2015, and the results of their operations and their cash flows for each of the years in the three-year period ended June 30, 2016, 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), the Company's internal control over financial reporting as of June 30, 2016, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated August 11, 2016 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP
Boston, Massachusetts
August 11, 2016

Table of Contents

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended June 30,		
	2016	2015	2014
	(Dollars in Thousands, Except per Share Data)		
Revenue:			
Subscription and software	$440,408	$405,640	$350,486
Services and other	31,936	34,761	40,967
Total revenue	472,344	440,401	391,453
Cost of revenue:			
Subscription and software	20,376	21,165	20,141
Services and other	28,235	28,411	32,547
Total cost of revenue	48,611	49,576	52,688
Gross profit	423,733	390,825	338,765
Operating expenses:			
Selling and marketing	91,536	92,736	94,827
Research and development	67,152	69,584	68,410
General and administrative	53,664	48,713	45,804
Total operating expenses	212,352	211,033	209,041
Income from operations	211,381	179,792	129,724
Interest income	441	487	1,124
Interest expense	(1,212)	(30)	(37)
Other income (expense), net	29	(778)	(2,278)
Income before provision for income taxes	210,639	179,471	128,533
Provision for income taxes	70,688	61,064	42,750
Net income	$139,951	$118,407	$85,783
Net income per common share:			
Basic	$1.69	$1.34	$0.93
Diluted	$1.68	$1.33	$0.92
Weighted average shares outstanding:			
Basic	82,892	88,398	92,648
Diluted	83,309	89,016	93,665

See accompanying notes to these consolidated financial statements.

Table of Contents

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended June 30,		
	2016	2015	2014
	(Dollars in Thousands)		
Net income	$139,951	$118,407	$85,783
Other comprehensive (loss) income:			
Net unrealized gains (losses) on available for sale securities, net of tax effects of $12, $15 and $(32) for fiscal years 2016, 2015 and 2014	22	(29)	59
Foreign currency translation adjustments	(3,841)	(2,873)	2,050
Total other comprehensive (loss) income	(3,819)	(2,902)	2,109
Comprehensive income	$136,132	$115,505	$87,892

See accompanying notes to these consolidated financial statements.

Table of Contents

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	June 30, 2016	2015
	(Dollars in Thousands, Except Share and Per Share Data)	
ASSETS		
Current assets:		
Cash and cash equivalents	$318,336	$156,249
Short-term marketable securities	3,006	59,197
Accounts receivable, net	20,476	30,721
Prepaid expenses and other current assets	13,948	10,752
Prepaid income taxes	5,557	542
Current deferred tax assets	—	6,169
Total current assets	361,323	263,630
Long-term marketable securities	—	3,047
Property, equipment and leasehold improvements, net	15,825	18,039
Computer software development costs, net	720	1,026
Goodwill	23,438	17,360
Intangible assets, net	5,000	147
Non-current deferred tax assets	12,236	10,444
Other non-current assets	1,196	1,668
Total assets	$419,738	$315,361
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$3,559	$5,240
Accrued expenses and other current liabilities	36,105	38,483
Income taxes payable	439	1,775
Borrowings under credit agreement	140,000	—
Current deferred revenue	252,520	250,968
Total current liabilities	432,623	296,466
Non-current deferred revenue	29,558	37,919
Other non-current liabilities	32,591	29,522
Commitments and contingencies (Note 12)		
Series D redeemable convertible preferred stock, $0.10 par value—Authorized—3,636 shares as of June 30, 2016 and 2015	—	—
Issued and outstanding—none as of June 30, 2016 and 2015		
Stockholders' deficit:		
Common stock, $0.10 par value—Authorized—210,000,000 shares		
Issued—102,031,960 shares at June 30, 2016 and 101,607,520 shares at June 30, 2015	10,203	10,161
Outstanding—80,177,950 shares at June 30, 2016 and 84,504,202 shares at June 30, 2015		
Additional paid-in capital	659,287	641,883
Accumulated deficit	(5,676)	(145,627)
Accumulated other comprehensive income	2,651	6,470
Treasury stock, at cost—21,854,010 shares of common stock at June 30, 2016 and 17,103,318 shares at June 30, 2015	(741,499)	(561,433)
Total stockholders' deficit	(75,034)	(48,546)

Total liabilities and stockholders' deficit	$419,738	$315,361

See accompanying notes to these consolidated financial statements.

Table of Contents

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' (DEFICIT) EQUITY

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Treasury Stock		Total Stockholders' (Deficit) Equity
	Number of Shares	$0.10 Par Value				Number of Shares	Cost	
	(Dollars in Thousands, Except Share Data)							
Balance June 30, 2013	99,945,545	$9,995	$575,770	$(349,817)	$7,263	6,261,776	$(141,313)	$101,898
Comprehensive income (loss):								
Net income	—	—	—	85,783	—	—	—	85,783
Other comprehensive income	—	—	—	—	2,109	—	—	2,109
Exercise of stock options	723,330	72	8,638	—	—	—	—	8,710
Withholding taxes related to restricted stock units net share settlement	364,865	36	(7,867)	—	—	—	—	(7,831)
Repurchase of common stock	—	—	—	—	—	3,110,114	(121,776)	(121,776)
Stock-based compensation	—	—	14,056	—	—	—	—	14,056
Excess tax benefits from stock-based compensation	—	—	727					727
Balance June 30, 2014	101,033,740	$10,103	$591,324	$(264,034)	$9,372	9,371,890	$(263,089)	$83,676
Comprehensive income (loss):								
Net income	—	—	—	118,407	—	—	—	118,407
Other comprehensive income (loss)	—	—	—	—	(2,902)			(2,902)
Exercise of stock options	308,847	31	4,635	—	—	—		4,666
Withholding taxes related to restricted stock units net share settlement	264,933	27	(5,684)	—	—	—	—	(5,657)
Repurchase of common stock	—	—	—	—	—	7,731,428	(298,344)	(298,344)
Stock-based compensation	—	—	14,584	—	—	—	—	14,584
Excess tax benefits from stock-based compensation	—	—	37,024					37,024

Balance June 30, 2015	101,607,520	$10,161	$641,883	$(145,627)	$ 6,470	17,103,318	$(561,433)	$(48,546)
Comprehensive income (loss):								
Net income	—	—	—	139,951	—	—	—	139,951
Other comprehensive income (loss)	—	—	—	—	(3,819)			(3,819)
Exercise of stock options	201,706	20	3,900	—	—	—		3,920
Withholding taxes related to restricted stock units net share settlement	222,734	22	(4,431)	—	—	—	—	(4,409)
Repurchase of common stock	—	—	—	—	—	4,750,692	(180,066)	(180,066)
Stock-based compensation	—	—	15,727	—	—	—	—	15,727
Excess tax benefits from stock-based compensation	—	—	2,208					2,208
Balance June 30, 2016	102,031,960	$10,203	$659,287	$(5,676)	$ 2,651	21,854,010	$(741,499)	$(75,034)

See accompanying notes to these consolidated financial statements.

F-6

Table of Contents

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended June 30,		
	2016	2015	2014
	(Dollars in Thousands)		
Cash flows from operating activities:			
Net income	$139,951	$118,407	$85,783
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	6,061	6,216	5,215
Net foreign currency (gain) loss	(3,666)	(1,552)	1,934
Stock-based compensation	15,727	14,584	14,056
Deferred income taxes	2,499	20,112	34,596
Provision for bad debts	260	(513)	1,793
Tax benefits from stock-based compensation	2,208	37,024	727
Excess tax benefits from stock-based compensation	(2,208)	(37,024)	(727)
Other non-cash operating activities	321	1,619	1,847
Changes in assets and liabilities:			
Accounts receivable	9,382	8,028	(3,179)
Unbilled services	—	526	301
Prepaid expenses, prepaid income taxes, and other assets	(7,681)	4,070	947
Installment receivables	1,575	(364)	13,607
Accounts payable, accrued expenses and other liabilities	(4,489)	5,933	906
Deferred revenue	(6,196)	14,919	42,325
Net cash provided by operating activities	153,744	191,985	200,131
Cash flows from investing activities:			
Purchase of marketable securities	—	(50,065)	(68,356)
Maturities of marketable securities	58,973	85,535	60,265
Purchase of property, equipment and leasehold improvements	(3,483)	(7,645)	(4,011)
Purchase of technology intangibles	—	—	(400)
Payments for business acquisitions	(8,000)	—	—
Capitalized computer software development costs	(269)	(359)	(685)
Net cash provided by (used in) investing activities	47,221	27,466	(13,187)
Cash flows from financing activities:			
Exercise of stock options	3,924	4,662	8,710
Repurchases of common stock	(178,604)	(297,246)	(121,776)
Payment of tax withholding obligations related to restricted stock	(4,480)	(5,699)	(7,831)
Excess tax benefits from stock-based compensation	2,208	37,024	727
Proceeds from credit agreement	140,000	—	—
Payments of credit agreement issuance costs	(1,707)	—	—
Net cash used in financing activities	(38,659)	(261,259)	(120,170)
Effect of exchange rate changes on cash and cash equivalents	(219)	(1,469)	320
(Decrease) increase in cash and cash equivalents	162,087	(43,277)	67,094
Cash and cash equivalents, beginning of year	156,249	199,526	132,432
Cash and cash equivalents, end of year	$318,336	$156,249	$199,526
Supplemental disclosure of cash flow information:			
Income tax paid, net	$69,028	$3,712	$7,157
Interest paid	963	30	37

Table of Contents

Supplemental disclosure of non-cash investing and financing activities:			
Change in landlord improvement allowance included in leasehold improvements and deferred rent liability	$ —	$6,064	$—
Change in purchases of property, equipment and leasehold improvements included in accounts payable and accrued expenses	(825)	675	—
Change in common stock repurchases included in accounts payable and accrued expenses	1,462	1,098	—

See accompanying notes to these consolidated financial statements.

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(1) Operations
Aspen Technology, Inc., together with its subsidiaries, is a leading global provider of process optimization software solutions designed to manage and optimize plant and process design, operational performance, and supply chain planning. Our aspenONE software and related services have been developed specifically for companies in the process industries, which consist of energy, chemicals, engineering and construction, as well as consumer packaged goods, power, metals and mining, pulp and paper, pharmaceuticals and biofuels. Customers use our solutions to improve their competitiveness and profitability by increasing throughput and productivity, reducing operating costs, enhancing capital efficiency, and decreasing working capital requirements. We operate globally in 31 countries as of June 30, 2016.
(2) Significant Accounting Policies
(a) Principles of Consolidation
The accompanying consolidated financial statements include the accounts of Aspen Technology, Inc. and our wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.
Reclassifications
Certain line items in prior period financial statements have been reclassified to conform to currently reported presentations.
(b) Management Estimates
The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions. These estimates and assumptions 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 revenue and expenses during the reporting period. Actual results could differ from those estimates.
(c) Cash and Cash Equivalents
Cash and cash equivalents consist of short-term, highly liquid investments with remaining maturities of three months or less when purchased.
(d) Marketable Securities
The following table summarizes the fair value, the amortized cost and unrealized holding gains (losses) on our marketable securities as of June 30, 2016 and 2015:

	Fair Value	Cost	Unrealized Gains	Unrealized Losses
	(Dollars in Thousands)			
June 30, 2016:				
U.S. corporate bonds with maturities less than one year	$3,006	$3,006	$ —	$ —
Total short-term marketable securities	$3,006	$3,006	$ —	$ —
June 30, 2015:				
U.S. corporate bonds with maturities less than one year	$59,197	$59,223	$ 8	$ (34)
Total short-term marketable securities	$59,197	$59,223	$ 8	$ (34)
U.S. corporate bonds with maturities greater than one year	$3,047	$3,055	$ —	$ (8)
Total long-term marketable securities	$3,047	$3,055	$ —	$ (8)

Our marketable securities are classified as available-for-sale and reported at fair value on the consolidated balance sheets. Net unrealized gains (losses) are reported as a separate component of accumulated other comprehensive income, net of tax. Realized gains and losses on investments are recognized in earnings as incurred. Our investments consist primarily of investment grade fixed income corporate debt securities with maturity dates in August 2016 as of June 30, 2016 and ranging from July 2015 through August 2016 as of June 30, 2015.

We review our marketable securities for impairment at each reporting period to determine if any of our securities have experienced an other-than-temporary decline in fair value in accordance with the provisions of ASC Topic 320, Investments—Debt and Equity Securities. We consider factors, such as the length of time and extent to which the market value has been less than the cost, the financial condition and near-term prospects of the issuer, our intent to sell, or whether it is more likely than not we will be required to sell the investment before recovery of its amortized cost basis. If we believe that an other-than-temporary decline in fair value has occurred, we write down the investment to fair value and recognize the credit loss in earnings and the non-credit loss in accumulated other comprehensive income. During fiscal 2016 and 2015, our marketable securities were not considered other-than-temporarily impaired and, as such, we did not recognize impairment losses during the periods then ended. Unrealized losses are attributable to changes in interest rates.

(e) Property and Equipment

Property and equipment are stated at cost. We provide for depreciation and amortization, primarily computed using the straight-line method, by charges to operations in amounts estimated to allocate the cost of the assets over their estimated useful lives, as follows:

Asset Classification	Estimated Useful Life
Computer equipment	3 years
Purchased software	3 - 5 years
Furniture and fixtures	3 - 10 years
Leasehold improvements	Life of lease or asset, whichever is shorter

(f) Revenue Recognition

Transition to the aspenONE Licensing Model

Prior to fiscal 2010, we offered term or perpetual licenses to specific products, or specifically defined sets of products, which we refer to as point products. The majority of our license revenue was recognized under an "upfront revenue model," in which the net present value of the aggregate license fees was recognized as revenue upon shipment of the point products, provided all revenue recognition criteria were met. Customers typically received one year of post-contract software maintenance and support, or SMS, with their license agreements and then could elect to renew SMS annually. Revenue from SMS was recognized ratably over the period in which the SMS was delivered.

In fiscal 2010, we introduced the following changes to our licensing model:

(i) We began offering our software on a subscription basis, allowing our customers access to all products within a licensed suite (aspenONE Engineering or aspenONE Manufacturing and Supply Chain). SMS is included for the entire term of the arrangement and customers are entitled to any software products or updates introduced into the licensed suite. We refer to this license arrangement as our aspenONE licensing model.

(ii) We began to include SMS for the entire term on our point product term arrangements.

In fiscal 2012, we introduced Premier Plus SMS. As part of this offering, customers receive 24x7 support, faster response times, dedicated technical advocates and access to web-based training modules. Premier Plus SMS is exclusively available as a component of our term contract arrangements and we are unable to establish VSOE for this deliverable because we don't offer it on a stand-alone basis.

Revenue related to our aspenONE licensing model and point product arrangements with Premier Plus SMS are both recognized over the term of the arrangement on a ratable basis. The changes to our licensing model resulted in a significant reduction to license revenue in fiscal 2010, as compared to fiscal periods preceding our licensing model changes. From fiscal 2010 through fiscal 2015, as customer license arrangements previously executed under the upfront revenue model reached the end of their terms and were renewed under the aspenONE licensing model, we recognized increasing amounts of subscription revenue and deferred revenue. The value of our installed base of software licenses was also growing during this period which

further contributed to growth in subscription and deferred revenue. Many of our license arrangements were five or six years in duration when the aspenONE licensing model was introduced at the start of fiscal 2010, and consequently, a number of arrangements executed under the upfront revenue model did not reach the end of their original term until the end of fiscal 2015. The changes to our licensing model did not have any material impact on subscription revenue or deferred revenue for fiscal 2016 and we do not expect any material impact on subscription revenue or deferred revenue for fiscal 2017 and beyond.

The changes to our licensing model introduced in fiscal 2010 did not change the method or timing of customer billings or cash collections. In addition, the changes to our licensing model did not impact the incurrence or timing of our expenses. Since there was no corresponding expense reduction to offset the lower revenue during fiscal years 2010-2015, operating income was lower than what would have been reported under a fully transitioned revenue model.

Revenue Recognition

We generate revenue from the following sources: (1) Subscription and software revenue; and (2) Services and other revenue.

Four basic criteria must be satisfied before software license revenue can be recognized: persuasive evidence of an arrangement between us and an end user; delivery of our product has occurred; the fee for the product is fixed or determinable; and collection of the fee is probable.

Persuasive evidence of an arrangement—We use a signed contract as evidence of an arrangement for software licenses and SMS. For professional services we use a signed contract and a work proposal to evidence an arrangement. In cases where both a signed contract and a purchase order are required by the customer, we consider both taken together as evidence of the arrangement.

Delivery of our product—Software and the corresponding access keys are generally delivered to customers via disk media with standard shipping terms of Free Carrier, our warehouse (i.e., FCA, named place) or electronic delivery. Our software license agreements do not contain conditions for acceptance.

Fee is fixed or determinable—We assess whether a fee is fixed or determinable at the outset of the arrangement. Significant judgment is involved in making this assessment.

Under our historical upfront revenue model, we are able to demonstrate that the fees are fixed or determinable for all arrangements, including those for our term licenses that contain extended payment terms. We have an established history of collecting under the terms of these contracts without providing concessions to customers. In addition, we also assess whether a contract modification to an existing term arrangement constitutes a concession. In making this assessment, significant analysis is performed to ensure that no concessions are given. Our software license agreements do not include a right of return or exchange. For license arrangements executed under the historical upfront revenue model, we recognize license revenue upon delivery of the software product, provided all other revenue recognition requirements are met.

We cannot assert that the fees under our aspenONE licensing model and point product arrangements with Premier Plus SMS are fixed or determinable because the rights provided to customers, and the economics of the arrangements, are not comparable to our transactions with other customers under the upfront revenue model. As a result, the amount of revenue recognized for these arrangements is limited by the amount of customer payments that become due.

Collection of fee is probable—We assess the probability of collecting from each customer at the outset of the arrangement based on a number of factors, including the customer's payment history, its current creditworthiness, economic conditions in the customer's industry and geographic location, and general economic conditions. If in our judgment collection of a fee is not probable, revenue is recognized as cash is collected, provided all other conditions for revenue recognition have been met.

Vendor-Specific Objective Evidence of Fair Value

We have established VSOE for professional services and certain training offerings, but not for our software products or our SMS offerings. We assess VSOE for SMS, professional services, and training, based on an analysis of standalone sales of the offerings using the bell-shaped curve approach. We do not have a history of selling our Premier Plus SMS offering to customers on a standalone basis, and as a result are unable to establish VSOE for this deliverable. As of July 1, 2014, we are no longer able to establish VSOE for legacy SMS offerings sold with our perpetual license arrangements. As of July 1, 2015, we were no longer able to establish VSOE for SMS offerings sold with our legacy term license arrangements. As a result, all perpetual license agreements and legacy term agreements that include legacy SMS entered into subsequent to June 30, 2014 and June 30, 2015, respectively, will be recognized ratably over the legacy SMS service period. Loss of VSOE on legacy SMS offerings sold with our perpetual license and legacy term arrangements did not have a material impact on our revenue in fiscal 2016 and is not expected to have a material impact on our revenue in future periods.

We allocate the arrangement consideration among the elements included in our multi-element arrangements using the residual method. Under the residual method, the VSOE of the undelivered elements is deferred and the remaining portion of the arrangement fee is recognized as revenue upon delivery of the software, assuming all other revenue recognition criteria are met. If VSOE does not exist for an undelivered element in an arrangement, revenue is deferred until such evidence does exist for the undelivered elements, or until all elements are delivered, whichever is earlier.

Under the historical upfront revenue model, the residual license fee is recognized upon delivery of the software provided all other revenue recognition criteria were met. Arrangements that qualified for upfront recognition during fiscal 2014 and prior periods included sales of perpetual licenses, amendments to existing legacy term arrangements and renewals of legacy term arrangements.

Subscription and Software Revenue

Subscription and software revenue consists of product and related revenue from our (i) aspenONE licensing model; (ii) point product arrangements with our Premier Plus SMS offering included for the contract term; (iii) legacy arrangements including (a) amendments to existing legacy term arrangements, (b) renewals of legacy term arrangements and (c) legacy arrangements that are being recognized over time as a result of not previously meeting one or more of the requirements for recognition under the upfront revenue model; (iv) legacy SMS arrangements; and (v) perpetual arrangements.

When a customer elects to license our products under our aspenONE licensing model, our Premier Plus SMS offering is included for the entire term of the arrangement and the customer receives, for the term of the arrangement, the right to any new unspecified future software products and updates that may be introduced into the licensed aspenONE software suite. Due to our obligation to provide unspecified future software products and updates, we are required to recognize revenue ratably over the term of the arrangement, once the other revenue recognition criteria noted above have been met.

Our point product arrangements with Premier Plus SMS include SMS for the term of the arrangement. Since we do not have VSOE for our Premier Plus SMS offering, the SMS element of our point product arrangements is not separable. As a result, revenue associated with point product arrangements with Premier Plus SMS included for the contract term is recognized ratably over the term of the arrangement, once the other revenue recognition criteria have been met.

Perpetual and legacy term license arrangements do not include the same rights as those provided to customers under the aspenONE licensing model and point product arrangements with Premier Plus SMS. Legacy SMS revenue is generated from legacy SMS offerings provided in support of perpetual and legacy term license arrangements. Customers typically receive SMS for one year and then can elect to renew SMS annually. During fiscal 2014 and prior periods, we had VSOE for certain legacy SMS offerings sold with perpetual and term license arrangements and could therefore separate the undelivered elements. Accordingly, license fee revenue for perpetual and legacy term license arrangements was recognized upon delivery of the software products using the residual method, provided all other revenue recognition requirements were met. VSOE of fair value for the undelivered SMS component sold with our perpetual and term license arrangements was deferred and subsequently amortized into revenue ratably over the contractual term of the SMS arrangement. As of July 1, 2014, we are no longer able to establish VSOE for our legacy SMS offerings sold with our perpetual license arrangements. As of July 1, 2015, we were no longer able to establish VSOE for SMS offerings sold with our legacy term license arrangements. As a result, all perpetual license agreements and legacy term agreements that include legacy SMS entered into subsequent to June 30, 2014 and June 30, 2015, respectively, will be recognized ratably over the legacy SMS service period. Loss of VSOE on legacy SMS offerings sold with our perpetual license and legacy term arrangements did not have a material impact on our revenue in fiscal

2016 and is not expected to have a material impact on our revenue in future periods.

Services and Other Revenue

Professional Services Revenue

Professional services are provided to customers on a time-and-materials (T&M) or fixed-price basis. We recognize professional services fees for our T&M contracts based upon hours worked and contractually agreed-upon hourly rates. Revenue from fixed-price engagements is recognized using the proportional performance method based on the ratio of costs incurred to the total estimated project costs. Project costs are typically expensed as incurred. The use of the proportional performance method is dependent upon our ability to reliably estimate the costs to complete a project. We use historical experience as a basis for future estimates to complete current projects. Additionally, we believe that costs are the best available measure of performance. Out-of-pocket expenses which are reimbursed by customers are recorded as revenue.

In certain circumstances, professional services revenue may be recognized over a longer time period than the period over which the services are performed. If the costs to complete a project are not estimable or the completion is uncertain, the revenue is recognized upon completion of the services. In circumstances in which professional services are sold as a single arrangement with, or in contemplation of, a new aspenONE license or point product arrangement with Premier Plus SMS, revenue is deferred and recognized on a ratable basis over the longer of (i) the period the services are performed, or (ii) the license term. When we provide professional services considered essential to the functionality of the software, we recognize the combined revenue from the sale of the software and related services using the completed contract or percentage-of-completion method.

We have occasionally been required to commit unanticipated additional resources to complete projects, which resulted in losses on those contracts. Provisions for estimated losses on contracts are made during the period in which such losses become probable and can be reasonably estimated.

Training Revenue

We provide training services to our customers, including on-site, Internet-based, public and customized training. Revenue is recognized in the period in which the services are performed. In circumstances in which training services are sold as a single arrangement with, or in contemplation of, a new aspenONE license or point product arrangement with Premier Plus SMS, revenue is deferred and recognized on a ratable basis over the longer of (i) the period the services are performed or (ii) the license term.

Deferred Revenue

Deferred revenue includes amounts billed or collected in advance of revenue recognition, including arrangements under the aspenONE licensing model, point product arrangements with Premier Plus SMS, legacy SMS arrangements, professional services, and training. Under the aspenONE licensing model and for point product arrangements with Premier Plus SMS, VSOE does not exist for the undelivered elements, and as a result, the arrangement fees are recognized ratably (i.e., on a subscription basis) over the term of the license. Deferred revenue is recorded as each invoice becomes due.

Other Licensing Matters

Our standard licensing agreements include a product warranty provision. We have not experienced significant claims related to software warranties beyond the scope of SMS support, which we are already obligated to provide, and consequently, we have not established reserves for warranty obligations.

Our agreements with our customers generally require us to indemnify the customer against claims that our software infringes third-party patent, copyright, trademark or other proprietary rights. Such indemnification obligations are generally limited in a variety of industry-standard respects, including our right to replace an infringing product. As of June 30, 2016 and 2015, we had not experienced any material losses related to these indemnification obligations and no claims with respect thereto were outstanding. We do not expect significant claims related to these indemnification obligations, and consequently, have not established any related reserves.

(g) Installments Receivable

Installments receivable resulting from product sales under the upfront revenue model are discounted to present value at prevailing market rates at the date the contract is signed, taking into consideration the customer's credit rating. The finance element is recognized using the effective interest method over the relevant license term and is classified as interest income. Current installments receivable consist of invoices with a due date of less than one year but greater than 45 days from the period-end date. Once an installments receivable invoice becomes due within 45 days, it is reclassified as a trade accounts receivable in our consolidated balance sheets. As a result, we did not have any past due installments receivable as of June 30, 2016.

Our non-current installments receivable are within the scope of Accounting Standards Update (ASU) No. 2010-20, Receivables (Topic 310): Disclosures about the Credit Quality of Financing Receivables and the Allowance for Credit Losses. As our portfolio of financing receivables arises from the sale of our software licenses, the methodology for determining our allowance for doubtful accounts is based on the collective population of receivables and is not stratified by class or portfolio segment. We consider factors such as existing economic conditions, country risk, customers' credit rating and past payment history in determining our allowance for doubtful accounts. We reserve against our installments receivable when the related trade accounts receivable have been past due for over a year, or when there is a specific risk of uncollectability. Our specific reserve reflects the full value of the related installments receivable for which collection has been deemed uncertain. We transfer an installment receivable reserve balance into a trade accounts receivable allowance when an installment receivable ages into a trade account receivable.

We write-off receivables when they are considered uncollectable based on our judgment. In instances when we write-off specific customers' trade accounts receivable, we also write off any related current and non-current installments receivable balances.

As of June 30, 2016 and June 30, 2015, our current installments receivable of $0.3 million and $1.6 million, respectively, are included within prepaid expenses and other current assets in our consolidated balance sheets. As of June 30, 2015, our non-current installments receivable of $0.3 million is included within other non-current assets in our consolidated balance sheets.

Under the aspenONE licensing model and for point product arrangements with Premier Plus SMS included for the contract term, the installment payments are not considered fixed or determinable and, as a result, are not included as installments receivable on our consolidated balance sheet.

(h) Allowance for Doubtful Accounts and Discounts

We make judgments as to our ability to collect outstanding receivables and provide allowances for the portion of receivables when a loss is reasonably expected to occur. The allowance for doubtful accounts is established to represent the best estimate of the net realizable value of the outstanding accounts receivable. The development of the allowance for doubtful accounts is based on a review of past due amounts, historical write-off and recovery experience, as well as aging trends affecting specific accounts and general operational factors affecting all accounts. In addition, factors are developed utilizing historical trends in bad debts and allowances.

We consider current economic trends when evaluating the adequacy of the allowance for doubtful accounts. If circumstances relating to specific customers change or unanticipated changes occur in the general business environment, our estimates of the recoverability of receivables could be further adjusted.

The following table presents our allowance for doubtful accounts activity for accounts receivable in fiscal 2016 and 2015, respectively:

	Year Ended June 30,	
	2016	2015
	(Dollars in Thousands)	
Balance, beginning of year	$1,636	$3,465
Provision for bad debts	1,032	(1,032)
Write-offs	(1,064)	(797)
Balance, end of year	$1,604	$1,636

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(2) Significant Accounting Policies (Continued)

The following table summarizes our accounts receivable, net of the related allowance for doubtful accounts, as of June 30, 2016 and 2015:

	Gross	Allowance	Net
	(Dollars in Thousands)		
June 30, 2016:			
Accounts Receivable	$22,080	$ 1,604	$20,476
	$22,080	$ 1,604	$20,476
June 30, 2015:			
Accounts Receivable	$32,357	$ 1,636	$30,721
	$32,357	$ 1,636	$30,721

(i) Fair Value of Financial Instruments

We determine fair value of financial and non-financial assets and liabilities in accordance with provisions of ASC Topic 820, Fair Value Measurements and Disclosures (ASC 820). ASC 820 defines fair value as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants. ASC 820 establishes a fair value hierarchy for valuation inputs that gives the highest priority to quoted prices in active markets for identical assets or liabilities, and the lowest priority to unobservable inputs. The fair value hierarchy is as follows:

Level 1 Inputs—Unadjusted quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

Level 2 Inputs—Inputs other than quoted prices included in Level 1 that are observable for an asset or a liability, either directly or indirectly. These might include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for an asset or a liability (such as interest rates, yield curves, volatilities, prepayment speeds, credit risks, etc.), or inputs that are derived principally from or corroborated by market data by correlation or other means.

Level 3 Inputs—Unobservable inputs for determining fair values of assets or liabilities that reflect an entity's own assumptions in pricing assets or liabilities.

Cash Equivalents. Cash equivalents are reported at fair value utilizing quoted market prices in identical markets, or "Level 1 Inputs." Our cash equivalents consist of short-term, highly liquid investments with remaining maturities of three months or less when purchased.

Marketable Securities. Marketable securities are reported at fair value calculated in accordance with the market approach, utilizing market consensus pricing models with quoted prices that are directly or indirectly observable, or "Level 2 Inputs".

Financial instruments not measured or recorded at fair value in the accompanying consolidated financial statements consist of cash, accounts receivable, installments receivable, accounts payable and accrued liabilities. The estimated fair value of these financial instruments approximates their carrying value. The estimated fair value of the borrowings under the credit agreement approximates its carrying value due to the floating interest rate.

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(2) Significant Accounting Policies (Continued)

The following table summarizes financial assets and financial liabilities measured and recorded at fair value on a recurring basis in the accompanying consolidated balance sheets as of June 30, 2016 and 2015, segregated by the level of the valuation inputs within the fair value hierarchy utilized to measure fair value:

	Fair Value Measurements at Reporting Date Using,	
	Quoted Prices in Active Markets for Identical Assets (Level 1 Inputs)	Significant Other Observable Inputs (Level 2 Inputs)
	(Dollars in Thousands)	
June 30, 2016:		
Cash equivalents	$ 286,200	$ —
Marketable securities	—	3,006
June 30, 2015:		
Cash equivalents	$ 130,232	$ —
Marketable securities	—	62,244

At June 30, 2016 and 2015, we did not have any assets or liabilities measured at fair value on a recurring basis using significant unobservable inputs ("Level 3 Inputs").
Certain non-financial assets, including goodwill, finite-lived intangible assets and other non-financial long-lived assets, are measured at fair value using market and income approaches on a non-recurring basis when there is an indication of impairment.
(j) Computer Software Development Costs
Certain computer software development costs are capitalized in the accompanying consolidated balance sheets. Capitalization of computer software development costs begins upon establishing technological feasibility defined as meeting specifications determined by the program design. Amortization of capitalized computer software development costs is provided on a product-by-product basis using the greater of (a) the amount computed using the ratio that current gross revenue for a product bears to total of current and anticipated future gross revenue for that product or (b) the straight-line method, beginning upon commercial release of the product, and continuing over the remaining estimated economic life of the product, not to exceed three years.
Total computer software costs capitalized were $0.3 million, $0.4 million and $0.7 million during the years ended June 30, 2016, 2015 and 2014, respectively. Total amortization expense charged to operations was approximately $0.6 million, $0.7 million and $1.0 million for the years ended June 30, 2016, 2015 and 2014, respectively. Computer software development accumulated amortization totaled $73.8 million and $73.3 million as of June 30, 2016 and 2015, respectively. Weighted average remaining useful life of computer software development costs was 0.7 years and 1.1 years at June 30, 2016 and 2015, respectively.
At each balance sheet date, we evaluate the unamortized capitalized software costs for potential impairment by comparing the balance to the net realizable value of the products. During the years ending June 30, 2016, 2015 and 2014, our computer software development costs were not considered impaired and as such, we did not recognize impairment losses during the periods then ended.
(k) Foreign Currency Translation

The determination of the functional currency of subsidiaries is based on the subsidiaries' financial and operational environment and is the local currency of the subsidiary. Gains and losses from foreign currency translation related to entities whose functional currency is their local currency are credited or charged to accumulated other comprehensive income included in stockholders' (deficit) equity in the consolidated balance sheets. In all instances, foreign currency transaction and remeasurement gains or losses are credited or charged to the consolidated statements of operations as incurred as a component of other income (expense), net. Net foreign currency transaction and remeasurement gains (losses) were less than $0.1 million, $(0.8) million and $(2.3) million in fiscal 2016, 2015 and 2014, respectively. Fiscal 2016 other income (expense), net included

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(2) Significant Accounting Policies (Continued)

$3.4 million of foreign currency exchange losses related to the Acquisition Bid (refer to Note 4, Acquisitions, for further discussion).

(l) Net Income Per Share

Basic income per share is determined by dividing net income by the weighted average common shares outstanding during the period. Diluted income per share is determined by dividing net income by diluted weighted average shares outstanding during the period. Diluted weighted average shares reflect the dilutive effect, if any, of potential common shares. To the extent their effect is dilutive, employee equity awards and other commitments to be settled in common stock are included in the calculation of diluted income per share based on the treasury stock method.

For the years ended June 30, 2016, 2015 and 2014, certain employee equity awards were anti-dilutive based on the treasury stock method. The calculations of basic and diluted net income (loss) per share and basic and diluted weighted average shares outstanding are as follows:

	Year Ended June 30,		
	2016	2015	2014
	(Dollars and Shares in Thousands, Except per Share Data)		
Net income	$139,951	$118,407	$85,783
Weighted average shares outstanding	82,892	88,398	92,648
Dilutive impact from:			
Employee equity awards	417	618	1,017
Dilutive weighted average shares outstanding	83,309	89,016	93,665
Income per share			
Basic	$1.69	$1.34	$0.93
Dilutive	$1.68	$1.33	$0.92

The following potential common shares were excluded from the calculation of dilutive weighted average shares outstanding because their effect would be anti-dilutive at the balance sheet date:

	Year Ended June 30,		
	2016	2015	2014
	(Shares in Thousands)		
Employee equity awards	1,028	587	291

(m) Concentration of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk are principally cash and cash equivalents, marketable securities, accounts receivable and installments receivable. Our cash is held in financial institutions and our cash equivalents are invested in money market mutual funds that we believe to be of high credit quality. At June 30, 2016, our investments in marketable securities consist primarily of investment grade fixed income corporate debt securities with maturities of less than 2 months. We diversify our investment portfolio by investing in multiple types of investment-grade securities and attempt to mitigate a risk of loss by using a third-party investment manager.

Concentration of credit risk with respect to receivables is limited to certain customers to which we make substantial sales. To reduce risk, we assess the financial strength of our customers. We do not require collateral or other security in support of our receivables. As of June 30, 2016, we had two customer receivable balances that represented approximately 10% and 15% of our total receivables. As of June 30, 2015, we had one customer receivable balance that represented approximately 11% of our total receivables and was collected subsequent to June 30, 2015.

(n) Computer Software Developed for Internal Use and Long-Lived Assets

Computer Software Developed for Internal Use:

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(2) Significant Accounting Policies (Continued)

Computer software developed for internal use is capitalized in accordance with ASC Topic 350-40, Intangibles Goodwill and Other—Internal Use Software. We capitalize direct labor costs incurred to develop internal-use software during the application development stage after determining software technological requirements and obtaining management approval for funding projects probable of completion.

In fiscal 2016 there were no capitalized direct labor costs associated with our development of software for internal use. In fiscal 2015 and 2014, we capitalized direct labor costs of $0.3 million and $0.8 million, respectively, associated with our development of software for internal use. These costs are included within property, plant and equipment in our consolidated balance sheets.

Impairment of Long-Lived Assets:

We evaluate our long-lived assets, which include finite-lived intangible assets, property and leasehold improvements for impairment as events and circumstances indicate that the carrying amount of an asset or a group of assets may not be recoverable. We assess the recoverability of the asset or a group of assets based on the undiscounted future cash flows the asset is expected to generate, and recognize an impairment loss when estimated undiscounted future cash flows expected to result from the use of the asset are less than its carrying value. If an asset or a group of assets are deemed to be impaired, the amount of the impairment loss, if any, represents the excess of the asset's or a group of assets' carrying value compared to their estimated fair values.

(o) Comprehensive Income

Comprehensive income is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Comprehensive income (loss) and its components for fiscal 2016, 2015 and 2014 are disclosed in the accompanying consolidated statements of comprehensive income.

As of June 30, 2016, 2015 and 2014, accumulated other comprehensive income is comprised of foreign translation adjustments of $2.7 million, $6.5 million $9.4 million, respectively, and net unrealized gains (losses) on available for sale securities of less than ($0.1) million, $(0.1) million and $0.1 million, respectively.

(p) Accounting for Stock-Based Compensation

Stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the vesting period.

(q) Income Taxes

Deferred income taxes are recognized based on temporary differences between the financial statement and tax bases of assets and liabilities. Deferred tax assets and liabilities are measured using the statutory tax rates and laws expected to apply to taxable income in the years in which the temporary differences are expected to reverse. Valuation allowances are provided against net deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income and the timing of the temporary differences becoming deductible.

Management considers, among other available information, scheduled reversals of deferred tax liabilities, projected future taxable income, limitations of availability of net operating loss carryforwards, and other matters in making this assessment.

We do not provide deferred taxes on unremitted earnings of foreign subsidiaries since we intend to indefinitely reinvest either currently or sometime in the foreseeable future. Unrecognized provisions for taxes on undistributed earnings of foreign subsidiaries, which are considered indefinitely reinvested, are not material to our consolidated financial position or results of operations. We are continuously subject to examination by the IRS, as well as various state and foreign jurisdictions. The IRS and other taxing authorities may challenge certain deductions and credits reported by us on our income tax returns. In accordance with provisions of ASC Topic 740, Income Taxes (ASC 740), an entity should recognize a tax benefit when it is more-likely-than-not, based on the technical merits, that the position would be sustained upon examination by a taxing authority. The amount to be recognized, if the more-likely-than-not threshold was passed, should be measured as the largest amount of tax benefit that is greater than 50 percent likely of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information.

Furthermore, any change in the recognition, de-recognition or measurement of a tax position should be recorded in the period in which the change occurs. We account for interest and penalties related to uncertain tax positions as part of the provision for income taxes.

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(2) Significant Accounting Policies (Continued)

(r) Loss Contingencies
We accrue estimated liabilities for loss contingencies arising from claims, assessments, litigation and other sources when it is probable that a liability has been incurred and the amount of the claim assessment or damages can be reasonably estimated. We believe that we have sufficient accruals to cover any obligations resulting from claims, assessments or litigation that have met these criteria. Refer to Note 12 for discussion of these matters and related liability accruals.
(s) Advertising Costs
Advertising costs are expensed as incurred and are classified as sales and marketing expenses. We incurred advertising expenses of $2.3 million, $2.9 million and $2.1 million during fiscal 2016, 2015 and 2014, respectively.
(t) Research and Development Expense
We charge research and development expenditures to expense as the costs are incurred. Research and development expenses consist primarily of personnel expenses related to the creation of new products, enhancements and engineering changes to existing products and costs of acquired technology prior to establishing technological feasibility.
During fiscal 2016, 2015 and 2014, we acquired certain technologies for $0.3 million, $3.3 million and $4.9 million, respectively. At the time we acquired the technology, the project to develop a commercially available product did not meet the definition of having reached technological feasibility and as such, the entire cost of the acquired technology was expensed as research and development expense.
(u) Recent Accounting Pronouncements
In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606). ASU No. 2014-09 was issued by the FASB as a part of the joint project with the International Accounting Standards Board (IASB) to clarify revenue recognition principles and develop a common revenue standard for the U.S. Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS). ASU No. 2014-09 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption of ASU No. 2014-09 is permitted but not before December 15, 2016. The amendments included within ASU No. 2014-09 should be applied by using one of the following methods:
Retrospectively to each prior reporting period presented. The entity may elect any of the practical expedients described in ASU No. 2014-09 when applying this method.
Retrospectively with the cumulative effect of initially applying ASU No. 2014-09 recognized at the date of initial application. In the reporting periods that include the date of the initial application of ASU No. 2014-09, the entity should disclose the amount by which each financial statement line item is affected by the application of ASU No. 2014-09 in the current reporting period as compared to the guidance that was in effect before the change.
We will adopt ASU No. 2014-09 during the first quarter of fiscal 2019. We are currently evaluating the impact of ASU No. 2014-09 on our financial position, results of operations and cash flows.
In April 2015, the FASB issued ASU No. 2015-05, Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement. The amendment provides guidance to customers about whether a cloud computing arrangement includes a software license. If a cloud computing arrangement includes a software license, the customer should account for the software license element of the arrangement consistent with the acquisition of other software licenses. If the arrangement does not include a software license, the customer should account for a cloud computing arrangement as a service contract. The amendment will be effective for annual reporting periods beginning on or after December 15, 2015. We are currently evaluating the impact of ASU No. 2015-05 on our financial position, results of operations and cash flows.
In April 2015, the FASB issued ASU No. 2015-03, Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs. ASU 2015-03 amends current presentation guidance by requiring that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the

carrying amount of that debt liability, consistent with debt discounts. Prior to the issuance of ASU No. 2015-03, debt issuance costs were required to be presented as an asset on the balance sheet. In August 2015, the FASB issued ASU No. 2015-15, Interest - Imputation of Interest (Subtopic 835-30): Presentation and Subsequent Measurement of Debt Issuance Costs Associated with Line-of-Credit Arrangements. ASU No. 2015-15 states that debt issuance costs related to line of credit arrangements can be presented as an

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(2) Significant Accounting Policies (Continued)

asset, similar to the treatment prior to the issuance of ASU No. 2015-03. We adopted the provisions of ASU No. 2015-03 and ASU No. 2015-15 during the second quarter of fiscal 2016. As of June 30, 2016, the issuance costs related to our Credit Agreement (as described in Note 9) were recorded in prepaid expenses and other current assets in our consolidated balance sheet. Adjustments to prior periods to conform to the current period presentation were not required as we did not have deferred finance costs on the balance sheet in prior periods.
In September 2015, the FASB issued ASU No. 2015-16, Business Combinations (Topic 805): Simplifying the Accounting for Measurement-Period Adjustments, which eliminates the requirement for an acquirer to retrospectively adjust the financial statements for measurement-period adjustments that occur in periods after a business combination is consummated. The ASU instead requires an acquirer to recognize a measurement-period adjustment during the period in which it determines the amount of the adjustment. The ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2015. Early adoption is permitted. We adopted ASU No. 2015-16 during the second quarter of fiscal 2016. The adoption of ASU No. 2015-16 did not have a material impact our consolidated financial position, results of operations or cash flows.
In November 2015, the FASB issued ASU No. 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes, which simplifies the presentation of deferred income taxes by removing the requirement to bifurcate deferred income tax assets and liabilities between current and non-current. The ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2016. Early adoption is permitted. The Company elected early adoption in the fourth quarter of fiscal 2016, and deferred income tax assets and liabilities are presented as non-current in the consolidated balance sheets at June 30, 2016. This adoption was applied prospectively and prior periods have not been reclassified.
In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). Under the amendment, lessees will be required to recognize virtually all of their leases on the balance sheet, by recording a right-of-use asset and lease liability. The ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2018. Early adoption is permitted. We are currently evaluating the impact of ASU No. 2016-02 on our financial position, results of operations and cash flows.
In March 2016, the FASB issued ASU No. 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net). The amendment clarifies the implementation guidance for principal versus agent considerations as contained in ASU No. 2014-09, Revenue from Contracts with Customers. The guidance includes indicators to assist an entity in determining whether it controls a specified good or service before it is transferred to a customer. ASU No. 2016-08 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption of ASU No. 2016-08 is permitted but not before December 15, 2016. We will adopt ASU No. 2016-08 during the first quarter of fiscal 2019. We are currently evaluating the impact of ASU No. 2016-08 on our financial position, results of operations and cash flows.
In March 2016, the FASB issued ASU No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The amendment identifies several areas for simplification applicable to entities that issue share-based payment awards to their employees, including income tax consequences, the option to recognize gross stock compensation expense with actual forfeitures recognized when they occur, and certain classifications on the statements of cash flows. The ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2016. Early adoption is permitted. We are currently evaluating the impact of ASU No. 2016-09 on our financial position, results of operations and cash flows.
In April 2016, the FASB issued ASU No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing. The amendment clarifies the process of identifying performance obligations and the licensing implementation guidance as contained in ASU No. 2014-09, Revenue from Contracts with Customers. ASU No. 2016-10 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption of ASU No. 2016-10 is permitted but not before December 15, 2016. We will adopt ASU No. 2016-10 during the first quarter of fiscal 2019. We are currently evaluating the impact of ASU No.

2016-10 on our financial position, results of operations and cash flows.

In May 2016, the FASB issued ASU No. 2016-11, Revenue Recognition (Topic 605) and Derivatives and Hedging (Topic 815): Rescission of SEC Guidance Because of Accounting Standards Updates 2014-09 and 2014-16 Pursuant to Staff Announcements at the March 3, 2016 EITF Meeting. The amendment rescinds certain SEC comments as codified in ASC Topic 605, Revenue Recognition, effective upon the adoption of ASU No. 2014-09, Revenue from Contracts with Customers. ASU

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(2) Significant Accounting Policies (Continued)

No. 2016-09 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption of ASU No. 2016-09 is permitted but not before December 15, 2016. We will adopt ASU No. 2016-09 during the first quarter of fiscal 2019. We are currently evaluating the impact of ASU No. 2016-09 on our financial position, results of operations and cash flows.
In May 2016, the FASB issued ASU No. 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients. The amendment clarifies issues such as assessing collectibility, noncash considerations, contract modifications, and completed contracts at transition as contained in ASU No. 2014-09, Revenue from Contracts with Customers. ASU No. 2016-12 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption of ASU No. 2016-12 is permitted but not before December 15, 2016. We will adopt ASU No. 2016-12 during the first quarter of fiscal 2019. We are currently evaluating the impact of ASU No. 2016-12 on our financial position, results of operations and cash flows.

(3) Property and Equipment
Property, equipment and leasehold improvements in the accompanying consolidated balance sheets consist of the following:

	Year Ended June 30,	
	2016	2015
	(Dollars in Thousands)	
Property, equipment and leasehold improvements—at cost:		
Computer equipment	$10,387	$11,614
Purchased software	23,705	23,338
Furniture & fixtures	6,712	6,653
Leasehold improvements	12,523	12,225
Accumulated depreciation	(37,502)	(35,791)
Property, equipment and leasehold improvements—net	$15,825	$18,039

During fiscal 2016, we wrote off fully depreciated property, equipment and leasehold improvements that were no longer in use with gross book values of $3.0 million.
Depreciation expense was $5.1 million, $4.7 million and $3.3 million for fiscal 2016, 2015 and 2014, respectively.
We account for asset retirement obligations in accordance with ASC Topic 410, Asset Retirement and Environmental Obligations. Our asset retirement obligations relate to leasehold improvements for leased properties. The balance of our asset retirement obligations was $0.9 million and $0.6 million as of June 30, 2016 and 2015, respectively.

(4) Acquisitions
In January 2016 we placed an offer to acquire the share capital of KBC Advanced Technologies plc (“KBC”) for 185 Pence Sterling per share, which valued KBC at approximately £158 million ("the Acquisition Bid"). The Acquisition Bid was to have been funded by cash on hand of approximately $91.0 million, which was held in escrow, and $140.0 million to be funded by a credit facility. On February 26, 2016, we entered into a $250.0 million credit agreement (the “Credit Agreement”) and borrowed $140.0 million (refer to Note 9 for further discussion of the Credit Agreement). In February 2016, KBC announced it had agreed to accept an acquisition offer of 210 Pence Sterling per share from Yokogawa Electric Corporation (“Yokogawa”) and we announced we did not intend to revise our offer. In April 2016 KBC was acquired by Yokogawa. A portion of the escrow balance was held in GBP for a period of time, which resulted in foreign exchange losses. During the year ended June 30, 2016, we incurred $5.2 million of costs related to the Acquisition Bid, as well as $3.4 million of foreign exchange losses, which were recognized in our results of

operations as a component of general and administrative expenses and other income (expense), net, respectively.

(4) Acquisitions (Continued)

In June 2016, we completed the acquisition of all the outstanding shares of Fidelis Group, LLC ("Fidelis"), a provider of asset reliability software used to predict and optimize asset performance. The purchase price consisted of $8.0 million of cash paid at closing and up to $2.0 million payment to be paid in December 2017.

A preliminary allocation of the purchase price is as follows. The valuation of acquired intangible assets and the deferred tax liabilities are considered preliminary as of June 30, 2016.

	Amount (Dollars in Thousands)
Tangible assets acquired, net	$ 65
Identifiable intangible assets:	
Developed technology	1,100
Customer relationships	700
In-process Research and Development	3,200
Goodwill	6,784
Deferred tax liabilities, net	(1,849)
Total assets acquired	$ 10,000

We used the income approach to determine the values of the identifiable intangible assets. The weighted-average discount rate (or rate of return) used to determine the value of the Fidelis intangible assets was 18% and the effective tax rate used was 34%. The values of the developed technology, in-process research and development and customer relationships are being amortized on a straight-line basis over their estimated useful lives of 10.0 years, 11.0 years and 8.0 years, respectively. The in-process research and development will begin amortization upon completion, which is expected in fiscal 2017. The weighted-average amortization period for these amortizable identifiable intangible assets is approximately 10.4 years.

The goodwill, which is not deductible for tax purposes, reflects the value of the assembled workforce and the company-specific synergies we expect to realize by selling Fidelis products and services to our existing customers.

The results of operations of Fidelis have been included prospectively in our results of operations since the date of acquisition. Our results of operations giving effect to the Fidelis acquisition as if it had occurred at the beginning of fiscal 2016 would not differ materially from reported results.

(5) Intangible Assets

We include in our amortizable intangible assets those intangible assets acquired in our business and asset acquisitions. We amortize acquired intangible assets with finite lives over their estimated economic lives, generally using the straight-line method. Each period, we evaluate the estimated remaining useful lives of acquired intangible assets to determine whether events or changes in circumstances warrant a revision to the remaining period of amortization. Acquired intangibles are removed from the accounts when fully amortized and no longer in use.

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(5) Intangible Assets (Continued)

Intangible assets consist of the following as of June 30, 2016 and 2015:

	Gross Carrying Amount	Accumulated Amortization	Effect of currency translation	Net Carrying Amount	Weighted Average Remaining Life (in Years)
	(Dollars in Thousands)				
June 30, 2016:					
Technology and patents	$3,696	$ (2,046)	$ (550)	$ 1,100	10.0
In process research & development	3,200	—	—	$ 3,200	11.0
Customer relationships	700	—	—	$ 700	8.0
Total	$7,596	$ (2,046)	$ (550)	$ 5,000	10.4
June 30, 2015:					
Technology and patents	$2,596	$ (2,646)	$ 197	$ 147	0.4
Total	$2,596	$ (2,646)	$ 197	$ 147	0.4

Amortization expense for technology and patents is included in operating expenses and amounted to $0.1 million, $0.7 million and $0.9 million in fiscal 2016, 2015 and 2014, respectively. Amortization expense is expected to be approximately $0.2 million in fiscal 2017, $0.5 million in fiscal 2018, $0.5 million in fiscal 2019, $0.5 million in fiscal 2020, $0.5 million in fiscal 2021, and $2.8 million thereafter.

(6) Goodwill

The changes in the carrying amount of goodwill for our subscription and software reporting unit during fiscal years ending June 30, 2016 and 2015 were as follows:

	Amount (Dollars in Thousands)
Balance as of June 30, 2014:	
Goodwill	$ 84,845
Accumulated impairment losses	(65,569)
	$ 19,276
Effect of currency translation	(1,916)
Balance as of June 30, 2015:	
Goodwill	$ 82,929
Accumulated impairment losses	(65,569)
	$ 17,360
Acquisition	6,784
Effect of currency translation	(706)
Balance as of June 30, 2016:	
Goodwill	$ 89,007
Accumulated impairment losses	(65,569)
	$ 23,438

We test goodwill for impairment annually (or more often if impairment indicators arise), at the reporting unit level. We first assess qualitative factors to determine whether the existence of events or circumstances indicates that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If we determine based on this assessment that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, we perform the two-step goodwill

impairment test. The first step requires us to determine the fair value of the reporting unit and compare it to the carrying amount, including goodwill, of such reporting unit. If the fair value exceeds the carrying amount, no impairment loss is recognized. However, if the carrying amount of the reporting unit exceeds its fair value, the goodwill of the unit may be impaired. The amount of impairment, if any, is measured based upon the implied fair value of goodwill at the valuation date.

Fair value of a reporting unit is determined using a combined weighted average of a market-based approach (utilizing fair value multiples of comparable publicly traded companies) and an income-based approach (utilizing discounted projected cash flows). In applying the income-based approach, we would be required to make assumptions about the amount and timing of future expected cash flows, growth rates and appropriate discount rates. The amount and timing of future cash flows would be based on our most recent long-term financial projections. The discount rate we would utilize would be determined using estimates of market participant risk-adjusted weighted-average costs of capital and reflect the risks associated with achieving future cash flows.

We have elected December 31st as the annual impairment assessment date and perform additional impairment tests if triggering events occur. We performed our annual impairment test for the subscription and software reporting unit as of December 31, 2015 and, based upon the results of our qualitative assessment, determined that it was not likely that its fair value was less than its carrying amount. As such, we did not perform the two-step goodwill impairment test and did not recognize impairment losses as a result of our analysis. If an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value, goodwill will be evaluated for impairment between annual tests. No triggering events indicating goodwill impairment occurred during fiscal 2016, 2015 and 2014.

(7) Accrued Expenses and Other Liabilities

Accrued expenses and other current liabilities in the accompanying consolidated balance sheets consist of the following:

	Year Ended June 30,	
	2016	2015
	(Dollars in Thousands)	
Royalties and outside commissions	$2,640	$2,879
Payroll and payroll-related	17,809	18,965
Other	15,656	16,639
Total accrued expenses and other current liabilities	$36,105	$38,483

Other non-current liabilities in the accompanying consolidated balance sheets consist of the following:

	Year Ended June 30,	
	2016	2015
	(Dollars in Thousands)	
Deferred rent	$6,361	$5,273
Uncertain tax positions	23,535	19,870
Other	2,695	4,379
Total other non-current liabilities	$32,591	$29,522

(8) Common Stock

On January 28, 2015, our Board of Directors approved a share repurchase program for up to $450 million worth of our common stock. On April 26, 2016, the Board of Directors approved a $400 million increase in the current share repurchase plan. The timing and amount of any shares repurchased are based on market conditions and other factors. All share repurchases of our common stock have been recorded as treasury stock under the cost method.

Table of Contents

We repurchased 4,750,692 shares, 7,731,428 shares and 3,110,114 shares of our common stock for $180.1 million, $298.3 million and $121.8 million during fiscal 2016, 2015 and 2014, respectively. As of June 30, 2016, the remaining dollar value under the stock repurchase program was $521.3 million.

(9) Credit Agreement

On February 26, 2016, we entered into a $250.0 million Credit Agreement (the “Credit Agreement”) with JPMorgan Chase Bank, N.A., as administrative agent, Silicon Valley Bank, as syndication agent, and the lenders and other parties named therein (the “Lenders”). The indebtedness evidenced by the Credit Agreement matures on February 26, 2021. Prior to the maturity of the Credit Agreement, any amounts borrowed may be repaid and, subject to the terms and conditions of the Credit Agreement, borrowed again in whole or in part without penalty. As of June 30, 2016, we had $140.0 million in outstanding borrowings under the Credit Agreement.

Borrowings under the Credit Agreement bear interest at a rate equal to either, at our option, the sum of (a) the highest of (1) the rate of interest publicly announced by JPMorgan Chase Bank, N.A. as its prime rate in effect, (2) the Federal Funds Effective Rate plus 0.5%, and (3) the one-month Adjusted LIBO Rate plus 1.0%, plus (b) a margin initially of 0.5% for the first full fiscal quarter ending after the date of the Credit Agreement and thereafter based on our Leverage Ratio; or the Adjusted LIBO Rate plus a margin initially of 1.5% for the first full fiscal quarter ending after the date of the Credit Agreement and thereafter based on our Leverage Ratio. We must also pay, on a quarterly basis, an unused commitment fee at a rate of between 0.2% and 0.3% per annum, based on our Leverage Ratio. The interest rate as of June 30, 2016 was 1.96%.

All borrowings under the Credit Agreement are secured by liens on substantially all of our assets. The Credit Agreement contains affirmative and negative covenants customary for facilities of this type, including restrictions on: incurrence of additional debt; liens; fundamental changes; asset sales; restricted payments; and transactions with affiliates. The Credit Agreement contains financial covenants regarding maintenance as of the end of each fiscal quarter, commencing with the quarter ending June 30, 2016, of a maximum Leverage Ratio of 3.0 to 1.0 and a minimum Interest Coverage Ratio of 3.0 to 1.0. We were in compliance with all covenants as of June 30, 2016.

(10) Stock-Based Compensation

Stock Compensation Plans

In April 2010, the shareholders approved the establishment of the 2010 Equity Incentive Plan (the 2010 Plan), which provides for the issuance of a maximum of 7,000,000 shares of common stock. The 2010 Plan provides for the grant of incentive and nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units, other stock-related awards, and performance awards that may be settled in cash, stock, or other property. As of June 30, 2016, there were 3,537,843 shares of common stock available for issuance subject to awards under the 2010 Plan.

In May 2005, the shareholders approved the establishment of the 2005 Stock Incentive Plan (the 2005 Plan), which provides for the issuance of a maximum of 4,000,000 shares of common stock. The 2005 Plan provides for the grant of incentive and nonqualified stock options and other stock-based awards, including the grant of shares based upon certain conditions, the grant of securities convertible into common stock and the grant of stock appreciation rights. Restricted stock and other stock-based awards granted under the 2005 Plan may not exceed, in the aggregate, 4,000,000 shares of common stock. The 2005 Plan expired on March 31, 2015.

General Award Terms

We issue stock options and restricted stock units (RSUs) to our employees and outside directors, pursuant to shareholder-approved equity compensation plans. Option awards are granted with an exercise price equal to the market closing price of our stock on the trading day prior to the grant date. Those options generally vest over four years and expire within 7 or 10 years of grant. RSUs generally vest over four years. Historically, our practice has been to settle stock option exercises and RSU vesting through newly-issued shares.

Stock Compensation Accounting

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(10) Stock-Based Compensation (Continued)

Our stock-based compensation is accounted for as awards of equity instruments. Our policy is to issue new shares upon the exercise of stock awards. We use the "with-and-without" approach for determining if excess tax benefits are realized under ASC 718.

We utilize the Black-Scholes option valuation model for estimating the fair value of options granted. The Black-Scholes option valuation model incorporates assumptions regarding expected stock price volatility, the expected life of the option, the risk-free interest rate, dividend yield and the market value of our common stock. The expected stock price volatility is determined based on our stock's historic prices over a period commensurate with the expected life of the award. The expected life of an option represents the period for which options are expected to be outstanding as determined by historic option exercises and cancellations. The risk-free interest rate is based on the U.S. Treasury yield curve for notes with terms approximating the expected life of the options granted. The expected dividend yield is zero, based on our history and expectation of not paying dividends on common shares. We recognize compensation costs on a straight-line basis, net of estimated forfeitures, over the requisite service period for time-vested awards.

The weighted average estimated fair value of option awards granted during fiscal 2016, 2015 and 2014 was $13.16, $13.43 and $11.56 respectively.

We utilized the Black-Scholes option valuation model with the following weighted average assumptions:

	Year Ended June 30,		
	2016	2015	2014
Risk-free interest rate	1.4 %	1.5 %	1.3 %
Expected dividend yield	None	None	None
Expected life (in years)	4.6	4.6	4.6
Expected volatility factor	34 %	35 %	39 %

The stock-based compensation expense and its classification in the accompanying consolidated statements of operations for fiscal 2016, 2015 and 2014 was as follows:

	Year Ended June 30,		
	2016	2015	2014
	(Dollars in Thousands)		
Recorded as expenses:			
Cost of service and other	$1,390	$1,351	$1,239
Selling and marketing	4,351	3,056	3,280
Research and development	3,423	3,881	4,129
General and administrative	6,563	6,296	5,408
Total stock-based compensation	$15,727	$14,584	$14,056

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(10) Stock-Based Compensation (Continued)

A summary of stock option and RSU activity under all equity plans in fiscal 2016 is as follows:

	Stock Options				Restricted Stock Units	
	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value (in 000's)	Shares	Weighted Average Grant Date Fair Value
Outstanding at June 30, 2015	1,214,257	$ 27.25	7.26	$ 22,232	542,432	$ 36.13
Granted	428,083	42.66			422,120	41.86
Settled (RSUs)					(341,496)	35.74
Exercised	(201,706)	19.44				
Cancelled / Forfeited	(126,492)	37.61			(129,724)	37.09
Outstanding at June 30, 2016	1,314,142	$ 32.47	7.23	$ 12,340	493,332	$ 41.06
Exercisable at June 30, 2016	836,756	$ 27.46	6.40	$ 11,485		
Vested and expected to vest at June 30, 2016	1,265,478	$ 32.10	7.18	$ 12,280	443,222	$ 40.97

During fiscal 2016, 2015 and 2014, the weighted average grant-date fair value of RSUs granted was $41.86, $42.65 and $33.07, respectively. During fiscal 2016, 2015 and 2014 the total fair value of vested shares from RSU grants amounted to $12.7 million, $16.1 million and $22.2 million, respectively.

As of June 30, 2016, the total future unrecognized compensation cost related to stock options and RSUs was $5.4 million and $17.8 million, respectively, and both are expected to be recorded over a weighted average period of 2.5 years.

During fiscal 2016, 2015 and 2014 the weighted average exercise price of stock options granted was $42.66, $42.66 and $33.06. The total intrinsic value of options exercised during fiscal 2016, 2015 and 2014 was $4.1 million, $8.2 million and $19.9 million, respectively. We received $3.9 million, $4.6 million and $8.7 million in cash proceeds from option exercises during fiscal 2016, 2015 and 2014, respectively. We paid $4.4 million, $5.7 million and $7.8 million for withholding taxes on vested RSUs during fiscal 2016, 2015 and 2014, respectively.

At June 30, 2016, common stock reserved for future issuance or settlement under equity compensation plans was 5.3 million shares.

(11) Income Taxes

Income before provision for income taxes consists of the following:

	Year Ended June 30,		
	2016	2015	2014
	(Dollars in Thousands)		
Domestic	$201,885	$175,805	$121,329
Foreign	8,754	3,666	7,204
Income before provision for income taxes	$210,639	$179,471	$128,533

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(11) Income Taxes (Continued)

The provision for income taxes shown in the accompanying consolidated statements of operations is composed of the following:

	Year Ended June 30,		
	2016	2015	2014
	(Dollars in Thousands)		
Federal—			
Current	$56,535	$—	$—
Deferred	7,496	55,895	32,996
State—			
Current	1,866	2,176	528
Deferred	204	729	1,005
Foreign—			
Current	4,554	3,382	7,785
Deferred	33	(1,118)	436
	$70,688	$61,064	$42,750

The provision for income taxes differs from that based on the federal statutory rate due to the following:

	Year Ended June 30,		
	2016	2015	2014
	(Dollars in Thousands)		
Federal tax provision at statutory rate	$73,723	$62,815	$44,989
State income taxes	1,153	2,114	78
Subpart F and dividend income	3,581	2,799	6,667
Foreign taxes and rate differences	(663)	(222)	1,881
Stock-based compensation	1,359	763	631
Tax credits	(3,867)	(3,562)	(8,902)
Tax contingencies	(581)	(641)	(261)
Return to provision adjustments	658	384	150
Domestic Production Activity Deduction	(4,892)	(3,600)	(2,443)
Valuation allowance	49	176	(16)
Other	168	38	(24)
Provision for income taxes	$70,688	$61,064	$42,750

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(11) Income Taxes (Continued)

Deferred tax assets (liabilities) consist of the following at June 30, 2016 and 2015:

	Year Ended June 30,	
	2016	2015
	(Dollars in Thousands)	
Deferred tax assets:		
Federal and state credits	$1,270	$2,144
Capital loss carryforwards	8,073	8,028
Foreign loss carryforwards	1,742	2,133
Deferred revenue	7,821	5,620
Other reserves and accruals	6,762	6,838
Intangible assets	1,616	2,478
Property, leasehold improvements, and other basis differences	1,853	2,136
Other temporary differences	870	2,916
	30,007	32,293
Deferred tax liabilities:		
Deferred revenue	(1,276)	(1,362)
Intangible assets	(2,912)	(1,065)
Property, leasehold improvements, and other basis differences	(3,305)	(2,812)
Other temporary differences	(508)	(645)
	(8,001)	(5,884)
Valuation allowance	(10,119)	(10,144)
Net deferred tax assets	$11,887	$16,265

Reflected in the deferred tax assets above at June 30, 2016, we have foreign net operating loss carryforwards of $6.9 million some of which will expire beginning in 2019 and others with unlimited carryforwards, state research and development credits of $1.2 million which begin to expire in 2025, and U.S. federal alternative minimum tax credit carryforwards of $0.4 million which has an unlimited carryforward.

In fiscal 2016 and fiscal 2015, we recorded reductions in the income taxes payable of $2.2 million and $37.0 million, respectively, with an increase to additional paid in capital, for the benefits of excess stock-based compensation deductions recognized during the period in the United States and United Kingdom.

Our valuation allowance for deferred tax assets was $10.1 million and $10.1 million as of June 30, 2016 and 2015 respectively. The most significant portion of the valuation allowance is attributable to a reserve against US capital loss carryforward deferred tax asset of $8.1 million.

We have determined that we underwent an ownership change (as defined under section 382 of the Internal Revenue Code of 1986, as amended) during fiscal 2011. As such, the utilization of certain tax attributes is subject to an annual limitation. The annual limitation is not expected to impact the realizability of the deferred tax assets.

For fiscal 2016, our income tax provision included amounts determined under the provisions of ASC 740 intended to satisfy additional income tax assessments, including interest and penalties, that could result from any tax return positions for which the likelihood of sustaining the position on audit does not meet a threshold of "more likely than not." Tax liabilities were recorded as a component of our income taxes payable and other non-current liabilities. The ultimate amount of taxes due will not be known until examinations are completed and settled or the audit periods are closed by statutes.

Table of Contents

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(11) Income Taxes (Continued)

A reconciliation of the reserve for uncertain tax positions is as follows:

	Year Ended June 30,		
	2016	2015	2014
	(Dollars in Thousands)		
Uncertain tax positions, beginning of year	$19,870	$21,193	$22,031
Gross increases—tax positions in prior period	67	238	112
Gross increases—tax positions in current period	5,474	—	—
Gross decreases—lapse of statutes	(1,772)	(1,024)	(823)
Currency translation adjustment	(104)	(537)	(127)
Uncertain tax positions, end of year	$23,535	$19,870	$21,193

At June 30, 2016, the total amount of unrecognized tax benefits is $23.5 million. Upon being recognized, the amount would reduce the effective tax rate. Our policy is to recognize interest and penalties related to income tax matters as provision for (benefit from) income taxes. At June 30, 2016, we had approximately $1.2 million of accrued interest and $0.8 million of penalties related to uncertain tax positions. We recorded a benefit for interest and penalties of approximately $0.8 million during fiscal 2016.

During the fourth quarter of fiscal 2016, we were notified by the Internal Revenue Services (“IRS”) that the fiscal 2015 U.S. federal income tax return will be audited. We believe our allowances for income tax contingencies are adequate and do not expect final resolution of the audit for approximately 12 months. Based on the information currently available, we do not anticipate a significant increase or decrease to our tax contingencies. We also continue to be subject to examination by the IRS for tax years 2007 to 2015.

We are subject to income tax in many jurisdictions outside the U.S. Our operations in certain jurisdictions remain subject to examination for tax years 2006 to 2015, some of which are currently under audit by local tax authorities. The resolutions of these audits are not expected to be material to our consolidated financial statements.

(12) Commitments and Contingencies

Operating Leases

We lease certain facilities and various office equipment under non-cancellable operating leases with terms in excess of one year. Rental expense, including short term leases, maintenance charges and taxes on leased facilities, was approximately $8.3 million, $8.3 million and $7.1 million for fiscal years 2016, 2015 and 2014, respectively.

Future minimum lease payments under these leases as of June 30, 2016 are as follows:

Year Ended June 30,	Operating Leases
	(Dollars in Thousands)
2017	$ 5,973
2018	6,815
2019	7,475
2020	6,979
2021	5,733
Thereafter	16,703
Total	$ 49,678

Standby letters of credit for $3.5 million secure our performance on professional services contracts and certain facility leases. The letters of credit expire at various dates through fiscal 2025.

Table of Contents

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(12) Commitments and Contingencies (Continued)

Legal Matters

In the ordinary course of business, we are, from time to time, involved in lawsuits, claims, investigations, proceedings and threats of litigation. These matters include an April 2004 claim by a customer that certain of our software products and implementation services failed to meet the customer's expectations. In March 2014, a judgment was issued by the trial court against us in the amount of approximately 1.9 million Euro ("€") plus interest and a portion of legal fees. We subsequently filed an appeal of that judgment. As of June 2016, the appellate court determined that we are liable for damages in the amount of approximately €1.7 million plus interest, with the possibility of additional damages to be determined in further proceedings by the appellate court.

While the outcome of the proceedings and claims referenced above cannot be predicted with certainty, there are no such matters, as of June 30, 2016 that, in the opinion of management, are reasonably possible to have a material adverse effect on our financial position, results of operations or cash flows. Liabilities, if applicable, related to the aforementioned matters discussed in this Note have been included in our accrued liabilities at June 30, 2016, and are not material to our financial position for the periods then ended. As of June 30, 2016, we do not believe that there is a reasonable possibility of a material loss exceeding the amounts already accrued for the proceedings or matters discussed above. However, the results of litigation (including the above-referenced appeal) and claims cannot be predicted with certainty; unfavorable resolutions are possible and could materially affect our results of operations, cash flows or financial position. In addition, regardless of the outcome, litigation could have an adverse impact on us because of attorneys' fees and costs, diversion of management resources and other factors.

(13) Retirement Plans

We maintain a defined contribution retirement plan under Section 401(k) of the Internal Revenue Code (IRC) covering all eligible employees, as defined. Under the plan, a participant may elect to defer receipt of a stated percentage of his or her compensation, subject to limitation under the IRC, which would otherwise be payable to the participant for any plan year. We may make discretionary contributions to this plan, including making matching contributions of 50%, up to a maximum of 6% of an employee's pretax contribution. We made matching contributions of approximately $2.4 million, $2.2 million and $2.0 million in fiscal 2016, 2015 and 2014, respectively. Additionally, we participate in certain government mandated and defined contribution plans throughout the world for which we comply with all funding requirements.

(14) Segment and Geographic Information

Operating segments are defined as components of an enterprise that engage in business activities for which discrete financial information is available and regularly reviewed by the chief operating decision maker in deciding how to allocate resources and to assess performance. Our chief operating decision maker is our President and Chief Executive Officer.

We have two operating and reportable segments, which are consistent with our reporting units: i) subscription and software and ii) services. The subscription and software segment is engaged in the licensing of process optimization software solutions and associated support services. The services segment includes professional services and training. The accounting policies of the operating segments are the same as those described in the summary of significant accounting policies (refer to Note 2). We do not track assets or capital expenditures by operating segments. Consequently, it is not practical to present assets, capital expenditures, depreciation or amortization by operating segments.

Table of Contents

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(14) Segment and Geographic Information (Continued)

The following table presents a summary of our reportable segments' profits:

	Subscription and software	Services	Total
	(Dollars in Thousands)		
Year Ended June 30, 2016:			
Segment revenue	$440,408	$31,936	$472,344
Segment expenses(1)	(179,064)	(28,235)	(207,299)
Segment profit	$261,344	$3,701	$265,045
Year Ended June 30, 2015:			
Segment revenue	$405,640	$34,761	$440,401
Segment expenses(1)	(183,485)	(28,411)	(211,896)
Segment profit	$222,155	$6,350	$228,505
Year Ended June 30, 2014:			
Segment revenue	$350,486	$40,967	$391,453
Segment expenses(1)	(183,378)	(32,547)	(215,925)
Segment profit	$167,108	$8,420	$175,528

(1) Our reportable segments' operating expenses include expenses directly attributable to the segments. Segment expenses include selling and marketing, research and development, stock-based compensation and certain corporate expenses incurred in support of the segments. Segment expenses do not include allocations of general and administrative; interest income, net; and other income (expense), net.

Reconciliation to Income Before Provision for Income Taxes

The following table presents a reconciliation of total segment operating profit to income before provision for income taxes:

	Year Ended June 30,		
	2016	2015	2014
	(Dollars in Thousands)		
Total segment profit for reportable segments	$265,045	$228,505	$175,528
General and administrative	(53,664)	(48,713)	(45,804)
Other income (expense), net	29	(778)	(2,278)
Interest income (net)	(771)	457	1,087
Income before provision for income taxes	$210,639	$179,471	$128,533

Table of Contents
ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(14) Segment and Geographic Information (Continued)

Geographic Information:
Revenue to external customers is attributed to individual countries based on the location the product or services are sold. Domestic and international sales as a percentage of total revenue are as follows:

	Year Ended June 30,		
	2016	2015	2014
United States	35.4 %	34.6 %	35.5 %
Europe	29.6	30.6	30.2
Other(1)	35.0	34.8	34.3
	100.0%	100.0%	100.0%

(1) Other consists primarily of Asia Pacific, Canada, Latin America and the Middle East.

We have long-lived assets of approximately $31.6 million that are located domestically and $14.6 million that reside in other geographic locations as of June 30, 2016. We had long-lived assets of approximately $23.8 million that were located domestically and $14.2 million that reside in other geographic locations as of June 30, 2015.

(15) Quarterly Financial Data (Unaudited)

The following tables present quarterly consolidated statement of operations data for fiscal 2016 and 2015. The below data is unaudited but, in our opinion, reflects all adjustments necessary for a fair presentation of this data in accordance with GAAP:

	Three Months Ended			
	June 30, 2016	March 31, 2016	December 31, 2015	September 30, 2015
	(Dollars and Shares in Thousands, Except per Share Data)			
Total revenue	$113,680	$119,217	$119,151	$ 120,296
Gross profit	101,949	107,197	107,263	107,324
Income from operations	48,972	50,681	56,299	55,429
Net income	33,326	33,171	36,683	36,771
Net income per common share:				
Basic	$0.41	$0.40	$0.44	$ 0.44
Diluted	$0.41	$0.40	$0.44	$ 0.44
Weighted average shares outstanding:				
Basic	81,282	83,081	83,315	83,876
Diluted	81,599	83,373	83,703	84,320

Table of Contents

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(15) Quarterly Financial Data (Unaudited) (Continued)

	Three Months Ended			
	June 30, 2015	March 31, 2015	December 31, 2014	September 30, 2014
	(Dollars and Shares in Thousands, Except per Share Data)			
Total revenue	$114,186	$111,299	$107,790	$ 107,126
Gross profit	101,565	98,990	95,525	94,745
Income from operations	46,906	41,731	46,521	44,634
Net income	30,806	28,170	30,464	28,967
Net income per common share:				
Basic	$0.36	$0.32	$0.34	$ 0.32
Diluted	$0.36	$0.32	$0.34	$ 0.32
Weighted average shares outstanding:				
Basic	85,056	87,355	89,942	91,183
Diluted	85,585	87,853	90,471	91,891

Table of Contents

EXHIBIT INDEX

Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form	Filing Date with SEC(1)	Exhibit Number
3.1	Certificate of Incorporation of Aspen Technology, Inc., as amended		8-K	August 22, 2003	4
3.2	By-laws of Aspen Technology, Inc.		8-K	March 27, 1998	3.2
4.1	Specimen certificate for common stock, $.10 par value, of Aspen Technology, Inc.		8-A/A	June 12, 1998	4
10.1	Lease Agreement dated January 27, 2014 between RAR2-Crosby Corporate Center QRS, Inc. and Aspen Technology, Inc. regarding 20, 22 and 28 Crosby Drive, Bedford, Massachusetts		10-Q	January 30, 2014	10.1
10.2	System License Agreement dated March 30, 1982 between Aspen Technology, Inc. and the Massachusetts Institute of Technology		10-K	April 11, 2008	10.4
10.3	Amendment dated March 30, 1982 to System License Agreement dated March 30, 1982 between Aspen Technology, Inc. and the Massachusetts Institute of Technology		10-K	April 11, 2008	10.5
10.4	Rule 2.7 Announcement, dated January 12, 2016		8-K	January 19, 2016	2.1
10.5	364-Day Bridge Credit Agreement, dated as of January 12, 2016, among Aspen Technology, Inc., as borrower, the lenders party thereto, JPMorgan Chase Bank, N.A., as administrative agent, and J.P. Morgan Securities LLC, as sole lead arranger and sole bookrunner		8-K	January 19, 2016	10.1
10.6	Credit Agreement, dated as of February 26, 2016, among Aspen Technology, Inc., as borrower, the lenders, co-documentation agents and issuing banks party thereto, JPMorgan Chase Bank, N.A., as administrative agent, joint lead arranger and joint bookrunner, and Silicon Valley Bank, as syndication agent, joint lead arranger and joint bookrunner		8-K	February 29, 2016	10.1
10.7^	Aspen Technology, Inc. 2005 Stock Incentive Plan (as amended)		10-K	November 9, 2009	10.39

10.8^	Form of Terms and Conditions of Stock Option Agreement granted under Aspen Technology, Inc. 2005 Stock Incentive Plan	10-Q	November 14, 2006	10.8
10.9^	Form of Restricted Stock Unit Agreement granted under Aspen Technology, Inc. 2005 Stock Incentive Plan	10-Q	November 14, 2006	10.9
10.10^	Form of Restricted Stock Unit Agreement—G granted under Aspen Technology, Inc. 2005 Stock Incentive Plan	10-Q	November 14, 2006	10.10
10.11^	Terms and Conditions of Restricted Stock Unit Agreement granted under 2005 Stock Incentive Plan	10-K	November 9, 2009	10.43

EX-1

Table of Contents

Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form	Filing Date with SEC(1)	Exhibit Number
10.12^	Aspen Technology, Inc. 2010 Equity Incentive Plan		8-K	April 21, 2010	10.1
10.13^	Form of Terms and Conditions of Restricted Stock Unit Agreement granted under Aspen Technology, Inc. 2010 Equity Incentive Plan		10-K	September 2, 2010	10.42
10.14^	Form of Terms and Conditions of Stock Option Agreement Granted under Aspen Technology, Inc. 2010 Equity Incentive Plan		10-K	September 2, 2010	10.43
10.15^	Aspen Technology, Inc. Executive Annual Incentive Bonus Plan (Fiscal Year 2014)		8-K	July 25, 2013	10.1
10.16^	Aspen Technology, Inc. Executive Annual Incentive Bonus Plan (Fiscal Year 2015)		8-K	July 25, 2014	10.1
10.17^	Aspen Technology, Inc. Executive Annual Incentive Bonus Plan (Fiscal Year 2016)		8-K	July 24, 2015	10.1
10.18^	Aspen Technology, Inc. Executive Annual Bonus Plan (Fiscal Year 2017)		8-K	July 22, 2016	10.1
10.19^	Form of Amended and Restated Executive Retention Agreement entered into by Aspen Technology, Inc. and each executive officer of Aspen Technology, Inc. (other than Antonio J. Pietri)		10-K	August 13, 2014	10.29
10.20^	Amended and Restated Executive Retention Agreement dated July 1, 2013 entered into by Aspen Technology, Inc. and Antonio J. Pietri		10-K	August 15, 2013	10.29
10.21^	Form of Confidentiality and Non-Competition Agreement of Aspen Technology, Inc.		10-K	April 11, 2008	10.45
10.22^	Non-Competition and Non-Solicitation Agreement dated July 1, 2013 entered into by Aspen Technology, Inc. and Antonio J. Pietri		10-K	August 15, 2013	10.30
21.1	Subsidiaries of Aspen Technology, Inc.	X			
23.1	Consent of KPMG LLP	X			
31.1		X			

	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	
31.2	Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X
32.1*	Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X
101.INS	Instance Document	X
101.SCH	XBRL Taxonomy Extension Schema Document	X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	X

EX-2

Table of Contents

Exhibit Number	Description	Filed with this Form 10-K	Incorporated by Reference		
			Form	Filing Date with SEC(1)	Exhibit Number
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	X			
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	X			
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	X			

(1) The SEC File No. is 001-34630 for Exhibits 10.9 through 10.11; and 10.13 through 10.15, inclusive. The SEC File No. for all other exhibits is 000-24786.

^ Management contract or compensatory plan or arrangement

* The certification attached as Exhibit 32.1 that accompanies this Form 10-K is not deemed filed with the SEC and is not to be incorporated by reference into any filing of Aspen Technology, Inc. under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date of this Form 10-K, irrespective of any general incorporation language contained in such filing.

EX-3