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 March 31, 2022

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**	**The Nasdaq Stock Market LLC**

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 o

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 o

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 o	
Non-accelerated filer o		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. o

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

As of April 20, 2022, there were 66,609,310 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 2022" refers to the year ending June 30, 2022).

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 March 31,		Nine Months Ended March 31,	
	2022	2021	2022	2021
	(Dollars in Thousands, Except Per Share Data)			
Revenue:				
License	$ 130,032	$ 110,104	$ 327,247	$ 352,133
Maintenance	50,017	45,885	146,615	139,561
Services and other	7,704	6,737	21,267	19,721
Total revenue	187,753	162,726	495,129	511,415
Cost of revenue:				
License	489	2,485	5,291	6,859
Maintenance	4,760	5,174	13,674	14,066
Services and other	8,373	8,396	24,436	24,911
Total cost of revenue	13,622	16,055	43,401	45,836
Gross profit	174,131	146,671	451,728	465,579
Operating expenses:				
Selling and marketing	33,977	30,345	94,088	82,092
Research and development	28,704	25,874	80,975	70,576
General and administrative	30,694	21,553	87,542	60,389
Total operating expenses	93,375	77,772	262,605	213,057
Income from operations	80,756	68,899	189,123	252,522
Interest income	8,287	8,410	25,646	26,383
Interest (expense)	(1,572)	(1,495)	(4,626)	(5,639)
Other income (expense), net	522	(5)	(2,107)	(1,807)
Income before income taxes	87,993	75,809	208,036	271,459
Provision for income taxes	12,870	13,314	31,650	47,101
Net income	$ 75,123	$ 62,495	$ 176,386	$ 224,358
Net income per common share:				
Basic	$ 1.13	$ 0.92	$ 2.64	$ 3.31
Diluted	$ 1.12	$ 0.91	$ 2.62	$ 3.28
Weighted average shares outstanding:				
Basic	66,594	67,920	66,791	67,809
Diluted	67,014	68,608	67,241	68,439

See accompanying Notes to these unaudited consolidated financial statements.

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

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2022	2021	2022	2021
	(Dollars in Thousands)			
Net income	$ 75,123	$ 62,495	$ 176,386	$ 224,358
Other comprehensive income (loss):				
Foreign currency translation adjustments	755	396	(3,935)	11,815
Total other comprehensive income (loss)	755	396	(3,935)	11,815
Comprehensive income	$ 75,878	$ 62,891	$ 172,451	$ 236,173

See accompanying Notes to these unaudited consolidated financial statements.

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

	March 31, 2022	June 30, 2021
	(Dollars in Thousands, Except Share and Per Share Data)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 285,217	$ 379,853
Accounts receivable, net	49,182	52,502
Current contract assets, net	345,633	308,607
Prepaid expenses and other current assets	11,848	12,716
Prepaid income taxes	3,154	14,639
Total current assets	695,034	768,317
Property, equipment and leasehold improvements, net	4,650	5,610
Computer software development costs, net	1,003	1,461
Goodwill	157,855	159,852
Intangible assets, net	37,737	44,327
Non-current contract assets, net	416,604	407,180
Contract costs	30,274	29,056
Operating lease right-of-use assets	31,609	32,539
Deferred tax assets	2,157	2,121
Other non-current assets	4,094	3,537
Total assets	$ 1,381,017	$ 1,454,000
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 7,176	$ 4,367
Accrued expenses and other current liabilities	46,161	50,575
Current operating lease liabilities	7,119	6,751
Income taxes payable	33,649	3,444
Current borrowings	26,000	20,000
Current deferred revenue	50,569	56,393
Total current liabilities	170,674	141,530
Non-current deferred revenue	12,114	11,732
Deferred income tax liabilities	139,921	193,360
Non-current operating lease liabilities	27,761	29,699
Non-current borrowings, net	253,412	273,162
Other non-current liabilities	2,280	3,760
Commitments and contingencies (Note 16)		
Series D redeemable convertible preferred stock, $0.10 par value— Authorized— 3,636 shares as of March 31, 2022 and June 30, 2021 Issued and outstanding— none as of March 31, 2022 and June 30, 2021	—	—
Stockholders' equity:		
Common stock, $0.10 par value— Authorized—210,000,000 shares Issued— 104,845,904 shares at March 31, 2022 and 104,543,414 shares at June 30, 2021 Outstanding— 66,607,779 shares at March 31, 2022 and 67,912,160 shares at June 30, 2021	10,485	10,455
Additional paid-in capital	850,948	819,642
Retained earnings	1,954,519	1,778,133
Accumulated other comprehensive income	5,091	9,026
Treasury stock, at cost—38,238,125 shares of common stock at March 31, 2022 and 36,631,254 shares at June 30, 2021	(2,046,188)	(1,816,499)
Total stockholders' equity	774,855	800,757
Total liabilities and stockholders' equity	$ 1,381,017	$ 1,454,000

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 Income (Loss)	Treasury Stock		Total Stockholders' Equity
	Number of Shares	$0.10 Par Value				Number of Shares	Cost	
	(Dollars in Thousands, Except Share Data)							
Balance June 30, 2021	104,543,414	$ 10,455	$ 819,642	$ 1,778,133	$ 9,026	36,631,254	$ (1,816,499)	$ 800,757
Comprehensive income (loss):								
Net income	—	—	—	39,399	—	—	—	39,399
Other comprehensive (loss)	—	—	—	—	(4,058)			(4,058)
Issuance of shares of common stock	29,717	3	1,874	—	—	—		1,877
Issuance of restricted stock units and net share settlement related to withholding taxes	66,809	7	(5,826)	—	—	—	—	(5,819)
Repurchase of common stock	—	—	—	—	—	1,066,194	(150,000)	(150,000)
Stock-based compensation	—	—	10,090	—	—	—	—	10,090
Balance September 30, 2021	104,639,940	$ 10,465	$ 825,780	$ 1,817,532	$ 4,968	37,697,448	$ (1,966,499)	$ 692,246
Comprehensive income (loss):								
Net income	—	—	—	61,864	—	—	—	61,864
Other comprehensive (loss)	—	—	—	—	(632)			(632)
Issuance of shares of common stock	124,959	12	12,472	—	—	—		12,484
Issuance of restricted stock units and net share settlement related to withholding taxes	28,131	3	(2,338)	—	—	—	—	(2,335)
Repurchase of common stock	—	—	(15,000)	—	—	439,233	(64,689)	(79,689)
Stock-based compensation	—	—	7,866	—	—	—	—	7,866
Balance December 31, 2021	104,793,030	$ 10,480	$ 828,780	$ 1,879,396	$ 4,336	38,136,681	$ (2,031,188)	$ 691,804
Comprehensive income:								
Net income	—	—	—	75,123	—	—	—	75,123
Other comprehensive income	—	—	—	—	755			755
Issuance of shares of common stock	23,899	2	1,774	—	—	—		1,776
Issuance of restricted stock units and net share settlement related to withholding taxes	28,975	3	(2,363)	—	—	—	—	(2,360)
Repurchase of common stock	—	—	15,000	—	—	101,444	(15,000)	—
Stock-based compensation	—	—	7,757	—	—	—	—	7,757
Balance March 31, 2022	104,845,904	$ 10,485	$ 850,948	$ 1,954,519	$ 5,091	38,238,125	$ (2,046,188)	$ 774,855

	Common Stock					Treasury Stock		
	Number of Shares	$0.10 Par Value	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Number of Shares	Cost	Total Stockholders' Equity
	(Dollars in Thousands, Except Share Data)							
Balance 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)
Stock-based compensation	—	—	6,268	—	—	—	—	6,268
Balance September 30, 2020	104,027,915	$ 10,403	$ 774,232	$ 1,491,041	$ (1,135)	36,270,015	$ (1,766,499)	$ 508,042
Comprehensive income:								
Net income	—	—	—	129,152	—	—	—	129,152
Other comprehensive income	—	—	—	—	7,266			7,266
Issuance of shares of common stock	34,681	3	2,843	—	—	—		2,846
Issuance of restricted stock units and net share settlement related to withholding taxes	37,236	4	(2,274)	—	—	—	—	(2,270)
Stock-based compensation	—	—	9,096	—	—	—	—	9,096
Balance December 31, 2020	104,099,832	$ 10,410	$ 783,897	$ 1,620,193	$ 6,131	36,270,015	$ (1,766,499)	$ 654,132
Comprehensive income:								
Net income	—	—	—	62,495	—	—	—	62,495
Other comprehensive income	—	—	—	—	396			396
Issuance of shares of common stock	148,541	15	9,233	—	—	—		9,248
Issuance of restricted stock units and net share settlement related to withholding taxes	35,584	4	(2,612)	—	—	—	—	(2,608)
Stock-based compensation	—	—	9,225	—	—	—	—	9,225
Balance March 31, 2021	104,283,957	$ 10,429	$ 799,743	$ 1,682,688	$ 6,527	36,270,015	$ (1,766,499)	$ 732,888

See accompanying Notes to these unaudited consolidated financial statements.

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

	Nine Months Ended March 31, 2022	Nine Months Ended March 31, 2021
	(Dollars in Thousands)	
Cash flows from operating activities:		
Net income	$ 176,386	$ 224,358
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	8,151	7,545
Reduction in the carrying amount of right-of-use assets	7,566	7,037
Net foreign currency losses	2,238	2,027
Stock-based compensation	25,713	24,589
Deferred income taxes	(53,472)	7,029
Provision for receivables	2,276	6,800
Other non-cash operating activities	1,507	718
Changes in assets and liabilities:		
Accounts receivable	805	4,115
Contract assets, net	(49,739)	(103,538)
Contract costs	(1,218)	198
Lease liabilities	(7,908)	(7,533)
Prepaid expenses, prepaid income taxes, and other assets	12,111	(6,959)
Accounts payable, accrued expenses, income taxes payable and other liabilities	36,036	(6,847)
Deferred revenue	(5,366)	13,410
Net cash provided by operating activities	155,086	172,949
Cash flows from investing activities:		
Purchases of property, equipment and leasehold improvements	(1,138)	(733)
Payments for business acquisitions, net of cash acquired	—	(16,272)
Payments for equity method investments	(617)	(926)
Payments for capitalized computer software development costs	(361)	(895)
Net cash used in investing activities	(2,116)	(18,826)
Cash flows from financing activities:		
Issuance of shares of common stock	15,923	12,508
Repurchases of common stock	(234,043)	—
Payments of tax withholding obligations related to restricted stock	(12,656)	(6,719)
Deferred business acquisition payments	(1,220)	—
Repayments of amounts borrowed	(14,000)	(131,182)
Payments of debt issuance costs	(402)	—
Net cash used in financing activities	(246,398)	(125,393)
Effect of exchange rate changes on cash and cash equivalents	(1,208)	573
(Decrease) increase in cash and cash equivalents	(94,636)	29,303
Cash and cash equivalents, beginning of period	379,853	287,796
Cash and cash equivalents, end of period	$ 285,217	$ 317,099
Supplemental disclosure of cash flow information:		
Income taxes paid, net	$ 42,697	$ 49,349
Interest paid	3,975	5,672
Supplemental disclosure of non-cash activities:		
Change in purchases of property, equipment and leasehold improvements included in accounts payable and accrued expenses	$ (99)	$ 77
Change in repurchases of common stock included in accounts payable and accrued expenses	(4,353)	—
Lease liabilities arising from obtaining right-of-use assets	4,860	1,488

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. ("AspenTech") 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, 2021, which are contained in our Annual Report on Form 10-K for the fiscal year ended June 30, 2021, as previously filed with the U.S. Securities and Exchange Commission ("SEC"). In the opinion of management, all adjustments, consisting of normal and recurring adjustments, considered necessary for a fair presentation of the financial position, results of operations, and cash flows at the dates and for the periods presented have been included and all intercompany accounts and transactions have been eliminated in consolidation. The results of operations for the three and nine months ended March 31, 2022 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, 2021. We adopted Accounting Standards Update ("ASU") No. 2019-12, *Income Taxes ("Topic 740") - Simplifying the Accounting for Income Taxes* effective July 1, 2021. Refer to Note 2(g), "New Accounting Pronouncements Adopted in Fiscal 2022," for further information regarding the adoption of ASU 2019-12. There were no other material changes to our significant accounting policies during the three and nine months ended March 31, 2022.

(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 income (expense), net. Net foreign currency exchange gain (losses) were $0.1 million and $(0.1) million during the three months ended March 31, 2022 and 2021, respectively, and $(2.2) million and $(2.0) million during the nine months ended March 31, 2022 and 2021, 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 were less than $0.1 million of capitalized direct labor costs associated with our development of software for sale during the three months ended March 31, 2022 and 2021, respectively, and less than $0.1 million and $0.7 million of capitalized direct labor costs associated with our development of software for sale during the nine months ended March 31, 2022 and 2021, respectively.

(f) 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 ($3.9 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 ($3.9 million) commitment. As of March 31, 2022, the fair value of this investment was $3.0 million CAD ($2.3 million), representing our payment towards the total commitment, and is recorded in non-current assets in our consolidated balance sheet.

(g) New Accounting Pronouncements Adopted in Fiscal 2022

In December 2019, the FASB issued ASU 2019-12, which 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 of this standard update is permitted. We adopted ASU 2019-12 effective July 1, 2021. The adoption of ASU 2019-12 did not have a material impact on our consolidated financial statements.

(h) Recently Issued Accounting Pronouncements

In October 2021, the FASB issued ASU No. 2021-08, *Business Combinations (Topic 805) - Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*. This ASU is intended to improve the accounting for acquired revenue contracts with customers in a business combination by addressing diversity in practice and inconsistency related to 1) recognition of an acquired contract liability, and 2) payment terms and their effect on subsequent revenue recognized by the acquirer. ASU 2021-08 is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2022. Early adoption of this ASU is permitted. We are currently evaluating the impact of ASU 2021-08 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. Each product suite leverages our Artificial Intelligence of Things (AIoT) products as a foundation for applying Industrial AI at scale, to help us realize our vision for Industrial AI at scale. Our asset performance management product suite is licensed by customer sites, user seats or cloud connections. The engineering and manufacturing and supply chain product suites are licensed by tokens, which are interchangeable measures of usage based on the various units of measure such as users, servers, applications, manipulated variables, etc. Customers may use tokens flexibly to access any product or combination of products in the licensed suite.

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, and segment as follows:

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2022	2021	2022	2021
	(Dollars in Thousands)			
Revenue by region:				
North America	$ 67,983	$ 66,786	$ 189,156	$ 225,62
Europe	68,382	47,581	156,813	158,77
Other (1)	51,388	48,359	149,160	127,02
	$ 187,753	$ 162,726	$ 495,129	$ 511,41
Revenue by type of performance obligation:				
Term licenses	$ 130,032	$ 110,104	$ 327,247	$ 352,13
Maintenance	50,017	45,885	146,615	139,56
Professional services and other	7,704	6,737	21,267	19,72
	$ 187,753	$ 162,726	$ 495,129	$ 511,41
Revenue by segment:				
Subscription and software	$ 180,049	$ 155,989	$ 473,862	$ 491,69
Services and other	7,704	6,737	21,267	19,72
	$ 187,753	$ 162,726	$ 495,129	$ 511,41

(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 ASU No. 2016-13, *Financial Instruments - Credit Losses (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 nine months ended March 31, 2022:

June 30, 2021	Provision	Write-Offs, Recoveries, and Billings	March 31, 2022
	(Dollars in Thousands)		
$ (5,380)	$ (2,922)	$ 3,889	$ (4,413)

Our total contract assets, net and deferred revenue were as follows as of March 31, 2022 and June 30, 2021:

	March 31, 2022	June 30, 2021
	(Dollars in Thousands)	
Contract assets, net	$ 762,237	$ 715,787
Deferred revenue	(62,683)	(68,125)
	$ 699,554	$ 647,662

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

The change in deferred revenue in the nine months ended March 31, 2022 was primarily due to $39.1 million of revenue recognized that was included in deferred revenue as of June 30, 2021, partially offset by an increase in new billings in advance of revenue recognition.

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 March 31, 2022 to the performance obligations that are unsatisfied (or partially unsatisfied) at the end of the reporting period:

	Year Ending June 30,					
	2022	2023	2024	2025	2026	Thereafter
	(Dollars in Thousands)					
License	$ 66,420	$ 26,271	$ 12,221	$ 16,856	$ 5,909	$ 693
Maintenance	50,367	174,091	138,460	100,038	65,808	38,699
Services and other	33,960	9,081	1,607	1,526	1,369	1,117

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 nine 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 2 months 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. Total lease expenses consisted of rent and fixed fees of $2.5 million and $2.5 million for the three months ended March 31, 2022 and 2021, respectively, and rent and fixed fees of $7.5 million and $7.4 million for the nine months ended March 31, 2022 and 2021, respectively.

The following table represents the weighted-average remaining lease term and discount rate information related to our operating leases as of March 31, 2022 and June 30, 2021:

	March 31, 2022	June 30, 2021
Weighted average remaining lease term	5.8 years	6.1 years
Weighted average discount rate	3.8 %	3.6 %

The following table represents the maturities of our operating lease liabilities as of March 31, 2022 and June 30, 2021:

	March 31, 2022	June 30, 2021
	(Dollars in Thousands)	
Year Ending June 30,		
2022	$ 1,447	$ 7,973
2023	8,922	8,024
2024	8,228	7,355
2025	6,085	5,353
2026	3,135	2,209
Thereafter	12,425	11,008
Total lease payments	40,242	41,922
Less: imputed interest	(5,362)	(5,472)
	$ 34,880	$ 36,450

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 March 31, 2022 and June 30, 2021, 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)	
March 31, 2022:		
Cash equivalents	$ 1,019	$ —
Equity method investments	—	2,286
June 30, 2021:		
Cash equivalents	$ 1,020	$ —
Equity method investments	—	1,326

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 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 March 31, 2022 and June 30, 2021:

	March 31, 2022	June 30, 2021
	(Dollars in Thousands)	
Accounts receivable, gross	$ 56,079	$ 61,273
Allowance for doubtful accounts	(6,897)	(8,771)
Accounts receivable, net	$ 49,182	$ 52,502

We had no customer receivable balance that individually represented 10% or more of our net accounts receivable as of March 31, 2022 and June 30, 2021.

7. Property and Equipment

Property, equipment and leasehold improvements consisted of the following as of March 31, 2022 and June 30, 2021:

	March 31, 2022	June 30, 2021
	(Dollars in Thousands)	
Property, equipment and leasehold improvements, at cost:		
Computer equipment	$ 6,719	$ 6,250
Purchased software	23,174	22,711
Furniture & fixtures	6,166	6,592
Leasehold improvements	11,244	12,982
Property, equipment and leasehold improvements, at cost	47,303	48,535
Accumulated depreciation	(42,653)	(42,925)
Property, equipment and leasehold improvements, net	$ 4,650	$ 5,610

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 March 31, 2022 and June 30, 2021:

	Gross Carrying Amount	Accumulated Amortization	Effect of Currency Translation	Net Carrying Amount
	(Dollars in Thousands)			
March 31, 2022:				
Technology	$ 55,288	$ (24,231)	$ 573	$ 31,630
Customer relationships	12,038	(5,937)	6	6,107
Non-compete agreements	553	(553)	—	—
Total	$ 67,879	$ (30,721)	$ 579	$ 37,737
June 30, 2021:				
Technology	$ 55,288	$ (19,378)	$ 911	$ 36,821
Customer relationships	12,038	(4,713)	181	7,506
Non-compete agreements	553	(553)	—	—
Total	$ 67,879	$ (24,644)	$ 1,092	$ 44,327

Total amortization expense related to intangible assets is included in cost of license revenue (for technology) and general and administrative expense (for customer relationships and non-compete agreements) and amounted to approximately $2.0 million and $2.1 million during the three months ended March 31, 2022 and 2021, respectively, and $6.1 million and $5.7 million during the nine months ended March 31, 2022 and 2021, respectively.

Future amortization expense as of March 31, 2022 is expected to be as follows:

Year Ending June 30,	Amortization Expense
	(Dollars in Thousands)
2022	$ 2,020
2023	8,063
2024	7,521
2025	7,436
2026	5,263
Thereafter	7,434
Total	$ 37,737

9. Goodwill

The changes in the carrying amount of goodwill for our subscription and software reporting unit during the nine months ended March 31, 2022 were as follows:

	Gross Carrying Amount	Accumulated Impairment Losses	Effect of Currency Translation	Net Carrying Amount
	(Dollars in Thousands)			
June 30, 2021:	$ 221,458	$ (65,569)	$ 3,963	$ 159,852
Foreign currency translation	—	—	(1,997)	(1,997)
March 31, 2022	$ 221,458	$ (65,569)	$ 1,966	$ 157,855

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 31 as the annual impairment assessment date. We performed our annual impairment test for the subscription and software reporting unit as of December 31, 2021 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 March 31, 2022 and June 30, 2021:

	March 31, 2022	June 30, 2021
	(Dollars in Thousands)	
Compensation-related	$ 27,909	$ 30,539
Acquisition and integration planning related fees	6,395	—
Professional fees	2,789	2,964
Deferred acquisition payments	2,775	2,862
Uncertain tax positions	1,005	1,087
Royalties and outside commissions	747	3,642
Share repurchases	—	4,353
Other	4,541	5,128
Total accrued expenses and other current liabilities	$ 46,161	$ 50,575

Other non-current liabilities consisted of the following as of March 31, 2022 and June 30, 2021:

	March 31, 2022	June 30, 2021
	(Dollars in Thousands)	
Uncertain tax positions	$ 1,207	$ 1,343
Deferred acquisition payments	—	1,200
Asset retirement obligations	857	947
Other	216	270
Total other non-current liabilities	$ 2,280	$ 3,760

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 rate as of March 31, 2022 was 1.71% on $282.0 million in outstanding borrowings on our term loan 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.

On December 14, 2021, we and JPMorgan Chase Bank, N.A., as administrative agent, entered into a Waiver and Second Amendment (the “Waiver and Amendment”) to the Amended and Restated Credit Agreement dated as of December 23, 2019. The Waiver and Amendment amends the Amended and Restated Credit Agreement to (i) permanently waive the specified event of default resulting from the consummation of the Transactions (as defined in Note 18) under the Transaction Agreement and Plan of Merger (the “Transaction Agreement”) with Emerson Electric Co. (“Emerson”), EMR Worldwide Inc., a wholly owned subsidiary of Emerson (“Emerson Sub”), Emersub CX, Inc., a wholly owned subsidiary of Emerson (“New AspenTech”), and Emersub CXI, Inc., a direct wholly owned subsidiary of New AspenTech (“Merger Subsidiary”); (ii) permanently waive a possible change of fiscal year event of default in the future if we change the end of our fiscal year; (iii) establish a benchmark replacement for each affected currency due to the 2021 LIBOR cessation; and (iv) make New AspenTech a loan party and guarantor of the Amended and Restated Credit Agreement, if and when the Transactions are consummated. The waivers and New AspenTech accession would become effective upon the consummation of the Transactions. The benchmark amendments became effective as of the effective date of the Waiver and Amendment.

As of March 31, 2022, our current borrowings of $26.0 million consisted of the term loan facility. Our non-current borrowings of $253.4 million consisted of $256.0 million of our term loan facility, net of $2.6 million in debt issuance costs. As of June 30, 2021, our current borrowings of $20.0 million consisted of the term loan facility. As of June 30, 2021, our non-current borrowings of $273.2 million consisted of $276.0 million of our term facility, net of $2.8 million in debt issuance costs.

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

Year Ending June 30,	**Amount**
	(Dollars in Thousands)
2022	$ 6,000
2023	28,000
2024	36,000
2025	212,000
Total	$ 282,000

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 December 31, 2019, 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 March 31, 2022, we were in compliance with these covenants.

12. Stock-Based Compensation

The stock-based compensation expense under all equity plans and its classification in the unaudited consolidated statements of operations for the three and nine months ended March 31, 2022 and 2021 were as follows:

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2022	2021	2022	2021
	(Dollars in Thousands)			
Recorded as expenses:				
Cost of maintenance	$ 150	$ 234	$ 505	$ 688
Cost of services and other	225	412	731	1,198
Selling and marketing	1,687	1,869	5,324	4,655
Research and development	1,702	2,273	5,434	6,515
General and administrative	3,993	4,437	13,719	11,533
Total stock-based compensation	$ 7,757	$ 9,225	$ 25,713	$ 24,589

A summary of stock option and restricted stock unit (“RSU”) activity under all equity plans for the nine months ended March 31, 2022 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, 2021	1,285,221	$ 94.18	6.93	$ 56,032	362,024	$ 128.66
Granted	274,777	130.29			393,769	135.79
Settled (RSUs)	—				(196,532)	127.62
Exercised (Stock options)	(171,895)	89.35			—	
Cancelled / Forfeited	(37,721)	128.78			(36,208)	131.76
Outstanding at March 31, 2022	1,350,382	$ 100.69	6.78	$ 85,818	523,053	$ 134.52
Vested and exercisable at March 31, 2022	869,953	$ 84.81	5.72	$ 70,087		
Vested and expected to vest as of March 31, 2022	1,262,415	$ 99.16	6.68	$ 83,580	409,774	$ 134.27

As of March 31, 2022, the RSUs expected to vest included 169,351 shares of RSUs granted during second and third quarter of fiscal 2022 which vest over a 12 to 18 month period contingent upon the close of the Transactions and continued service. Stock-based compensation expense associated with these awards will begin recognition at the closing date of the Transactions. Accordingly, there was no stock-based compensation expense recognized during the three and nine months ended March 31, 2022 for these awards.

The weighted average estimated fair value of option awards granted was $47.93 and $45.63 during the three months ended March 31, 2022 and 2021, respectively, and $40.50 and $38.76 during the nine months ended March 31, 2022 and 2021, respectively.

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

	Nine Months Ended March 31,	
	2022	2021
Risk-free interest rate	0.8 %	0.4 %
Expected dividend yield	0.0 %	0.0 %
Expected life (in years)	4.7	4.7
Expected volatility factor	35.4 %	34.1 %

As of March 31, 2022, the total future unrecognized compensation cost related to stock options and RSUs was $13.7 million and $46.0 million, respectively, and was expected to be recorded over a weighted average period of 2.57 years and 2.74 years, respectively. Of the $46.0 million total future unrecognized compensation cost related to RSUs, $24.2 million was associated with the awards that are contingent upon the close of the Transactions.

As of March 31, 2022, common stock reserved for future issuance under equity compensation plans was 4.9 million shares.

13. Stock Repurchases

On July 22, 2020, our Board of Directors approved a share repurchase program (the “FY 2021 Program”) for up to $200.0 million of our common stock. The FY 2021 Program expired on June 30, 2021. On June 4, 2021, our Board of Directors approved a new share repurchase program (the “FY 2022 Program”) for up to $300.0 million of our common stock in our fiscal year ending June 30, 2022. The timing and amount of any shares repurchased under the FY 2022 Program are based on market conditions and other factors. All shares of our common stock repurchased have been recorded as treasury stock under the cost method.

On June 14, 2021, as part of our FY 2022 Program, we entered into an accelerated share repurchase program (the “ASR Program”) with a third-party financial institution to repurchase an aggregate of $150.0 million of our common stock. Pursuant to the terms of the ASR Program, we made an upfront payment of $150.0 million on July 1, 2021 in exchange for the delivery of 872,473 initial shares of our common stock. The actual number of shares repurchased is determined at the maturity of the ASR Program based on the volume-weighted average price per share of our common stock over the term of the ASR Program, less an agreed-upon discount.

The ASR Program was completed on August 20, 2021. We repurchased in total 1,066,194 shares of our common stock for $150.0 million as part of the ASR Program. These shares were recorded as an increase to treasury stock.

On November 12, 2021, as part of our FY 2022 Program, we entered into another accelerated share repurchase program (the “Second ASR Program”) with a third-party financial institution to repurchase an aggregate of $75.0 million of our common stock. Pursuant to the terms of the Second ASR Program, we made an upfront payment of $75.0 million on November 16, 2021 in exchange for the delivery of 402,874 initial shares of our common stock. The actual number of shares repurchased is determined at the maturity of the program based on volume-weighted average price per share of our common stock over the term of the program, less an agreed-upon discount.

The Second ASR Program was completed on January 21, 2022. We repurchased in total 504,318 shares of our common stock for $75.0 million as part of the Second ASR Program. These shares were recorded as an increase to treasury stock.

Additionally, we repurchased 36,359 shares of our common stock for $4.7 million during the second quarter of fiscal 2022 under the FY 2022 Program. As of March 31, 2022, the total remaining value under the FY 2022 Program was $70.3 million.

14. Net Income Per Share

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

The calculations of basic and diluted net income per share and basic and dilutive weighted average shares outstanding for the three and nine months ended March 31, 2022 and 2021 are as follows:

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2022	2021	2022	2021
	(Dollars and Shares in Thousands, Except Per Share Data)			
Net income	$ 75,123	$ 62,495	$ 176,386	$ 224,358
Weighted average shares outstanding	66,594	67,920	66,791	67,809
Dilutive impact from:				
Employee equity awards	420	688	450	630
Dilutive weighted average shares outstanding	67,014	68,608	67,241	68,439
Income per share				
Basic	$ 1.13	$ 0.92	$ 2.64	$ 3.31
Dilutive	$ 1.12	$ 0.91	$ 2.62	$ 3.28

For the three and nine months ended March 31, 2022 and 2021, 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 March 31, 2022 and 2021:

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2022	2021	2022	2021
	(Shares in Thousands)			
Employee equity awards	539	507	638	869

Included in the table above are options to purchase 28,504 and 29,586 shares of our common stock during the three and nine months ended March 31, 2022, which were not included in the computation of dilutive weighted average shares outstanding, because their exercise prices ranged from $144.83 per share to $167.96 per share during the nine months ended March 31, 2022, and were greater than the average market price of our common stock during the period then ended. These options were outstanding as of March 31, 2022 and expire at various dates through March 28, 2032.

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 14.6% and 17.6% during the three months ended March 31, 2022 and 2021, respectively, and 15.2% and 17.3% during the nine months ended March 31, 2022 and 2021, respectively. Our effective tax rate was lower in the three and nine months ended March 31, 2022 due to the higher FDII deduction taken this year compared to last year due to the timing of revenue recognition for tax purposes on multi-year software license agreements as the result of the change in income tax regulations.

We recognized income tax expense of $12.9 million and $13.3 million during the three months ended March 31, 2022 and 2021, respectively, and $31.7 million and $47.1 million during the nine months ended March 31, 2022 and 2021. Our income tax expense was driven primarily by pre-tax profitability in our domestic and foreign operations and the impact of permanent items and discrete tax 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 $2.2 million and $2.3 million secured our performance on professional services contracts, certain facility leases and potential liabilities as of March 31, 2022 and June 30, 2021, respectively. The letters of credit expire at various dates through fiscal 2025.

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 March 31, 2022			
Segment revenue	$ 180,049	$ 7,704	$ 187,753
Segment expenses (1)	(67,930)	(8,373)	(76,303)
Segment profit (loss)	$ 112,119	$ (669)	$ 111,450
Three Months Ended March 31, 2021			
Segment revenue	$ 155,989	$ 6,737	$ 162,726
Segment expenses (1)	(63,878)	(8,396)	(72,274)
Segment profit (loss)	$ 92,111	$ (1,659)	$ 90,452
Nine Months Ended March 31, 2022			
Segment revenue	$ 473,862	$ 21,267	$ 495,129
Segment expenses (1)	(194,028)	(24,436)	(218,464)
Segment profit (loss)	$ 279,834	$ (3,169)	$ 276,665
Nine Months Ended March 31, 2021			
Segment revenue	$ 491,694	$ 19,721	$ 511,415
Segment expenses (1)	(173,593)	(24,911)	(198,504)
Segment profit (loss)	$ 318,101	$ (5,190)	$ 312,911

(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 and nine months ended March 31, 2022 and 2021:

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2022	2021	2022	2021
		(Dollars in Thousands)		
Total segment profit for reportable segments	$ 111,450	$ 90,452	$ 276,665	$ 312,911
General and administrative expense	(30,694)	(21,553)	(87,542)	(60,389)
Interest income	8,287	8,410	25,646	26,383
Interest (expense)	(1,572)	(1,495)	(4,626)	(5,639)
Other (expense), net	522	(5)	(2,107)	(1,807)
Income before income taxes	$ 87,993	$ 75,809	$ 208,036	$ 271,459

18. Transaction Agreement with Emerson Electric Co.

On October 10, 2021, we entered into the Transaction Agreement with Emerson, Emerson Sub, New AspenTech, and Merger Subsidiary, pursuant to which, among other things, (i) Emerson will contribute $6,014,000,000 in cash to New AspenTech in exchange for New AspenTech common stock, (ii) Emerson Sub will contribute Emerson's Open Systems International, Inc. and Geological Simulation Software businesses to New AspenTech in exchange for New AspenTech common stock, (iii) Merger Subsidiary will merge with and into AspenTech, with AspenTech being the surviving corporation (the "Surviving Corporation") and becoming a wholly owned subsidiary of New AspenTech and (iv) as a result of the merger, each issued and outstanding share of our common stock (subject to certain exceptions) will be converted into the right to receive 0.42 shares of New AspenTech common stock and a per share cash consideration amount, calculated by dividing $6,014,000,000 by the number of outstanding shares of our common stock as of the closing of the transactions contemplated by the Transaction Agreement (the "Closing") on a fully diluted basis, which per share cash consideration amount was estimated to be approximately $87.50 per share of our common stock.

Immediately following the Closing, Emerson and Emerson Sub will collectively own 55% of the outstanding New AspenTech common stock (on a fully diluted basis) and our stockholders will own the remaining outstanding New AspenTech common stock. Following the Closing, New AspenTech and its subsidiaries will operate under the name "Aspen Technology, Inc."

The Transaction Agreement includes customary representations, warranties and covenants of the parties. Among other things and subject to certain exceptions, until the earlier of the termination of the Transaction Agreement or the Closing, we and Emerson have agreed to use reasonable best efforts to conduct our and Emerson's respective businesses (in Emerson's case, the contributed business) in the ordinary course consistent with past practice. The Transaction Agreement also prohibits our solicitation of proposals relating to alternative transactions and restricts our ability to furnish information to, or participate in any discussions or negotiations with, any third party with respect to any such transaction, subject to certain limited exceptions.

The obligation of the parties to consummate the Transactions is subject to customary conditions, including, among other things, (i) the affirmative vote of the holders of a majority of our outstanding common stock, (ii) the approvals under applicable regulatory and competition laws, including the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (in each case, without the requirement to take actions that would be reasonably expected to materially and adversely affect Emerson and its subsidiaries or New AspenTech and its subsidiaries after giving effect of the Transactions), which approvals have been obtained and (iii) the effectiveness of the registration statement on Form S-4 filed by Emerson Sub with the SEC, which occurred on April 18, 2022, and the approval of the listing on Nasdaq of the shares of New AspenTech common stock to be issued in the Transactions.

The Transaction Agreement contains certain termination rights for each of us and Emerson, including the right of each party to terminate the Transaction Agreement if the Transactions have not been consummated by October 10, 2022. Under the Transaction Agreement, we are required to pay a termination fee in the amount of $325,000,000 to Emerson in certain events described in the Transaction Agreement, including if Emerson terminates the Transaction Agreement in the event our Board of Directors changes its recommendation that our stockholders approve the Transaction Agreement.

All of the parties to the Transaction Agreement entered into an amendment to the Transaction Agreement on March 23, 2022 ("Amendment No. 1"). Amendment No. 1 amends Exhibit G to the Transaction Agreement, which is the form of the certificate of incorporation of New AspenTech following the closing of the Transactions, to clarify that the exclusive forum provision for certain types of stockholder claims does not apply to claims under the Securities Exchange Act of 1934. The foregoing description of Amendment No. 1 does not purport to be complete, and is qualified in its entirety by reference to the full text of Amendment No. 1 which is attached to this Form 10-Q as Exhibit 2.2 and is incorporated herein by reference.

We filed a definitive proxy statement on Schedule 14A on April 18, 2022, with respect to the special stockholder meeting to be held on May 16, 2022 for the approval of the Transactions, which contains detailed information relating to the Transaction Agreement and the Transactions as well as additional details of the process.

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

Caution Concerning Forward-Looking Statements

This Quarterly Report contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this Quarterly Report, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, prospective products, size of market, plans, objectives of management, expected market growth and the anticipated effects of the coronavirus (COVID-19) pandemic (and any COVID-19 variants, the "COVID-19 pandemic") on our business, operating results and financial condition are forward-looking statements.

In addition, this Quarterly Report contains forward-looking statements regarding the pending Transactions with Emerson (each as defined below under "Transaction Agreement with Emerson Electric Co."), including: statements regarding the expected timing and structure of the Transactions; the ability of the parties to complete the Transactions considering the various closing conditions; the expected benefits of the Transactions, such as improved operations, enhanced revenues and cash flow, synergies, growth potential, market profile, business plans, expanded portfolio and financial strength; the competitive ability and position of New AspenTech (as defined below) following completion of the Transactions; legal, economic and regulatory conditions; and any assumptions underlying any of the foregoing.

Forward-looking statements concern future circumstances and results and other statements that are not historical facts and are sometimes identified by the words "may," "will," "should," "potential," "intend," "expect," "endeavor," "seek," "anticipate," "estimate," "overestimate," "underestimate," "believe," "plan," "could," "would," "project," "predict," "continue," "target" or other similar words or expressions or negatives of these words, but not all forward-looking statements include such identifying words. Forward-looking statements are based upon current plans, estimates and expectations that are subject to risks, uncertainties and assumptions. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those indicated or anticipated by such forward-looking statements. We can give no assurance that such plans, estimates or expectations will be achieved and therefore, actual results may differ materially from any plans, estimates or expectations in such forward-looking statements.

Important factors that could cause actual results to differ materially from such plans, estimates or expectations include, among others: (1) that one or more closing conditions to the Transactions, including certain regulatory approvals, may not be satisfied or waived, on a timely basis or otherwise, including that a governmental entity may prohibit, delay or refuse to grant approval for the consummation of the Transactions, may require conditions, limitations or restrictions in connection with such approvals or that the required approval by our stockholders may not be obtained; (2) the risk that the Transactions may not be completed in the time frame expected by us or Emerson, or at all; (3) unexpected costs, charges or expenses resulting from the Transactions; (4) uncertainty of the expected financial performance of New AspenTech following completion of the Transactions; (5) failure to realize the anticipated benefits of the Transactions, including as a result of delay in completing the Transactions or integrating the industrial software business of Emerson with our business; (6) the ability of New AspenTech to implement its business strategy; (7) difficulties and delays in achieving revenue and cost synergies of New AspenTech; (8) inability to retain and hire key personnel; (9) the occurrence of any event that could give rise to termination of the Transactions; (10) potential litigation in connection with the Transactions or other settlements or investigations that may affect the timing or occurrence of the Transactions or result in significant costs of defense, indemnification and liability; (11) evolving legal, regulatory and tax regimes; (12) changes in economic, financial, political and regulatory conditions, in the United States and elsewhere, and other factors that contribute to uncertainty and volatility, natural and man-made disasters, civil unrest, pandemics (e.g., the COVID-19 pandemic), geopolitical uncertainty, and conditions that may result from legislative, regulatory, trade and policy changes associated with the current or subsequent U.S. administration; (13) our ability and the ability of Emerson and New AspenTech to successfully recover from a disaster or other business continuity problem due to a hurricane, flood, earthquake, terrorist attack, war, pandemic, security breach, cyber-attack, power loss, telecommunications failure or other natural or man-made event, including the ability to function remotely during long-term disruptions such as the COVID-19 pandemic; (14) the impact of public health crises, such as pandemics (including the COVID-19 pandemic) and epidemics and any related company or governmental policies and actions to protect the health and safety of individuals or governmental policies or actions to maintain the functioning of national or global economies and markets, including any quarantine, " shelter in place," " stay at home," workforce reduction, social distancing, shut down or similar actions and policies; (15) actions by third parties, including government agencies; (16) potential adverse reactions or changes to business relationships resulting from the announcement or completion of the Transactions; (17) the risk that disruptions from the Transactions will harm Emerson's and our business, including current plans and operations; (18) certain restrictions during the pendency of the Transactions that may impact Emerson's or our ability to pursue certain business opportunities or strategic transactions; (19) our, Emerson's and New AspenTech's ability to meet expectations regarding the accounting and tax treatments of the Transactions; and (20) other risk factors as detailed from time to time in Emerson's and our reports filed with the SEC, including Emerson's and our annual report on Form 10-K, periodic quarterly reports on Form 10-Q, periodic current reports on Form 8-K and other documents filed with the SEC. While the list of factors presented here is considered representative, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles to the realization of forward-looking statements.

Any forward-looking statements speak only as of the date of this Quarterly Report. We undertake no obligation to update any forward-looking statements, whether as a result of new information or development, future events or otherwise, except as required by law. You should read the following discussion in conjunction with our unaudited consolidated financial statements and related notes thereto contained in this report. You should also 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 30, and references in this Quarterly Report to a specific fiscal year are the twelve months ended June 30 of such year (for example, "fiscal 2022" refers to the year ending June 30, 2022).

Business Overview

We are a global leader in asset optimization software that optimizes asset design, operations and maintenance in complex, industrial environments to enable organizations to meet their business goals for sustainability and profitability. We combine decades of process modeling and operations expertise with big data, artificial intelligence, and advanced analytics. Our purpose-built software helps organizations meet their sustainability goals to reduce emissions and drive innovation which enables competitiveness and profitability of our customers. Our software enhances capital efficiency and decreases working capital requirements over the entire asset lifecycle driving a higher level of operational excellence. In addition, we help our customers increase throughput, drive resource efficiencies, increase production levels, reduce unplanned downtime, manage emissions to reach their net-zero footprint goals, and improve overall safety.

Our software combines our proprietary mathematical and empirical models of manufacturing and planning processes which reflects the deep domain expertise we have amassed from focusing on solutions for the process and other capital-intensive industries for over 40 years. Our products have embedded artificial intelligence, or AI, capabilities that create insights, provide guidance, and automate and democratize knowledge, known as Industrial AI, to create more value for the industries we serve. For customers beginning to consider how AI can be applied to their domain-specific challenges, we recently introduced our hybrid model methodology. This capability enhances first principles-driven models with AI to improve accuracy, safety and predictability without requiring customers to have additional data science expertise.

We have developed our applications to design and optimize processes across three principal business areas: engineering, manufacturing and supply chain, and asset performance management, or APM. Each business area leverages our Artificial Intelligence of Things, or AIoT, products as the foundation of applying Industrial AI at scale. We are the 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 help our customer' meet their sustainability and profitability goals;
- Long-term customer relationships;
- Large installed base of users of our software; and
- Long-term license contracts.

We have approximately 2,500 customers globally. Our customers consist of companies engaged in the process industries including 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

Due to the COVID-19 pandemic, beginning in March 2020, there was a sudden decrease in demand for oil, compounded by the excess supply arising from producers' failure to agree on production cuts, which resulted in a drop in oil prices. Our business was negatively impacted by these factors. Specifically, we saw a slowdown in closing customer contracts, a higher than pre-COVID customer attrition rate due to non-renewals and renewals at lower entitlement level and, to a lesser extent, a slowdown in customer payments. During fiscal year 2022, there has been a normalization of transaction closing cycles and customer payment timing. As of March 31, 2022, oil prices have fully recovered and surpassed pre-pandemic levels and our customers' operations are now more normalized although some effects remain. 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 capital expenditure and operational expenditure budgetary cycles that are inherent in our customers' procurement strategies, which are informed by oil prices and environmental factors such as COVID-19, all of which are uncertain and cannot be predicted. We are continuing to monitor the potential impacts related to the 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.

Russia's invasion of Ukraine on February 24, 2022 and the ongoing military conflict between Ukraine and Russia, exacerbated by sanctions and other regulatory measures imposed by the global community, have resulted in significant volatility in financial markets and depreciation of the Russian ruble and Ukrainian hryvnia, as well as in an increase in energy and commodity prices globally. We maintain operations in Russia and license software and provide related services to customers in Russia and Ukraine. While the conflict has not had a material impact on our financial results, we continue to evaluate the impact, if any, of the various sanctions and export control measures imposed by the United States and other governments on our ability to do business in Russia, maintain contracts with vendors and pay employees in Russia, receive payment from customers in Russia and Ukraine, and assess our operations for potential asset impairment. The outcome of these assessments will depend on how the conflict evolves and any further actions that may be taken by the United States, Russia, and other governments around the world. As a software company, there is no material impact to supply chain operations expected due to the conflict in Ukraine.

Transaction Agreement with Emerson Electric Co.

On October 11, 2021, we announced that we had entered into the Transaction Agreement with Emerson, pursuant to which Emerson will combine its Open Systems International, Inc. and Geological Simulation Software businesses, with us to form New AspenTech. Upon closing of the Transactions, which is subject to the satisfaction of certain customary conditions, including the approval of our stockholders, each issued and outstanding share of our common stock (subject to certain exceptions) will be converted into the right to receive 0.42 shares of New AspenTech common stock and a per share cash consideration amount, calculated by dividing $6,014,000,000 by the number of outstanding shares of our common stock as of the closing of the Transactions on a fully diluted basis.

Immediately following the closing of the Transactions, Emerson and its affiliates will collectively own 55% of the outstanding New AspenTech common stock (on a fully diluted basis) and our stockholders will own the remaining outstanding New AspenTech common stock. Following the closing, New AspenTech and its subsidiaries will operate under the name "Aspen Technology, Inc."

The Transaction Agreement was negotiated and signed subsequent to a process that our Board of Directors originally undertook beginning in late 2020 to explore options to increase our value to our shareholders. As part of that process, we retained financial advisors, including JPMorgan Chase & Co., which assisted in facilitating contact with third parties, including Emerson, to assess the level of interest on the part of such third parties in a potential strategic corporate transaction involving us. Potential transactions included a range of structures, from a minority stake to finance targeted acquisitions, to a majority stake and up to a potential whole company acquisition. After discussions with such third parties, it became apparent that there were no such transactions that were of interest among the parties or that we wished to pursue, and in May 2021 our Board of Directors determined to close the process. Subsequently, an arrangement was proposed by Emerson that our Board of Directors found to be an attractive pathway to increasing shareholder value and creating a global leader in our industry; accordingly, our Board of Directors advanced those discussions, which ultimately resulted in the Transaction Agreement with Emerson.

We filed a definitive proxy statement on Schedule 14A on April 18, 2022, with respect to the special stockholder meeting to be held on May 16, 2022 for the approval of the Transactions, which contains detailed information relating to the Transaction Agreement and the Transactions as well as additional details of the process.

For more detail about the transaction with Emerson, please see our Current Report on Form 8-K filed with the SEC on October 12, 2021 and Note 18 – Transaction Agreement with Emerson Electric Co. to our consolidated financial statements included in this Quarterly Report on Form 10-Q, as well as the definitive proxy statement on Schedule 14A we filed referenced above.

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. Each product suite leverages our AIoT products as a foundation for applying Industrial AI at scale. Our APM product suite is licensed by customer sites, user seats or cloud connections. The engineering and manufacturing and supply chain product suites are licensed by tokens, which are interchangeable measures of usage based on the various units of measure such as users, servers, applications, manipulated variables, etc. Customers may use tokens flexibly to access one or more products in the suite in any combination. This licensing system enables customers to use products as needed, and to experiment with different products to best solve whatever critical business challenges the customer faces, and to license 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 intangible assets, 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 our 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 personnel expenses 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 intangible assets, and the provision for receivables.

Other Income and Expenses

Interest Income. Interest income is recorded for financing components under Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) or 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 Expense. Interest expense is primarily related to outstanding borrowings under 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 entities.

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 our success in meeting targets for growth in annual spend that are approved by our Board of Directors. 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 results of 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 March 31, 2022, approximately 85% of our term license agreements (by value) were denominated in U.S. dollars. For agreements denominated in other currencies, we use 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 2.4% during the third quarter of fiscal 2022, from $640.2 million at December 31, 2021 to $655.3 million at March 31, 2022 and by approximately 5.5% during the first nine months of fiscal 2022, from $621.3 million at June 30, 2021.

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 $2.9 billion as of June 30, 2021. TCV is an annual metric.

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 increased from $175.6 million during the three months ended March 31, 2021 to $207.0 million during the three months ended March 31, 2022. Bookings decreased from $548.8 million during the nine months ended March 31, 2021 to $516.7 million during the nine months ended March 31, 2022. 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 and integration planning related payments. Acquisition and integration planning related payments are costs we paid to effect a business combination. Those costs include: finders fees; advisory, legal, accounting and due diligence, valuation, and other professional or consulting fees; and costs of registering and issuing equity securities.

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

	Nine Months Ended March 31,	
	2022	2021
	(Dollars in Thousands)	
Net cash provided by operating activities (GAAP)	$ 155,086	$ 172,949
Purchase of property, equipment, and leasehold improvements	(1,138)	(733)
Payments for capitalized computer software development costs	(361)	(895)
Acquisition and integration planning related payments	20,592	2,433
Free cash flow (non-GAAP)	$ 174,179	$ 173,754

Total free cash flow on a non-GAAP basis increased by $0.4 million during the nine months ended March 31, 2022 as compared to the same period of the prior fiscal year. The increase was primarily due to higher customer receipts and a decrease in tax payments, offset by an increase in supplier and compensation-related payments resulting from an increase in headcount. 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 intangible assets, and other items, such as the impact of acquisition and integration planning related fees, for the indicated periods:

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
GAAP income from operations	$ 80,756	$ 68,899	$ 11,857	17.2 %	$ 189,123	$ 252,522	$ (63,399)	(25.1)%
Plus:								
Stock-based compensation	7,757	9,225	(1,468)	(15.9)%	25,713	24,589	1,124	4.6 %
Amortization of intangibles	2,025	2,047	(22)	(1.1)%	6,102	5,657	445	7.9 %
Acquisition and integration planning related fees	11,923	749	11,174	1,491.9 %	29,066	3,133	25,933	827.7 %
Non-GAAP income from operations	$ 102,461	$ 80,920	$ 21,541	26.6 %	$ 250,004	$ 285,901	$ (35,897)	(12.6)%

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, 2021 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, 2021, and include the subsection captioned “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 and Nine Months Ended March 31, 2022 and 2021

The following table sets forth the results of operations and the period-over-period percentage change in certain financial data for the three and nine months ended March 31, 2022 and 2021:

	Three Months Ended March 31,		Increase / (Decrease) Change	Nine Months Ended March 31,		Increase / (Decrease) Change
	2022	2021	%	2022	2021	%
			(Dollars in Thousands)			
Revenue:						
License	$ 130,032	$ 110,104	18.1 %	$ 327,247	$ 352,133	(7.1)%
Maintenance	50,017	45,885	9.0 %	146,615	139,561	5.1 %
Services and other	7,704	6,737	14.4 %	21,267	19,721	7.8 %
Total revenue	187,753	162,726	15.4 %	495,129	511,415	(3.2)%
Cost of revenue:						
License	489	2,485	(80.3)%	5,291	6,859	(22.9)%
Maintenance	4,760	5,174	(8.0)%	13,674	14,066	(2.8)%
Services and other	8,373	8,396	(0.3)%	24,436	24,911	(1.9)%
Total cost of revenue	13,622	16,055	(15.2)%	43,401	45,836	(5.3)%
Gross profit	174,131	146,671	18.7 %	451,728	465,579	(3.0)%
Operating expenses:						
Selling and marketing	33,977	30,345	12.0 %	94,088	82,092	14.6 %
Research and development	28,704	25,874	10.9 %	80,975	70,576	14.7 %
General and administrative	30,694	21,553	42.4 %	87,542	60,389	45.0 %
Total operating expenses	93,375	77,772	20.1 %	262,605	213,057	23.3 %
Income from operations	80,756	68,899	17.2 %	189,123	252,522	(25.1)%
Interest income	8,287	8,410	(1.5)%	25,646	26,383	(2.8)%
Interest (expense)	(1,572)	(1,495)	5.2 %	(4,626)	(5,639)	(18.0)%
Other income (expense), net	522	(5)	(10,540.0)%	(2,107)	(1,807)	16.6 %
Income before income taxes	87,993	75,809	16.1 %	208,036	271,459	(23.4)%
Provision for income taxes	12,870	13,314	(3.3)%	31,650	47,101	(32.8)%
Net income	$ 75,123	$ 62,495	20.2 %	$ 176,386	$ 224,358	(21.4)%

The following table sets forth the results of operations as a percentage of total revenue for certain financial data for the three and nine months ended March 31, 2022 and 2021:

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2022	2021	2022	2021
	(% of Revenue)			
Revenue:				
License	69.3 %	67.7 %	66.1 %	68.9 %
Maintenance	26.6	28.2	29.6	27.3
Services and other	4.1	4.1	4.3	3.9
Total revenue	100.0	100.0	100.0	100.1
Cost of revenue:				
License	0.3	1.5	1.1	1.3
Maintenance	2.5	3.2	2.8	2.8
Services and other	4.5	5.2	4.9	4.9
Total cost of revenue	7.3	9.9	8.8	9.0
Gross profit	92.7	90.1	91.2	91.0
Operating expenses:				
Selling and marketing	18.1	18.6	19.0	16.1
Research and development	15.3	15.9	16.4	13.8
General and administrative	16.3	13.2	17.7	11.8
Total operating expenses	49.7	47.8	53.0	41.7
Income from operations	43.0	42.3	38.2	49.4
Interest income	4.4	5.2	5.2	5.2
Interest (expense)	(0.8)	(0.9)	(0.9)	(1.1)
Other income (expense), net	0.3	—	(0.4)	(0.4)
Income before income taxes	46.9	46.6	42.0	53.1
Provision for income taxes	6.9	8.2	6.4	9.2
Net income	40.0 %	38.4 %	35.6 %	43.9 %

Revenue

Total revenue increased by $25.0 million during the three months ended March 31, 2022 as compared to the corresponding period of the prior fiscal year. The increase of $25.0 million during the three months ended March 31, 2022 was comprised of an increase in license revenue of $19.9 million, an increase in maintenance revenue of $4.1 million, and an increase in services and other revenue of $1.0 million, as compared to the corresponding period of the prior fiscal year.

Total revenue decreased by $16.3 million during the nine months ended March 31, 2022 as compared to the corresponding period of the prior fiscal year. The decrease of $16.3 million during the nine months ended March 31, 2022 was comprised of a decrease in license revenue of $24.9 million, offset in part by an increase in maintenance revenue of $7.1 million, and an increase in services and other revenue of $1.5 million, as compared to the corresponding period of the prior fiscal year.

License Revenue

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
License revenue	$ 130,032	$ 110,104	$ 19,928	18.1 %	$ 327,247	$ 352,133	$ (24,886)	(7.1)%
As a percent of total revenue	69.3 %	67.7 %			66.1 %	68.9 %		

The period-over-period increase of $19.9 million in license revenue during the three months ended March 31, 2022 was primarily attributable to increases in bookings driven by the timing of renewals. The period-over-period decrease of $24.9 million in license revenue during the nine months ended March 31, 2022 was primarily attributable to decreases in bookings driven by the timing of renewals.

Maintenance Revenue

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Maintenance revenue	$ 50,017	$ 45,885	$ 4,132	9.0 %	$ 146,615	$ 139,561	$ 7,054	5.1 %
As a percent of total revenue	26.6 %	28.2 %			29.6 %	27.3 %		

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 increases of $4.1 million and $7.1 million in maintenance revenue during the three and nine months ended March 31, 2022, respectively, were 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 March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Services and other revenue	$ 7,704	$ 6,737	$ 967	14.4 %	$ 21,267	$ 19,721	$ 1,546	7.8 %
As a percent of total revenue	4.1 %	4.1 %			4.3 %	3.9 %		

We recognize professional services revenue for our time-and-materials, or 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 increased $1.0 million and $1.5 million during the three and nine months ended March 31, 2022, respectively, 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 March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Cost of license revenue	$ 489	$ 2,485	$ (1,996)	(80.3)%	$ 5,291	$ 6,859	$ (1,568)	(22.9)%
As a percent of license revenue	0.4 %	2.3 %			1.6 %	1.9 %		

Cost of license revenue decreased $2.0 million and $1.6 million for the three and nine months ended March 31, 2022, respectively, as compared to the corresponding period of the prior fiscal year, primarily due to a decrease in royalty expenses. License gross profit margin increased to 99.6% from 97.7% for the three months ended March 31, 2022 and 2021, respectively, and to 98.4% from 98.1% for the nine months ended March 31, 2022 and 2021, respectively due to lower cost of license revenue.

Cost of Maintenance Revenue

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Cost of maintenance revenue	$ 4,760	$ 5,174	$ (414)	(8.0)%	$ 13,674	$ 14,066	$ (392)	(2.8)%
As a percent of maintenance revenue	9.5 %	11.3 %			9.3 %	10.1 %		

Cost of maintenance revenue remained consistent for the three and nine months ended March 31, 2022, respectively, as compared to the corresponding period of the prior fiscal year. Maintenance gross profit margin increased for the three and nine months ended March 31, 2022 and 2021, respectively, due to higher maintenance revenue.

Cost of Services and Other Revenue

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Cost of services and other revenue	$ 8,373	$ 8,396	$ (23)	(0.3)%	$ 24,436	$ 24,911	$ (475)	(1.9)%
As a percent of services and other revenue	108.7 %	124.6 %			114.9 %	126.3 %		

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 and nine months ended March 31, 2022, respectively, as compared to the corresponding period of the prior fiscal year. Gross profit margin on services and other revenue was (8.7)% and (24.6)% for the three months ended March 31, 2022 and 2021, respectively, and (14.9)% and (26.3)% for the nine months ended March 31, 2022 and 2021, respectively. The improved gross profit margin on services and other for the three and nine months ended March 31, 2022, as compared to the same periods of the prior fiscal year, was a function of an increase in services and other revenues attributable to increased training services and a decrease in cost of services and other expenses.

Gross Profit

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Gross profit	$ 174,131	$ 146,671	$ 27,460	18.7 %	$ 451,728	$ 465,579	$ (13,851)	(3.0)%
As a percent of revenue	92.7 %	90.1 %			91.2 %	91.0 %		

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 increased by $27.5 million and decreased by $13.9 million for the three and nine months ended March 31, 2022, respectively, as compared to the corresponding period of the prior fiscal year. Gross profit margin increased to 92.7% from 90.1% for the three months ended March 31, 2022 and 2021, respectively, and increased to 91.2% from 91.0% for the nine months ended March 31, 2022 and 2021, respectively. The increase for the three months ended March 31, 2022 was primarily attributable to an increase in license revenue due to an increase in bookings driven by the timing of renewals during the three months ended March 31, 2022, as compared to the same periods last year, while costs decreased. The decrease for the nine months ended March 31, 2022 was primarily attributable to a decrease in license revenue, partially offset by increases in maintenance and service and other revenues and decreases in cost of license revenue.

Operating Expenses

Selling and Marketing Expense

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Selling and marketing expense	$ 33,977	$ 30,345	$ 3,632	12.0 %	$ 94,088	$ 82,092	$ 11,996	14.6 %
As a percent of total revenue	18.1 %	18.6 %			19.0 %	16.1 %		

The period-over-period increase of $3.6 million in selling and marketing expense during the three months ended March 31, 2022 was attributable to higher compensation costs of $1.7 million related to salaries, benefits, and bonuses as a result of increased headcount, and greater acquisition and integration planning related expenses of $1.5 million.

The period-over-period increase of $12.0 million in selling and marketing expense during the nine month ended March 31, 2022 was attributable to higher compensation costs of $4.9 million related to salaries, benefits, and bonuses due to an increase in headcount, greater acquisition and integration planning related expenses of $2.8 million, greater commission expense of $1.2 million, increased travel expenses of $1.0 million, increased stock-based compensation expense of $0.7 million, and greater marketing costs of $0.4 million.

Research and Development Expense

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Research and development expense	$ 28,704	$ 25,874	$ 2,830	10.9 %	$ 80,975	$ 70,576	$ 10,399	14.7 %
As a percent of total revenue	15.3 %	15.9 %			16.4 %	13.8 %		

The period-over-period increase of $2.8 million in research and development expense during the three months ended March 31, 2022 was primarily attributable to higher compensation costs of $2.3 million related to salaries, benefits, and bonuses as a result of increased headcount, and higher capitalized software development costs of $0.4 million in the prior fiscal year period, offset in part by a reduction on stock-based compensation expense of $0.6 million.

The period-over-period increase of $10.4 million in research and development expense during the nine months ended March 31, 2022 was primarily attributable to higher compensation costs of $7.1 million related to salaries, benefits, and bonuses as a result of increased headcount, greater information services allocated expenses of $1.8 million, and higher capitalized software development costs of $0.7 million in the prior fiscal year period.

General and Administrative Expense

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
General and administrative expense	$ 30,694	$ 21,553	$ 9,141	42.4 %	$ 87,542	$ 60,389	$ 27,153	45.0 %
As a percent of total revenue	16.3 %	13.2 %			17.7 %	11.8 %		

The period-over-period increase of $9.1 million in general and administrative expense during the three months ended March 31, 2022 was attributable to an increase in acquisition and integration planning related expenses of $9.7 million, higher compensation costs of $1.3 million related to salaries, benefits, and bonuses as a result of increased headcount, offset in part by a reduction in information services allocation costs of $1.5 million.

The period over period increase of $27.2 million in general and administrative expense during the nine months ended March 31, 2022 was attributable to acquisition and integration planning related expenses of $23.0 million, higher stock-based costs expenses of $2.2 million, and higher hardware, software, and maintenance expenses of $2.2 million.

Non-Operating Income (Expense)

Interest Income

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Interest income	$ 8,287	$ 8,410	$ (123)	(1.5)%	$ 25,646	$ 26,383	$ (737)	(2.8)%
As a percent of total revenue	4.4 %	5.2 %			5.2 %	5.2 %		

Interest income remained consistent for the three and nine months ended March 31, 2022.

Interest (Expense)

	Three Months Ended March 31,		(Increase) / Decrease Change		Nine Months Ended March 31,		(Increase) / Decrease Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Interest (expense)	$ (1,572)	$ (1,495)	$ (77)	5.2 %	$ (4,626)	$ (5,639)	$ 1,013	(18.0)%
As a percent of total revenue	(0.8)%	(0.9)%			(0.9)%	(1.1)%		

Interest (expense) remained consistent for the three months ended March 31, 2022. Interest (expense) decreased $1.0 million during the nine months ended March 31, 2022, due to a lower outstanding borrowing balance as a result of paying off our revolving credit facility in December 2020.

Other Income (Expense), Net

	Three Months Ended March 31,		(Increase) / Decrease Change		Nine Months Ended March 31,		(Increase) / Decrease Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Other income (expense), net	$ 522	$ (5)	$ 527	(10,540.0)%	$ (2,107)	$ (1,807)	$ (300)	16.6 %
As a percent of total revenue	0.3 %	— %			(0.4)%	(0.4)%		

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

During the three months ended March 31, 2022 and 2021, other income (expense), net was primarily comprised of $0.4 million of equity income from equity method investments and $(0.1) million of foreign currency exchange (losses), respectively.

During the nine months ended March 31, 2022 and 2021 other income (expense), net was primarily comprised of $(2.2) million and $(2.0) million of foreign currency exchange (losses), respectively.

Provision for Income Taxes

	Three Months Ended March 31,		Increase / (Decrease) Change		Nine Months Ended March 31,		Increase / (Decrease) Change	
	2022	2021	$	%	2022	2021	$	%
	(Dollars in Thousands)							
Provision for income taxes	$ 12,870	$ 13,314	$ (444)	(3.3)%	$ 31,650	$ 47,101	$ (15,451)	(32.8)%
Effective tax rate	14.6 %	17.6 %			15.2 %	17.3 %		

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, or 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 14.6% and 17.6% during the three months ended March 31, 2022 and 2021, respectively, and 15.2% and 17.3% during the nine months ended March 31, 2022 and 2021, respectively. Our effective tax rate was lower in the three and nine months ended March 31, 2022 due to the higher FDII deduction taken this year compared to last year due to the timing of revenue recognition for tax purposes on multi-year software license agreements as the result of the change in income tax regulations.

We recognized income tax expense of $12.9 million and $13.3 million during the three months ended March 31, 2022 and 2021, respectively, and $31.7 million and $47.1 million during the nine months ended March 31, 2022 and 2021, respectively. Our income tax expense was driven primarily by pre-tax profitability in our domestic and foreign operations and the impact of permanent items and discrete tax 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 March 31, 2022, our principal capital resources consisted of $285.2 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.

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, which we refer to as 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, 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.

On December 14, 2021, we and JPMorgan Chase Bank, N.A., as administrative agent, entered into the Waiver and Second Amendment to the Amended and Restated Credit Agreement dated as of December 23, 2019, which we refers to as the Waiver and Amendment. The Waiver and Amendment amends the Amended and Restated Credit Agreement to (i) permanently waive the specified event of default resulting from the consummation of the Transactions under the Transaction Agreement with Emerson, Emerson Sub, New AspenTech, and Merger Subsidiary; (ii) permanently waive a possible change of fiscal year event of default in the future if we change the end of our fiscal year; (iii) establish a benchmark replacement for each affected currency due to the 2021 LIBOR cessation; (iv) make New AspenTech a loan party and guarantor of the Amended and Restated Credit Agreement, if and when the Transactions are consummated. The waivers and New AspenTech accession would become effective upon the consummation of the Transactions. The benchmark amendments became effective as of the effective date of the Waiver and Amendment.

As of March 31, 2022, our current borrowings of $26.0 million consisted of the term loan facility. Our non-current borrowings of $253.4 million consisted of $256.0 million of our term loan facility, net of $2.6 million in debt issuance costs. As of June 30, 2021, our current borrowings of $20.0 million consisted of the term loan facility. As of June 30, 2021, our non-current borrowings of $273.2 million consisted of $276.0 million of our term facility, net of $2.8 million in debt issuance costs.

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 remained consistent at $1.0 million as of March 31, 2022 and June 30, 2021, 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:

	Nine Months Ended March 31,	
	2022	**2021**
	(Dollars in Thousands)	
Cash flow provided by (used in):		
Operating activities	$ 155,086	$ 172,949
Investing activities	(2,116)	(18,826)
Financing activities	(246,398)	(125,393)
Effect of exchange rate changes on cash and cash equivalents	(1,208)	573
(Decrease) increase in cash and cash equivalents	$ (94,636)	$ 29,303

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 $155.1 million during the nine months ended March 31, 2022. This amount resulted from net income of $176.4 million, adjusted for net uses of cash of $(15.3) million and non-cash items of $(6.0) million related to changes in working capital.

Non-cash items during the nine months ended March 31, 2022 consisted primarily of a reduction in deferred income taxes of $53.5 million, partially offset by stock-based compensation expense of $25.7 million, depreciation and amortization expense of $8.2 million, a reduction in the carrying amount of right-of-use assets of $7.6 million, a provision for receivables of $2.3 million, and net foreign currency losses of $2.2 million. A $53.5 million decrease in deferred income taxes was mainly because of the adjustment resulting from tax accounting method changes related to revenue recognition associated with our multi-year software licenses as a result of the change in income tax regulations.

Cash used by working capital of $15.3 million during the nine months ended March 31, 2022 was primarily attributable to an increase in cash used in contract assets of $49.7 million and a decrease in lease liabilities of $7.9 million, partially offset by an increase in accounts payable, accrued expenses and other current liabilities of $36.0 million, an increase in prepaid expenses, taxes and other assets of $12.1 million, an increase in deferred revenue of $5.4 million, and an increase in accounts receivable of $0.8 million. A $36.0 million increase in accounts payable, accrued expenses and other current liabilities was mainly comprised of a $30.2 million increase in income taxes payable.

Investing Activities

During the nine months ended March 31, 2022, we used $2.1 million of cash for investing activities. We used $1.1 million for capital expenditures, $0.6 million for equity method investments, and $0.4 million for capitalized computer software costs.

Financing Activities

During the nine months ended March 31, 2022, we used $246.4 million of cash for financing activities. This amount resulted from $234.0 million of cash used for the repurchase of common stock, $14.0 million of cash used for maturities of amounts borrowed under our term loan facility, and $12.7 million of cash used for withholding taxes on vested and settled restricted stock units, offset in part by $15.9 million for cash provided by the exercise of employee stock options.

Contractual Obligations

Standby letters of credit for $2.2 million and $2.3 million secured our performance on professional services contracts, certain facility leases and potential liabilities as of March 31, 2022 and June 30, 2021, respectively. The letters of credit expire at various dates through fiscal 2025.

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 March 31, 2022 and 2021, 21.5% and 14.6% of our total revenue was denominated in a currency other than the U.S. dollar, respectively. During the nine months ended March 31, 2022 and 2021, 15.2% and 11.4% of our total revenue was denominated in a currency other than the U.S. dollar, respectively. In addition, certain of our operating costs incurred outside the United States are denominated in currencies other than the U.S. dollar. We conduct business on a worldwide basis and as a result, a portion of our revenue, earnings, net assets, and net investments in foreign affiliates is exposed to changes in foreign currency exchange rates. We measure our net exposure for cash balance positions and for cash inflows and outflows in order to evaluate the need to mitigate our foreign exchange risk. We may enter into foreign currency forward contracts to minimize the impact related to unfavorable exchange rate movements, although we have not done so during the three and nine months ended March 31, 2022 and 2021. 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.

We recorded $0.1 million and $(0.1) million of net foreign currency exchange gains (losses) during the three months ended March 31, 2022 and 2021, respectively, and $(2.2) million and $(2.0) million of net foreign currency exchange (losses) during the nine months ended March 31, 2022 and 2021, 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 $3.9 million and $2.5 million for the three months ended March 31, 2022 and 2021, respectively, and by approximately $8.6 million and $5.2 million during the nine months ended March 31, 2022 and 2021, respectively.

Interest Rate Risk

We place our investments in money market instruments. Our analysis of our investment portfolio and interest rates at March 31, 2022 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 March 31, 2022, we had current borrowings of $26.0 million and non-current borrowings of $253.4 million on our term loan facility. Our non-current borrowings of $253.4 million consist of $256.0 million of our term loan facility, net of $2.6 million in unamortized debt issuance costs.

As of June 30, 2021, our current borrowings of $20.0 million consisted of the term loan facility under the Amended and Restated Credit Agreement. Our non-current borrowings of $273.2 million consisted of $276.0 million under our term loan facility, net of $2.8 million in debt issuance costs. A hypothetical 10% increase or decrease in interest rates paid on outstanding borrowings under the Amended and Restated 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 ($3.9 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 ($3.9 million) commitment. As of March 31, 2022, the fair value of this investment is $3.0 million CAD ($2.3 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 March 31, 2022. 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 our management, including our 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 March 31, 2022, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective.

b) Changes in Internal Controls Over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the nine months ended March 31, 2022, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. 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 fiscal year ended June 30, 2021, 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 2021 Annual Report on Form 10-K remains current in all material respects, with the exception of the revised risk factors below.

Risks Related to the Transactions

The Transactions are subject to a number of conditions to closing, which may not be satisfied on a timely basis or at all.

The Transactions are subject to several closing conditions outlined in the Transaction Agreement, including the adoption of the Transaction Agreement by our stockholders, the expiration or termination of any applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 and the receipt of regulatory approvals in certain other foreign jurisdictions. Although the parties have obtained all regulatory clearances, consents and approvals required to complete the Transactions, governmental or regulatory agencies could still seek to block or challenge the Transactions or could impose restrictions they deem necessary or desirable in the public interest as a condition to approving the Transactions. If any one of these conditions is not satisfied or waived, the Transactions may not be completed.

Failure to complete the Transactions could adversely affect our financial results and our future business and operations.

There is no assurance that the Transactions will be completed on the terms or timeline currently contemplated, or at all. If the Transactions are not consummated by October 10, 2022, the Transaction Agreement may be terminated in accordance with its terms. If our stockholders do not approve and adopt the Transaction Agreement or if the Transactions are not completed for any other reason, we would be subject to a number of risks, including the following:

- the attention of our management may have been diverted to the Transactions instead of on our operations and pursuit of other opportunities that may have been beneficial to us;
- resulting negative customer perception could adversely affect our ability to compete for, or to win, new and renewal business in the marketplace;
- we and our stockholders would not realize the anticipated benefits of the Transactions, including a cash payment of $6,014,000,000 in the aggregate and any anticipated synergies from combining our business with Emerson’s industrial software business;
- we may be required to pay a termination fee of $325,000,000 if the Transaction Agreement is terminated in the case of certain events described in the Transaction Agreement, including if Emerson terminates the Transaction Agreement in the event our Board of Directors changes its recommendation that our stockholders approve the Transaction Agreement;
- the trading price of our common stock may experience increased volatility to the extent that the current market prices reflect a market assumption that the Transactions will be completed; or
- we could be subject to litigation from stockholders related to the Transaction Agreement.

The occurrence of any of these events individually or in combination could have a material adverse effect on our financial condition, operations or the trading price of our common stock.

The Transaction Agreement contains provisions that limit our ability to pursue alternatives to the Transactions, which could discourage third parties from making a competing transaction proposal.

The Transaction Agreement contains provisions that may discourage third parties from submitting business combination proposals to us that might result in greater value to our stockholders than the Transactions. The Transaction Agreement generally prohibits us from soliciting any competing business combination proposal. In addition, if the Transaction Agreement is terminated by us or Emerson in circumstances that obligates us to pay a termination fee of $325,000,000 to Emerson, our financial condition may be adversely affected as a result of the payment of the termination fee, which might deter third parties from proposing alternative business combination proposals.

The pendency of the Transactions could adversely affect our business.

In connection with the Transactions, some of our suppliers and customers may delay or defer sales and purchasing decisions, which could negatively impact revenues, earnings and cash flows regardless of whether the Transactions are completed. We have agreed in the Transaction Agreement to refrain from taking certain actions with respect to our business and financial affairs during the pendency of the Transactions, and such restrictions could be in place for an extended period of time if completion of the Transactions is delayed and could adversely impact our financial condition, operations or cash flows. These restrictions may prevent us from pursuing otherwise attractive business opportunities and making other changes to our business before completion of the Transactions or termination of the Transaction Agreement. The process of seeking to accomplish the Transactions could also divert the focus of our management from pursuing other opportunities that could be beneficial to us.

The pursuit of the Transactions and the preparation for the integration of Emerson's industrial software business have placed, and will continue to place, a significant burden on our management and internal resources. There is a significant degree of difficulty and management distraction inherent in the process of seeking to close the Transactions and integrate Emerson's industrial software business, which could cause an interruption of, or loss of momentum in, the activities of our existing business, regardless of whether the Transactions are eventually completed. Our management team will be required to devote considerable amounts of time to this integration process, which will decrease the time they will have to manage our existing businesses, service existing customers, attract new customers and develop new products, services or strategies. One potential consequence of such distractions could be the failure of management to realize other opportunities that could be beneficial to us. If our senior management is not able to effectively manage the process leading up to and immediately following closing, or if any significant business activities are interrupted as a result of the integration process, our business could suffer.

We may be unable to attract and retain key employees during the pendency of the Transactions.

In connection with the Transactions, our current employees and any prospective employees may experience uncertainty about their future roles with New AspenTech following the Transactions, which may materially adversely affect our ability to attract and retain key personnel during the pendency of the Transactions. Even though we have implemented a retention plan for key personnel, key employees may depart because of issues relating to the uncertainty and difficulty of integration or a desire not to remain with New AspenTech following the Transactions. The departure of existing key employees or the failure of potential key employees to accept employment with New AspenTech, despite our recruiting efforts, could have a material adverse impact on our business, financial condition and operating results, regardless of whether the Transactions are eventually completed.

Even if the Transactions are closed, the integration of our business and Emerson's industrial software business following the closing will present significant challenges that may result in a decline in the anticipated benefits of the Transactions.

The Transactions involve the combination of businesses that currently operate as independent businesses. New AspenTech will be required to devote management attention and resources to integrating its business practices and operations, and prior to the Transactions, management attention and resources will be required to plan for such integration. Potential difficulties New AspenTech may encounter in the integration process include the following:

- the inability to successfully integrate the two businesses, including operations, technologies, products and services, in a manner that permits New AspenTech to achieve the cost savings and operating synergies anticipated to result from the Transactions, which could result in the anticipated benefits of the Transactions not being realized partly or wholly in the time frame currently anticipated or at all;

- lost sales and customers as a result of certain customers of either or both of the two businesses deciding not to do business with New AspenTech, or deciding to decrease their amount of business in order to reduce their reliance on a single company;

- the necessity of coordinating geographically separated organizations, systems and facilities;
- potential unknown liabilities and unforeseen increased expenses, delays or regulatory conditions associated with the Transactions;
- integrating personnel with diverse business backgrounds and business cultures, while maintaining focus on providing consistent, high-quality products and services;
- consolidating and rationalizing information technology platforms and administrative infrastructures as well as accounting systems and related financial reporting activities;
- preserving our important relationships as well as those of Emerson’s industrial software business and resolving potential conflicts that may arise; and
- performance shortfalls as a result of the diversion of management’s attention caused by completing the Transactions and integrating the two businesses’ operations.

Failure of the parties to successfully implement and operate under the commercial agreement between New AspenTech and Emerson could impact the potential benefits of the Transactions.

The Transaction Agreement provides for a commercial agreement between New AspenTech and Emerson to become effective following the Closing of the Transactions. Among other things, the commercial agreement will allow Emerson to resell New AspenTech software solutions. If the parties are unsuccessful at implementing and operating under the commercial agreement, some of the potential benefits contemplated in connection with the Transactions might not be realized.

Following the Closing of the Transactions, Emerson will control New AspenTech and will continue to have approval rights over certain actions taken by New AspenTech so long as Emerson beneficially owns a certain percentage of New AspenTech’s common stock. The interests of Emerson in its capacity as a stockholder of New AspenTech may differ from the interests of other stockholders of New AspenTech.

Upon the Closing of the Transactions, Emerson is expected to beneficially own or control 55% of the common stock of New AspenTech on a fully diluted basis. Under the stockholders agreement to be entered into between New AspenTech and Emerson as provided in the Transaction Agreement and Emerson’s control of New AspenTech’s voting power, Emerson will have substantial influence over the outcome of corporate actions of New AspenTech, including the election of directors, any merger, consolidation or sale of all or substantially all of New AspenTech’s assets or certain other agreed-upon corporate transactions. Particularly, so long as Emerson owns greater than 40% of the common stock of New AspenTech, Emerson has the ability to elect a majority of New AspenTech’s Board of Directors. Emerson also may exert influence in delaying or preventing a change in control of New AspenTech, even if such change in control would benefit the other stockholders of New AspenTech. In addition, the significant concentration of stock ownership may adversely affect the market value of New AspenTech’s common stock due to investors’ perception that conflicts of interest may exist or arise.

Moreover, the stockholders agreement to be entered into between New AspenTech and Emerson permits Emerson to require New AspenTech to avail itself of “Controlled Company” exemptions to the corporate governance listing standards of Nasdaq for so long as Emerson owns greater than 50% of the common stock of New AspenTech. If so requested by Emerson, New AspenTech will avail itself of some or all of the “Controlled Company” exemptions to certain corporate governance listing standards of Nasdaq, including the requirements that (i) New AspenTech’s Board of Directors be composed of a majority of independent directors, (ii) compensation of New AspenTech’s executive officers be determined by a compensation committee composed solely of independent directors, and (iii) director nominees be selected or recommended for the Board of Directors’ selection either by a majority of the independent directors or a nominating committee composed solely of independent directors.

Risks Related to Our Operations

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

As of March 31, 2022, we operated in 35 countries. We sell our products primarily through a direct sales force located throughout the world. In the event that we are unable to adequately staff and maintain our foreign operations, we could face difficulties managing our international operations.

Customers outside the United States accounted for the majority of our total revenue during the three and nine months ended March 31, 2022 and March 31, 2021. We anticipate that revenue from customers outside the United States will continue to account for a significant portion of our total revenue for the foreseeable future. Our operating results attributable to operations outside the United States are subject to additional risks, including:

- unexpected changes in regulatory or environmental requirements, tariffs and other barriers, including, for example, international trade disputes, changes in climate regulations, sanctions or other regulatory restrictions imposed by the United States or foreign governments;
- less effective protection of intellectual property;
- requirements of foreign laws and other governmental controls;
- difficulties in collecting trade accounts receivable in other countries;
- adverse tax consequences; and
- the challenges of managing legal disputes in foreign jurisdictions.

In the event that we are unable to adequately staff and maintain our foreign operations, we could face difficulties managing our international operations.

In addition, the ongoing conflict in Ukraine could adversely impact our business, financial position, cash flows and results of operations in the region which may in turn adversely impact our overall business, financial position, cash flows and results of operations. We maintain operations in Russia and license software and provide related services to customers in Russia and Ukraine. While the conflict has not had a material impact on our financial results, we continue to evaluate the impact, if any, of the various sanctions and export control measures imposed by the United States and other governments on our ability to do business in Russia, maintain contracts with vendors and pay employees in Russia, receive payment from customers in Russia and Ukraine, and assess our operations for potential asset impairment. The outcome of these assessments will depend on how the conflict evolves and any further actions that may be taken by the United States, Russia, and other governments around the world. As a software company, there is no material impact to supply chain operations expected due to the conflict in Ukraine.

If the sanctions and other retaliatory measures imposed by the global community change, we may be required to cease or suspend operations in the region or, should the conflict worsen, we may voluntarily elect to do so. Any disruption to, or suspension of, the business and operations in Russia would result in the loss of revenues from the business in Russia. In addition, as a result of the risk of collectability of receivables from our customers in Russia, we may be required to adjust our accounting practices relating to revenue recognition in this region, with the result that we may not be able to recognize revenue until there is no significant risk of revenue reversal. We may also suffer reputational harm as a result of our continued operations in Russia, which may adversely impact our sales and other businesses in other countries.

While the precise effects of the ongoing military conflict and sanctions on the Russian and global economies remain uncertain, they have already resulted in significant volatility in financial markets and depreciation of the Russian ruble and the Ukrainian hryvnia against the U.S. dollar, as well as in an increase in energy and commodity prices globally. Should the conflict continue or escalate, there may be various economic and security consequences including, but not limited to, supply shortages of different kinds, further increases in prices of commodities, including piped gas, oil and agricultural goods, reduced consumer purchasing power, significant disruptions in logistics infrastructure, telecommunications services and risks relating to the unavailability of information technology systems and infrastructure. The resulting impacts to the global economy, financial markets, inflation, interest rates and unemployment, among others, could adversely impact economic and financial conditions, and may disrupt the global economy's ongoing recovery following the COVID-19 pandemic. Other potential consequences include, but are not limited to, growth in the number of popular uprisings in the region, increased political discontent, especially in the regions most affected by the conflict or economic sanctions, increase in cyberterrorism activities and attacks, displacement of persons to regions close to the areas of conflict and an increase in the number of refugees fleeing across Europe, among other unforeseen social and humanitarian effects. As a result of the ongoing conflict between Russia and Ukraine, we may experience other risks, difficulties and challenges in the way we conduct our business and operations generally.

A protracted conflict between Ukraine and Russia, any escalation of that conflict, and the financial and economic sanctions and import and/or export controls imposed on Russia by the United States, the UK, the EU, Canada and others, as well as restrictions imposed by Russia, and the above-mentioned adverse effect on our operations (both in this region and generally) and on the wider global economy and market conditions could, in turn, have a material adverse impact on our business, financial condition, cash flows and results of operations and could cause the market value of our common shares to decline.

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

We devote significant resources to continually updating our software and developing new products, and our financial performance is dependent in part upon our ability to bring new products and services to market. Our customers use our software to optimize their manufacturing processes and manage asset performance, and they rely on us to provide updates and releases as part of our software maintenance and support services, and to provide remote on-line troubleshooting support. The security of our information technology environment is therefore important to our research and development initiatives, and an important consideration in our customers' purchasing decisions. We maintain cybersecurity policies and procedures, including employee training, to manage risk to our information systems, and we continually evaluate and adapt our systems and processes to mitigate evolving cybersecurity threats, including the increase in ransomware attacks. Our policy is to follow the appropriate cybersecurity framework to manage and reduce cybersecurity risk. We may incur additional costs to maintain appropriate cybersecurity protections in response to evolving cybersecurity threats, and we may not be able to safeguard against all data security breaches or misuses of data. If the security of our systems is impaired, or if our systems are infiltrated by unauthorized persons, our development initiatives might be disrupted, we might be unable to provide service, and our customers and their operations may be subject to cyberattacks and resulting business disruptions and financial losses. Our customer relationships might deteriorate, our reputation in the industry could be impacted, and we could be subject to liability claims. This could reduce our revenues, and expose us to significant costs to detect, correct and avoid recurrences of any breach of security and to defend any claims against us. In addition, our insurance coverage may not be adequate to cover all costs related to cybersecurity incidents and the disruptions resulting from such events.

In addition, there may be an increased risk of cyberattacks by state actors due to the current conflict between Russia and Ukraine. Any increase in such attacks on us or our systems could adversely affect our network systems or other operations. Although we maintain cybersecurity policies and procedures to manage risk to our information systems, continuously adapt our systems and processes to mitigate such threats, and plan to enhance our protections against such attacks, we may not be able to address these cybersecurity threats proactively or implement adequate preventative measures and there can be no assurance that we will promptly detect and address any such disruption or security breach, if at all.

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 March 31, 2022 of shares of our common stock:

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share (2)	Total Number of Shares Purchased as Part of Publicly Announced Program (3)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (4)
January 1 to 31, 2022	101,444	$ 148.72	101,444	
February 1 to 28, 2022	—	$ —	—	
March 1 to 31, 2022	—	$ —	—	
Total	101,444	$ —	101,444	$ 70,309,854

(1) As of March 31, 2022, the total number of shares of common stock repurchased under all programs approved by the Board of Directors was 38,238,125.

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

(3) On June 4, 2021, our Board of Directors approved a new share repurchase program for up to $300.0 million worth of our common stock.

(4) As of March 31, 2022, the total remaining value under the New Share Repurchase Program was approximately $70.3 million.

Item 6. Exhibits.

Exhibit Number	Description
2.2	Amendment No. 1 to the Transaction Agreement and Plan of Merger, dated as of March 23, 2022, among Aspen Technology, Inc., Emerson Electric Co., EMR Worldwide Inc., Emersub CX, Inc. and Emersub CXI, Inc.
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.INS	Inline Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline 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: April 27, 2022	By:	**/s/ ANTONIO J. PIETRI**
		Antonio J. Pietri
		President and Chief Executive Officer
		(Principal Executive Officer)
Date: April 27, 2022	By:	**/s/ CHANTELLE BREITHAUPT**
		Chantelle Breithaupt
		Senior Vice President and Chief Financial Officer
		(Principal Financial Officer)

Exhibit 2.2

AMENDMENT NO. 1
TO THE TRANSACTION AGREEMENT AND PLAN OF MERGER

This AMENDMENT NO. 1 TO TRANSACTION AGREEMENT AND PLAN OF MERGER (this "Amendment No. 1"), dated as of March 23, 2022, is by and among Aspen Technology, Inc., a Delaware corporation ("Aspen"), Emerson Electric Co., a Missouri corporation ("Emerson"), EMR Worldwide Inc., a Delaware corporation and a wholly owned subsidiary of Emerson ("Emerson Sub"), Emersub CX, Inc., a Delaware corporation and a wholly owned subsidiary of Emerson ("Newco"), and Emersub CXI, Inc., a Delaware corporation and a wholly owned subsidiary of Newco ("Merger Subsidiary"). Each of Aspen, Emerson, Emerson Sub, Newco and Merger Subsidiary is referred to as a "Party," and collectively, as the "Parties."

WHEREAS, the Parties are parties to the Transaction Agreement and Plan of Merger (the "Transaction Agreement"), dated as of October 10, 2021 (the "Original Execution Date");

WHEREAS, pursuant to Section 13.03 of the Transaction Agreement, the Parties desire to amend certain terms of the Transaction Agreement to the extent provided herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

Section 1. Amendment to Exhibit G to the Transaction Agreement. Exhibit G (Form of Newco Certificate of Incorporation) to the Transaction Agreement is hereby deleted and replaced in its entirety with Exhibit G-1 hereto.

Section 2. Effect of Amendment. From and after the date hereof, each reference in the Transaction Agreement to "this Agreement," "hereof," "hereunder" or words of like import referring to the Transaction Agreement (or any schedule or exhibit thereof) shall be deemed a reference to the Transaction Agreement (and such schedule or exhibit) as amended hereby. The Parties agree that all references in the Transaction Agreement to "the date hereof" or "the date of this Agreement" shall refer to the Original Execution Date. Except as and to the extent expressly modified by this Amendment No. 1, the Transaction Agreement (or any schedule or exhibit thereof) is not otherwise amended, modified or supplemented and shall remain in full force and effect in accordance with its terms.

Section 3. Other Provisions. This Amendment hereby incorporates the provisions of Sections 1.02 (Other Definitional and Interpretive Provisions), 13.03 (Amendments and Waivers), 13.05 (Disclosure Schedules), 13.06 (Binding Effect; Benefit; Assignment), 13.07 (Governing Law), 13.08 (Jurisdiction), 13.09 (Counterparts; Effectiveness); 13.10 (Entire Agreement), 13.11 (Severability) and 13.12 (Specific Performance) of the Transaction Agreement as if fully set forth herein, mutatis mutandis.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment No. 1 to be duly executed by their respective authorized officers as of the day and year first above written.

ASPEN TECHNOLOGY, INC.

By: /s/Antonio J. Pietri
Name: Antonio J. Pietri
Title: President and Chief Executive Officer

EMERSON ELECTRIC CO.

By: /s/Vincent M. Servello
Name: Vincent M. Servello
Title: Vice President

EMR WORLDWIDE INC.

By: /s/Vincent M. Servello
Name: Vincent M. Servello
Title: Vice President

EMERSUB CX, INC.

By: /s/Vincent M. Servello
Name: Vincent M. Servello
Title: Vice President

EMERSUB CXI, INC.

By: /s/Vincent M. Servello
Name: Vincent M. Servello
Title: Vice President

[Signature Page to Amendment No. 1 to the Transaction Agreement and Plan of Merger]

Exhibit G-1

FORM OF AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION

OF

Aspen Technology, Inc.

The date of the filing of its original certificate of incorporation with the Secretary of State of the State of Delaware was October 8, 2021. The Corporation was originally incorporated under the name Emersub CX, Inc.

ARTICLE 1
NAME

The name of the corporation is Aspen Technology, Inc. (the "Corporation").

ARTICLE 2
REGISTERED OFFICE AND AGENT

The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE 3
PURPOSE AND POWERS

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware as the same exists or may hereafter be amended (the "DGCL").

ARTICLE 4
CAPITAL STOCK

(A) Authorized Shares

1. Classes of Stock. The total number of shares of stock that the Corporation shall have authority to issue is [•], consisting of [•] shares of Common Stock, par value $0.0001 per share (the "Common Stock"), and [•] shares of Preferred Stock, par value $0.0001 per share (the "Preferred Stock").

2. Preferred Stock. Preferred Stock may be issued from time to time in one or more classes or series pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors of the Corporation (the "Board") and the filing of a certificate pursuant to the DGCL (a "Preferred Designation"), authority to do so being hereby expressly vested in the Board. The Board is further authorized, subject to limitations prescribed by law, to fix by resolution or resolutions the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, of any classes or series of Preferred Stock, including without limitation authority to fix by resolution or resolutions the dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), redemption price or prices, and liquidation preferences of any such class or series, and the number of shares constituting any such class or series and the designation thereof, or any of the foregoing. The powers, preferences and relative, participating, optional and other special rights of each class or series of Preferred Stock, and the qualifications, limitations or restrictions thereof, if any, may differ from those of any and all other classes or series at any time outstanding. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of all of the then-outstanding shares of capital stock of the Corporation entitled to vote thereon, irrespective of the provisions of Section 242(b)(2) of the DGCL, subject to obtaining a vote of the holders of any classes or series of Preferred Stock, if such a vote is required pursuant to the terms of this Certificate of Incorporation (including any Preferred Designation).

(B) Voting Rights

Each holder of Common Stock, as such, shall be entitled to one vote for each share of Common Stock held of record by such holder on all matters on which stockholders generally are entitled to vote; provided that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to this Certificate of Incorporation (including any Preferred Designation) that relates solely to the terms of one or more outstanding classes or series of Preferred Stock if the holders of such affected class or series are entitled, either separately or together with the holders of one or more other such classes or series, to vote thereon pursuant to this Certificate of Incorporation (including any Preferred Designation) or pursuant to the DGCL.

ARTICLE 5
BYLAWS

Subject to the terms of the Stockholders Agreement, dated as of [●], among the Corporation, Emerson Electric Co., a Missouri corporation ("Emerson"), and EMR Worldwide Inc., a Delaware corporation (as amended from time to time, the "Stockholders Agreement"), the Board shall have the power to adopt, amend or repeal the bylaws of the Corporation (the "Bylaws"). The Stockholders Agreement shall be publicly available with the Company's public filings.

ARTICLE 6
BOARD OF DIRECTORS

(A) Power of the Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board.

(B) Election of Directors. Subject to the terms of the Stockholders' Agreement and any Preferred Designation, the number of directors of the Corporation shall be as from time to time fixed by, or in the manner provided in, the Bylaws of the Corporation. There shall be no cumulative voting in the election of directors. Election of directors need not be by written ballot unless the Bylaws so provide.

(C) Vacancies. Subject to the terms of the Stockholders Agreement and any Preferred Designation, vacancies on the Board resulting from death, resignation, removal or otherwise and newly created directorships resulting from any increase in the number of directors may be filled solely by a majority of the directors then in office (although less than a quorum) or by the sole remaining director, and each director so elected shall hold office until his or her successor is elected and qualified.

(D) Removal. Any director or the entire Board may be removed from office at any time with or without cause by the affirmative vote of the holders of a majority of the voting power of all of the then-outstanding shares of capital stock of the Corporation entitled to vote thereon or pursuant to the terms of the Stockholders Agreement with respect to the parties to such agreement and any Preferred Designation.

ARTICLE 7
MEETINGS OF STOCKHOLDERS

(A) Annual Meetings. An annual meeting of stockholders for the election of directors to succeed those whose terms expire and for the transaction of such other business as may properly come before the meeting shall be held at such place, if any, on such date, and at such time as the Bylaws may provide.

(B) Special Meetings. Except as otherwise provided for in any Preferred Designation, special meetings of the stockholders may only be called as set forth in the Bylaws.

(C) Action by Consent. If Emerson and its affiliates beneficially own in the aggregate at least 20% of the voting power of all of the then-outstanding shares of capital stock of the Corporation, any action required or permitted to be taken at any annual or special meeting of stockholders may be taken by consent of stockholders without a meeting; provided that, if Emerson and its affiliates do not beneficially own at least 20% of the voting power of all of the then-outstanding shares of capital stock of the Corporation, then any action required or permitted to be taken at any annual or special meeting of stockholders may be taken upon the vote of stockholders at an annual or special meeting duly noticed and called in accordance with the DGCL and this Article 7 and may not be taken by consent of stockholders without a meeting (except pursuant to any Preferred Designation). For purposes of this Section (C) of Article 7, "affiliate" means a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, another person.

ARTICLE 8
INDEMNIFICATION

(A) Limited Liability. A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director to the fullest extent permitted by applicable law.

(B) Right to Indemnification.

(1) Each person (and the heirs, executors or administrators of such person) who was or is a party or is threatened to be made a party to, or is involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was a director or officer of the Corporation or is or was serving at the request of the Corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise (each, a "Covered Person"), shall be indemnified and held harmless by the Corporation to the fullest extent permitted by the DGCL. The right to indemnification conferred in this Article 8 shall also include the right to be paid by the Corporation the expenses incurred in connection with any such proceeding in advance of its final disposition to the

fullest extent authorized by applicable law. The right to indemnification conferred in this Article 8 shall be a contract right.

(2) If a claim for indemnification (following the final disposition of such proceeding) or advancement of expenses under this Article 8 is not paid in full within 30 days after a written claim therefor by the Covered Person has been received by the Corporation, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense (including attorney's fees) of prosecuting such claim to the fullest extent permitted by law. In any such action the Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(3) The Corporation may, by action of the Board, provide indemnification and advancement of expenses to such of the employees and agents of the Corporation to such extent and to such effect as the Board shall determine to be appropriate and authorized by applicable law.

(C) Insurance. The Corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss incurred by such person in any such capacity or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the DGCL.

(D) Priority of Corporation Obligations. The Corporation hereby acknowledges that a Covered Person may have certain rights of indemnification, advancement of expenses and/or insurance provided by persons (an "Other Indemnitor") other than the Corporation or an affiliate of the Corporation. The Corporation hereby agrees (i) that it is the indemnitor of first resort (i.e., its obligations to the Covered Persons are primary and any obligation of the Other Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Covered Persons are secondary), (ii) that it shall be required to advance the full amount of expenses incurred by such Covered Persons and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement, in each case to the extent legally permitted and as required by the terms of this Certificate of Incorporation or the Bylaws (or any other agreement between the Corporation and such Covered Persons), without regard to any rights such Covered Persons may have against the Other Indemnitors, and (iii) that it irrevocably waives, relinquishes and releases the Other Indemnitors from any and all claims against the Other Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Corporation further agrees that no advancement or payment by the Other Indemnitors on behalf of such Covered Persons with respect to any claim for which such Covered Persons have sought indemnification from the Corporation shall affect the foregoing and the Other Indemnitors shall be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Covered Persons against the Corporation. The Other Indemnitors are express third party beneficiaries of the terms of this clause (D).

(E) Nonexclusivity of Rights. The rights and authority conferred in this Article 8 shall not be exclusive of any other right that any person may otherwise have or hereafter acquire.

(F) Preservation of Rights. Neither the amendment nor repeal of this Article 8, nor the adoption of any provision of this Certificate of Incorporation or the Bylaws, nor, to the fullest extent permitted by the DGCL, any modification of law, shall adversely affect any right or protection of any person granted pursuant hereto existing at, or arising out of or related to any event, act or omission that occurred prior to, the time of such amendment, repeal, adoption or modification (regardless of when any proceeding (or part thereof) relating to such event, act or omission arises or is first threatened, commenced or completed).

ARTICLE 9
CORPORATE OPPORTUNITIES

The Corporation has waived certain corporate opportunities as identified in the Stockholders Agreement, such that Emerson and the other persons specified therein shall not be liable to the Corporation, its affiliates or its stockholders for breach of any fiduciary duty as a stockholder or director of the Corporation from pursuit of such opportunities as set forth in the Stockholders Agreement. Any person or entity purchasing or otherwise acquiring or holding any interest in the shares of capital stock of the Corporation shall be deemed to have notice of and consented to the foregoing.

ARTICLE 10
AMENDMENTS

The Corporation reserves the right to amend this Certificate of Incorporation in any manner permitted by the DGCL and all rights and powers conferred upon stockholders, directors and officers herein are granted subject to this reservation.

ARTICLE 11
EXCLUSIVE JURISDICTION FOR CERTAIN ACTIONS AND SEVERABILITY

Unless the Board otherwise approves in writing the selection of an alternate forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery of the State of Delaware does not have jurisdiction, the Superior

Court of the State of Delaware, or, if the Superior Court of the State of Delaware also does not have jurisdiction, the United States District Court for the District of Delaware) shall, to the fullest extent permitted by applicable law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim for or based on a breach of a duty (including any fiduciary duty) owed by any current or former director, officer or other employee or stockholder to the Corporation or the Corporation's stockholders, including a claim alleging the aiding and abetting of such a breach of a fiduciary duty, (iii) any action asserting a claim arising pursuant to any provision of the DGCL or this Certificate of Incorporation or the Bylaws, (iv) any action asserting a claim related to, involving or against the Corporation governed by the internal affairs doctrine or (v) any action asserting an "internal corporate claim" as that term is defined in Section 115 of the DGCL (each, a "Covered Proceeding"); provided that the foregoing shall not apply to claims arising under the Securities Exchange Act of 1934, as amended, or the rules and regulations promulgated thereunder.

Unless the Board otherwise approves in writing the selection of an alternative forum, the federal district courts of the United States of America shall, to the fullest extent permitted by law, be the sole and exclusive forum for any complaint asserting a cause of action arising under the Securities Act of 1933, as amended, or the rules and regulations promulgated thereunder.

Failure to enforce the provisions of this Article 11 would cause the Corporation irreparable harm and the Corporation shall be entitled to equitable relief, including injunctive relief and specific performance, to enforce the foregoing provisions. Any person or entity purchasing or otherwise acquiring or holding any interest in the shares of capital stock of the Corporation shall be deemed to have notice of and consented to the provisions of this Article 11 and waived any argument relating to the inconvenience of the forums referenced above in. The existence of any prior written approval by the Corporation of an alternative forum shall not act as a waiver of the Corporation's ongoing consent right as set forth in this Article 11 with respect to any current or future actions or claims.

If any provision or provisions of this Certificate of Incorporation shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Certificate of Incorporation (including each portion of any paragraph of this Certificate of Incorporation containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby.

ARTICLE 12
DGCL SECTION 203 AND BUSINESS COMBINATIONS

(A) The Corporation hereby expressly elects not to be governed by Section 203 of the DGCL.

(B) The Corporation shall not engage in any business combination with any interested stockholder for a period of three years following the time that such stockholder became an interested stockholder, unless:

1. prior to such time, the Board approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

2. upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting power of all of the then-outstanding shares of capital stock of the Corporation at the time the transaction commenced, excluding for purposes of determining the voting power of all of the then-outstanding shares of capital stock of the Corporation (but not the voting power of the then-outstanding shares of capital stock of the Corporation owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

3. at or subsequent to such time, the business combination is approved by the Board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66⅔% of the voting power of all of the then-outstanding shares of capital stock of the Corporation which is not owned by the interested stockholder.

For purposes of this Article 12, references to:

"affiliate" means a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, another person.

"associate," when used to indicate a relationship with any person, means: (i) any corporation, partnership, unincorporated association or other entity of which such person is a director, officer or partner or is, directly or indirectly, the owner of 20% or more of any class of voting stock; (ii) any trust or other estate in which such person has at least a 20% beneficial interest or as to which such person serves as trustee or in a similar fiduciary capacity; and (iii) any relative or spouse of such person, or any relative of such spouse, who has the same residence as such person.

"Emerson Direct Transferee" means any person that acquires (other than in a registered public offering or through a broker's transaction executed on any securities exchange or other over-the-counter market) directly from Emerson or any of its affiliates or successors or any "group," or any member of any such group, of which such persons are a party under Rule 13d-5 of the Securities Exchange Act of 1934 beneficial ownership of 5% or more of the voting power of all of the then-outstanding shares of capital stock of the Corporation.

"business combination," when used in reference to the Corporation and any interested stockholder of the Corporation, means:

1. any merger or consolidation of the Corporation or any direct or indirect majority-owned subsidiary of the Corporation (a) with the interested stockholder, or (b) with any other corporation, partnership, unincorporated association or other entity if the merger or consolidation is caused by the interested stockholder and as a result of such merger or consolidation Section (B) of this Article 12 is not applicable to the surviving entity;

2. any sale, lease, exchange, mortgage, pledge, transfer or other disposition (in one transaction or a series of transactions), except proportionately as a stockholder of the Corporation, to or with the interested stockholder, whether as part of a dissolution or otherwise, of assets of the Corporation or of any direct or indirect majority-owned subsidiary of the Corporation which assets have an aggregate market value equal to 10% or more of either the aggregate market value of all the assets of the Corporation determined on a consolidated basis or the aggregate market value of all the outstanding stock of the Corporation;

3. any transaction which results in the issuance or transfer by the Corporation or by any direct or indirect majority-owned subsidiary of the Corporation of any stock of the Corporation or of such subsidiary to the interested stockholder, except: (a) pursuant to the exercise, exchange or conversion of securities exercisable for, exchangeable for or convertible into stock of the Corporation or any such subsidiary which securities were outstanding prior to the time that the interested stockholder became such; (b) pursuant to a merger under Section 251(g) of the DGCL; (c) pursuant to a dividend or distribution paid or made, or

the exercise, exchange or conversion of securities exercisable for, exchangeable for or convertible into stock of the Corporation or any such subsidiary which security is distributed, pro rata to all holders of a class or series of stock of the Corporation subsequent to the time the interested stockholder became such; (d) pursuant to an exchange offer by the Corporation to purchase stock made on the same terms to all holders of said stock; or (e) any issuance or transfer of stock by the Corporation; provided, however, that in no case under items (c)-(e) of this clause (3) shall there be an increase in the interested stockholder's proportionate share of the stock of any class or series of the Corporation or of the voting stock of the Corporation (except as a result of immaterial changes due to fractional share adjustments);

4. any transaction involving the Corporation or any direct or indirect majority-owned subsidiary of the Corporation which has the effect, directly or indirectly, of increasing the proportionate share of the stock of any class or series, or securities convertible into the stock of any class or series, of the Corporation or of any such subsidiary which is owned by the interested stockholder, except as a result of immaterial changes due to fractional share adjustments or as a result of any purchase or redemption of any shares of stock not caused, directly or indirectly, by the interested stockholder; or

5. any receipt by the interested stockholder of the benefit, directly or indirectly (except proportionately as a stockholder of the Corporation), of any loans, advances, guarantees, pledges, or other financial benefits (other than those expressly permitted in clauses 1 to 4) provided by or through the Corporation or any direct or indirect majority-owned subsidiary.

"control," including the terms "controlling," "controlled by" and "under common control with," means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting stock, by contract, or otherwise. A person who is the owner of 20% or more of the outstanding voting stock of the Corporation, partnership, unincorporated association or other entity shall be presumed to have control of such entity, in the absence of proof by a preponderance of the evidence to the contrary. Notwithstanding the foregoing, a presumption of control shall not apply where such person holds voting stock, in good faith and not for the purpose of circumventing this Article 12, as an agent, bank, broker, nominee, custodian or trustee for one or more owners who do not individually or as a group have control of such entity.

"interested stockholder" means any person (other than the Corporation or any direct or indirect majority-owned subsidiary of the Corporation) that (i) is the owner of 15% or more of the outstanding voting stock of the Corporation, or (ii) is an affiliate or associate of the Corporation and was the owner of 15% or more of the outstanding voting stock of the Corporation at any time within the three year period immediately prior to the date on which it is sought to be determined whether such person is an interested stockholder; and the affiliates and associates of such person; but "interested stockholder" shall not include or be deemed to include, in any case, (a) Emerson, any Emerson Direct Transferee, or any of their respective affiliates or successors or any "group," or any member of any such group, to which such persons are a party under Rule 13d-5 of the Securities Exchange Act of 1934, or (b) any person whose ownership of shares in excess of the 15% limitation set forth herein is the result of any action taken solely by the Corporation, provided that such person shall be an interested stockholder if thereafter such person acquires additional shares of voting stock of the Corporation, except as a result of further corporate action not caused, directly or indirectly, by such person. For the purpose of determining whether a person is an interested stockholder, the voting stock of the Corporation deemed to be outstanding shall include stock deemed to be owned by the person through application of the definition of "owner" below but shall not include any other unissued stock of the Corporation which may be issuable pursuant to any agreement, arrangement or understanding, or upon exercise of conversion rights, warrants or options, or otherwise.

"owner," including the terms "own" and "owned," when used with respect to any stock, means a person that individually or with or through any of its affiliates or associates:

1. beneficially owns such stock, directly or indirectly; or

2. has (a) the right to acquire such stock (whether such right is exercisable immediately or only after the passage of time) pursuant to any agreement, arrangement or understanding, or upon the exercise of conversion rights, exchange rights, warrants or options, or otherwise; provided that a person shall not be deemed the owner of stock tendered pursuant to a tender or exchange offer made by such person or any of such person's affiliates or associates until such tendered stock is accepted for purchase or exchange; or (b) the right to vote such stock pursuant to any agreement, arrangement or understanding; provided that a person shall not be deemed the owner of any stock because of such person's

right to vote such stock if the agreement, arrangement or understanding to vote such stock arises solely from a revocable proxy or consent given in response to a proxy or consent solicitation made to ten or more persons; or

3. has any agreement, arrangement or understanding for the purpose of acquiring, holding, voting (except voting pursuant to a revocable proxy or consent as described in item (b) of subsection (2) above), or disposing of such stock with any other person that beneficially owns, or whose affiliates or associates beneficially own, directly or indirectly, such stock.

"person" means any individual, corporation, partnership, unincorporated association or other entity.

"stock" means, with respect to any corporation, capital stock and, with respect to any other entity, any equity interest.

"voting stock" means stock of any class or series entitled to vote generally in the election of directors.

ARTICLE 13
STOCKHOLDERS AGREEMENT

Notwithstanding anything in this Certificate of Incorporation to the contrary (including the provisions of Article 3 hereof), (i) the Corporation is not authorized to engage in any act or activity that would constitute a breach by the Corporation of Article III (except for Section 3.7), Section 4.2(e), Section 4.3, Section 4.4, Section 4.9 or Section 7.6 of the Stockholders Agreement (the "Specified Provisions"), and (ii) the Corporation shall lack the power to engage in any such act or activity, unless (in the case of either of clauses (i) or (ii)) such act or activity is approved, or ratified after such act or activity occurs, by the parties to the Stockholders Agreement. For the avoidance of doubt, a breach of the Specified Provisions shall not occur if an act or activity would constitute a breach of a contractual right relating to such Specified Provision of one or more of the parties to the Stockholders Agreement and such right has been waived (either by a limited waiver or otherwise) by such parties.

IN WITNESS WHEREOF, the undersigned has executed this Amended and Restated Certificate of Incorporation this _____ day of __________, 20__.

Aspen Technology, Inc.

____
[Name]
Title: Chief Executive 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 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: April 27, 2022	**/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, Chantelle Breithaupt, 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 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: April 27, 2022

/s/ CHANTELLE BREITHAUPT
Chantelle Breithaupt
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 March 31, 2022, 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: April 27, 2022	**/s/ ANTONIO J. PIETRI**
	Antonio J. Pietri
	President and Chief Executive Officer
	(Principal Executive Officer)
Date: April 27, 2022	**/s/ CHANTELLE BREITHAUPT**
	Chantelle Breithaupt
	Senior Vice President and Chief Financial Officer
	(Principal 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.