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

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended December 31, 2016

or

☐ **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: 001-34630

ASPEN TECHNOLOGY, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

04-2739697

(I.R.S. Employer Identification No.)

20 Crosby Drive

Bedford, Massachusetts

(Address of principal executive offices)

01730

(Zip Code)

(781) 221-6400

(Registrant's telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§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 ☒ No ☐

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

☒

Accelerated filer

☐

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

Smaller reporting company

☐

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

As of January 19, 2017, there were 76,072,181 shares of the registrant's common stock (par value \$0.10 per share) outstanding.

TABLE OF CONTENTS

	<u>Page</u>
 PART I - FINANCIAL INFORMATION	
Item 1.	Financial Statements.
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations.
Item 3.	Quantitative and Qualitative Disclosures About Market Risk.
Item 4.	Controls and Procedures.
 PART II - OTHER INFORMATION	
Item 1.	Legal Proceedings.
Item 1A.	Risk Factors.
Item 2.	Unregistered Sales of Equity Securities and Use of Proceeds.
Item 6.	Exhibits.
 SIGNATURES	

aspenONE is one of our registered trademarks. All other trade names, trademarks and service marks appearing in this Form 10-Q are the property of their respective owners.

Our fiscal year ends on June 30, and references to a specific fiscal year are to the twelve months ended June 30 of such year (for example, "fiscal 2017" refers to the year ending June 30, 2017).

PART I - FINANCIAL INFORMATION
Item 1. Financial Statements.
Consolidated Financial Statements (unaudited)

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

	Three Months Ended December 31,		Six Months Ended December 31,	
	2016	2015	2016	2015
(Dollars in Thousands, Except per Share Data)				
Revenue:				
Subscription and software	\$ 112,916	\$ 110,126	\$ 226,360	\$ 221,985
Services and other	7,017	9,025	13,623	17,462
Total revenue	119,933	119,151	239,983	239,447
Cost of revenue:				
Subscription and software	5,176	4,967	10,245	10,209
Services and other	6,403	6,921	12,839	14,651
Total cost of revenue	11,579	11,888	23,084	24,860
Gross profit	108,354	107,263	216,899	214,587
Operating expenses:				
Selling and marketing	21,829	21,178	43,854	43,614
Research and development	18,597	15,981	37,229	32,578
General and administrative	11,863	13,805	25,020	26,667
Total operating expenses, net	52,289	50,964	106,103	102,859
Income from operations	56,065	56,299	110,796	111,728
Interest income	216	71	488	153
Interest expense	(892)	(13)	(1,762)	(14)
Other income (expense), net	697	(157)	1,344	739
Income before provision for income taxes	56,086	56,200	110,866	112,606
Provision for income taxes	19,076	19,517	38,855	39,152
Net income	\$ 37,010	\$ 36,683	\$ 72,011	\$ 73,454
Net income per common share:				
Basic	\$ 0.48	\$ 0.44	\$ 0.92	\$ 0.88
Diluted	\$ 0.48	\$ 0.44	\$ 0.92	\$ 0.87
Weighted average shares outstanding:				
Basic	76,905	83,315	77,977	83,596
Diluted	77,318	83,703	78,356	84,035

See accompanying Notes to these unaudited consolidated financial statements.

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

	Three Months Ended December 31,		Six Months Ended December 31,	
	2016	2015	2016	2015
	(Dollars in Thousands)			
Net income	\$ 37,010	\$ 36,683	\$ 72,011	\$ 73,454
Other comprehensive loss:				
Net unrealized gains (losses) on available for sale securities, net of tax effects of (\$5) and \$10 for the three and six months ended December 31, 2016, and \$8 and (\$4) for the three and six months ended December 31, 2015	10	(15)	(17)	8
Foreign currency translation adjustments	(1,717)	(428)	(2,620)	(2,161)
Total other comprehensive loss	(1,707)	(443)	(2,637)	(2,153)
Comprehensive income	<u>\$ 35,303</u>	<u>\$ 36,240</u>	<u>\$ 69,374</u>	<u>\$ 71,301</u>

See accompanying Notes to these unaudited consolidated financial statements.

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Unaudited)

	December 31, 2016	June 30, 2016
	(Dollars in Thousands, Except Share Data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 67,026	\$ 318,336
Short-term marketable securities	72,939	3,006
Accounts receivable, net	17,927	20,476
Prepaid expenses and other current assets	10,409	13,948
Prepaid income taxes	108	5,557
Total current assets	168,409	361,323
Property, equipment and leasehold improvements, net	14,992	15,825
Computer software development costs, net	571	720
Goodwill	53,033	23,438
Intangible assets, net	21,628	5,000
Non-current deferred tax assets	7,542	12,236
Other non-current assets	1,182	1,196
Total assets	\$ 267,357	\$ 419,738
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	\$ 1,289	\$ 3,559
Accrued expenses and other current liabilities	33,028	36,105
Income taxes payable	6,800	439
Borrowings under credit agreement	140,000	140,000
Current deferred revenue	213,883	252,520
Total current liabilities	395,000	432,623
Non-current deferred revenue	27,452	29,558
Other non-current liabilities	37,782	32,591
Commitments and contingencies (Note 16)		
Series D redeemable convertible preferred stock, \$0.10 par value—		
Authorized— 3,636 shares as of December 31, 2016 and June 30, 2016		
Issued and outstanding— none as of December 31, 2016 and June 30, 2016	—	—
Stockholders' deficit:		
Common stock, \$0.10 par value— Authorized—210,000,000 shares		
Issued— 102,331,673 shares at December 31, 2016 and 102,031,960 shares at June 30, 2016		
Outstanding— 76,244,859 shares at December 31, 2016 and 80,177,950 shares at June 30, 2016	10,233	10,203
Additional paid-in capital	672,041	659,287
Retained earnings (deficit)	66,334	(5,676)
Accumulated other comprehensive income	14	2,651
Treasury stock, at cost—26,086,814 shares of common stock at December 31, 2016 and 21,854,010 shares at June 30, 2016	(941,499)	(741,499)
Total stockholders' deficit	(192,877)	(75,034)
Total liabilities and stockholders' deficit	\$ 267,357	\$ 419,738

See accompanying Notes to these unaudited consolidated financial statements.

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

	Six Months Ended December 31,	
	2016	2015
	(Dollars in Thousands)	
Cash flows from operating activities:		
Net income	\$ 72,011	\$ 73,454
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	3,300	3,020
Net foreign currency gains	(2,301)	(1,444)
Stock-based compensation	9,630	7,935
Deferred income taxes	182	(133)
Provision for bad debts	56	176
Tax benefits from stock-based compensation	1,032	1,831
Excess tax benefits from stock-based compensation	(1,032)	(1,831)
Other non-cash operating activities	40	271
Changes in assets and liabilities, excluding initial effects of acquisitions:		
Accounts receivable	2,494	15,720
Prepaid expenses, prepaid income taxes, and other assets	3,661	1,993
Accounts payable, accrued expenses, income taxes payable and other liabilities	5,084	(3,307)
Deferred revenue	(40,740)	(58,513)
Net cash provided by operating activities	53,417	39,172
Cash flows from investing activities:		
Purchases of marketable securities	(683,748)	—
Maturities of marketable securities	613,379	32,049
Purchases of property, equipment and leasehold improvements	(1,374)	(1,781)
Payments for business acquisitions, net of cash acquired	(36,171)	—
Payments for capitalized computer software costs	(100)	—
Net cash (used in) provided by investing activities	(108,014)	30,268
Cash flows from financing activities:		
Exercises of stock options	4,843	2,445
Repurchases of common stock	(199,584)	(56,790)
Payments of tax withholding obligations related to restricted stock	(2,786)	(2,188)
Excess tax benefits from stock-based compensation	1,032	1,831
Net cash used in financing activities	(196,495)	(54,702)
Effect of exchange rate changes on cash and cash equivalents	(218)	(364)
(Decrease) increase in cash and cash equivalents	(251,310)	14,374
Cash and cash equivalents, beginning of period	318,336	156,249
Cash and cash equivalents, end of period	\$ 67,026	\$ 170,623
Supplemental disclosure of cash flow information:		
Income taxes paid, net	\$ 25,000	\$ 34,497
Interest paid	1,579	14
Supplemental disclosure of non-cash investing and financing activities:		
Change in purchases of property, equipment and leasehold improvements included in accounts payable and accrued expenses	\$ 506	\$ (295)
Change in common stock repurchases included in accrued expenses	416	(1,724)

See accompanying Notes to these unaudited consolidated financial statements.

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS

1. Interim Unaudited Consolidated Financial Statements

The accompanying interim unaudited consolidated financial statements of Aspen Technology, Inc. and its subsidiaries have been prepared on the same basis as our annual consolidated financial statements. We have omitted certain information and footnote disclosures normally included in our annual consolidated financial statements. Such interim unaudited consolidated financial statements have been prepared in conformity with U.S. Generally Accepted Accounting Principles (GAAP), as defined in the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 270, *Interim Reporting*, for interim financial information and with the instructions to Rule 10-01 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. It is suggested that these unaudited consolidated financial statements be read in conjunction with the audited consolidated financial statements for the year ended June 30, 2016, which are contained in our Annual Report on Form 10-K, as previously filed with the U.S. Securities and Exchange Commission (SEC). In the opinion of management, all adjustments, consisting of normal and recurring adjustments, considered necessary for a fair presentation of the financial position, results of operations, and cash flows at the dates and for the periods presented have been included and all intercompany accounts and transactions have been eliminated in consolidation. The results of operations for the three and six months ended December 31, 2016 are not necessarily indicative of the results to be expected for the subsequent quarter or for the full fiscal year.

The preparation of financial statements in conformity with GAAP 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.

Unless the context requires otherwise, references to we, our and us refer to Aspen Technology, Inc. and its subsidiaries.

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.

(b) Significant Accounting Policies

Our significant accounting policies are described in Note 2 to the consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended June 30, 2016. There were no material changes to our significant accounting policies during the three and six months ended December 31, 2016.

(c) Revenue Recognition

We generate revenue from the following sources: (1) Subscription and software revenue; and (2) Services and other revenue. We sell our software products to end users primarily under fixed-term licenses. We license our software products primarily through a subscription offering which we refer to as our aspenONE licensing model, which includes software maintenance and support, known as our Premier Plus SMS offering, for the entire term. Our aspenONE products are organized into three suites: 1) engineering; 2) manufacturing and supply chain, or MSC; and 3) asset performance management, or APM. The aspenONE licensing model provides customers with access to all of the products within the aspenONE suite(s) they license. We refer to these arrangements as token arrangements. Tokens are fixed units of measure. The amount of software usage is limited by the number of tokens purchased by the customer.

We also license our software through point product term arrangements, which include our Premier Plus SMS offering for the entire term, as well as perpetual license arrangements.

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 electronic delivery or via physical medium with standard shipping terms of Free Carrier, our warehouse (i.e., FCA, AspenTech). 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.

As a standard business practice, we offer fixed-term license arrangements, which are generally payable on an annual basis.

We cannot assert that the fees under our aspenONE licensing model and point product arrangements with Premier Plus SMS are fixed or determinable because of the rights provided to customers, economics of the arrangements, and because we do not have an established history of collecting under the terms of these contracts without providing concessions to customers. 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 (VSOE)

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.

Subscription and Software Revenue

Subscription and software revenue consists primarily 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; and (iii) 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 and because we do not have VSOE for our Premier Plus SMS offering, 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.

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 and related costs are 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, professional services, and training. 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 December 31, 2016 and June 30, 2016, 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.

(d) 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. Please refer to Note 16 for discussion of these matters and related liability accruals.

(e) Foreign Currency Transactions

Foreign currency exchange gains and losses generated from the settlement and remeasurement of transactions denominated in currencies other than the functional currency of our subsidiaries are recognized in our results of operations as incurred as a component of other income (expense), net. Net foreign currency gains (losses) were \$0.7 million and \$1.3 million during the three and six months ended December 31, 2016 and \$(0.2) million and \$0.7 million during the three and six months ended and December 31, 2015, respectively.

(f) 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.

We acquired technology for \$0.4 million and \$0.3 million during the six months ended December 31, 2016 and December 31, 2015, 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.

(g) Recently Issued 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 supersedes the revenue recognition requirements in *Revenue Recognition (Topic 605)*, and requires entities to recognize revenue when they transfer promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services. As currently issued and amended, ASU 2014-09 is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period, though early adoption is permitted for annual reporting periods beginning after December 15, 2016. We will adopt ASU No. 2014-09 during the first quarter of fiscal 2019. Based on our preliminary assessment, the adoption of ASU No. 2014-09 will impact the timing of a portion of the revenue recognized from our term contracts. We are continuing to evaluate the impact of ASU No. 2014-09 on our consolidated financial statements and implementing accounting system changes related to the adoption.

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 consolidated financial statements.

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 consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326)*. The amendment changes the impairment model for most financial assets and certain other instruments. Entities will be required to use a model that will result in the earlier recognition of allowances for losses for trade and other receivables, held-to-maturity debt securities, loans, and other instruments. For available-for-sale debt securities with unrealized losses, the losses will be recognized as allowances rather than as reductions in the amortized cost of the securities. The ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2019. Early adoption is permitted. We are currently evaluating the impact of ASU No. 2016-13 on our consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230)*. The amendment updates the guidance as to how certain cash receipts and cash payments should be presented and classified, and is intended to reduce the existing diversity in practice. The ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2017. Early adoption is permitted. We are currently evaluating the impact of ASU No. 2016-15 on our consolidated financial statements.

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes - Intra-Entity Transfers of Assets Other Than Inventory (Topic 740)*. The amendment changes accounting for the income tax consequences of intra-entity transfers of assets other than inventory by requiring an entity to recognize the income tax consequences when a transfer occurs, instead of when

an asset is sold to an outside party. The amendment should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. The ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2017. Early adoption is permitted. We are currently evaluating the impact of ASU No. 2016-18 on our consolidated financial statements.

3. Marketable Securities

The following table summarizes the fair value, the amortized cost and unrealized holding gains (losses) on our marketable securities as of December 31, 2016 and June 30, 2016:

	Fair Value	Cost	Unrealized Gains	Unrealized Losses
	(Dollars in Thousands)			
December 31, 2016:				
U.S. corporate bonds	\$ 72,939	\$ 72,965	\$ —	\$ (26)
Total short-term marketable securities	<u>\$ 72,939</u>	<u>\$ 72,965</u>	<u>\$ —</u>	<u>\$ (26)</u>
June 30, 2016:				
U.S. corporate bonds	\$ 3,006	\$ 3,006	\$ —	\$ —
Total short-term marketable securities	<u>\$ 3,006</u>	<u>\$ 3,006</u>	<u>\$ —</u>	<u>\$ —</u>

Our marketable securities were classified as available-for-sale and reported at fair value on the unaudited consolidated balance sheets. Net unrealized gains (losses) were reported as a separate component of accumulated other comprehensive income, net of tax. Realized gains (losses) on investments were recognized in earnings as incurred. Our investments consisted primarily of investment grade fixed income corporate debt securities with maturity dates ranging from January 2017 through May 2017 as of December 31, 2016 and August 2016 as of June 30, 2016.

4. Fair Value

We determine fair value by utilizing a fair value hierarchy that ranks the quality and reliability of the information used in its determination. Fair values determined using “Level 1 inputs” utilize unadjusted quoted prices in active markets for identical assets or liabilities that we have the ability to access. Fair values determined using “Level 2 inputs” utilize data points that are observable, such as quoted prices, interest rates and yield curves for similar assets and liabilities.

Cash equivalents of \$30.2 million and \$286.2 million as of December 31, 2016 and June 30, 2016, respectively, were 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 of \$72.9 million and \$3.0 million as of December 31, 2016 and June 30, 2016, respectively, were reported at fair value calculated in accordance with the market approach, utilizing market consensus pricing models with quoted prices that were directly or indirectly observable, or “Level 2 inputs.”

Financial instruments not measured or recorded at fair value in the accompanying unaudited consolidated financial statements consist of 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 (described below in Note 11, Credit Agreement) approximates its carrying value due to the floating interest rate.

5. Accounts Receivable

Our accounts receivable, net of the related allowance for doubtful accounts, were as follows as of December 31, 2016 and June 30, 2016:

	Gross	Allowance	Net
	(Dollars in Thousands)		
December 31, 2016:			
Accounts receivable	\$ 19,256	\$ 1,329	\$ 17,927
	<u>\$ 19,256</u>	<u>\$ 1,329</u>	<u>\$ 17,927</u>
June 30, 2016:			
Accounts receivable	\$ 22,080	\$ 1,604	\$ 20,476
	<u>\$ 22,080</u>	<u>\$ 1,604</u>	<u>\$ 20,476</u>

As of December 31, 2016, we had one customer receivable balance that individually represented approximately 15% of our total receivables.

6. Property and Equipment

Property, equipment and leasehold improvements in the accompanying unaudited consolidated balance sheets consisted of the following:

	December 31, 2016	June 30, 2016
	(Dollars in Thousands)	
Property, equipment and leasehold improvements - at cost:		
Computer equipment	\$ 9,668	\$ 10,387
Purchased software	23,725	23,705
Furniture & fixtures	6,862	6,712
Leasehold improvements	11,763	12,523
Accumulated depreciation	(37,026)	(37,502)
Property, equipment and leasehold improvements - net	<u>\$ 14,992</u>	<u>\$ 15,825</u>

During the six months ended December 31, 2016, we wrote off fully depreciated property, equipment and leasehold improvements that were no longer in use with gross book values of \$2.2 million.

7. Acquisitions

Mtelligence Corporation

On October 26, 2016, we completed the acquisition of all the outstanding shares of Mtelligence Corporation ("Mtell"), a provider of predictive and prescriptive maintenance software and related services used to optimize asset performance, for total cash consideration of \$37.4 million. The purchase price consisted of \$31.9 million of cash paid at closing and an additional \$5.5 million to be held back until April 2018 as security for certain representations, warranties, and obligations of the sellers. The holdback was recorded at its fair value as of the acquisition date of \$5.3 million.

[Table of Contents](#)

A preliminary allocation of the purchase price is as follows. The valuation of the net assets acquired and the deferred tax liabilities are considered preliminary as of December 31, 2016.

	Amount
	(Dollars in Thousands)
Tangible assets acquired, net	\$ 779
Identifiable intangible assets:	
Developed technology	11,385
Customer relationships	679
Non-compete agreements	553
Goodwill	28,160
Deferred tax liabilities, net	(4,371)
Total assets acquired	\$ 37,185

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 Mtell intangible assets was 19% and the effective tax rate used was 34%. The values of the developed technology, customer relationships and non-compete agreements are being amortized on a straight-line basis, except technology which is being amortized on a proportional use basis, over their estimated useful lives of 12 years, 6 years and 3 years, respectively.

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 Mtell products and services to our existing customers. The results of operations of Mtell have been included prospectively in our results of operations since the date of acquisition.

Technology and Trademarks

In August 2016, we acquired certain technology and trademarks for total cash consideration of \$6.0 million. The purchase price consisted of \$5.4 million of cash paid at closing and up to an additional \$0.6 million to be paid in August 2017. The acquisition met the definition of a business combination as it contained inputs and processes that are capable of being operated as a business. The preliminary allocation of the purchase price as of September 30, 2016 allocated \$4.0 million to developed technology and \$2.0 million to goodwill. The fair value of the developed technology of \$4.0 million was determined using the replacement cost approach. The developed technology is being amortized on a straight-line basis over its estimated useful life of 6 years. The acquisition is treated as an asset purchase for tax purposes and accordingly, the goodwill resulting from the acquisition is expected to be deductible.

Fidelis Group, LLC

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 an additional \$2.0 million to be paid in December 2017.

[Table of Contents](#)

A preliminary allocation of the purchase price is as follows, including adjustments identified subsequent to the acquisition date. The valuation of the net assets acquired and the deferred tax liabilities are considered preliminary as of December 31, 2016.

	Amount
	(Dollars in Thousands)
Tangible assets acquired, net	\$ 65
Identifiable intangible assets:	
Developed technology	1,272
Customer relationships	753
In-process research and development	3,097
Goodwill	6,706
Deferred tax liabilities, net	(1,893)
Total assets acquired	<u>\$ 10,000</u>

8. 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.

Intangible assets consist of the following as of December 31, 2016 and June 30, 2016:

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
	(Dollars in Thousands)		
December 31, 2016:			
Technology and patents	\$ 19,150	\$ (2,660)	\$ 16,490
In process research & development	3,200	—	3,200
Customer relationships	1,432	(47)	1,385
Non-compete agreements	553	—	553
Total	<u>\$ 24,335</u>	<u>\$ (2,707)</u>	<u>\$ 21,628</u>
June 30, 2016:			
Technology and patents	\$ 3,696	\$ (2,596)	\$ 1,100
In process research & development	3,200	—	3,200
Customer relationships	700	—	700
Total	<u>\$ 7,596</u>	<u>\$ (2,596)</u>	<u>\$ 5,000</u>

Total amortization expense related to intangible assets is included in operating expenses and amounted to approximately \$0.1 million for the three and six months ended December 31, 2016 and December 31, 2015, respectively. Amortization expense is expected to be approximately \$1.1 million in fiscal 2017, \$1.7 million in fiscal 2018, \$1.7 million in fiscal 2019, \$1.8 million in fiscal 2020, \$1.9 million in fiscal 2021, and \$13.4 million thereafter.

9. Goodwill

The changes in the carrying amount of goodwill for our subscription and software reporting unit during the six months ended December 31, 2016 was as follows:

	Gross Carrying Amount	Accumulated impairment losses	Effect of currency translation	Net Carrying Amount
	(Dollars in Thousands)			
Goodwill, net, at June 30, 2016	\$ 89,007	\$ (65,569)	\$ —	\$ 23,438
Goodwill from Mtell acquisition	28,160	—	—	28,160
Goodwill from technology acquisition	2,000	—	—	2,000
Subsequent Fidelis goodwill adjustment	(78)	—	—	(78)
Foreign currency translation and other	—	—	(487)	(487)
Goodwill, net, at December 31, 2016	<u>\$ 119,089</u>	<u>\$ (65,569)</u>	<u>\$ (487)</u>	<u>\$ 53,033</u>

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, 2016 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.

10. Accrued Expenses and Other Liabilities

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

	December 31, 2016	June 30, 2016
	(Dollars in Thousands)	
Royalties and outside commissions	\$ 2,894	\$ 2,640
Payroll and payroll-related	12,351	17,809
Other	17,783	15,656
Total accrued expenses and other current liabilities	<u>\$ 33,028</u>	<u>\$ 36,105</u>

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

	December 31, 2016	June 30, 2016
	(Dollars in Thousands)	
Deferred rent	\$ 6,627	\$ 6,361
Uncertain tax positions	20,704	23,535
Other	10,451	2,695
Total other non-current liabilities	\$ 37,782	\$ 32,591

11. 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 December 31, 2016 and June 30, 2016, we had \$140.0 million in outstanding borrowings under the Credit Agreement. Debt issuance costs related to the Credit Agreement were recorded in prepaid expenses and other current assets in our consolidated balance sheet.

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 December 31, 2016 was 2.27%.

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. As of December 31, 2016 we were in compliance with these covenants.

12. Stock-Based Compensation

The weighted average estimated fair value of option awards granted was \$12.45 and \$12.96 during the three and six months ended December 31, 2016 and \$12.39 and \$13.52 during the three and six months ended December 31, 2015, respectively.

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

	Six Months Ended December 31,	
	2016	2015
Risk-free interest rate	1.1%	1.4%
Expected dividend yield	0.0%	0.0%
Expected life (in years)	4.6	4.6
Expected volatility factor	31.4%	34.1%

[Table of Contents](#)

The stock-based compensation expense and its classification in the unaudited consolidated statements of operations for the three and six months ended December 31, 2016 and 2015 are as follows:

	Three Months Ended December 31,		Six Months Ended December 31,	
	2016	2015	2016	2015
(Dollars in Thousands)				
Recorded as expenses:				
Cost of services and other	\$ 374	\$ 350	\$ 743	\$ 707
Selling and marketing	1,010	837	1,965	1,750
Research and development	1,495	848	2,558	1,672
General and administrative	1,792	1,477	4,364	3,806
Total stock-based compensation	\$ 4,671	\$ 3,512	\$ 9,630	\$ 7,935

A summary of stock option and RSU activity under all equity plans for the three and six months ended December 31, 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, 2016	1,314,142	\$ 32.47	7.23	\$ 12,340	493,332	\$ 41.06
Granted	456,872	45.48			509,156	45.93
Settled (RSUs)	—				(163,970)	41.72
Exercised	(191,085)	25.84			—	
Cancelled / Forfeited	(42,702)	39.25			(35,987)	42.28
Outstanding at December 31, 2016	1,537,227	\$ 36.97	7.72	\$ 27,219	802,531	\$ 43.96
Vested and exercisable at December 31, 2016	806,266	\$ 30.97	6.54	\$ 19,113	—	
Vested and expected to vest as of December 31, 2016	1,460,949	\$ 36.60	7.65	\$ 26,416	719,043	\$ 43.87

The weighted average grant-date fair value of RSUs granted was \$47.73 and \$45.93 during the three and six months ended December 31, 2016 and \$38.04 and \$43.94 during the three and six months ended December 31, 2015, respectively. The total fair value of shares vested from RSU grants was \$4.2 million and \$8.3 million during the three and six months ended December 31, 2016 and \$2.9 million and \$6.3 million during the three and six months ended December 31, 2015, respectively.

At December 31, 2016, the total future unrecognized compensation cost related to stock options was \$8.3 million and is expected to be recorded over a weighted average period of 2.9 years. At December 31, 2016, the total future unrecognized compensation cost related to RSUs was \$31.4 million and is expected to be recorded over a weighted average period of 2.9 years.

The total intrinsic value of options exercised was \$1.4 million and \$4.1 million during the three and six months ended December 31, 2016 and \$1.4 million and \$2.3 million during the three and six months ended December 31, 2015, respectively. We received cash proceeds from option exercises of \$4.8 million and \$2.4 million during the six months ended December 31, 2016 and 2015, respectively. We withheld withholding taxes on vested RSUs of \$2.8 million and \$2.2 million during the six months ended December 31, 2016 and 2015, respectively.

At December 31, 2016, common stock reserved for future issuance or settlement under equity compensation plans was 5.0 million shares.

13. Stockholders' Deficit

Stock Repurchases

On January 28, 2015, our Board of Directors approved a share repurchase program for up to \$450.0 million worth of our common stock. On April 26, 2016, the Board of Directors approved a \$400.0 million increase in the share repurchase plan. The timing and amount of any shares repurchased are based on market conditions and other factors. All shares of our common stock repurchased have been recorded as treasury stock under the cost method.

On August 29, 2016, as part of our common stock repurchase program, we entered into an accelerated share repurchase program (the "ASR Program") with a third-party financial institution. Pursuant to the terms of the ASR Program, we made an upfront payment of \$100.0 million in exchange for an initial delivery of approximately 1.76 million shares of our common stock, representing 80% of the total shares ultimately expected to be delivered over the program's term. The initial shares received, which had an aggregate cost of \$80.0 million based on the August 29, 2016 closing share price, were recorded as an increase to treasury stock. As of September 30, 2016, \$20.0 million, representing the difference between the upfront \$100.0 million payment and the \$80.0 million cost of the initial share delivery, was recorded as a reduction to additional paid-in capital in our consolidated balance sheet.

Upon the final settlement of the ASR Program during the three months ended December 31, 2016, we received an additional delivery of 0.35 million shares of our common stock. The total number of shares received under the ASR Program during the six months ended December 31, 2016 was 2.1 million shares, which was determined based on the volume-weighted average price per share of our common stock over the term of the ASR Program, less an agreed-upon discount.

During the three months ended December 31, 2016 we repurchased 987,237 and 348,854 shares of our common stock for \$50.0 million and \$20.0 million in the open market and as part of the ASR Program, respectively.

During the six months ended December 31, 2016 we repurchased 2,126,095 and 2,106,709 shares of our common stock for \$100.0 million and \$100.0 million in the open market and as part of the ASR Program, respectively.

As of December 31, 2016, the total remaining value under the share repurchase program approved on January 28, 2015 and amended on April 26, 2016 was approximately \$321.3 million.

Accumulated Other Comprehensive Income

As of December 31, 2016, accumulated other comprehensive income was comprised of foreign currency translation adjustments of less than \$0.1 million and net unrealized losses on available for sale securities of less than \$0.1 million. As of December 31, 2015, accumulated other comprehensive income was comprised of foreign currency translation adjustments of \$4.3 million and net unrealized losses on available for sale securities of less than \$0.1 million.

As of June 30, 2016, accumulated other comprehensive income was comprised of foreign currency translation adjustments of \$2.7 million and net unrealized losses on available for sale securities of less than \$0.1 million. As of June 30, 2015, accumulated other comprehensive income was comprised of foreign currency translation adjustments of \$6.5 million and net unrealized losses on available for sale securities of less than \$0.1 million.

14. 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 net income per share based on the treasury stock method.

The calculations of basic and diluted net income per share and basic and dilutive weighted average shares outstanding for the three and six months ended December 31, 2016 and 2015 are as follows:

	Three Months Ended December 31,		Six Months Ended December 31,	
	2016	2015	2016	2015
	(Dollars and Shares in Thousands, Except per Share Data)			
Net income	\$ 37,010	\$ 36,683	\$ 72,011	\$ 73,454
Weighted average shares outstanding	76,905	83,315	77,977	83,596
Dilutive impact from:				
Share-based payment awards	413	388	379	439
Dilutive weighted average shares outstanding	77,318	83,703	78,356	84,035
Income per share				
Basic	\$ 0.48	\$ 0.44	\$ 0.92	\$ 0.88
Dilutive	\$ 0.48	\$ 0.44	\$ 0.92	\$ 0.87

For the three and six months ended December 31, 2016 and 2015, certain employee equity awards were anti-dilutive based on the treasury stock method. Additionally, during the three and six months ended December 31, 2016, options to purchase 2,260 and 6,875 shares, respectively, of our common stock were

not included in the computation of dilutive weighted average shares outstanding, because their exercise prices ranged from \$47.40 per share to \$54.22 per share and were greater than the average market price of our common stock during the periods then ended. These options were outstanding as of December 31, 2016 and expire at various dates through December 14, 2026.

The following employee equity awards were excluded from the calculation of dilutive weighted average shares outstanding because their effect would be anti-dilutive as of December 31, 2016 and 2015:

	Three Months Ended December 31,		Six Months Ended December 31,	
	2016	2015	2016	2015
	(Shares in Thousands)			
Employee equity awards	721	1,108	873	1,072

15. Income Taxes

The effective tax rate for the periods presented was 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 for the three and six months ended December 31, 2016 was 33.9% and 35.0%, respectively, as compared to 34.7% and 34.8% for the corresponding periods of the prior fiscal year. Our effective tax rate changed slightly for the three and six months ended December 31, 2016 compared to the same periods in 2015 due to discrete items. During the three and six months ended December 31, 2016 and 2015, our income tax expense was driven primarily by pre-tax profitability

in our domestic and foreign operations and the impact of permanent items. The permanent items are predominantly a U.S. domestic production activity deduction being slightly offset by non-deductible stock-based compensation expense.

We use the “with and without” ordering approach to calculate our tax provision when necessary. This methodology requires us to utilize all other tax attributes before recognizing excess tax benefits. Excess tax benefits are generated when the deductible value of stock-based compensation for income tax purposes exceeds the value recognized for financial statement purposes. Excess tax benefits are not included as a component of deferred tax assets. When realized, excess tax benefits reduce income taxes payable and increase additional paid in capital. In our unaudited consolidated statements of cash flows, the excess tax benefits of \$1.0 million and \$1.8 million were reported as sources of cash flows from financing activities with offsetting reductions to cash flows from operating activities during the six months ended December 31, 2016 and 2015, respectively.

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 those earnings 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.

16. Commitments and Contingencies

Operating Leases

We lease certain facilities under non-cancellable operating leases with terms in excess of one year. Rental expense on leased facilities under operating leases was approximately \$2.1 million and \$4.2 million during the three and six months ended December 31, 2016 and \$2.1 million and \$4.1 million during the three and six months ended December 31, 2015, respectively.

Standby letters of credit for \$2.9 million as of December 31, 2016 secure our performance on professional services contracts, certain facility leases and potential liabilities. This is a decrease from \$3.5 million as of June 30, 2016. The letters of credit expire at various dates through fiscal 2018.

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 December 31, 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 were no such matters, as of December 31, 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 December 31, 2016, and are not material to our financial position for the period then ended. As of December 31, 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.

17. Segment 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.

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. 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](#)

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

	Subscription and software	Services	Total
	(Dollars in Thousands)		
Three Months Ended December 31, 2016			
Segment revenue	\$ 112,916	\$ 7,017	\$ 119,933
Segment expenses (1)	(45,602)	(6,403)	(52,005)
Segment profit	<u>\$ 67,314</u>	<u>\$ 614</u>	<u>\$ 67,928</u>
Three Months Ended December 31, 2015			
Segment revenue	\$ 110,126	\$ 9,025	\$ 119,151
Segment expenses (1)	(42,126)	(6,921)	(49,047)
Segment profit	<u>\$ 68,000</u>	<u>\$ 2,104</u>	<u>\$ 70,104</u>
Six Months Ended December 31, 2016			
Segment revenue	\$ 226,360	\$ 13,623	\$ 239,983
Segment expenses (1)	(91,328)	(12,839)	(104,167)
Segment profit	<u>\$ 135,032</u>	<u>\$ 784</u>	<u>\$ 135,816</u>
Six Months Ended December 31, 2015			
Segment revenue	\$ 221,985	\$ 17,462	\$ 239,447
Segment expenses (1)	(86,401)	(14,651)	(101,052)
Segment profit	<u>\$ 135,584</u>	<u>\$ 2,811</u>	<u>\$ 138,395</u>

(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, net.

Reconciliation to Income before Income Taxes

The following table presents a reconciliation of total segment profit to income before income taxes for the three and six months ended December 31, 2016 and 2015:

	Three Months Ended December 31,		Six Months Ended December 31,	
	2016	2015	2016	2015
	(Dollars in Thousands)			
Total segment profit for reportable segments	\$ 67,928	\$ 70,104	\$ 135,816	\$ 138,395
General and administrative	(11,863)	(13,805)	(25,020)	(26,667)
Other income (expense), net	697	(157)	1,344	739
Interest (expense) income, net	(676)	58	(1,274)	139
Income before income taxes	<u>\$ 56,086</u>	<u>\$ 56,200</u>	<u>\$ 110,866</u>	<u>\$ 112,606</u>

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion in conjunction with our unaudited consolidated financial statements and related and notes thereto contained in this report. In addition to historical information, this discussion contains forward-looking statements that involve risks and uncertainties. You should read "Item 1A. Risk Factors," of Part II for a discussion of important factors that could cause our actual results to differ materially from our expectations.

Our fiscal year ends on June 30th, and references in this Quarterly Report to a specific fiscal year are to the twelve months ended June 30th of such year (for example, "fiscal 2017" refers to the year ending on June 30, 2017).

Recent Events

In November 2016, we announced the introduction of a new product suite, aspenONE Asset Performance Management (APM). The new suite expands the aspenONE product portfolio from the engineering and manufacturing and supply chain suites into maintenance, reliability, and predictive analytics to address business challenges that include process disruptions, low asset availability and unplanned downtime. The aspenONE APM suite enables companies to optimize their assets throughout the entire plant lifecycle and includes the Aspen Fidelis Reliability product and the Aspen Asset Analytics products.

On October 26, 2016, we completed the acquisition of all the outstanding shares of Mtelligence Corporation ("Mtell"), a California-based provider of predictive and prescriptive maintenance software and related services used to optimize asset performance, for total cash consideration of \$37.4 million. The purchase price consisted of \$31.9 million of cash paid at closing and up to an additional \$5.5 million to be held back until April 2018 as security for certain representations, warranties, and obligations of the Sellers.

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 the process industries, including the energy, chemicals, and engineering and construction industries, as well as other industries in which asset optimization is a key component of operational performance. 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 and other industries for over 35 years. We have developed our applications to design and optimize processes across three principal business areas: engineering, manufacturing and supply chain, and asset performance management. 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 transportation, power, metals and mining, pulp and paper, pharmaceuticals, consumer packaged goods, and biofuels.

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 sell our software products to end users primarily under fixed-term licenses. 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 three suites: 1) engineering; 2) manufacturing and supply chain, or MSC; and 3) asset performance management, or APM. 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 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.

We also license our software through point product arrangements with our Premier Plus SMS offering included for the contract term, as well as perpetual license 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 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 intangibles, (iii) distribution fees, and (iv) costs of providing Premier Plus SMS bundled with our aspenONE licensing and point product arrangements.

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 investment in marketable securities and short-term money market instruments.

Interest Expense. During the three and six months ended December 31, 2016, interest expense is primarily related to our Credit Agreement. During the three and six months ended December 31, 2015, interest expense was comprised of miscellaneous interest charges.

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

We utilize certain key non-GAAP and other business measures to track and assess the performance of our business and we make these measures available to investors. We have refined the set of appropriate business metrics in the context of our evolving business and 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.

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. Management believes that this financial measure is a useful metric to investors as it provides insight into the growth component of license bookings during a fiscal period. 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 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.

[Table of Contents](#)

We estimate that annual spend grew by approximately 0.9% during the second quarter of fiscal 2017, from \$446.2 million at September 30, 2016 to \$450.1 million at December 31, 2016, and by approximately 2.0% during the first half of fiscal 2017, from \$441.4 million at June 30, 2016.

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 or to repay borrowings under the credit agreement, and it is 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:

	Six Months Ended December 31,	
	2016	2015
	(Dollars in Thousands)	
Net cash provided by operating activities	\$ 53,417	\$ 39,172
Purchases of property, equipment, and leasehold improvements	(1,374)	(1,781)
Capitalized computer software development costs	(100)	—
Excess tax benefits from stock-based compensation	1,032	1,831
Non-capitalized acquired technology	846	1,250
Acquisition related fees	413	—
Free cash flows (non-GAAP)	<u>\$ 54,234</u>	<u>\$ 40,472</u>

Total free cash flow on a non-GAAP basis increased by \$13.8 million during the six months ended December 31, 2016 as compared to the same period of the prior fiscal year primarily due to changes in working capital.

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 in free cash flow to be consistent with the treatment of other tax activity.

In the six months ended December 31, 2016 and December 31, 2015, 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.

Non-GAAP Operating Income

Non-GAAP income from operations 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 excluding non-recurring and certain non-cash items, provides additional insight into recurring profitability and cash flow from operations.

[Table of Contents](#)

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

	Three Months Ended December 31,		2016 Compared to 2015		Six Months Ended December 31,		2016 Compared to 2015	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
GAAP income from operations	\$ 56,065	\$ 56,299	\$ (234)	(0.4)%	\$ 110,796	\$ 111,728	\$ (932)	(0.8)%
Plus:								
Stock-based compensation	4,671	3,512	1,159	33.0 %	9,630	7,935	1,695	21.4 %
Non-capitalized acquired technology	—	—	—	— %	350	250	100	40.0 %
Amortization of intangibles	56	20	36	180.0 %	111	133	(22)	(16.5)%
Acquisition-related fees	99	1,028	(929)	(90.4)%	461	1,028	(567)	(55.2)%
Non-GAAP income from operations	\$ 60,891	\$ 60,859	\$ 32	0.1 %	\$ 121,348	\$ 121,074	\$ 274	0.2 %

In the six months ended December 31, 2016 and December 31, 2015, 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.

Critical Accounting Estimates and Judgments

Note 2, "Significant Accounting Policies" to the audited consolidated financial statements in our Annual Report on Form 10-K for the fiscal year ended June 30, 2016 describes the significant accounting policies and methods used in the preparation of the consolidated financial statements appearing in this report. The accounting policies that reflect our more significant estimates, judgments and assumptions in the preparation of our consolidated financial statements are described in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7 of our Annual Report on Form 10-K for the fiscal year ended June 30, 2016, and include the following:

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

There were no significant changes to our critical accounting policies and estimates during the three and six months ended December 31, 2016.

Results of Operations

Comparison of the Three and Six Months Ended December 31, 2016

The following table sets forth the results of operations and the period-over-period percentage change in certain financial data for the three and six months ended December 31, 2016:

	Three Months Ended December 31,		Increase / (Decrease) Change	Six Months Ended December 31,		Increase / (Decrease) Change
	2016	2015	%	2016	2015	%
(Dollars in Thousands)						
Revenue:						
Subscription and software	\$ 112,916	\$ 110,126	2.5 %	\$ 226,360	\$ 221,985	2.0 %
Services and other	7,017	9,025	(22.2)%	13,623	17,462	(22.0)%
Total revenue	119,933	119,151	0.7 %	239,983	239,447	0.2 %
Cost of revenue:						
Subscription and software	5,176	4,967	4.2 %	10,245	10,209	0.4 %
Services and other	6,403	6,921	(7.5)%	12,839	14,651	(12.4)%
Total cost of revenue	11,579	11,888	(2.6)%	23,084	24,860	(7.1)%
Gross profit	108,354	107,263	1.0 %	216,899	214,587	1.1 %
Operating expenses:						
Selling and marketing	21,829	21,178	3.1 %	43,854	43,614	0.6 %
Research and development	18,597	15,981	16.4 %	37,229	32,578	14.3 %
General and administrative	11,863	13,805	(14.1)%	25,020	26,667	(6.2)%
Total operating expenses, net	52,289	50,964	2.6 %	106,103	102,859	3.2 %
Income from operations	56,065	56,299	(0.4)%	110,796	111,728	(0.8)%
Interest income	216	71	204.2 %	488	153	219.0 %
Interest expense	(892)	(13)	*	(1,762)	(14)	*
Other income, net	697	(157)	543.9 %	1,344	739	81.9 %
Income before provision for income taxes	56,086	56,200	(0.2)%	110,866	112,606	(1.5)%
Provision for income taxes	19,076	19,517	(2.3)%	38,855	39,152	(0.8)%
Net income	\$ 37,010	\$ 36,683	0.9 %	\$ 72,011	\$ 73,454	(2.0)%

* Percentage is not meaningful.

[Table of Contents](#)

The following table sets forth the results of operations as a percentage of net revenue for certain financial data for the three and six months ended December 31, 2016:

	Three Months Ended December 31,		Six Months Ended December 31,	
	2016	2015	2016	2015
	(% of Revenue)			
Revenue:				
Subscription and software	94.1 %	92.4 %	94.3 %	92.7 %
Services and other	5.9	7.6	5.7	7.3
Total revenue	100.0	100.0	100.0	100.0
Cost of revenue:				
Subscription and software	4.3	4.2	4.3	4.3
Services and other	5.3	5.8	5.3	6.1
Total cost of revenue	9.7	10.0	9.6	10.4
Gross profit	90.3	90.0	90.4	89.6
Operating expenses:				
Selling and marketing	18.2	17.8	18.3	18.2
Research and development	15.5	13.4	15.5	13.6
General and administrative	9.9	11.6	10.4	11.1
Total operating expenses, net	43.6	42.8	44.2	43.0
Income from operations	46.7	47.3	46.2	46.7
Interest income	0.2	0.1	0.2	0.1
Interest expense	(0.7)	(0.0)	(0.7)	(0.0)
Other income (expense), net	0.6	(0.1)	0.6	0.3
Income before provision for income taxes	46.8	47.2	46.2	47.0
Provision for income taxes	15.9	16.4	16.2	16.4
Net income	30.9 %	30.8 %	30.0 %	30.7 %

Revenue

Total revenue increased by \$0.8 million and \$0.5 million during the three and six months ended December 31, 2016 as compared to the corresponding periods of the prior fiscal year. The increase was primarily attributable to an increase in subscription and software revenue of \$2.8 million and \$4.4 million, respectively, partially offset by a decrease in services and other revenue of \$2.0 million and \$3.8 million, respectively.

During the six months ended December 31, 2015, we recognized revenue of \$2.9 million related to the completion of customer arrangements recognized under completed contract accounting. This amount was recognized as \$2.0 million of subscription and software revenue and \$0.9 million of services and other revenue. No such events occurred during the six months ended December 31, 2016.

Subscription and Software Revenue

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
Subscription and software revenue	\$ 112,916	\$ 110,126	\$ 2,790	2.5%	\$ 226,360	\$ 221,985	\$ 4,375	2.0%
As a percent of revenue	94.1%	92.4%			94.3%	92.7%		

The increase in subscription and software revenue during the three and six months ended December 31, 2016 as compared to the corresponding period of the prior fiscal year was primarily the result of the growth of our base of license arrangements

[Table of Contents](#)

being recognized on a ratable basis. In the six months ended December 31, 2015, we recognized revenue of \$2.0 million related to the completion of customer arrangements recognized under completed contract accounting, as noted above. No such events occurred during the six months ended December 31, 2016.

We expect subscription and software revenue to continue to increase as a result of: (i) having a larger base of license arrangements recognized on a ratable basis; (ii) increased customer usage of our software; (iii) adding new customers; and (iv) escalating annual payments.

Services and Other Revenue

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
Services and other revenue	\$ 7,017	\$ 9,025	\$ (2,008)	(22.2)%	\$ 13,623	\$ 17,462	\$ (3,839)	(22.0)%
As a percent of revenue	5.9%	7.6%			5.7%	7.3%		

The decrease in services and other revenue during the three and six months ended December 31, 2016 as compared to the corresponding period of the prior fiscal year was primarily attributable to the timing and lower levels of activity of professional service arrangements.

Professional services revenue for the six months ended December 31, 2015 included recognition of \$0.9 million of revenue related to customer contracts recognized under completed contract accounting, as noted above. No such events occurred during the six months ended December 31, 2016.

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.

Gross Profit

Gross profit increased from \$107.3 million during the three months ended December 31, 2015 to \$108.4 million during the corresponding period of the current fiscal year. The period-over-period increase in gross profit was primarily attributable to the growth of our subscription and software revenue of \$2.8 million.

Gross profit increased from \$214.6 million during the six months ended December 31, 2015 to \$216.9 million during the corresponding period of the current fiscal year. The period-over-period increase in gross profit was primarily attributable to the growth of our subscription and software revenue of \$4.4 million.

Gross profit margin increased from 90.0% and 89.6% during the three and six months ended December 31, 2015 to 90.3% and 90.4% during the corresponding periods of the current fiscal year. For further discussion of subscription and software gross profit and services and other gross profit, please refer to the "Cost of Subscription and Software Revenue" and "Cost of Services and Other Revenue" sections below.

Expenses

Cost of Subscription and Software Revenue

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
Cost of subscription and software revenue	\$ 5,176	\$ 4,967	\$ 209	4.2%	10,245	10,209	\$ 36	0.4%
As a percent of revenue	4.3%	4.2%			4.3%	4.3%		

Cost of subscription and software revenue was consistent for the three and six months ended December 31, 2016 as compared to the corresponding periods of the prior fiscal year.

Subscription and software gross profit margin was consistent at 95.4% and 95.5% during the three months ended December 31, 2016 and 2015, respectively. Subscription and software gross profit margin was consistent at 95.5% and 95.4% during the six months ended December 31, 2016 and 2015, respectively.

Cost of Services and Other Revenue

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
Cost of services and other revenue	\$ 6,403	\$ 6,921	\$ (518)	(7.5)%	\$ 12,839	\$ 14,651	\$ (1,812)	(12.4)%
As a percent of revenue	5.3%	5.8%			5.3%	6.1%		

The period-over-period decrease in cost of services and other revenue of \$0.5 million and \$1.8 million during the three and six months ended December 31, 2016, respectively, was primarily attributable to the timing of professional service arrangements and cost of revenue for projects accounted for under the completed contract method.

Cost of services and other revenue during the six months ended December 31, 2015 included the recognition of \$0.6 million of costs related to customer contracts recognized under completed contract accounting, as noted above. No such events occurred during the six months ended December 31, 2016.

The timing of revenue and expense recognition on professional service arrangements can impact the comparability of cost and gross profit margin of professional services revenue from year to year.

Gross profit margin on services and other revenue of 8.8% for the three months ended December 31, 2016 decreased from the 23.3% for the corresponding period of the prior fiscal year, primarily due to lower revenue of \$2.0 million.

Gross profit margin on services and other revenue of 5.8% for the six months ended December 31, 2016 decreased from the 16.1% for the corresponding period of the prior fiscal year, primarily due to lower revenue of \$3.8 million.

Selling and Marketing Expense

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
Selling and marketing expense	\$ 21,829	\$ 21,178	\$ 651	3.1%	\$ 43,854	\$ 43,614	\$ 240	0.6%
As a percent of revenue	18.2%	17.8%			18.3%	18.2%		

[Table of Contents](#)

Selling and marketing expense was consistent for the three and six months ended December 31, 2016 as compared to the corresponding periods of the prior fiscal year.

Research and Development Expense

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
Research and development expense	\$ 18,597	\$ 15,981	\$ 2,616	16.4%	\$ 37,229	\$ 32,578	\$ 4,651	14.3%
As a percent of revenue	15.5%	13.4%			15.5%	13.6%		

The period-over-period increase of \$2.6 million in research and development expense during the three months ended December 31, 2016 was primarily attributable to higher compensation costs of \$1.0 million related to an increase in headcount and higher overhead allocations of \$0.7 million.

The period-over-period increase of \$4.7 million in research and development expense during the six months ended December 31, 2016 was primarily attributable to higher compensation costs of \$1.8 million related to an increase in headcount, higher overhead allocations of \$1.4 million, higher stock-based compensation of \$0.9 million, and higher consulting costs of \$0.4 million.

In the six months ended December 31, 2016 and December 31, 2015, we acquired technology for \$0.4 million and \$0.3 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.

General and Administrative Expense

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
General and administrative expense	\$ 11,863	\$ 13,805	\$ (1,942)	(14.1)%	\$ 25,020	\$ 26,667	\$ (1,647)	(6.2)%
As a percent of revenue	9.9%	11.6%			10.4%	11.1%		

The period-over-period decrease of \$1.9 million in general and administrative expense during the three months ended December 31, 2016 was primarily attributable to lower acquisition costs of \$0.9 million and lower overhead allocations of \$0.9 million.

The period-over-period decrease of \$1.6 million in general and administrative expense during the six months ended December 31, 2016 was primarily attributable to lower overhead allocations of \$2.2 million and lower acquisition costs of \$0.6 million, partially offset by higher hardware and software maintenance costs of \$1.2 million.

Interest Income

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
Interest income	\$ 216	\$ 71	\$ 145	204.2%	\$ 488	\$ 153	\$ 335	219.0%
As a percent of revenue	0.2%	0.1%			0.2%	0.1%		

[Table of Contents](#)

The period-over-period increase of \$0.1 million and \$0.3 million in interest income during the three and six months ended December 31, 2016, respectively, was attributable to a higher level of interest income from investments.

Interest Expense

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
Interest expense	\$ (892)	\$ (13)	\$ (879)	*	\$ (1,762)	\$ (14)	\$ (1,748)	*
As a percent of revenue	(0.7)%	—%			(0.7)%	—%		

* Percentage is not meaningful.

The period-over-period increase of \$0.9 million and \$1.7 million in interest expense during the three and six months ended December 31, 2016, respectively, was attributable to interest expense related to our outstanding borrowings, which we entered into in February 2016, as described in the Liquidity and Capital Resources section below.

Other Income (Expense), net

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
Other income (expense), net	\$ 697	\$ (157)	\$ 854	543.9%	\$ 1,344	\$ 739	\$ 605	81.9%
As a percent of revenue	0.6%	(0.1)%			0.6%	0.3%		

During the three months ended December 31, 2016 and 2015, other income (expense), net was comprised of \$0.7 million of currency gains and \$0.2 million of currency losses, respectively.

During the six months ended December 31, 2016 and 2015, other income, net was comprised of \$1.3 million and \$0.7 million of currency gains, respectively.

Provision for Income Taxes

	Three Months Ended December 31,		Period-to-Period Change		Six Months Ended December 31,		Period-to-Period Change	
	2016	2015	\$	%	2016	2015	\$	%
(Dollars in Thousands)								
Provision for income taxes	\$ 19,076	\$ 19,517	\$ (441)	(2.3)%	\$ 38,855	\$ 39,152	\$ (297)	(0.8)%
Effective tax rate	33.9%	34.7%			35.0%	34.8%		

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 decreased to 33.9% for the three months ended December 31, 2016 compared to 34.7% for the corresponding period of the prior fiscal year primarily due to discrete items.

Our effective tax rate increased to 35.0% for the six months ended December 31, 2016 compared to 34.8% for the corresponding period of the prior fiscal year primarily due to discrete items.

Liquidity and Capital Resources

Resources

In recent years, we have financed our operations with cash generated from operating activities. As of December 31, 2016, our principal sources of liquidity consisted of \$67.0 million in cash and cash equivalents and \$72.9 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 beyond existing resources and our Credit Agreement described below, 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, we entered into a \$250.0 million Credit Agreement (the "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 December 31, 2016, we had \$140.0 million in outstanding borrowings under the Credit Agreement.

For a more detailed description of the Credit Agreement, see Note 11, Credit Agreement, to our Unaudited Consolidated Financial Statements in Item 1 of this Form 10-Q.

Cash Equivalents and Cash Flows

Our cash equivalents of \$30.2 million consist primarily of money market funds as of December 31, 2016. Our investments in marketable securities of \$72.9 million as of December 31, 2016 consist primarily of investment grade fixed income corporate debt securities with maturities ranging from less than 1 month to 5 months. 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 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:

	Six Months Ended December 31,	
	2016	2015
	(Dollars in Thousands)	
Cash flow provided by (used in):		
Operating activities	\$ 53,417	\$ 39,172
Investing activities	(108,014)	30,268
Financing activities	(196,495)	(54,702)
Effect of exchange rates on cash balances	(218)	(364)
Decrease in cash and cash equivalents	<u>\$ (251,310)</u>	<u>\$ 14,374</u>

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.

During fiscal 2015, we utilized our tax credits and net operating losses to offset U.S. corporate income taxes payable. We became a U.S. corporate tax payer in fiscal year 2016.

[Table of Contents](#)

Cash from operating activities provided \$53.4 million during the six months ended December 31, 2016. This amount resulted from net income of \$72.0 million, adjusted for non-cash items of \$10.9 million and net uses of cash of \$29.5 million related to changes in working capital.

Non-cash items consisted primarily of stock-based compensation expense of \$9.6 million, depreciation and amortization expense of \$3.3 million, and other net items of \$0.1 million, partially offset by deferred income taxes of \$0.2 million and net foreign currency gains of \$2.3 million.

Cash used by working capital of \$25.0 million was primarily attributable to cash outflows related to decreases in deferred revenue of \$40.7 million (cash flows related to deferred revenue vary due to the timing of invoicing, in particular the anniversary dates of annual installments associated with multi-year software license arrangements), partially offset by cash inflows related to decreases in accounts receivable of \$2.5 million, increases in accounts payable, accrued expenses and other current liabilities of \$5.1 million and decreases in prepaid expenses, prepaid income taxes, and other assets of \$3.7 million.

Investing Activities

During the six months ended December 31, 2016, we used \$108.0 million of cash for investing activities. We used \$683.7 million for purchases of marketable securities, \$36.2 million for acquisition related payments, \$1.4 million for capital expenditures and \$0.1 million for capitalized computer software development costs, partially offset by sources of cash of \$613.4 million resulting from the maturities of marketable securities.

Financing Activities

During the six months ended December 31, 2016, we used \$196.5 million of cash for financing activities. We used \$199.6 million for repurchases of our common stock and \$2.8 million for withholding taxes on vested and settled restricted stock units, partially offset by proceeds of \$4.8 million from the exercise of employee stock options and \$1.0 million in excess tax benefits from stock-based compensation.

Contractual Obligations

Standby letters of credit for \$2.9 million as of December 31, 2016 secure our performance on professional services contracts, certain facility leases and potential liabilities. This is a decrease from \$3.5 million as of June 30, 2016. The letters of credit expire at various dates through fiscal 2018.

Recently Issued Accounting Pronouncements

Refer to Note 2 (g), “Recently Issued Accounting Pronouncements,” in the Notes to the Unaudited Consolidated Financial Statements for information about recent accounting pronouncements.

Item 3. 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

During the three months ended December 31, 2016 and 2015, 10.0% and 11.1% of our total revenue was denominated in a currency other than the U.S. dollar, respectively. During the six months ended December 31, 2016 and 2015, 10.0% and 13.8% of our total revenue was denominated in a currency other than the U.S. dollar, respectively. 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 the three and six months ended December 31, 2016 and 2015. Our largest exposures to foreign currency exchange rates exist primarily with the Euro, Pound Sterling, Canadian Dollar, and Japanese Yen.

During the three months ended December 31, 2016 and 2015, we recorded \$0.7 million and (\$0.2) 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 \$1.0 million and \$1.1 million for the three months ended December 31, 2016 and 2015, respectively.

During the six months ended December 31, 2016 and 2015, we recorded \$1.3 million and \$0.7 million of net foreign currency exchange gains 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 \$2.2 million and \$2.4 million for the six months ended December 31, 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 1 month to 5 months as of December 31, 2016 and from less than 1 month to 8 months as of December 31, 2015, respectively. We do not use derivative financial instruments in our investment portfolio.

Our analysis of our investment portfolio and interest rates at December 31, 2016 and 2015 indicated that a 100 basis point increase or decrease in interest rates would result in a decrease or increase of approximately \$0.1 million and \$0.1 million in the fair value of our investment portfolio at December 31, 2016 and 2015, respectively, determined in accordance with 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 December 31, 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 4. 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 December 31, 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 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 December 31, 2016, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective.

b) Changes in Internal Controls Over Financial Reporting

During the three and six months ended December 31, 2016, no changes were identified in our internal controls over financial reporting that materially affected, or were reasonably likely to materially affect, our internal controls over financial reporting.

PART II - OTHER INFORMATION**Item 1. Legal Proceedings.**

Refer to Note 16, “Commitments and Contingencies,” in the Notes to the Unaudited Consolidated Financial Statements for information regarding certain legal proceedings, the contents of which are herein incorporated by reference.

Item 1A. Risk Factors.

The risks described in Item 1A. Risk Factors, in our Annual Report on Form 10-K for the year ended June 30, 2016, could materially and adversely affect our business, financial condition and results of operations. These risk factors do not identify all risks that we face—our operations could also be affected by factors that are not presently known to us or that we currently consider to be immaterial to our operations. The Risk Factors section of our 2016 Annual Report on Form 10-K remains current in material respects, with the exception of the revised risk factors below.

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

During the three months ended December 31, 2016 and 2015, 10.0% and 11.1% of our total revenue was denominated in a currency other than the U.S. dollar, respectively. During the six months ended December 31, 2016 and 2015, 10.0% and 13.8% of our total revenue was denominated in a currency other than the U.S. dollar, respectively. 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 the three and six months ended December 31, 2016 and 2015, 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.

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

The following table provides information about purchases by us during the three months ended December 31, 2016 of shares of our common stock:

Period	Total Number of Shares Purchased (2)	Average Price Paid per Share (3)	Total Number of Shares Purchased as Part of Publicly Announced Program (1)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (4)
October 1 to 31, 2016	352,660	\$ 47.27	352,660	
November 1 to 30, 2016	215,350	\$ 49.81	215,350	
December 1 to 31, 2016	768,081	\$ 55.47	768,081	
Total	1,336,091	\$ 52.39	1,336,091	\$ 321,292,680

(1) 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 share repurchase plan.

(2) As of December 31, 2016, the total number of shares of common stock repurchased under all programs approved by the Board of Directors was 26,086,814 shares, including purchases under the ASR Program. For a more detailed description of the ASR Program, see Note 13, Stockholders' Deficit, to our Unaudited Consolidated Financial Statements in Item 1 of this Form 10-Q.

(3) 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. During the period December 1 to 31, 2016, we received approximately 0.35 million shares of our common stock under final settlement the ASR Program, representing the remaining shares received over the program's term.

(4) As of December 31, 2016, the total remaining value under the share repurchase program approved on January 28, 2015 and amended on April 26, 2016 was approximately \$321.3 million.

Item 6. Exhibits.

Exhibit Number	Description	Filed with this Form 10-Q	Incorporated by Reference		
			Form	Filing Date with SEC	Exhibit Number
10.1^	Aspen Technology, Inc. 2016 Omnibus Incentive Plan		8-K	December 12, 2016	10.1
10.2^	Form of Terms and Conditions of Restricted Stock Unit Agreement Granted Under Aspen Technology Inc. 2016 Omnibus Incentive Plan	X			
10.3^	Form of Terms and Conditions of Stock Option Agreement Granted Under Aspen Technology Inc. 2016 Omnibus Incentive Plan	X			
31.1	Certification of Principal Executive Officer pursuant to Exchange Act Rules 13a-14 and 15d-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
31.2	Certification of Principal Financial Officer pursuant to Exchange Act Rules 13a-14 and 15d-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
32.1	Certification of President and Chief Executive Officer and Executive Vice President and Chief Financial Officer 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			
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			

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Aspen Technology, Inc.

Date: January 26, 2017

By: /s/ ANTONIO J. PIETRI
Antonio J. Pietri
President and Chief Executive Officer
(Principal Executive Officer)

Date: January 26, 2017

By: /s/ KARL E. JOHNSEN
Karl E. Johnsen
Senior Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

EXHIBIT INDEX

Exhibit Number	Description	Filed with this Form 10-Q	Incorporated by Reference		
			Form	Filing Date with SEC	Exhibit Number
10.1^	Aspen Technology, Inc. 2016 Omnibus Incentive Plan		8-K	December 12, 2016	10.1
10.2^	Form of Terms and Conditions of Restricted Stock Unit Agreement Granted Under Aspen Technology Inc. 2016 Omnibus Incentive Plan	X			
10.3^	Form of Terms and Conditions of Stock Option Agreement Granted Under Aspen Technology Inc. 2016 Omnibus Incentive Plan	X			
31.1	Certification of Principal Executive Officer pursuant to Exchange Act Rules 13a-14 and 15d-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
31.2	Certification of Principal Financial Officer pursuant to Exchange Act Rules 13a-14 and 15d-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	X			
32.1	Certification of President and Chief Executive Officer and Executive Vice President and Chief Financial Officer 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			
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			

Aspen Technology, Inc.

**Terms and Conditions of Restricted Stock Unit Agreement
Granted Under 2016 Omnibus Incentive Plan**

1. *Grant of Award.*

These terms and conditions, together with the notice of grant attached hereto (“Notice”), evidence the grant by Aspen Technology, a Delaware corporation (the “Company”), on the grant date set forth in the Notice (the “Grant Date”) to the individual named in the Notice (the “Participant”) of Restricted Stock Units of the Company (individually, an “RSU” and collectively, the “RSUs”) on the terms provided herein and in the Company’s 2016 Omnibus Incentive Plan (the “Plan”). Each RSU represents the right to receive one share of the common stock, \$0.10 par value per share, of the Company (“Common Stock”) as provided in this Agreement. The shares of Common Stock that are issuable upon vesting of the RSUs are referred to in this Agreement as “Shares.”

2. *Vesting; Forfeiture.*

(a) The RSUs shall vest according to the schedule set forth on the Notice.

(b) Except as otherwise provided in the Plan, by the Board of Directors or pursuant to agreement between the Company and the Participant, if the Participant’s employment with the Company terminates for any reason, any portion of this Award that is not vested as of the date of such termination shall be forfeited. For purposes of this Agreement, employment with the Company shall include employment with a parent or subsidiary of the Company.

3. *Distribution of Shares.*

(a) The Company will distribute to the Participant (or to the Participant’s estate in the event that his or her death occurs after a vesting date but before distribution of the corresponding Shares), as soon as administratively practicable (not more than 75 days) after each vesting date (each such date of distribution hereinafter referred to as a “Settlement Date”), all of the vested Shares represented by RSUs that vested before the Settlement Date. If a Settlement Date occurs during a period during which the Participant may not trade in securities of the Company because the Company’s insider trading policy imposes a trading blackout on the Participant, then the Settlement Date shall be delayed until such trading blackout has ended, to the extent permitted by 409A, unless Company deducts and retains from the Shares to be distributed upon the Settlement Date, such number of Shares as is equal in value to the Company’s statutory withholding obligations with respect to the income recognized by Participant upon the lapse of the forfeiture provisions set forth in the Agreement (based on statutory withholding rates for Federal and state tax purposes, including payroll taxes, that are applicable to such income), and to pay the required amounts to the relevant taxing authorities.

(b) The Company shall not be obligated to issue to the Participant the Shares upon the vesting of any RSU (or otherwise) unless the issuance and delivery of such Shares shall comply with all relevant provisions of law and other legal requirements including, without limitation, any applicable federal or state securities laws and the requirements of any stock exchange upon which shares of Common Stock may then be listed.

4. *Restrictions on Transfer.*

The Participant shall not sell, assign, transfer, pledge, hypothecate or otherwise dispose of, by operation of law or otherwise (collectively “transfer”) any RSUs, or any interest therein, except by will or the laws of descent and distribution.

5. *Dividend and Other Shareholder Rights.*

Except as set forth in the Plan, neither the Participant nor any person claiming under or through the Participant shall be, or have any rights or privileges of, a stockholder of the Company in respect of the Shares issuable pursuant to the RSUs granted hereunder until the Shares have been delivered to the Participant.

6. *Provisions of the Plan; Change in Control.*

This Agreement is subject to the provisions of the Plan, the terms of which are incorporated herein by reference. A prospectus describing the Plan has been delivered to the Participant. The Plan itself is available upon request. In that regard, the RSUs are subject to adjustment in connection with a change in capital of the Company or a Corporate Transaction, as provided in Sections 15.1 and 15.2 of the Plan. In addition, vesting of the RSUs in connection with a Change in Control shall be determined in accordance with Section 15.3 of the Plan. For purposes of Section 15.3.1(ii) of the Plan, if the RSUs are assumed, converted or replaced by the resulting entity in the Change in Control, if, within one year after the date of the Change in Control, the Participant has a Separation from Service by the Company other than for Cause or by the Participant for Good

Reason, any unvested RSUs shall become fully vested and payable as of the date of such Separation from Service. For this purpose, "Cause" and "Good Reason" mean as follows:

"Cause" means any (i) willful failure by the Participant, which failure is not cured within 30 days of written notice to the Participant from the Company, to perform his or her material responsibilities to the Company, or (ii) willful misconduct by the Participant that affects the business reputation of the Company.

"Good Reason" means any significant diminution in the Participant's title, authority, or responsibilities from and after the Change in Control, or any reduction in the annual cash compensation payable to the Participant from and after the Change in Control.

7. Withholding Taxes; Section 83(b) Election.

(a) No Shares will be delivered pursuant to the vesting of an RSU unless and until the Participant pays to the Company, or makes provision satisfactory to the Company for payment of, any federal, state or local withholding taxes required by law to be withheld in respect of the vesting of the RSU. To satisfy any such tax obligation, the Company may deduct and retain from the Shares to be distributed upon the Settlement Date such number of Shares as is equal in value up to the Company's maximum statutory withholding obligations with respect to the income recognized by the Participant upon the lapse of the forfeiture provisions (based on statutory withholding rates for federal and state tax purposes, including payroll taxes, that are applicable to such income), and pay the required amounts to the relevant taxing authorities.

(b) The Participant acknowledges that no election under Section 83(b) of the Internal Revenue Code of 1986 may be filed with respect to this Award.

8. Miscellaneous.

(a) *No Rights to Employment.* The Participant acknowledges and agrees that the vesting of the RSUs shall be in accordance with the vesting schedule set forth in the Notice, and is contingent upon status as an employee at the time of vesting at the will of the Company (not through the act of being hired). The Participant further acknowledges and agrees that the transactions contemplated hereunder and the vesting schedule set forth in the Notice do not constitute an express or implied promise of continued engagement as an employee or consultant for the vesting period, for any period, or at all.

(b) *Severability.* The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and each other provision of this Agreement shall be severable and enforceable to the extent permitted by law.

(c) *Waiver.* Any provision for the benefit of the Company contained in this Agreement may be waived, either generally or in any particular instance, by the Board of Directors of the Company.

(d) *Binding Effect.* This Agreement shall be binding upon and inure to the benefit of the Company and the Participant and their respective heirs, executors, administrators, legal representatives, successors and assigns, subject to the restrictions on transfer set forth in Section 4 of this Agreement.

(e) *Notice.* Any notice which either party hereto may be required or permitted to give to the other shall be in writing and may be delivered personally, by intraoffice mail, by fax, by electronic mail or other electronic means, or via a postal service, postage prepaid, to such electronic mail or postal address and directed to such person as the Company may notify the Participant from time to time; and to the Participant at the Participant's electronic mail or postal address as shown on the records of the Company from time to time, or at such other electronic mail or postal address as the Participant, by notice to the Company, may designate in writing from time to time.

(f) *Pronouns.* Whenever the context may require, any pronouns used in this Agreement shall include the corresponding masculine, feminine or neuter forms, and the singular form of nouns and pronouns shall include the plural, and vice versa.

(g) *Entire Agreement.* This Agreement and the Plan constitute the entire agreement between the parties, and this Agreement supersedes all prior agreements and understandings, relating to the subject matter of this Agreement.

(h) *Amendment.* This Agreement may be amended or modified only by a written instrument executed by both the Company and the Participant.

(i) *Governing Law.* This Agreement shall be construed, interpreted and enforced in accordance with the internal laws of the State of Delaware, USA without regard to any applicable conflicts of laws principles.

(j) *Participant's Acknowledgments.* The Participant acknowledges that he or she: (i) has read this Agreement; (ii) understands the terms and consequences of this Agreement; and (iii) is fully aware of the legal and binding effect of this Agreement.

(k) *Unfunded Rights.* The right of the Participant to receive Common Stock pursuant to this Agreement is an unfunded and unsecured obligation of the Company. The Participant shall have no rights under this Agreement other than those of an unsecured general creditor of the Company.

(l) *Section 409A.* Payments under this Agreement are intended to be exempt from, or comply with, the provisions of Section 409A and this Agreement shall be administered and construed accordingly. If any payment, compensation or other benefit provided to the Participant in connection with a termination of his employment is determined, in whole or in part, to constitute “nonqualified deferred compensation” within the meaning of Section 409A and the Participant is a specified employee as defined in Section 409A(2)(B)(i), no part of such payments shall be paid before the day that is six (6) months plus one (1) day after the date of termination (the “New Payment Date”). The aggregate of any payments that otherwise would have been paid to the Participant during the period between the date of termination and the New Payment Date shall be paid to the Participant in a lump sum on such New Payment Date.

(m) *Additional Acknowledgments; Appendix A.* By accepting this Award, the Participant acknowledges and agrees that this Award is subject to the terms applicable to Awards granted to service providers outside the U.S. set forth in the Appendix A hereto. Appendix A constitutes part of this Agreement. Please review the provisions of Appendix A carefully, as this Award will be null and void absent the Participant’s acceptance of such provisions. The Company reserves the right to impose other requirements on the Award to the extent that the Company determines it is necessary or advisable in order to comply with local law or facilitate the administration of the Award and to require the Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

By accepting this grant online, I hereby acknowledge that I have read these Terms and Conditions, the 2016 Omnibus Incentive Plan and related prospectus, and agree to all terms and conditions set forth therein.

APPENDIX A
TO THE TERMS AND CONDITIONS OF RESTRICTED STOCK UNIT AWARD

1. ADDITIONAL ACKNOWLEDGEMENTS

By entering into this Agreement and accepting the grant of RSUs evidenced hereby, the Participant acknowledges, understands and agrees that:

- (a) the Plan is established voluntarily by the Company, and all Awards under the Plan are discretionary in nature;
 - (b) the grant of RSUs is voluntary and occasional and does not create any contractual or other right to receive future awards of RSUs or benefits in lieu of RSUs, even if such awards have been awarded in the past;
 - (c) all decisions with respect to future awards, if any, will be at the sole discretion of the Company;
 - (d) the grant of RSUs shall not create a right to employment with the Company or any other Subsidiary and shall not interfere with the ability of the Company or any Subsidiary to terminate the Participant's employment or service relationship (if any);
 - (e) the Participant is voluntarily participating in the Plan;
 - (f) the RSUs and any payment made pursuant to the RSUs, and the value and income of same, are not part of normal or expected compensation or salary for any purposes, including, but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement benefits or welfare benefits or similar payments;
 - (g) unless otherwise agreed with the Company, the Award and any Shares subject to the Award, and the value and income of same, are not granted as consideration for, or in connection with, any service the Participant may provide as a director of any Subsidiary;
 - (h) in accepting the grant of RSUs, the Participant expressly recognizes that the RSUs are an award made solely by the Company, with principal offices in Massachusetts, U.S.A.; the Company is solely responsible for the administration of the Plan and the Participant's participation in the Plan; in the event that the Participant is an employee or consultant of an Subsidiary, the RSUs and the Participant's participation in the Plan will not create a right to employment be interpreted to form an employment or service contract or relationship with the Company; furthermore, the RSUs will not be interpreted to form an employment or service contract with any Subsidiary;
 - (i) the future value of the Shares which may be delivered in settlement of the RSUs (to the extent earned) is unknown, indeterminable and cannot be predicted with certainty;
 - (j) no claim or entitlement to compensation or damages shall arise from forfeiture of the RSUs resulting from termination of the Participant's employment or service (for any reason whatsoever, whether or not such termination is later found to be invalid or in breach of the employment laws in the jurisdiction where the Participant is employed or providing services or the terms of the Participant's employment or service agreement, if any) or recoupment of all or any portion of any payment made pursuant to the RSUs as provided by the Terms and Conditions and, in consideration of the grant of the RSUs to which the Participant is not otherwise entitled, the Participant irrevocably agrees never to institute any claim against the Company or any other Subsidiary, waives the Participant's ability, if any, to bring any such claim, and releases the Company, the Participant's employer and any other Subsidiary from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, the Participant shall be deemed irrevocably to have agreed not to pursue such claim, and the Participant agrees to execute any and all documents necessary to request dismissal or withdrawal of such claim;
 - (k) the Participant is solely responsible for investigating and complying with any exchange control laws applicable to the Participant in connection with his or her participation in the Plan;
 - (l) unless otherwise provided in the Plan or by the Company in its discretion, the RSUs and the benefits evidenced by this Agreement do not create any entitlement to have the RSUs or any such benefits transferred to, or assumed by,
-

another company nor to be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the Common Stock; and

(m) neither the Company nor any other Subsidiary shall be liable for any foreign exchange rate fluctuation between the Participant's local currency and the United States Dollar that may affect the value of the RSUs, any payment made pursuant to the RSUs or the subsequent sale of any Shares acquired under the Plan.

2. NO ADVICE REGARDING GRANT

The Company is not providing any tax, legal, or financial advice, nor is the Company making any recommendations regarding the Participant's participation in the Plan or the Participant's acquisition of any Shares under the Plan or subsequent sale of such Shares. The Participant is hereby advised to consult with the Participant's personal tax, legal and financial advisors regarding the Participant's participation in the Plan before taking any action in relation thereto.

3. LANGUAGE

If the Participant has received this Agreement or any other document related to the Plan translated into a language other than English and if the meaning of the translated version differs from the English version, the English version shall control.

4. Electronic Delivery and Acceptance

The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. The Participant hereby consents to receive such documents by electronic delivery and agree to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

5. Insider-Trading/Market-Abuse Laws

The Participant acknowledges that, depending on his or her country, the Participant may be subject to insider-trading restrictions and/or market-abuse laws, which may affect his or her ability to acquire or sell Shares acquired or rights to acquire Shares under the Plan during such times as the Participant is considered to have "inside information" regarding the Company (as defined by the laws in his or her country). Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. The Participant is responsible for complying with any applicable restrictions, and the Participant is advised to speak to his or her personal legal advisor regarding this matter.

Aspen Technology, Inc.

**Terms and Conditions of Stock Option Agreement
Granted Under 2016 Omnibus Incentive Plan****1. Grant of Option.**

These terms and conditions together with the notice of grant of stock option (the “Notice”) set forth on the cover page to which they are attached constitute an Agreement evidencing the grant by Aspen Technology, Inc., a Delaware corporation (the “Company”), on the grant date set forth in the Notice (the “Grant Date”) to the employee named in the Notice (the “Participant”), of an option to purchase, in whole or in part, on the terms provided herein and in the Company’s 2016 Omnibus Incentive Plan (the “Plan”), the number of shares (the “Shares”) of common stock, \$0.10 par value per share, of the Company (“Common Stock”) set forth on the Notice, at a strike price set forth per Share set forth in the Notice. Unless earlier terminated, this Agreement shall expire at 5:00 p.m., Eastern Time, on the Expiration Date set forth in the Notice (the “Final Exercise Date”).

To the extent permitted by the Code (as defined below) and designated in the Notice, it is intended that the option evidenced by this Agreement shall be an incentive stock option as defined in Section 422 of the Internal Revenue Code of 1986, as amended, and any regulations promulgated thereunder (the “Code”) or a nonqualified stock option, to the extent designated in this Notice.

2. Vesting Schedule.

The options granted hereunder will vest according to the schedule set forth on the Notice. The right of exercise shall be cumulative so that to the extent the option is not exercised in any period to the maximum extent permissible it shall continue to be exercisable, in whole or in part, with respect to all Shares for which it is vested until the earlier of the Final Exercise Date or the termination of this Agreement under Section 3 hereof or the Plan.

3. Exercise of Option.

(a) Form of Exercise. Each election to exercise this Agreement shall be in the manner permitted by the Company’s third party stock incentive plan administrator. If no such third party administrator is administering the Plan at such time, such election shall be in writing, signed by the Participant and received by the Company at its principal office, accompanied by this Agreement and payment in full in the manner provided in the Plan, or as otherwise provided in the Plan. The Participant may purchase less than the number of shares covered hereby, provided that no partial exercise of this Agreement may be for any fractional share.

(b) Continuous Relationship with the Company Required. Except as otherwise provided in this Section 3, this Agreement may not be exercised unless the Participant, at the time he or she exercises this Agreement, is, and has been at all times since the Grant Date, an employee or officer of, or consultant or advisor to, the Company or any parent or subsidiary of the Company as defined in Section 424(e) or (f) of the Code (an “Eligible Participant”).

(c) Termination of Relationship with the Company. If the Participant ceases to be an Eligible Participant for any reason, then, except as provided in paragraphs (d) and (e) below, the right to exercise this Agreement shall terminate three months after such cessation (but in no event after the Final Exercise Date), provided that this Agreement shall be exercisable only to the extent that the Participant was entitled to exercise this Agreement on the date of such cessation. Notwithstanding the foregoing, if the Participant, prior to the Final Exercise Date, violates the non-competition or confidentiality provisions of any employment contract, confidentiality and nondisclosure agreement or other agreement between the Participant and the Company, the right to exercise this Agreement shall terminate immediately upon such violation.

(d) Exercise Period Upon Death or Disability. Unless otherwise agreed by the Company and the Participant, if the Participant dies or becomes disabled (within the meaning of Section 22(e)(3) of the Code) prior to the Final Exercise Date while he or she is an Eligible Participant and the Company has not terminated such relationship for “cause” as specified in paragraph (e) below, this Agreement shall be exercisable, within the period of eighteen months following the date of death, or one year following the date of disability, of the Participant, by the Participant (or in the case of death by an authorized transferee), provided that this Agreement shall be exercisable only to the extent that this

Agreement was exercisable by the Participant on the date of his or her death or disability, and further provided that this Agreement shall not be exercisable after the Final Exercise Date.

(c) Termination for Cause. If, prior to the Final Exercise Date, the Participant's employment is terminated by the Company for Cause (as defined below), the right to exercise this Agreement shall terminate immediately upon the effective date of such termination of employment, unless otherwise agreed by the Company and the Participant. If the Participant is party to an employment or severance agreement with the Company that contains a definition of "cause" for termination of employment, "Cause" shall have the meaning ascribed to such term in such agreement. Otherwise, "Cause" shall mean (i) any willful failure by the Participant, which failure is not cured within 30 days of written notice to the Participant from the Company, to perform his or her material responsibilities to the Company, or (ii) willful misconduct by the Participant that affects the business reputation of the Company, in either case as determined by the Company, which determination shall be conclusive.

4. Tax Matters.

(a) Withholding. No Shares will be issued pursuant to the exercise of this Agreement unless and until the Participant pays to the Company, or makes provision satisfactory to the Company for payment of, any federal, state or local withholding taxes required to be withheld in respect of this Agreement. To satisfy any such tax obligation, the Company may deduct and retain from the Shares to be issued upon exercise of the Option such number of Shares as is equal in value up to the Company's maximum statutory withholding obligations with respect to the income recognized by the Participant upon such exercise (based on statutory withholding rates for federal and state tax purposes, including payroll taxes, that are applicable to such income), and pay the required amounts to the relevant taxing authorities.

(b) Disqualifying Disposition. To the extent the option is an incentive stock option, if the Participant disposes of Shares acquired upon exercise of this Agreement within two years from the Grant Date or one year after such Shares were acquired pursuant to exercise of this Agreement, the Participant shall notify the Company in writing of such disposition.

5. Nontransferability of Option.

This Agreement may not be sold, assigned, transferred, pledged or otherwise encumbered by the Participant, either voluntarily or by operation of law, except by will or the laws of descent and distribution, and, during the lifetime of the Participant, this Agreement shall be exercisable only by the Participant.

6. Provisions of the Plan: Change in Control.

This Agreement is subject to the provisions of the Plan, the terms of which are incorporated herein by reference. A prospectus describing the Plan has been delivered to the Participant. The Plan itself is available upon request. In that regard, the Option is subject to adjustment in connection with a change in capital of the Company or a Corporate Transaction, as provided in Sections 15.1 and 15.2 of the Plan. In addition, vesting of the Option in connection with a Change in Control shall be determined in accordance with Section 15.3 of the Plan. For purposes of Section 15.3.1(ii) of the Plan, if the Option is assumed, converted or replaced by the resulting entity in the Change in Control, if, within one year after the date of the Change in Control, the Participant has a Separation from Service by the Company other than for Cause or by the Participant for Good Reason, any unvested portion of the Option shall become fully vested and exercisable as of the date of such Separation from Service. For this purpose, "Cause" and "Good Reason" mean as follows:

"Cause" is as defined in Section 3(e) above.

"Good Reason" means any significant diminution in the Participant's title, authority, or responsibilities from and after the Change in Control, or any reduction in the annual cash compensation payable to the Participant from and after the Change in Control.

7. Miscellaneous.

(a) No Rights to Employment. The Participant acknowledges and agrees that the vesting and exercisability of the Option shall be in accordance with the vesting schedule set forth in the Notice, and is contingent upon status as an employee at the time of vesting at the will of the Company (not through the act of being hired). The Participant further

acknowledges and agrees that the transactions contemplated hereunder and the vesting schedule set forth in the Notice do not constitute an express or implied promise of continued engagement as an employee or consultant for the vesting period, for any period, or at all.

- (b) Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and each other provision of this Agreement shall be severable and enforceable to the extent permitted by law.
- (c) Waiver. Any provision for the benefit of the Company contained in this Agreement may be waived, either generally or in any particular instance, by the Board of Directors of the Company.
- (d) Binding Effect. This Agreement shall be binding upon and inure to the benefit of the Company and the Participant and their respective heirs, executors, administrators, legal representatives, successors and assigns, subject to the restrictions on transfer set forth in Section 5 of this Agreement.
- (e) Notice. Any notice which either party hereto may be required or permitted to give to the other shall be in writing and may be delivered personally, by intraoffice mail, by fax, by electronic mail or other electronic means, or via a postal service, postage prepaid, to such electronic mail or postal address and directed to such person as the Company may notify the Participant from time to time; and to the Participant at the Participant's electronic mail or postal address as shown on the records of the Company from time to time, or at such other electronic mail or postal address as the Participant, by notice to the Company, may designate in writing from time to time.
- (f) Pronouns. Whenever the context may require, any pronouns used in this Agreement shall include the corresponding masculine, feminine or neuter forms, and the singular form of nouns and pronouns shall include the plural, and vice versa.
- (g) Entire Agreement. This Agreement and the Plan constitute the entire agreement between the parties, and this Agreement supersedes all prior agreements and understandings, relating to the subject matter of this Agreement.
- (h) Amendment. This Agreement may be amended or modified only by a written instrument executed by both the Company and the Participant.
- (i) Governing Law. This Agreement shall be construed, interpreted and enforced in accordance with the internal laws of the State of Delaware, USA without regard to any applicable conflicts of laws principles.
- (j) Participant's Acknowledgments. The Participant acknowledges that he or she: (i) has read this Agreement; (ii) understands the terms and consequences of this Agreement; and (iii) is fully aware of the legal and binding effect of this Agreement.
- (k) Unfunded Rights. The right of the Participant to receive Shares upon exercise of the Option pursuant to this Agreement is an unfunded and unsecured obligation of the Company. The Participant shall have no rights under this Agreement other than those of an unsecured general creditor of the Company.
- (l) Additional Acknowledgments: Appendix A. By accepting this Award, the Participant acknowledges and agrees that this Award is subject to the terms applicable to Awards granted to service providers outside the U.S. set forth in the Appendix A hereto. Appendix A constitutes part of this Agreement. Please review the provisions of Appendix A carefully, as this Award will be null and void absent the Participant's acceptance of such provisions. The Company reserves the right to impose other requirements on the Award to the extent that the Company determines it is necessary or advisable in order to comply with local law or facilitate the administration of the Award and to require the Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

By accepting this grant online, I hereby acknowledge that I have read these Terms and Conditions, the 2016 Omnibus Incentive Plan and related prospectus, and agree to all terms and conditions set forth therein.

APPENDIX A
TO THE TERMS AND CONDITIONS OF STOCK OPTION AWARD

1. ADDITIONAL ACKNOWLEDGEMENTS

By entering into this Agreement and accepting the grant of the Option evidenced hereby, the Participant acknowledges, understands and agrees that:

- (a) the Plan is established voluntarily by the Company, and all awards under the Plan are discretionary in nature;
 - (b) the grant of the Option is voluntary and occasional and does not create any contractual or other right to receive future awards of Options or benefits in lieu of Options, even if such awards have been awarded in the past;
 - (c) all decisions with respect to future awards, if any, will be at the sole discretion of the Company;
 - (d) the grant of Option shall not create a right to employment with the Company or any other Subsidiary and shall not interfere with the ability of the Company or any Subsidiary to terminate the Participant's employment or service relationship (if any);
 - (e) the Participant is voluntarily participating in the Plan;
 - (f) the Option and any payment made pursuant to the Option, and the value and income of same, are not part of normal or expected compensation or salary for any purposes, including, but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement benefits or welfare benefits or similar payments;
 - (g) unless otherwise agreed with the Company, the Option and any Shares subject to the Option, and the value and income of same, are not granted as consideration for, or in connection with, any service the Participant may provide as a director of any Subsidiary;
 - (h) in accepting the grant of the Option, the Participant expressly recognizes that the Option is an award made solely by the Company, with principal offices in Massachusetts, U.S.A.; the Company is solely responsible for the administration of the Plan and the Participant's participation in the Plan; in the event that the Participant is an employee or consultant of an Subsidiary, the Option and the Participant's participation in the Plan will not create a right to employment be interpreted to form an employment or service contract or relationship with the Company; furthermore, the Option will not be interpreted to form an employment or service contract with any Subsidiary;
 - (i) the future value of the Shares which may be delivered upon exercise of the Option is unknown, indeterminable and cannot be predicted with certainty;
 - (j) no claim or entitlement to compensation or damages shall arise from forfeiture of the Option resulting from termination of the Participant's employment or service (for any reason whatsoever, whether or not such termination is later found to be invalid or in breach of the employment laws in the jurisdiction where the Participant is employed or providing services or the terms of the Participant's employment or service agreement, if any) and, in consideration of the grant of the Option, the Participant irrevocably agrees never to institute any claim against the Company, the Participant's employer or any other affiliate, waives the Participant's ability, if any, to bring any such claim, and releases the Company, the Participant's employer and any other affiliate from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, the Participant shall be deemed irrevocably to have agreed not to pursue such claim, and the Participant agrees to execute any and all documents necessary to request dismissal or withdrawal of such claim;
 - (k) the Participant is solely responsible for investigating and complying with any exchange control laws applicable to the Participant in connection with his or her participation in the Plan;
 - (l) unless otherwise provided in the Plan or by the Company in its discretion, the Option and the benefits evidenced by this Agreement do not create any entitlement to have the Option or any such benefits transferred to, or assumed
-

by, another company nor to be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the Company's Common Stock; and

(m) neither the Company, the Participant's employer nor any other affiliate shall be liable for any foreign exchange rate fluctuation between the Participant's local currency and the United States Dollar that may affect the value of the Option, any payment made pursuant to the Option or the subsequent sale of any shares of Common Stock acquired under the Plan.

2. NO ADVICE REGARDING GRANT

The Company is not providing any tax, legal, or financial advice, nor is the Company making any recommendations regarding the Participant's participation in the Plan or the Participant's acquisition of any Shares under the Plan or subsequent sale of such Shares. The Participant is hereby advised to consult with the Participant's personal tax, legal and financial advisors regarding the Participant's participation in the Plan before taking any action in relation thereto.

3. LANGUAGE

If the Participant has received this Agreement or any other document related to the Plan translated into a language other than English and if the meaning of the translated version differs from the English version, the English version shall control.

4. Electronic Delivery and Acceptance

The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. The Participant hereby consents to receive such documents by electronic delivery and agree to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

5. Insider-Trading/Market-Abuse Laws

The Participant acknowledges that, depending on his or her country, the Participant may be subject to insider-trading restrictions and/or market-abuse laws, which may affect his or her ability to acquire or sell Shares acquired or rights to acquire Shares (*e.g.*, Awards, Units) under the Plan during such times as the Participant is considered to have "inside information" regarding the Company (as defined by the laws in his or her country). Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. The Participant is responsible for complying with any applicable restrictions, and the Participant is advised to speak to his or her personal legal advisor regarding this matter.

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Antonio J. Pietri, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aspen Technology, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: January 26, 2017

/s/ ANTONIO. J. PIETRI

Antonio J. Pietri
President and Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Karl E. Johnsen, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aspen Technology, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: January 26, 2017

/s/ KARL E. JOHNSEN

Karl E. Johnsen

Senior Vice President and Chief Financial Officer

(Principal Financial Officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of Aspen Technology, Inc. (the "Company") for the quarter ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies in his capacity as an officer of the Company, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: January 26, 2017

/s/ ANTONIO J. PIETRI

Antonio J. Pietri
President and Chief Executive Officer

Date: January 26, 2017

/s/ KARL E. JOHNSEN

Karl E. Johnsen
Senior Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to Aspen Technology, Inc. and will be retained by Aspen Technology, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

