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 September 30, 2020

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

(781) 221-6400
(Registrant’s telephone number, including area code)

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

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common stock, $0.10 par value per share	**AZPN**	**NASDAQ Global Select Market**

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 every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer ☐		Smaller reporting company	☐
		Emerging growth company	☐

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

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

As of December 16, 2020, there were 67,780,992 shares of the registrant's common stock (par value $0.10 per share) outstanding.

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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 30th, and references to a specific fiscal year are to the twelve months ended June 30th of such year (for example, "fiscal 2021" refers to the year ending June 30, 2021).

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 September 30,	
	2020	2019
	(Dollars in Thousands, Except per Share Data)	
Revenue:		
License	$ 61,859	$ 87,719
Maintenance	46,858	43,672
Services and other	6,254	8,786
Total revenue	114,971	140,177
Cost of revenue:		
License	2,136	1,660
Maintenance	4,764	4,977
Services and other	8,566	8,581
Total cost of revenue	15,466	15,218
Gross profit	99,505	124,959
Operating expenses:		
Selling and marketing	25,172	29,192
Research and development	22,530	22,493
General and administrative	17,633	19,884
Total operating expenses	65,335	71,569
Income from operations	34,170	53,390
Interest income	8,669	7,976
Interest (expense)	(2,095)	(3,000)
Other (expense) income, net	(1,469)	1,132
Income before income taxes	39,275	59,498
Provision for income taxes	6,564	5,984
Net income	$ 32,711	$ 53,514
Net income per common share:		
Basic	$ 0.48	$ 0.78
Diluted	$ 0.48	$ 0.77
Weighted average shares outstanding:		
Basic	67,729	68,441
Diluted	68,299	69,317

See accompanying Notes to these unaudited consolidated financial statements.

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

	Three Months Ended September 30,	
	2020	2019
	(Dollars in Thousands)	
Net income	$ 32,711	$ 53,514
Other comprehensive income (loss):		
Foreign currency translation adjustments	4,153	(3,102)
Total other comprehensive income (loss)	4,153	(3,102)
Comprehensive income	$ 36,864	$ 50,412

See accompanying Notes to these unaudited consolidated financial statements.

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

	September 30, 2020	June 30, 2020
	(Dollars in Thousands, Except Share Data)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 317,511	$ 287,796
Accounts receivable, net	52,365	56,301
Current contract assets, net	283,907	291,497
Prepaid expenses and other current assets	12,714	10,884
Prepaid income taxes	3,935	3,962
Total current assets	670,432	650,440
Property, equipment and leasehold improvements, net	5,983	5,963
Computer software development costs, net	1,540	928
Goodwill	139,416	137,055
Intangible assets, net	41,759	42,851
Non-current contract assets, net	330,776	318,976
Contract costs	28,331	28,614
Operating lease right-of-use assets	33,669	34,905
Deferred tax assets	1,755	1,735
Other non-current assets	2,318	1,839
Total assets	$ 1,255,979	$ 1,223,306
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 2,890	$ 3,988
Accrued expenses and other current liabilities	36,609	43,556
Current operating lease liabilities	6,865	6,824
Income taxes payable	5,508	1,799
Current borrowings	135,163	135,163
Current deferred revenue	45,073	43,168
Total current liabilities	232,108	234,498
Non-current deferred revenue	12,598	13,913
Deferred tax liabilities	180,001	179,978
Non-current operating lease liabilities	31,518	33,088
Non-current borrowings, net	288,571	292,369
Other non-current liabilities	3,141	3,107
Commitments and contingencies (Note 16)		
Series D redeemable convertible preferred stock, $0.10 par value— Authorized— 3,636 shares as of September 30, 2020 and June 30, 2020 Issued and outstanding— none as of September 30, 2020 and June 30, 2020	—	—
Stockholders' equity:		
Common stock, $0.10 par value— Authorized—210,000,000 shares Issued— 104,027,915 shares at September 30, 2020 and 103,988,707 shares at June 30, 2020 Outstanding— 67,757,900 shares at September 30, 2020 and 67,718,692 shares at June 30, 2020	10,403	10,399
Additional paid-in capital	774,232	769,411
Retained earnings	1,491,041	1,458,330
Accumulated other comprehensive loss	(1,135)	(5,288)
Treasury stock, at cost—36,270,015 shares of common stock at September 30, 2020 and 36,270,015 shares at June 30, 2020	(1,766,499)	(1,766,499)
Total stockholders' equity	508,042	466,353
Total liabilities and stockholders' equity	$ 1,255,979	$ 1,223,306

See accompanying Notes to these unaudited consolidated financial statements.

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

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock		Total Stockholders' Equity
	Number of Shares	$0.10 Par Value				Number of Shares	Cost	
	(Dollars in Thousands, Except Share Data)							
June 30, 2020	103,988,707	$ 10,399	$ 769,411	$ 1,458,330	$ (5,288)	36,270,015	$ (1,766,499)	$ 466,353
Comprehensive income:								
Net income	—	—	—	32,711	—	—	—	32,711
Other comprehensive income	—	—	—	—	4,153			4,153
Issuance of shares of common stock	12,943	1	314	—	—	—		315
Issuance of restricted stock units and net share settlement related to withholding taxes	26,265	3	(1,761)	—	—	—	—	(1,758)
Repurchase of common stock	—	—	—	—	—	—	—	—
Stock-based compensation	—	—	6,268	—	—	—	—	6,268
September 30, 2020	104,027,915	$ 10,403	$ 774,232	$ 1,491,041	$ (1,135)	36,270,015	$ (1,766,499)	$ 508,042

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock		Total Stockholders' Equity
	Number of Shares	$0.10 Par Value				Number of Shares	Cost	
	(Dollars in Thousands, Except Share Data)							
June 30, 2019	103,642,292	$ 10,365	$ 739,099	$ 1,228,659	$ 336	35,017,726	$ (1,616,499)	$ 361,960
Comprehensive income:								
Net income	—	—	—	53,514	—	—	—	53,514
Other comprehensive (loss)	—	—	—	—	(3,102)			(3,102)
Issuance of shares of common stock	17,783	2	933	—	—	—		935
Issuance of restricted stock units and net share settlement related to withholding taxes	57,451	5	(3,399)	—	—	—	—	(3,394)
Repurchase of common stock	—	—	—	—	—	382,279	(50,000)	(50,000)
Stock-based compensation	—	—	9,275	—	—	—	—	9,275
September 30, 2019	103,717,526	$ 10,372	$ 745,908	$ 1,282,173	$ (2,766)	35,400,005	$ (1,666,499)	$ 369,188

See accompanying Notes to these unaudited consolidated financial statements.

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

	Three Months Ended September 30, 2020	Three Months Ended September 30, 2019
	(Dollars in Thousands)	
Cash flows from operating activities:		
Net income	$ 32,711	$ 53,514
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	2,334	2,036
Reduction in the carrying amount of right-of-use assets	2,365	1,887
Net foreign currency losses	1,463	721
Stock-based compensation	6,268	9,275
Deferred income taxes	41	(1,326)
Provision for bad debts	3,120	982
Other non-cash operating activities	202	107
Changes in assets and liabilities:		
Accounts receivable	2,243	(1,945)
Contract assets, net	(7,366)	(31,526)
Contract costs	284	(345)
Lease liabilities	(2,663)	(1,932)
Prepaid expenses, prepaid income taxes, and other assets	(1,900)	(2,092)
Accounts payable, accrued expenses, income taxes payable and other liabilities	(5,505)	(12,741)
Deferred revenue	2,854	(1,355)
Net cash provided by operating activities	36,451	15,260
Cash flows from investing activities:		
Purchases of property, equipment and leasehold improvements	(177)	(600)
Payments for business acquisitions, net of cash acquired	—	(74,219)
Payments for equity method investments	(334)	—
Payments for capitalized computer software development costs	(806)	(9)
Net cash used in investing activities	(1,317)	(74,828)
Cash flows from financing activities:		
Issuance of shares of common stock	268	1,018
Repurchases of common stock	—	(50,848)
Payments of tax withholding obligations related to restricted stock	(1,828)	(3,166)
Proceeds from borrowings, net of repayments	(4,000)	100,000
Net cash provided by (used in) financing activities	(5,560)	47,004
Effect of exchange rate changes on cash and cash equivalents	228	(729)
Increase (decrease) in cash, cash equivalents, and restricted cash	29,802	(13,293)
Cash and cash equivalents, beginning of period	287,796	71,926
Cash, cash equivalents, and restricted cash, end of period	$ 317,598	$ 58,633
Supplemental disclosure of cash flow information:		
Income taxes paid, net	$ 2,703	$ 10,284
Interest paid	2,121	2,801
Supplemental disclosure of non-cash activities:		
Change in purchases of property, equipment and leasehold improvements included in accounts payable and accrued expenses	$ 281	$ 160
Change in repurchases of common stock included in accounts payable and accrued expenses	—	(848)
Lease liabilities arising from obtaining right-of-use assets	223	3,272

	September 30, 2020	September 30, 2019
Reconciliation to amounts within the unaudited consolidated balance sheets:	(Dollars in Thousands)	
Cash and cash equivalents	$ 317,511	$ 57,943
Restricted cash included in other non-current assets	87	690
Cash, cash equivalents, and restricted cash, end of period	$ 317,598	$ 58,633

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, 2020, 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 months ended September 30, 2020 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, 2020. We adopted Accounting Standards Update ("ASU") No. 2016-13, *Financial Instruments - Credit Losses ("Topic 326")* effective July 1, 2020. Refer to Note 2(h), “New Accounting Pronouncements Adopted in Fiscal 2021,” for further information regarding the adoption of Topic 326. There were no other material changes to our significant accounting policies during the three months ended September 30, 2020.

(c) 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.

(d) 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 (expense), net. Net foreign currency exchange (losses) gains were $(1.5) million and $1.1 million during the three months ended September 30, 2020 and 2019, respectively.

(e) 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. There was $0.7 million and less than $0.1 million of capitalized direct labor costs associated with our development of software for sale during the three months ended September 30, 2020 and 2019, respectively.

(f) Restricted Cash

As of September 30, 2020 and 2019, our restricted cash balance of $0.1 million and $0.7 million, respectively, related to funds subject to contractual restrictions. We did not have a restricted cash balance as of June 30, 2020 or 2019, respectively.

(g) Equity Method Investments

During fiscal 2020, we entered into a limited partnership investment fund agreement. The primary objective of this partnership is investing in equity and equity-related securities (including convertible debt) of venture growth- stage businesses. We account for the investment in accordance with Topic 323, *Investments - Equity Method and Joint Ventures*. Our total commitment under this partnership is 5.0 million CAD ($3.7 million). Under the conditions of the equity method investment, unfavorable future changes in market conditions could lead to a potential loss up to the full value of our 5.0 million CAD ($3.7 million) commitment. As of September 30, 2020, the fair value of this investment is 0.9 million CAD ($0.7 million), representing our payment towards the total commitment, and is recorded in non-current assets in our consolidated balance sheet.

(h) New Accounting Pronouncements Adopted in Fiscal 2021

In June 2016, the FASB issued Topic 326. The amendment changes the impairment model for most financial assets and certain other instruments. Under Topic 326, entities are required to use a model that will result in the earlier recognition of allowances for losses for trade and other receivables, contract assets, held-to-maturity debt securities, loans, and other instruments. Topic 326 is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2019. Early adoption is permitted. We adopted Topic 326 effective July 1, 2020 using the effective date method with a modified retrospective transition approach. The adoption of Topic 326 did not have a material impact on our balance sheet, operating results or cash flows, and there was no impact on our debt covenants.

In March 2020, the FASB issued ASU 2020-04, *Facilitation of the Effects of Reference Rate Reform on Financial Reporting (“Topic 848”)*. ASU 2020-04 provides practical expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The expedients and exceptions provided by ASU 2020-04 apply only to contracts, hedging relationships, and other transactions that reference the London Interbank Offered Rate (“LIBOR”) or another reference rate expected to be discontinued as a result of reference rate reform. These amendments are not applicable to contract modifications made and hedging relationships entered into or evaluated after December 31, 2022. ASU No. 2020-04 is effective as of March 12, 2020 through December 31, 2022, and may be applied to contract modifications and hedging relationships from the beginning of an interim period that includes or is subsequent to March 12, 2020. We adopted ASU 2020-04 effective July 1, 2020. The adoption of ASU No. 2020-04 did not have a material impact on our operating results or cash flows, and there was no impact on our debt covenants.

(i) Recently Issued Accounting Pronouncements

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes ("Topic 740") - Simplifying the Accounting for Income Taxes*. ASU 2019-12 is intended to simplify accounting for income taxes. It removes certain exceptions to the general principles in Topic 740 and amends existing guidance to improve consistent application. ASU 2019-12 is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2020. Early adoption is permitted. We are currently evaluating the impact of ASU 2019-12 on our consolidated financial statements.

3. Revenue from Contracts with Customers

In accordance with ASU No. 2014-09, *Revenue from Contracts with Customers* ("Topic 606"), we account for a customer contract when both parties have approved the contract and are committed to perform their respective obligations, each party's rights can be identified, payment terms can be identified, the contract has commercial substance, and it is probable that we will collect substantially all of the consideration to which we are entitled. Revenue is recognized when, or as, performance obligations are satisfied by transferring control of a promised product or service to a customer.

Nature of Products and Services

We generate revenue from the following sources: (1) License revenue; (2) Maintenance revenue; and (3) 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; and 3) asset performance management. 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.

We determine revenue recognition through the following steps:

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

Term-based Arrangements: Term-based arrangements consist of on-premise term licenses as well as maintenance.

License

License revenue consists primarily of product and related revenue from our aspenONE licensing model and point product arrangements.

When a customer elects to license our products under our aspenONE licensing model, the customer receives, for the term of the arrangement, the right to all software products in the licensed aspenONE software suite. When a customer elects to license point products, the customer receives, for the term of the arrangement, the right to license specified products in the licensed aspenONE software suite. Revenue from initial product licenses is recognized upfront upon delivery.

Maintenance

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 updates that may be introduced into the licensed aspenONE software suite. When a customer elects to license point products, 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 updates that may be introduced related to the specified products licensed. Maintenance represents a stand-ready obligation and, due to our obligation to provide unspecified future software updates on a when-and-if available basis as well as telephone support services, we are required to recognize revenue ratably over the term of the arrangement.

Services and Other Revenue

Professional Services Revenue

Professional services are provided to customers on a time-and-materials ("T&M") or fixed-price basis. The obligation to provide professional services is generally satisfied over time, with the customer simultaneously receiving and consuming the benefits as we satisfy our performance obligation. For professional services, revenue is recognized by measuring progress toward the completion of our obligations. 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. 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.

Training Revenue

We provide training services to our customers, including on-site, Internet-based, public and customized training. The obligation to provide training services is generally satisfied over time, with the customer simultaneously receiving and consuming the benefits as we satisfy our performance obligation. Revenue is recognized in the period in which the services are performed.

Contracts with Multiple Performance Obligations

Our contracts generally contain more than one of the products and services listed above, each of which is separately accounted for as a distinct performance obligation.

Allocation of consideration: We allocate total contract consideration to each distinct performance obligation in an arrangement on a relative standalone selling price basis. The standalone selling price reflects the price we would charge for a specific product or service if it was sold separately in similar circumstances and to similar customers.

If the arrangement contains professional services and other products or services, we allocate to the professional service obligation a portion of the total contract consideration based on the standalone selling price of professional services that is observed from consistently priced standalone sales.

The standalone selling price for term arrangements, which always include maintenance for the full term of the arrangement, is the price for the combined license and maintenance bundle. The amount assigned to the license and maintenance bundle is separated into license and maintenance amounts using the respective standalone selling prices represented by the value relationship between the software license and maintenance.

When two or more contracts are entered into at or near the same time with the same customer, we evaluate the facts and circumstances associated with the negotiation of those contracts. Where the contracts are negotiated as a package, we will account for them as a single arrangement and allocate the consideration for the combined contracts among the performance obligations accordingly.

Standalone selling price: When available, we use directly observable transactions to determine the standalone selling prices for performance obligations. Generally, directly observable data is not available for term licenses and maintenance. When term licenses are sold together with maintenance in a bundled arrangement, we estimate a standalone selling price for these distinct performance obligations using relevant information, including our overall pricing objectives and strategies and historical pricing data, and taking into consideration market conditions and other factors.

Other policies and judgments

Payment terms and conditions vary by contract type, although terms generally include a requirement of payment annually over the term of the license arrangement. Therefore, we generally receive payment from a customer after the performance obligation related to the license has been satisfied, and therefore, our contracts generally contain a significant financing component. The significant financing component is calculated utilizing an interest rate that derives the net present value of the performance obligations delivered on an upfront basis based on the allocation of consideration. We have instituted a customer portfolio approach in assigning interest rates. The rates are determined at contract inception and are based on the credit characteristics of the customers within each portfolio.

Contract modifications

We sometimes enter into agreements to modify previously executed contracts, which constitute contract modifications. We assess each of these contract modifications to determine (i) if the additional products and services are distinct from the products and services in the original arrangement; and (ii) if the amount of consideration expected for the added products and services reflects the stand-alone selling price of those products and services, as adjusted for contract-specific circumstances. A contract modification meeting both criteria is accounted for as a separate contract. A contract modification not meeting both criteria is considered a change to the original contract and is accounted for on either (i) a prospective basis as a termination of the existing contract and the creation of a new contract; or (ii) a cumulative catch-up basis. Generally, our contract modifications meet both criteria and are accounted for as a separate contract, as adjusted for contract-specific circumstances.

Disaggregation of Revenue

We disaggregate our revenue by region, type of performance obligation, timing of revenue recognition, and segment as follows:

	Three Months Ended September 30,	
	2020	**2019**
	(Dollars in Thousands)	
Revenue by region:		
North America	$ 47,642	$ 62,428
Europe	33,716	38,278
Other (1)	33,613	39,471
	$ 114,971	$ 140,177
Revenue by type of performance obligation:		
Term licenses	$ 61,859	$ 87,719
Maintenance	46,858	43,672
Professional services and other	6,254	8,786
	$ 114,971	$ 140,177
Revenue by segment:		
Subscription and software	$ 108,717	$ 131,391
Services and other	6,254	8,786
	$ 114,971	$ 140,177

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

Contract Assets and Deferred Revenue

The difference in the opening and closing balances of our contract assets and deferred revenue primarily results from the timing difference between our performance and the customer's payment. We fulfill our obligations under a contract with a customer by transferring products and services in exchange for consideration from the customer. We recognize a contract asset when we transfer products or services to a customer and the right to consideration is conditional on something other than the passage of time. Accounts receivable are recorded when the customer has been billed or the right to consideration is unconditional. We recognize deferred revenue when we have received consideration or an amount of consideration is due from the customer and we have a future obligation to transfer products or services.

Payment terms and conditions vary by contract type. Terms generally include a requirement of payment annually over the term of the license arrangement. During the majority of each customer contract term, the amount invoiced is generally less than the amount of revenue recognized to date, primarily because we transfer control of the performance obligation related to the software license at the inception of the contract term, and the allocation of contract consideration to the license performance obligation is a significant portion of the total contract consideration. Therefore, our contracts often result in the recording of a contract asset throughout the majority of the contract term. We record a contract asset when revenue recognized on a contract exceeds the billings.

The contract assets are subject to credit risk and reviewed in accordance with Topic 326. We monitor the credit quality of customer contract asset balances on an individual basis, at each reporting date, through credit characteristics, geographic location, and the industry in which they operate. We recognize an impairment on contract assets if, subsequent to contract inception, it becomes probable payment is not collectible. An allowance for expected credit loss reflects losses expected over the remaining term of the contract asset and is determined based upon historical losses, customer-specific factors, and current economic conditions.
The following table presents the change in the reserve for contract assets during the three months ended September 30, 2020:

June 30, 2020	Provision	Write-Offs and Recoveries	September 30, 2020
(Dollars in Thousands)			
$ (2,947)	$ (3,213)	$ —	$ (6,160)

Our total contract assets, net and deferred revenue were as follows as of September 30, 2020 and June 30, 2020:

	September 30, 2020	June 30, 2020
	(Dollars in Thousands)	
Contract assets, net	$ 614,683	$ 610,473
Deferred revenue	(57,671)	(57,081)
	$ 557,012	$ 553,392

Contract assets and deferred revenue are presented net at the contract level for each reporting period.

The change in deferred revenue in the three months ended September 30, 2020 was primarily due to an increase in new billings in advance of revenue recognition, partially offset by $15.3 million of revenue recognized that was included in deferred revenue as of June 30, 2020.

Contract Costs

We pay commissions for new product sales as well as for renewals of existing contracts. Commissions paid to obtain renewal contracts are not commensurate with the commissions paid for new product sales and therefore, a portion of the commissions paid for new contracts relate to future renewals.

We account for new product sales commissions using a portfolio approach and allocate the cost of commissions in proportion to the allocation of transaction price of license and maintenance performance obligations, including assumed renewals. Commissions allocated to the license and license renewal components are expensed at the time the license revenue is recognized. Commissions allocated to maintenance are capitalized and amortized on a straight-line basis over a period of four years to eight years for new contracts, reflecting our estimate of the expected period that we will benefit from those commissions.

Amortization of capitalized contract costs is included in selling and marketing expenses in our statement of operations.

Transaction Price Allocated to Remaining Performance Obligations

The following table includes the aggregate amount of the transaction price allocated as of September 30, 2020 to the performance obligations that are unsatisfied (or partially unsatisfied) at the end of the reporting period:

	Year Ended June 30,					
	2021	2022	2023	2024	2025	Thereafter
	(Dollars in Thousands)					
License	$ 72,769	$ 17,706	$ 5,614	$ 3,295	$ 1,585	$ 355
Maintenance	127,523	132,241	97,953	68,748	40,561	10,423
Services and other	56,958	3,136	814	352	196	166

4. Leases

We have operating leases primarily for corporate offices, and other operating leases for data centers and certain equipment. We determine whether an arrangement is or contains a lease based on facts and circumstances present at the inception of the arrangement. We recognize lease expense on a straight-line basis over the lease term. Our leases have remaining lease terms of less than one year to approximately ten years, some of which include options to extend the leases for up to five years, and some of which include the option to terminate the leases upon advanced notice of 30 days or more. If we are reasonably certain we will exercise an option to extend or terminate the lease, the time period covered by the extension or termination option is included in the lease term.

Operating lease liabilities and their corresponding right-of-use assets are recorded based on the present value of lease payments over the expected lease term. The interest rate implicit in the lease contracts is typically not readily determinable. As such, we utilize the appropriate incremental borrowing rate, which is the rate incurred to borrow on a collateralized basis over a similar term at an amount equal to the lease payments in a similar economic environment. Certain adjustments to the right-of-use asset may be required for items such as incentives received. We have lease agreements with lease and non-lease components, which are accounted for separately.

Operating lease costs are recognized on a straight-line basis over the term of the lease. The components of lease expenses for the three months ended September 30, 2020 and 2019 were as follows:

	Three Months Ended September 30,	
	2020	2019
	(Dollars in Thousands)	
Operating lease costs (1)	$ 2,423	$ 2,183
Total lease costs	$ 2,423	$ 2,183

(1) Operating lease costs include rent and fixed fees

The following table represents the weighted-average remaining lease term and discount rate information related to our operating leases as of September 30, 2020 and June 30, 2020:

	September 30, 2020	June 30, 2020
Weighted average remaining lease term	5.5 years	5.7 years
Weighted average discount rate	4.4 %	4.4 %

The following table represents the maturities of our operating lease liabilities as of September 30, 2020 and June 30, 2020:

	September 30, 2020	June 30, 2020
	(Dollars in Thousands)	
Year Ending June 30,		
2021	$ 6,110	$ 8,477
2022	8,885	8,784
2023	8,321	8,167
2024	7,555	7,516
2025	5,512	5,481
Thereafter	7,519	7,370
Total lease payments	43,902	45,795
Less: imputed interest	(5,519)	(5,883)
	$ 38,383	$ 39,912

5. 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 are reported at fair value utilizing quoted market prices in identical markets, or "Level 1 Inputs." Our cash equivalents consist of short-term money market instruments.

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

The following table summarizes financial assets and liabilities measured and recorded at fair value on a recurring basis in the accompanying consolidated balance sheets as of September 30, 2020 and June 30, 2020, segregated by the level of the valuation inputs within the fair value hierarchy utilized to measure fair value:

	Fair Value Measurements at Reporting Date Using,	
	Quoted Prices in Active Markets for Identical Assets (Level 1 Inputs)	Significant Other Observable Inputs (Level 2 Inputs)
	(Dollars in Thousands)	
September 30, 2020:		
Cash equivalents	$ 1,020	$ —
Equity method investments	—	684
June 30, 2020:		
Cash equivalents	$ 1,020	$ —
Equity method investments	—	342

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

6. Accounts Receivable, Net

Our accounts receivable, net of the related allowance for doubtful accounts, were as follows as of September 30, 2020 and June 30, 2020:

	September 30, 2020	June 30, 2020
	(Dollars in Thousands)	
Accounts receivable, gross	$ 60,436	$ 62,925
Allowance for doubtful accounts	(8,071)	(6,624)
Accounts receivable, net	$ 52,365	$ 56,301

As of September 30, 2020, we had one customer receivable balance that individually represented 10% or more of our net accounts receivable. This customer receivable balance was collected subsequent to September 30, 2020. As of June 30, 2020, we had no customer receivable balances that individually represented 10% or more of our net accounts receivable.

7. Property and Equipment

Property, equipment and leasehold improvements consisted of the following as of September 30, 2020 and June 30, 2020:

	September 30, 2020	June 30, 2020
	(Dollars in Thousands)	
Property, equipment and leasehold improvements, at cost:		
Computer equipment	$ 7,221	$ 6,958
Purchased software	22,702	22,534
Furniture & fixtures	7,001	6,971
Leasehold improvements	12,508	12,424
Property, equipment and leasehold improvements, at cost	49,432	48,887
Accumulated depreciation	(43,449)	(42,924)
Property, equipment and leasehold improvements, net	$ 5,983	$ 5,963

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 consisted of the following as of September 30, 2020 and June 30, 2020:

	Gross Carrying Amount	Accumulated Amortization	Effect of Currency Translation	Net Carrying Amount
	(Dollars in Thousands)			
September 30, 2020:				
Technology	$ 51,269	$ (14,680)	$ (367)	$ 36,222
Customer relationships	9,148	(3,487)	(124)	5,537
Non-compete agreements	553	(553)	—	—
Total	$ 60,970	$ (18,720)	$ (491)	$ 41,759
June 30, 2020:				
Technology	$ 51,269	$ (13,245)	$ (842)	$ 37,182
Customer relationships	9,148	(3,171)	(308)	5,669
Non-compete agreements	553	(553)	—	—
Total	$ 60,970	$ (16,969)	$ (1,150)	$ 42,851

Total amortization expense related to intangible assets is included in cost of license revenue and operating expenses and amounted to approximately \$1.7 million and \$1.2 million for the three months ended September 30, 2020 and 2019, respectively.

Future amortization expense as of September 30, 2020 is expected to be as follows:

Year Ended June 30,		Amortization Expense
		(Dollars in Thousands)
2021	$	5,199
2022		6,968
2023		6,946
2024		6,394
2025		6,304
Thereafter		9,948
Total	$	41,759

9. Goodwill

The changes in the carrying amount of goodwill for our subscription and software reporting segment during the three months ended September 30, 2020 were as follows:

		Gross Carrying Amount		Accumulated Impairment Losses		Effect of Currency Translation		Net Carrying Amount
				(Dollars in Thousands)				
June 30, 2020:	$	207,850	$	(65,569)	$	(5,226)	$	137,055
Goodwill from acquisitions		—		—		—		—
Foreign currency translation		—		—		2,361		2,361
September 30, 2020:	$	207,850	$	(65,569)	$	(2,865)	$	139,416

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 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 is impaired.

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. We performed our annual impairment test for the subscription and software reporting unit as of December 31, 2019 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 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 consisted of the following as of September 30, 2020 and June 30, 2020:

	September 30, 2020	June 30, 2020
	(Dollars in Thousands)	
Compensation-related	$ 20,649	$ 27,591
Deferred acquisition payments	1,543	1,479
Uncertain tax positions	306	318
Royalties and external commissions	3,553	3,359
Professional fees	2,383	2,115
Other	8,175	8,694
Total accrued expenses and other current liabilities	$ 36,609	$ 43,556

Other non-current liabilities consisted of the following as of September 30, 2020 and June 30, 2020:

	September 30, 2020	June 30, 2020
	(Dollars in Thousands)	
Uncertain tax positions	$ 2,045	$ 2,027
Asset retirement obligations	935	920
Other	161	160
Total other non-current liabilities	$ 3,141	$ 3,107

11. Credit Agreement

In December 2019, we entered into an Amended and Restated Credit Agreement with JPMorgan Chase Bank, N.A., as administrative agent, joint lead arranger and joint bookrunner, Silicon Valley Bank, as joint lead arranger, joint bookrunner and syndication agent, and the lenders and co-documentation agents named therein (the "Amended and Restated Credit Agreement"). The Amended and Restated Credit Agreement, which amends and restates the Credit Agreement we entered into as of February 26, 2016, provides for a $200.0 million secured revolving credit facility and a $320.0 million secured term loan facility.

Principal outstanding under the Amended and Restated Credit Agreement bears interest at a rate per annum equal to, at our option, either: (1) the sum of (a) the highest of (i) the rate of interest last quoted by The Wall Street Journal in the United States as the prime rate in effect, (ii) the NYFRB Rate (as defined in the Amended and Restated Credit Agreement) plus 0.5%, and (iii) the LIBO rate (as defined in the Amended and Restated Credit Agreement) multiplied by the Statutory Reserve Rate (as defined in the Amended and Restated Credit Agreement) plus 1.0%, plus (b) a margin initially of 0.5% for the first full fiscal quarter ending after the date of the Amended and Restated Credit Agreement and thereafter based on our leverage ratio (as defined in the Amended and Restated Credit Agreement); or (2) the sum of (a) the LIBO rate multiplied by the Statutory Reserve Rate, plus (b) a margin initially of 1.5% for the first full fiscal quarter ending after the date of the Amended and Restated Credit Agreement and thereafter based on our leverage ratio. The interest rates as of September 30, 2020 were 1.65% on $308.0 million in outstanding borrowings on our term loan facility and 1.65% on $119.2 million in outstanding borrowings on our revolving credit facility.

All borrowings under the Amended and Restated Credit Agreement are secured by liens on substantially all of our assets and the assets of our subsidiary AspenTech Canada Holdings, LLC, which has guaranteed our obligations under the Amended and Restated Credit Agreement. Additional significant subsidiaries (as determined in the Amended and Restated Credit Agreement) may be required to guarantee our obligations and to grant liens on their assets in favor of the lenders.

As of September 30, 2020, we had $119.2 million and $308.0 million in outstanding borrowings on our revolving credit facility and term loan facility, respectively. Our current borrowings of $135.2 million consist of $119.2 million of the revolving credit facility and $16.0 million of the term loan facility. Our non-current borrowings of $288.6 million consist of $292.0 million of our term loan facility, net of $3.4 million in debt issuance costs. We had current borrowings of $135.2 million and non-current borrowings of $292.4 million as of June 30, 2020.

The indebtedness under the revolving credit facility matures on December 23, 2024. The following table summarizes the maturities of the term loan facility:

Year Ended June 30,	Amount
	(Dollars in Thousands)
2021	$ 12,000
2022	20,000
2023	28,000
2024	36,000
2025	212,000
Total	$ 308,000

The Amended and Restated 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. There are also financial covenants regarding maintenance as of the end of each fiscal quarter, commencing with the quarter ending September 30, 2020, of a maximum leverage ratio of 3.50 to 1.00 and a minimum interest coverage ratio of 2.50 to 1.00. As of September 30, 2020, we were in compliance with these covenants.

12. Stock-Based Compensation

Stock Compensation Accounting

The weighted average estimated fair value of option awards granted was $31.11 and $33.15 during the three months ended September 30, 2020 and 2019, respectively.

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

	Three Months Ended September 30,	
	2020	2019
Risk-free interest rate	0.3 %	1.5 %
Expected dividend yield	0.0 %	0.0 %
Expected life (in years)	5.3	4.5
Expected volatility factor	32.7 %	26.8 %

The stock-based compensation expense under all equity plans and its classification in the unaudited consolidated statements of operations for the three months ended September 30, 2020 and 2019 are as follows:

	Three Months Ended September 30,	
	2020	2019
	(Dollars in Thousands)	
Recorded as expenses:		
Cost of maintenance	$ 316	$ 398
Cost of services and other	450	543
Selling and marketing	1,244	1,547
Research and development	1,722	2,102
General and administrative	2,536	4,685
Total stock-based compensation	$ 6,268	$ 9,275

A summary of stock option and restricted stock unit ("RSU") activity under all equity plans for the three months ended September 30, 2020 is as follows:

	Stock Options							Restricted Stock Units		
	Shares		Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)		Aggregate Intrinsic Value (in 000's)		Shares		Weighted Average Grant Date Fair Value
Outstanding at June 30, 2020	1,410,139	$	76.19	6.67	$	49,705		352,921	$	112.45
Granted	7,929		105.42					5,103		107.20
Settled (RSUs)	—							(40,095)		96.65
Exercised	(12,943)		24.38					—		
Cancelled / Forfeited	(4,644)		126.62					(2,985)		124.78
Outstanding at September 30, 2020	1,400,481	$	76.65	6.27	$	71,762		314,944	$	114.27
Vested and exercisable at September 30, 2020	1,012,572	$	62.08	5.61	$	65,829		—		
Vested and expected to vest as of September 30, 2020	1,357,921	$	75.46	6.21	$	71,128		279,100	$	114.20

The weighted average grant-date fair value of RSUs granted was $107.20 and $133.15 during the three months ended September 30, 2020 and 2019, respectively. The total fair value of shares vested from RSU grants was $5.1 million and $10.5 million during the three months ended September 30, 2020 and 2019, respectively.

At September 30, 2020, the total future unrecognized compensation cost related to stock options was $8.8 million and is expected to be recorded over a weighted average period of 2.2 years. At September 30, 2020, the total future unrecognized compensation cost related to RSUs was $27.8 million and is expected to be recorded over a weighted average period of 2.2 years. Amounts represent compensation cost, net of estimated forfeitures.

The total intrinsic value of options exercised was $1.0 million and $1.3 million during the three months ended September 30, 2020 and 2019, respectively. We received cash proceeds from option exercises of $0.3 million and $1.0 million during the three months ended September 30, 2020 and 2019, respectively. We withheld taxes on vested RSUs of $1.8 million and $3.4 million during the three months ended September 30, 2020 and 2019, respectively.

As of September 30, 2020, common stock reserved for future issuance under equity compensation plans was 6.0 million shares.

Employee Stock Purchase Plan

On July 26, 2018, our Board of Directors approved the Aspen Technology, Inc. 2018 Employee Stock Purchase Plan (the "ESPP"), which provides for the issuance of up to 250,000 shares of common stock to participating employees. The ESPP is intended to be a qualified employee stock purchase plan under Section 423 of the Internal Revenue Code of 1986, or the IRC. The ESPP was approved at our Annual Meeting of Stockholders on December 7, 2018. The ESPP currently provides for a purchase price equal to 85% of the lower of (a) the fair market value of the common stock on the first trading day of each ESPP offering period and (b) the fair market value of the common stock on the last day of the offering period. Our initial offering period was January 1, 2019 through June 30, 2019. Our current offering period is July 1, 2020 through December 31, 2020.

During the three months ended September 30, 2020 and 2019, we recorded stock-based compensation expense of approximately $0.2 million and $0.1 million, respectively, associated with the ESPP. As of September 30, 2020, there were 217,739 shares of common stock available for issuance under the ESPP.

13. Stockholders' Equity

Stock Repurchases

On January 22, 2015, our Board of Directors approved a share repurchase program (the "Share Repurchase Program") for up to $450.0 million of our common stock. The Share Repurchase Program was announced on January 28, 2015, and expires at the end of each fiscal year unless extended. On April 26, 2016, June 8, 2017, April 18, 2018, December 6, 2018, and April 17, 2019, the Board of Directors approved a $400.0 million, $200.0 million, $200.0 million, $100.0 million, and $200.0 million increase in the Share Repurchase Program, respectively. On July 22, 2020, our Board of Directors approved a new share repurchase program (the "New Share Repurchase Program") for up to $200.0 million of our common stock, and terminated the Share Repurchase Program. 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.

No shares of our common stock were repurchased in the open market under the New Share Repurchase Program during the three months ended September 30, 2020. 382,279 shares of our common stock were repurchased in the open market for $50.0 million under the Share Repurchase Program during the three months ended September 30, 2019. As of September 30, 2020, the total remaining value under the New Share Repurchase Program was approximately $200.0 million.

Accumulated Other Comprehensive (Loss) Income

As of September 30, 2020 and June 30, 2020, accumulated other comprehensive (loss) income was comprised of foreign currency translation adjustments of $(1.1) million and $(5.3) million, respectively.

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 months ended September 30, 2020 and 2019 are as follows:

	Three Months Ended September 30,	
	2020	2019
	(Dollars and Shares in Thousands, Except per Share Data)	
Net income	$ 32,711	$ 53,514
Weighted average shares outstanding	67,729	68,441
Dilutive impact from:		
Employee equity awards	570	876
Dilutive weighted average shares outstanding	68,299	69,317
Income per share		
Basic	$ 0.48	$ 0.78
Dilutive	$ 0.48	$ 0.77

For the three months ended September 30, 2020 and 2019, certain employee equity awards were anti-dilutive based on the treasury stock method. 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 September 30, 2020 and 2019:

	Three Months Ended September 30,	
	2020	2019
	(Shares in Thousands)	
Employee equity awards	716	689

Included in the table above are options to purchase 499,413 shares of our common stock during the three months ended September 30, 2020, which were not included in the computation of dilutive weighted average shares outstanding, because their exercise prices ranged from $115.36 per share to $138.14 per share and were greater than the average market price of our common stock during the period then ended. These options were outstanding as of September 30, 2020 and expire at various dates through September 13, 2030.

15. Income Taxes

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, primarily the Foreign Derived Intangible Income (“FDII”) deduction. Assuming certain requirements are met, the FDII deduction is a benefit for U.S. companies that sell their products or services to customers outside the U.S.

Our effective tax rate was 16.7% and 10.0% during the three months ended September 30, 2020 and 2019, respectively. Our effective tax rate was lower in the three months ended September 30, 2019 as a result of the tax contingency reversal due to settling an IRS audit.

We recognized an income tax expense of $6.6 million and $6.0 million during the three months ended September 30, 2020 and 2019, respectively. 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 the FDII deduction, stock-based compensation expense and tax credits for research expenditures.

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.

16. Commitments and Contingencies

Standby letters of credit for $2.7 million and $3.5 million secured our performance on professional services contracts, certain facility leases and potential liabilities as of September 30, 2020 and June 30, 2020, respectively. The letters of credit expire at various dates through fiscal 2026.

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.

We have two operating and reportable segments, which are consistent with our reporting units: i) subscription and software and ii) services and other. The subscription and software segment is engaged in the licensing of process optimization and asset performance management software solutions and associated support services, and includes our license and maintenance revenue. The services and other segment includes professional services and training, and includes our services and other revenue. 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.

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

	Subscription and Software	Services and Other	Total
	(Dollars in Thousands)		
Three Months Ended September 30, 2020			
Segment revenue	$ 108,717	$ 6,254	$ 114,971
Segment expenses (1)	(54,602)	(8,566)	(63,168)
Segment profit	$ 54,115	$ (2,312)	$ 51,803
Three Months Ended September 30, 2019			
Segment revenue	$ 131,391	$ 8,786	$ 140,177
Segment expenses (1)	(58,322)	(8,581)	(66,903)
Segment profit (loss)	$ 73,069	$ 205	$ 73,274

(1) Our reportable segments' operating expenses include expenses directly attributable to the segments. Segment expenses include selling and marketing and research and development expenses. Segment expenses do not include allocations of general and administrative expense; interest income; interest expense; and other (expense) 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 months ended September 30, 2020 and 2019:

	Three Months Ended September 30,	
	2020	2019
	(Dollars in Thousands)	
Total segment profit for reportable segments	$ 51,803	$ 73,274
General and administrative expense	(17,633)	(19,884)
Interest income	8,669	7,976
Interest (expense)	(2,095)	(3,000)
Other (expense) income, net	(1,469)	1,132
Income before income taxes	$ 39,275	$ 59,498

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 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 2021" refers to the year ending on June 30, 2021).

Business Overview

We are a global leader in asset optimization software that optimizes asset design, operations and maintenance in complex, industrial environments. We combine decades of process modeling and operations expertise with big data, artificial intelligence, and advanced analytics. Our purpose-built software improves the competitiveness and profitability of our customers by increasing throughput, energy efficiency, and production levels, reducing unplanned downtime, plant emissions, and safety risks, enhancing capital efficiency, and decreasing working capital requirements over the entire asset lifecycle to support operational excellence.

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 capital-intensive 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 and asset performance management software for each of these business areas.

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

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

We have approximately 2,400 customers globally. Our customers consist of companies engaged in the process and other capital-intensive industries such as energy, chemicals, engineering and construction, as well as pharmaceuticals, food and beverage, transportation, power, metals and mining, pulp and paper, and consumer packaged goods.

Business Segments

We have two operating and reportable segments, which are consistent with our reporting units: (i) subscription and software and (ii) services and other. The subscription and software segment is engaged in the licensing of process optimization and asset performance management software solutions and associated support services, and includes our license and maintenance revenue. The services and other segment includes professional services and training, and includes our services and other revenue.

Recent Events

In December 2019, the novel SARS-CoV-2 virus and associated COVID-19 disease ("COVID-19") were reported in China, and in March 2020 the World Health Organization declared a pandemic. Since the beginning of March 2020, the sudden decrease in demand for oil due to the COVID-19 pandemic, compounded by the excess supply arising from producers' failure to agree on production cuts, resulted in a drop in oil prices. During the three months ended September 30, 2020, our business was negatively impacted by these factors. Specifically, we saw a slowdown in closing customer contracts, a slight increase in our customer attrition rate due to non-renewals and renewals at lower entitlement level and, to a lesser extent, a slowdown in customer payments. We are continuing to assess the impact of these items on global markets and the various industries of our customers. The extent of the impact on our operational and financial performance going forward will depend on developments such as the duration and spread of the pandemic and other factors affecting oil prices, the impact of these items on our customers and our sales cycles, as well as on our employees, all of which are uncertain and cannot be predicted. We are continuing to monitor the potential impacts related to the current disruption of COVID-19 and uncertainty in the global markets on the various industries of our customers. These factors could potentially impact the signing of new agreements, as well as the recoverability of assets, including accounts receivable and contract costs.

On November 7, 2020, we completed the acquisition of all the outstanding shares of Camo Analytics AS (“Camo”), a leading provider of industrial analytics, for a total cash consideration of $12.0 million. We intend to account for the Camo acquisition as a business combination. The allocation of the purchase price is subject to the valuation of the net assets acquired.

On December 8, 2020, we completed the acquisition of all the outstanding shares of OptiPlant, Inc. (“OptiPlant”), a leading provider of AI Driven 3D Conceptual Design and Engineering Automation software, for a total cash consideration of $8.0 million. We intend to account for the OptiPlant acquisition as a business combination. The allocation of the purchase price is subject to the valuation of the net assets acquired.

Key Components of Operations

Revenue

We generate revenue primarily from the following sources:

License Revenue. We sell our software products to end users, primarily under fixed-term licenses, through a subscription offering which we refer to as our aspenONE licensing model. The aspenONE licensing model 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; and 3) asset performance management. 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 also license our software through point product arrangements with our Premier Plus SMS offering included for the contract term.

Maintenance Revenue. 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.

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.

Cost of Revenue

Cost of License. Our cost of license revenue consists of (i) royalties, (ii) amortization of capitalized software and intangibles, and (iii) distribution fees.

Cost of Maintenance. Our cost of maintenance revenue consists primarily of personnel-related 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.

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, amortization of intangibles, and provision for bad debts.

Other Income and Expenses

Interest Income. Interest income is recorded for financing components under Accounting Standards Update ("ASU") No. 2014-09, *Revenue from Contracts with Customers* ("Topic 606"). When a contract includes a significant financing component, we generally receive the majority of the customer consideration after the recognition of a substantial portion of the arrangement fee as license revenue. As a result, we decrease the amount of revenue recognized and increase interest income by a corresponding amount. Interest income also includes the accretion of interest on investments in short-term money market instruments.

Interest Expense. Interest expense is primarily related to our Amended and Restated Credit Agreement.

Other (Expense) Income, Net. Other (expense) income, 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. We record interest and penalties related to income tax matters as a component of income tax expense. Our effective income tax rate may fluctuate between fiscal years and from quarter to quarter due to items arising from discrete events, such as tax benefits from the disposition of employee equity awards, settlements of tax audits and assessments and tax law changes. Our effective income tax rate is also impacted by, and may fluctuate in any given period because of, the composition of income in foreign jurisdictions where tax rates differ.

Key Business Metrics

Background

We utilize key business measures to track and assess the performance of our business. We have identified the following set of appropriate business metrics in the context of our evolving business:

- Annual spend
- Total contract value
- Bookings

We also use the following non-GAAP business metrics in addition to GAAP measures to track our business performance:

- Free cash flow
- Non-GAAP operating income

We make these measures available to investors and 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 agreements, as of a specific date. Annual spend is calculated by summing the most recent annual invoice value of each of our active term license agreements. Annual spend also includes the annualized value of standalone SMS agreements purchased with certain legacy term license agreements, which have become an immaterial part of our business.

Comparing annual spend for different dates can provide insight into the growth and retention rates of our business, because annual spend represents the estimated annualized billings associated with our active term license agreements. Management utilizes the annual spend business metric to evaluate the growth and performance of our business as well as for planning and forecasting. In addition, our corporate and executive bonus programs are based in part on the company's success in meeting targets for growth in annual spend that are approved by our board. We believe that annual spend is a useful business metric to investors as it provides insight into the growth component of our term licenses and to how management evaluates and forecasts the business.

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 contractually-agreed 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 agreements.

Annual spend is adversely affected by term license and standalone SMS agreements that are renewed at a lower entitlement level or not renewed and, to a lesser extent, by customer agreements that become inactive during the agreement's term because, in our determination, amounts due (or which will become due) under the agreement are not collectible. Because the annual spend calculation includes all of our active term license agreements, the reported balance may include agreements with customers that are delinquent in paying invoices, that are in bankruptcy proceedings, or where payment is otherwise in doubt.

As of September 30, 2020, approximately 88% of our term license agreements (by value) are denominated in U.S. dollars. For agreements denominated in other currencies, the company uses a fixed historical exchange rate to calculate annual spend in dollars rather than using current exchange rates, so that our calculation of growth in annual spend is not affected by fluctuations in foreign currencies.

Beginning in fiscal 2019 and for all future periods, for term license agreements that contain professional services or other products and services, we have included in the annual spend calculation the portion of the invoice allocable to the term license under Topic 606 rather than the portion of the invoice attributed to the license in the agreement. We believe that methodology more accurately allocates any discounts or premiums to the different elements of the agreement. We have not applied this methodology retroactively for agreements entered into in prior fiscal years.

We estimate that annual spend grew by approximately 0.5% during the first quarter of fiscal 2021, from $593.1 million at June 30, 2020 to $596.2 million at September 30, 2020.

Total Contract Value

Total Contract Value ("TCV") is the aggregate value of all payments received or to be received under all active term license agreements, including maintenance and escalation. TCV was $2.8 billion as of June 30, 2020. TCV is an annual metric and will be included in our Annual Report on Form 10-K for the fiscal year ended June 30, 2021.

Bookings

Bookings is the total value of customer term license contracts signed in the current period, less the value of such contracts signed in the current period where the initial licenses are not yet deemed delivered, plus term license contracts signed in a previous period for which the initial licenses are deemed delivered in the current period.

Bookings decreased from $135.0 million during the three months ended September 30, 2019 to $98.8 million during the three months ended September 30, 2020. The change in bookings is due to the timing of renewals.

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 Amended and Restated 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) payments for capitalized computer software costs, and (c) other nonrecurring items, such as acquisition related receipts and payments.

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

	Three Months Ended September 30,	
	2020	2019
	(Dollars in Thousands)	
Net cash provided by operating activities (GAAP)	$ 36,451	$ 15,260
Purchases of property, equipment, and leasehold improvements	(177)	(600)
Payments for capitalized computer software development costs	(806)	(9)
Acquisition related (receipts) payments	291	(353)
Free cash flow (non-GAAP)	$ 35,759	$ 14,298

Total free cash flow on a non-GAAP basis increased by $21.5 million during the three months ended September 30, 2020 as compared to the same period of the prior fiscal year primarily due to changes in working capital. See additional commentary in the "Liquidity and Capital Resources" section below.

Non-GAAP Income from Operations

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

The following table presents our income from operations, as adjusted for stock-based compensation expense, amortization of intangibles, and other items, such as the impact of acquisition related fees, for the indicated periods:

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
GAAP income from operations	$ 34,170	$ 53,390	$ (19,220)	(36.0)%
Plus:				
Stock-based compensation	6,268	9,275	(3,007)	(32.4)%
Amortization of intangibles	1,745	1,195	550	46.0 %
Acquisition related fees	563	118	445	377.1 %
Non-GAAP income from operations	$ 42,746	$ 63,978	$ (21,232)	(33.2)%

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, 2020 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 critical 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, 2020, and include the following:

- Revenue recognition

See Note 3, "Revenue from Contracts with Customers," to our Unaudited Consolidated Financial Statements in Part 1, Item 1 of this Form 10-Q for more information on our accounting policies related to revenue recognition.

Results of Operations

Comparison of the Three Months Ended September 30, 2020 and 2019

The following table sets forth the results of operations and the period-over-period percentage change in certain financial data for the three months ended September 30, 2020 and 2019:

	Three Months Ended September 30,		Increase / (Decrease) Change
	2020	2019	%
	(Dollars in Thousands)		
Revenue:			
License	$ 61,859	$ 87,719	(29.5)%
Maintenance	46,858	43,672	7.3 %
Services and other	6,254	8,786	(28.8)%
Total revenue	114,971	140,177	(18.0)%
Cost of revenue:			
License	2,136	1,660	28.7 %
Maintenance	4,764	4,977	(4.3)%
Services and other	8,566	8,581	(0.2)%
Total cost of revenue	15,466	15,218	1.6 %
Gross profit	99,505	124,959	(20.4)%
Operating expenses:			
Selling and marketing	25,172	29,192	(13.8)%
Research and development	22,530	22,493	0.2 %
General and administrative	17,633	19,884	(11.3)%
Total operating expenses	65,335	71,569	(8.7)%
Income from operations	34,170	53,390	(36.0)%
Interest income	8,669	7,976	8.7 %
Interest (expense)	(2,095)	(3,000)	(30.2)%
Other (expense) income, net	(1,469)	1,132	(229.8)%
Income before income taxes	39,275	59,498	(34.0)%
Provision for income taxes	6,564	5,984	9.7 %
Net income	$ 32,711	$ 53,514	(38.9)%

The following table sets forth the results of operations as a percentage of total revenue for certain financial data for the three months ended September 30, 2020 and 2019:

	Three Months Ended September 30,	
	2020	2019
	(% of Revenue)	
Revenue:		
License	53.8 %	62.6 %
Maintenance	40.8	31.2
Services and other	5.4	6.2
Total revenue	100.0	100.0
Cost of revenue:		
License	1.9	1.2
Maintenance	4.1	3.6
Services and other	7.5	6.1
Total cost of revenue	13.5	10.9
Gross profit	86.5	89.1
Operating expenses:		
Selling and marketing	21.9	20.8
Research and development	19.6	16.0
General and administrative	15.3	14.2
Total operating expenses	56.8	51.1
Income from operations	29.7	38.1
Interest income	7.5	5.7
Interest (expense)	(1.8)	(2.1)
Other (expense) income, net	(1.3)	0.8
Income before income taxes	34.2	42.4
Provision for income taxes	5.7	4.3
Net income	28.5 %	38.2 %

Revenue

Total revenue decreased by $25.2 million during the three months ended September 30, 2020 as compared to the corresponding period of the prior fiscal year. The decrease of $25.2 million during the three months ended September 30, 2020 was comprised of a decrease in license revenue of $25.9 million and a decrease in services and other revenue of $2.5 million, partially offset by an increase in maintenance revenue of $3.2 million, as compared to the corresponding period of the prior fiscal year.

License Revenue

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
License revenue	$ 61,859	$ 87,719	$ (25,860)	(29.5)%
As a percent of total revenue	53.8 %	62.6 %		

The period-over-period decrease of $25.9 million in license revenue during the three months ended September 30, 2020 was primarily attributable to a decrease in bookings related to the timing of renewals.

Maintenance Revenue

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Maintenance revenue	$ 46,858	$ 43,672	$ 3,186	7.3 %
As a percent of total revenue	40.8 %	31.2 %		

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

The period-over-period increase of $3.2 million in maintenance revenue during the three months ended September 30, 2020 was primarily due to growth of our base of arrangements, which include maintenance, being recognized on a ratable basis.

Services and Other Revenue

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Services and other revenue	$ 6,254	$ 8,786	$ (2,532)	(28.8)%
As a percent of total revenue	5.4 %	6.2 %		

We recognize professional services revenue for our time-and-materials ("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.

Services and other revenue decreased $2.5 million during the three months ended September 30, 2020 as compared to the corresponding period of the prior fiscal year primarily due to the timing and volume of professional services engagements.

Cost of Revenue

Cost of License Revenue

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Cost of license revenue	$ 2,136	$ 1,660	$ 476	28.7 %
As a percent of license revenue	3.5 %	1.9 %		

Cost of license revenue increased $0.5 million for the three months ended September 30, 2020 as compared to the corresponding period of the prior fiscal year primarily due to increased amortization of intangible assets from acquisitions. License gross profit margin remained consistent at 96.5% and 98.1% for the three months ended September 30, 2020 and 2019, respectively, due to the low cost of license revenue.

Cost of Maintenance Revenue

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Cost of maintenance revenue	$ 4,764	$ 4,977	$ (213)	(4.3)%
As a percent of maintenance revenue	10.2 %	11.4 %		

Cost of maintenance revenue decreased $0.2 million for the three months ended September 30, 2020 as compared to the corresponding period of the prior fiscal year. Maintenance gross profit margin was 89.8% and 88.6% for the three months ended September 30, 2020 and 2019, respectively.

Cost of Services and Other Revenue

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Cost of services and other revenue	$ 8,566	$ 8,581	$ (15)	(0.2)%
As a percent of services and other revenue	137.0 %	97.7 %		

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. For example, 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.

Cost of services and other revenue remained consistent for the three months ended September 30, 2020 as compared to the corresponding period of the prior fiscal year. Gross profit margin on services and other revenue was (37.0)% and 2.3% for the three months ended September 30, 2020 and 2019, respectively.

Gross Profit

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Gross profit	$ 99,505	$ 124,959	$ (25,454)	(20.4)%
As a percent of revenue	86.5 %	89.1 %		

For further discussion of subscription and software gross profit and services and other gross profit, please refer to the “Cost of License Revenue," "Cost of Maintenance Revenue," and “Cost of Services and Other Revenue” sections above.

Gross profit decreased by $25.5 million for the three months ended September 30, 2020 as compared to the corresponding period of the prior fiscal year. Gross profit margin remained consistent at 86.5% and 89.1% for the three months ended September 30, 2020 and 2019, respectively.

Operating Expenses

Selling and Marketing Expense

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Selling and marketing expense	$ 25,172	$ 29,192	$ (4,020)	(13.8)%
As a percent of total revenue	21.9 %	20.8 %		

The period-over-period decrease of $4.0 million in selling and marketing expense during the three months ended September 30, 2020 was primarily attributable to lower travel and event related costs of $3.1 million and lower compensation costs of $0.7 million.

Research and Development Expense

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Research and development expense	$ 22,530	$ 22,493	$ 37	0.2 %
As a percent of total revenue	19.6 %	16.0 %		

Research and development expense remained consistent during the three months ended September 30, 2020 as compared to the corresponding period of the prior fiscal year.

General and Administrative Expense

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
General and administrative expense	$ 17,633	$ 19,884	$ (2,251)	(11.3)%
As a percent of total revenue	15.3 %	14.2 %		

The period-over-period decrease of $2.3 million in general and administrative expense during the three months ended September 30, 2020 was primarily attributable to lower professional fees of $2.4 million.

Non-Operating Income (Expense)

Interest Income

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Interest income	$ 8,669	$ 7,976	$ 693	8.7 %
As a percent of total revenue	7.5 %	5.7 %		

The period-over-period increase of $0.7 million in interest income during the three months ended September 30, 2020 was a result of: (i) increased customer usage of our software; (ii) adding new customers; and (iii) escalating annual payments.

Interest Expense

	Three Months Ended September 30,		(Increase) / Decrease Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Interest expense	$ (2,095)	$ (3,000)	$ 905	(30.2)%
As a percent of total revenue	(1.8)%	(2.1)%		

The period-over-period decrease of $0.9 million in interest expense during the three months ended September 30, 2020 was primarily due to lower interest expenses related to our Amended and Restated Credit Agreement.

Other (Expense) Income, Net

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Other (expense) income, net	$ (1,469)	$ 1,132	$ (2,601)	(229.8)%
As a percent of total revenue	(1.3)%	0.8 %		

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

During the three months ended September 30, 2020 and 2019, other (expense) income, net was comprised of $(1.5) million and $1.1 million of currency (losses) gains, respectively.

Provision for Income Taxes

	Three Months Ended September 30,		Increase / (Decrease) Change	
	2020	2019	$	%
	(Dollars in Thousands)			
Provision for income taxes	$ 6,564	$ 5,984	$ 580	9.7 %
Effective tax rate	16.7 %	10.0 %		

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, primarily the Foreign Derived Intangible Income (“FDII”) deduction. Assuming certain requirements are met, the FDII deduction is a benefit for U.S. companies that sell their products or services to customers outside the U.S.

Our effective tax rate was 16.7% and 10.0% during the three months ended September 30, 2020 and 2019, respectively. Our effective tax rate was lower in the three months ended September 30, 2019 as a result of the tax contingency reversal due to settling an IRS audit.

We recognized an income tax expense of $6.6 million and $6.0 million during the three months ended September 30, 2020 and 2019, respectively. 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 the FDII deduction, stock-based compensation expense and tax credits for research expenditures.

Liquidity and Capital Resources

Resources

In recent years, we have financed our operations with cash generated from operating activities. As of September 30, 2020, our principal capital resources consisted of $317.5 million in cash and cash equivalents.

We believe our existing cash and cash equivalents, 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 if we decide to make one or more acquisitions of businesses, technologies or products. If additional funding for such purposes is required beyond existing resources and our Amended and Restated 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.

In March 2020, we borrowed $100.0 million under the revolving credit facility described below under "Credit Agreement," with the majority of the proceeds held as cash and cash equivalents. We increased our borrowing under the revolving credit facility as a precautionary measure to increase our cash position and preserve financial flexibility in light of disruption and uncertainty in the global markets resulting from the outbreak of the novel SARS-CoV-2 virus and associated COVID-19 disease and its impact on the demand for oil, compounded by the excess supply arising from producers' failure to agree on production cuts.

Credit Agreement

In December 2019, we entered into an Amended and Restated Credit Agreement with JPMorgan Chase Bank, N.A., as administrative agent, joint lead arranger and joint bookrunner, Silicon Valley Bank, as joint lead arranger, joint bookrunner and syndication agent, and the lenders and co-documentation agents named therein (the "Amended and Restated Credit Agreement"). The Amended and Restated Credit Agreement, which amends and restates the Credit Agreement we entered into as of February 26, 2016 with the same lenders (the "Prior Credit Agreement"), provides for a $200.0 million secured revolving credit facility and a $320.0 million secured term loan facility. The indebtedness under the revolving credit facility matures on December 23, 2024. Prior to the maturity of the Amended and Restated Credit Agreement, any amounts borrowed under the revolving credit facility may be repaid and, subject to the terms and conditions of the Amended and Restated Credit Agreement, borrowed again in whole or in part without penalty.

As of September 30, 2020, we had $119.2 million and $308.0 million in outstanding borrowings on our revolving credit facility and term loan facility, respectively. Our current borrowings of $135.2 million consist of $119.2 million of the revolving credit facility and $16.0 million of the term loan facility. Our non-current borrowings of $288.6 million consist of $292.0 million of our term loan facility, net of $3.4 million in debt issuance costs. We had current borrowings of $135.2 million and non-current borrowings of $292.4 million as of June 30, 2020.

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

Cash Equivalents and Cash Flows

Our cash equivalents of $1.0 million and $1.0 million as of September 30, 2020 and June 30, 2020, respectively, consisted of money market funds. The objective of our investment policy is to manage our cash and investments to preserve principal and maintain liquidity.

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

	Three Months Ended September 30,	
	2020	2019
	(Dollars in Thousands)	
Cash flow provided by (used in):		
Operating activities	$ 36,451	$ 15,260
Investing activities	(1,317)	(74,828)
Financing activities	(5,560)	47,004
Effect of exchange rates on cash balances	228	(729)
Increase (decrease) in cash and cash equivalents	$ 29,802	$ (13,293)

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.

Cash from operating activities provided $36.5 million during the three months ended September 30, 2020. This amount resulted from net income of $32.7 million, adjusted for non-cash items of $15.8 million and net uses of cash of $12.1 million related to changes in working capital.

Non-cash items during the three months ended September 30, 2020 consisted primarily of stock-based compensation expense of $6.3 million, provision for bad debts of $3.1 million, reduction in the carrying amount of right-of-use assets of $2.4 million, depreciation and amortization expense of $2.3 million, and net foreign currency losses of $1.5 million.

Cash used by working capital of $12.1 million during the three months ended September 30, 2020 was primarily attributable to cash used by increases in contract assets of $7.4 million, decreases in accounts payable, accrued expenses and other current liabilities of $5.5 million, decreases in lease liabilities of $2.7 million, and increases in prepaid expenses, prepaid income taxes, and other assets of $1.9 million, partially offset by increases in deferred revenue of $2.9 million, decreases in accounts receivable of $2.2 million, and decreases in contract costs of $0.3 million.

Investing Activities

During the three months ended September 30, 2020, we used $1.3 million of cash for investing activities. We used $0.8 million for capitalized computer software costs, $0.3 million for equity method investments, and $0.2 million for capital expenditures.

Financing Activities

During the three months ended September 30, 2020, we used $5.6 million of cash for financing activities. This amount resulted from $4.0 million of cash used for repayments of borrowings and $1.8 million of cash used for withholding taxes on vested and settled restricted stock units, partially offset by $0.3 million for cash provided by the exercise of employee stock options.

Contractual Obligations

Standby letters of credit for $2.7 million and $3.5 million secured our performance on professional services contracts, certain facility leases and potential liabilities as of September 30, 2020 and June 30, 2020, respectively. The letters of credit expire at various dates through fiscal 2026.

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 September 30, 2020 and 2019, 7.4% and 5.6% 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 months ended September 30, 2020 and 2019. Currently, our largest exposures to foreign exchange rates exist primarily with the Euro, Pound Sterling, Canadian Dollar, Japanese Yen, and Russian Ruble against the U.S. dollar.

During the three months ended September 30, 2020 and 2019, we recorded $(1.5) million and $1.1 million of net foreign currency exchange losses, respectively, related to the settlement and remeasurement of transactions denominated in currencies other than the functional currency of our entities. 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 $0.2 million and $0.5 million for the three months ended September 30, 2020 and 2019, respectively.

Interest Rate Risk

We place our investments in money market instruments. Our analysis of our investment portfolio and interest rates at September 30, 2020 indicated that a hypothetical 100 basis point increase or decrease in interest rates would not have a material impact on the fair value of our investment portfolio determined in accordance with an income-based approach utilizing portfolio future cash flows discounted at the appropriate rates.

As of September 30, 2020, we had $119.2 million and $308.0 million in outstanding borrowings on our revolving credit facility and term loan facility, respectively. Our current borrowings of $135.2 million consist of $119.2 million of the revolving credit facility and $16.0 million of the term loan facility. Our non-current borrowings of $288.6 million consist of $292.0 million of our term loan facility, net of $3.4 million in debt issuance costs. A hypothetical 100 basis point 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.

Investment Risk

During fiscal 2020, we entered into a limited partnership investment fund agreement. The primary objective of this partnership is investing in equity and equity-related securities (including convertible debt) of venture growth- stage businesses. We account for the investment in accordance with Topic 323, *Investments - Equity Method and Joint Ventures*. Our total commitment under this partnership is 5.0 million CAD ($3.7 million). Under the conditions of the equity method investment, unfavorable future changes in market conditions could lead to a potential loss up to the full value of our 5.0 million CAD ($3.5 million) commitment. As of September 30, 2020, the fair value of this investment is 0.9 million CAD ($0.7 million), representing our payment towards the total commitment, and is recorded in non-current assets in our consolidated balance sheet.

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 September 30, 2020. 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 September 30, 2020, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were not effective due to a material weakness in internal control over financial reporting that was disclosed in our Annual Report on Form 10-K for the fiscal year ended June 30, 2020.

b) Management's Plan to Remediate the Material Weakness

As previously described in Part II, Item 9A of our Annual Report on Form 10-K for the fiscal year ended June 30, 2020, we implemented a remediation plan to address the material weakness mentioned above. Management enhanced our risk assessment process over the design and implementation of internal controls over new and emerging financial reporting matters such as the adoption of ASC Topic 842. We also performed an updated risk assessment of revenue and associated contract balances controls and identified and designed enhanced review controls over the accounting for revenue contracts under ASC Topic 606, including the use of additional reporting tools and additional reconciliation controls. The COVID-19 pandemic and resulting remote working environment made timely completion of these remediation procedures more challenging, and all remediation efforts were not fully completed as of June 30, 2020. As a result, management concluded that the material weakness in our internal control over the financial reporting had not been fully remediated as of June 30, 2020. The weakness will be considered remediated when the applicable controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively. We expect that the remediation of this material weakness will be completed prior to the end of fiscal 2021.

c) Changes in Internal Controls Over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the three months ended September 30, 2020, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting, with the exception of the change in our controls resulting from the adoption of Topic 326 as described in
Note 2, "Significant Accounting Policies," to our Unaudited Consolidated Financial Statements. We performed a risk assessment and implemented changes to our processes and control activities. We will continue to review and document our disclosure controls and procedures, including our internal control over financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that our systems evolve with our business.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings.

None.

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, 2020, 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 2020 Annual Report on Form 10-K remains current in all material respects, with the exception of the revised risk factors below.

Our customers' business operations have been, and continue to be, subject to business interruptions arising from the COVID-19 pandemic. We continue to monitor the situation, but there can be no assurance that the pandemic will not result in delays or possibly reductions in demand for our solutions that could have a serious adverse effect on our business.

Many countries have imposed restrictions on travel and public assembly and closed schools and businesses in order to slow the spread of the SARS-CoV-2 virus and associated COVID-19 disease. These governmental restrictions and related private sector responses have adversely affected the business operations of some of our customers and resulted in a slowdown in closing some customer contracts and, to a lesser extent, a delay in customer payments during the three months ended September 30, 2020. While the measures instituted in response to COVID-19 are expected to be temporary, the duration of the business disruptions and related operational and financial impact on our customers and us cannot be estimated with certainty at this time. The adverse effects on the economies and financial markets of many countries and markets may result in an economic downturn and changes in global economic policy that could reduce demand for our products and have a material adverse impact on our business, operating results and financial condition, including on our ability to collect accounts receivable. Our business may also be harmed if our employees are not able to perform services for customers on-site due to travel restrictions or facility closings.

Our business could suffer if we do not grow our aspenONE asset performance management (APM) business or if the demand for, or usage of, our other aspenONE software declines for any reason, including declines due to adverse changes in the process and other capital-intensive industries.

We have introduced the aspenONE APM suite, and our aspenONE engineering and manufacturing and supply chain suites account for a significant majority of our revenue and will continue to do so for the foreseeable future. If we do not grow our aspenONE APM business or if demand for, or usage of, our other suites declines for any reason, our operating results, cash flows from operations and financial position would suffer. Our business could be adversely affected by:

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

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

In addition, worldwide economic downturns and pricing pressures experienced by energy, chemical, engineering and construction, and other capital-intensive industries have led to consolidations and reorganizations. In particular, we believe that the drop in demand for oil due to the COVID-19 pandemic, compounded by the excess supply arising from producers' failure to agree on production cuts, impacted and may continue to impact the operating levels and capital spending of certain of our customers. This has resulted in, and could continue to result in, less predictable and lower demand for our products and services. Any such adverse environmental, safety or health incident, change in regulatory standards, or economic downturn that affects the capital-intensive industries, including continued challenges and uncertainty among customers whose business is adversely affected by volatility in oil prices, a shift to a greater percentage of renewable energy sources such as wind and solar, as well as general domestic and foreign economic conditions and other factors that reduce spending by companies in these industries, could harm our operating results in the future.

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

During the three months ended September 30, 2020 and 2019, 7.4% and 5.6% 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, Japanese Yen, and Russian Ruble against the U.S. dollar. During the three months ended September 30, 2020 and 2019, 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 September 30, 2020 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)
July 1 to 31, 2020	—	$ —	—	
August 1 to 31, 2020	—	$ —	—	
September 1 to 30, 2020	—	$ —	—	
Total	—	$ —	—	$ 200,000,000

(1) On January 22, 2015, our Board of Directors approved a share repurchase program (the "Share Repurchase Program") for up to $450.0 million worth of our common stock. On April 26, 2016, June 8, 2017, April 18, 2018, December 6, 2018, and April 17, 2019, the Board of Directors approved a $400.0 million, $200.0 million, $200.0 million, $100.0 million, and $200.0 million increase in the Share Repurchase Program, respectively. On July 22, 2020, our Board of Directors approved a new share repurchase program (the "New Share Repurchase Program") for up to $200.0 million worth of our common stock, and terminated the Share Repurchase Program.

(2) As of September 30, 2020, the total number of shares of common stock repurchased under all programs approved by the Board of Directors was 36,270,015.

(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.

(4) As of September 30, 2020, the total remaining value under the New Share Repurchase Program was approximately $200.0 million.

Item 6. Exhibits.

Exhibit Number	Description
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
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
32.1	Certification of President and Chief Executive Officer and Senior 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
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURES

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

Aspen Technology, Inc.

Date: December 22, 2020	By:	**/s/ ANTONIO J. PIETRI**
		Antonio J. Pietri
		President and Chief Executive Officer
		(Principal Executive Officer)
Date: December 22, 2020	By:	**/s/ KARL E. JOHNSEN**
		Karl E. Johnsen
		Senior Vice President and Chief Financial Officer
		(Principal Financial Officer)

EXHIBIT 31.1

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: December 22, 2020

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

EXHIBIT 31.2

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: December 22, 2020

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

EXHIBIT 32.1

**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 September 30, 2020, 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: December 22, 2020

/s/ ANTONIO J. PIETRI
Antonio J. Pietri
President and Chief Executive Officer

Date: December 22, 2020

/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.