

**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, 2019**

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 **001-33834**

RUBICON TECHNOLOGY, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	36-4419301
State or Other Jurisdiction of Incorporation or Organization	I.R.S. Employer Identification No.
900 East Green Street Bensenville, Illinois	60106
Address of Principal Executive Offices	Zip Code

Registrant's Telephone Number, Including Area Code: **(847) 295-7000**

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered

As of May 10, 2019, the Registrant had 2,686,345 shares of common stock, par value \$.001 per share, outstanding.

RUBICON TECHNOLOGY, INC.

**Quarterly Report on Form 10-Q
For the quarterly period ended March 31, 2019**

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PART I FINANCIAL INFORMATION

Rubicon Technology, Inc.

Condensed Consolidated Balance Sheets

	<u>March 31,</u> <u>2019</u>	<u>December 31,</u> <u>2018</u>
	(unaudited) (in thousands, other than share data)	
Assets		
Cash and cash equivalents	\$ 9,489	\$ 11,241
Restricted cash	172	169
Short-term investments	16,210	14,356
Accounts receivable, net	613	733
Inventories	2,100	2,130
Other inventory supplies	140	183
Prepaid expenses and other current assets	216	109
Assets held for sale	4,145	4,145
Total current assets	<u>33,085</u>	<u>33,066</u>
Property and equipment, net	<u>2,709</u>	<u>2,728</u>
Total assets	<u>\$ 35,794</u>	<u>\$ 35,794</u>
Liabilities and stockholders' equity		
Accounts payable	\$ 347	\$ 400
Accrued payroll	111	28
Accrued and other current liabilities	287	345
Corporate income and franchise taxes	283	286
Accrued real estate taxes	133	96
Advance payments	16	39
Total current liabilities	<u>1,177</u>	<u>1,194</u>
Total liabilities	<u>1,177</u>	<u>1,194</u>
Commitments and contingencies (Note 7)		
Stockholders' equity		
Preferred stock, \$.001 par value, 1,000,000 undesignated shares authorized, no shares issued or outstanding	—	—
Common stock, \$.001 par value, 8,200,000 shares authorized; 2,921,488 and 2,919,542 shares issued; 2,731,548 and 2,733,601 shares outstanding	29	29
Additional paid-in capital	375,990	375,979
Treasury stock, at cost, 189,940 and 185,941 shares	(12,244)	(12,213)
Accumulated other comprehensive loss	(21)	(2)
Accumulated deficit	(329,137)	(329,193)
Total stockholders' equity	<u>34,617</u>	<u>34,600</u>
Total liabilities and stockholders' equity	<u>\$ 35,794</u>	<u>\$ 35,794</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.

Rubicon Technology, Inc.

Condensed Consolidated Statements of Operations

	<u>Three months ended</u> <u>March 31,</u>	
	<u>2019</u>	<u>2018</u>
	(unaudited)	
	(in thousands, other than share and per share data)	
Revenue	\$ 920	\$ 1,039
Cost of goods sold	585	932
Gross profit	<u>335</u>	<u>107</u>
Operating expenses:		
General and administrative	426	622
Sales and marketing	95	119
Research and development	—	33

taxes	1,946	—	—	—	—	—	—	—	—
Purchase of treasury stock, at cost	—	—	(3,999)	(31)	—	—	—	—	(31)
Unrealized loss on investments, net of tax	—	—	—	—	—	—	(19)	—	(19)
Net income	—	—	—	—	—	—	—	56	56
Balance at March 31, 2019	2,921,488	\$ 29	(189,940)	\$ (12,244)	\$ 375,990	\$ (21)	\$ (329,137)	\$ 34,617	

The accompanying notes are an integral part of these condensed consolidated financial statements.

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Rubicon Technology, Inc.
Condensed Consolidated Statements of Cash Flows

	Three months ended March 31,	
	2019	2018
	(unaudited) (in thousands)	
Cash flows from operating activities		
Net income (loss)	\$ 56	\$ (40)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities		
Depreciation and amortization	45	130
Net gain on sale or disposal of assets	(75)	(562)
Stock-based compensation	11	164
Changes in operating assets and liabilities:		
Accounts receivable	120	113
Inventories	30	169
Other inventory supplies	43	68
Prepaid expenses and other assets	(107)	(106)
Accounts payable	(53)	(360)
Accrued payroll	83	(32)
Accrued real estate taxes	12	(13)
Corporate income and franchise taxes	(3)	55
Advanced payments	(23)	(47)
Accrued and other current liabilities	(58)	(61)
Net cash provided by (used in) operating activities	<u>81</u>	<u>(522)</u>
Cash flows from investing activities		
Proceeds from sale or disposal of assets	75	1,188
Purchases of investments	(1,992)	(2,775)
Proceeds from sale of investments	119	544
Net cash used in investing activities	<u>(1,798)</u>	<u>(1,043)</u>
Cash flows from financing activities		
Taxes paid related to net share settlement of equity awards	—	(1)
Purchases of treasury stock	(32)	—
Net cash used in financing activities	<u>(32)</u>	<u>(1)</u>
Net effect of currency translation	—	(1)
Net decrease in cash, cash equivalents and restricted cash	(1,749)	(1,567)
Cash, cash equivalents and restricted cash, beginning of period	11,410	11,725
Cash, cash equivalents and restricted cash, end of period	<u>\$ 9,661</u>	<u>\$ 10,158</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.

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Rubicon Technology, Inc.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

March 31, 2019

1. BASIS OF PRESENTATION

Interim financial data

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“GAAP”) for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and notes required by GAAP for complete consolidated financial statements and should be read in conjunction with Rubicon Technology, Inc.’s (the “Company”) annual report filed on Form 10-K for the fiscal year ended December 31, 2018. In the opinion of management, all adjustments (consisting only of adjustments of a normal and recurring nature) considered necessary for a fair presentation of the results of operations have been included. Consolidated operating results for the three-month period ended March 31, 2019, are not necessarily indicative of results that may be expected for the year ending December 31,

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, Rubicon Technology Worldwide LLC, Rubicon Technology BP LLC, Rubicon Sapphire Technology (Malaysia) SDN BHD and Rubicon Technology Hong Kong Limited. All intercompany transactions and balances have been eliminated in consolidation.

Investments

The Company invests available cash primarily in U.S. Treasury securities, investment grade commercial paper, FDIC guaranteed certificates of deposit, common stock and corporate notes. Investments classified as available-for-sale debt securities are carried at fair value with unrealized gains and losses recorded in accumulated other comprehensive income (loss). Investments in equity securities are reported at fair value, with both realized and unrealized gains and losses recorded in other income (expense), in the Consolidated Statement of Operations. Investments in which the Company has the ability and intent, if necessary, to liquidate are classified as short-term.

The Company reviews its available-for-sale debt securities investments at the end of each quarter for other-than-temporary declines in fair value based on the specific identification method. The Company considers various factors in determining whether an impairment is other-than-temporary, including the severity and duration of the impairment, changes in underlying credit ratings, forecasted recovery, its ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value and the probability that the scheduled cash payments will continue to be made. When the Company concludes that an other-than-temporary impairment has resulted, the difference between the fair value and carrying value is written off and recorded as a charge on the consolidated statement of operations.

Accounts receivable

The majority of the Company's accounts receivable is due from defense subcontractors, industrial manufacturers, fabricators and resellers. Credit is extended based on an evaluation of the customer's financial condition. Accounts receivable are due based on contract terms and at stated amounts due from customers, net of an allowance for doubtful accounts. Losses from credit sales are provided for in the financial statements.

Accounts outstanding longer than the contractual payment terms are considered past due. The Company determines its allowance by considering a number of factors, including length of time customer's account is past due, customer's current ability to pay and the condition of the general economy and industry as a whole. The Company writes off accounts receivable when they are deemed uncollectible and such write-offs, net of payments received, are recorded as a reduction to the allowance.

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Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The Company records treasury stock purchases under the cost method whereby the entire cost of the acquired stock is recorded as treasury stock. In November 2018, the Company's Board of Directors authorized a program to repurchase up to \$3 million of the Company's common stock. The Company's share repurchase program does not obligate it to acquire any specific number of shares. Under the program, shares may be repurchased in privately negotiated and/or open market transactions. The timing, price and volume of repurchases are based upon market conditions, relevant securities laws and other factors. The stock repurchase plan expires on November 19, 2021 and may be terminated at any time.

Share repurchase activity during the three months ended March 31, 2019, was as follows:

Periods	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced program	Approximate dollar value of shares that may yet be purchased under the program (in thousands)
January 1, 2019 to January 31, 2019	300	\$ 8.00	300	\$ 2,933
February 1, 2019 to February 28, 2019	—	—	—	2,933
March 1, 2019 to March 31, 2019	3,699	7.90	3,699	2,903
Total	3,999			

Inventories

Inventories are valued at the lower of cost or net realizable value. Net realizable value is determined based on an estimated selling price in the ordinary course of business less reasonably predictable costs of completion and disposal. Raw materials cost is determined using the first-in, first-out method, and work-in-process and finished goods costs are determined on a standard cost basis, which includes materials, labor and manufacturing overhead. The Company reduces the carrying value of its inventories for differences between the cost and the estimated net realizable value, taking into account usage, expected demand, technological obsolescence and other information.

The Company establishes inventory reserves when conditions exist that suggest inventory may be in excess of anticipated demand or is obsolete based on customer specifications. The Company evaluates the ability to realize the value of its inventory based on a combination of factors, including forecasted sales, estimated current and future market value and changes in customers' product specifications. The Company's method of estimating excess and obsolete inventory has remained consistent for all periods presented.

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Inventories consisted of the following:

March 31, 2019	December 31, 2018
(in thousands)	

Raw materials	\$ 468	\$ 468
Work-in-process	1,164	1,322
Finished goods	468	340
	<u>\$ 2,100</u>	<u>\$ 2,130</u>

Property and equipment

Property and equipment consisted of the following:

	March 31, 2019	December 31, 2018
	(in thousands)	
Machinery, equipment and tooling	\$ 3,293	\$ 3,293
Buildings	1,711	1,686
Information systems	819	819
Land and land improvements	594	594
Furniture and fixtures	8	8
Total cost	6,425	6,400
Accumulated depreciation and amortization	(3,716)	(3,672)
Property and equipment, net	<u>\$ 2,709</u>	<u>\$ 2,728</u>

Assets held for sale and long-lived assets

When circumstances, such as adverse market conditions, indicate that the carrying value of a long-lived asset may be impaired, the Company performs an analysis to review the recoverability of the asset's carrying value. The Company makes estimates of the undiscounted cash flows (excluding interest charges) from the expected future operations of the asset. These estimates consider factors such as expected future operating income, operating trends and prospects, as well as the effects of demand, competition and other factors. If the analysis indicates that the carrying value is not recoverable from future cash flows, an impairment loss is recognized to the extent that the carrying value exceeds the estimated fair value. The estimated fair value of assets is determined using appraisal techniques, which assume the highest and best use of the asset by market participants, considering the use of the asset that is physically possible, legally permissible and financially feasible at the measurement date. Any impairment losses are recorded as operating expenses which reduce net income.

For the year ended December 31, 2018, the Company reviewed the current fair value of its assets and concluded no adjustments were needed. Additionally, no adjustments were recorded for the three months ended March 31, 2019. The Company will continue to assess its long-lived assets to ensure the carrying amount of these assets is still appropriate given any changes in the asset usage, marketplace and other factors used in determining the current fair value.

Additionally, in the three months ended March 31, 2018, the Company completed individual sales and held auctions for equipment and consumable assets, resulting in the sale of certain of its excess U.S. and Malaysia assets, which had a total net book value of \$626,000. Based on these sales, a gain on sale or disposal of equipment and consumable assets of \$562,000 was recorded for the three months ended March 31, 2018. The Company did not record any additional sales of its equipment or consumable assets for the three months ended March 31, 2019. Unsold excess Malaysia equipment continued to be classified as current assets held for sale at March 31, 2019 and December 31, 2018.

The Company is pursuing the sale of its parcel of land in Batavia, Illinois, and the sale or lease of its 65,000 square-foot facility located in Penang, Malaysia. Although the Company cannot assure the timing of these sales, these properties were classified as current assets held for sale at March 31, 2019 and December 31, 2018, as it is the Company's intention to complete these sales within the next twelve-month period. The Company cannot guarantee that it will be able to successfully complete the sale or lease of any assets.

Revenue recognition

The Company recognizes revenue in accordance with ASC Topic 606, *Revenue From Contracts with Customers* ("Topic 606"), when performance obligations under a purchase order or signed quotation are satisfied. The Company's business practice commits the Company to manufacture and deliver product upon acceptance of a customer's purchase order or signed quotation ("agreement"). The agreement with the customer includes specifications of the product to be delivered, price, expected ship date and payment terms. The Company's agreements generally do not contain variable, financing, rights of return or non-cash components. There are no up-front costs to develop the production process. The performance obligation is satisfied at the point in time (single performance obligation) when the product is manufactured to the customer's specification, as performance does not create an asset with an alternative use to the Company. Accordingly, the Company recognizes revenue when the product is shipped, and control of the product, title and risk of loss have been transferred to the customer. The Company grants credit terms considering normal collection risk. If there is doubt about collection, full prepayment for the order is required. Any payments received prior to shipment are recorded as deferred revenue and included in Advance Payments in the Consolidated Balance Sheets.

Government Contracts

In 2012, the Company signed a contract with the Air Force Research Laboratory to produce large-area sapphire windows on a cost plus fixed fee basis. The deliverables under this contract included development of machinery and technology to be able to produce large-area sapphire windows, prove the concept of growing large windows with that equipment and delivery of large-area sapphire windows. The Company recorded research and development revenue related to this contract on a gross basis over the contractually defined period of time as the obligations were completed, using the input method of measuring progress, which recognizes revenue as resources are consumed, labor hours expended and costs are incurred, plus a portion of the fixed fee. No research and development revenue was recorded for the three months ended March 31, 2018. As the Company has completed this contract in 2018, all revenues corresponding to the total value of the contract of \$4.7 million have been recognized as of December 31, 2018. No additional research and development revenue was recorded for the three months ended March 31, 2019. At March 31, 2019, the estimated costs to complete the contract were in excess of the contract value. In reviewing its current estimates, the Company expects its remaining payments to be less than \$200,000, which has previously been accrued.

The Company does not provide maintenance or other services and it does not have sales that involve bill & hold arrangements, multiple elements or deliverables. However, the Company does provide product warranty for up to 90 days, for which the Company has accrued a warranty reserve of \$7,000 and \$8,000 at March 31, 2019 and December 31, 2018, respectively.

Net income (loss) per common share

Basic net income (loss) per common share is computed by dividing net income (loss) by the weighted-average number of common shares outstanding during the period. Diluted net income (loss) per common share is computed by dividing net income (loss) by the weighted-average number of diluted common shares outstanding during the period. Diluted shares outstanding are calculated by adding to the weighted-average shares (a) any outstanding stock options based on the treasury stock method and (b) restricted stock units ("RSU").

Diluted net income per common share was the same as basic net income per common share for the three months ended March 31, 2019 and 2018, because the effects of potentially dilutive securities did not have a material impact on the calculation of diluted net income per share. The Company had outstanding options exercisable

New accounting pronouncements adopted

In February 2016, the FASB issued ASU No. 2016-02 ("ASU 2016-02"), *Leases (Topic 842)*, which modifies the lease recognition requirements and requires entities to recognize the assets and liabilities arising from leases on the balance sheet. ASU 2016-02 requires entities to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. ASU 2016-02 is effective for interim and annual reporting periods beginning after December 15, 2018, with early adoption permitted. The Company's adoption of ASU 2016-02 did not have a material impact on its consolidated financial statements, as the Company does not have any material lease arrangements.

In February 2018, the FASB issued ASU No. 2018-02 ("ASU 2018-02"), *Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Comprehensive Income*. The new guidance allows companies to reclassify stranded tax effects resulting from the Tax Act, from accumulated other comprehensive income to retained earnings. The guidance also requires certain new disclosures regardless of the election. Early adoption is permitted. The Company's adoption of ASU 2018-02 did not have a material impact on its consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07 ("ASU 2018-07"), *Compensation - Stock Compensation (Topic 718): Improvements to Non-Employee Share-Based Payment Accounting*. These amendments expand the scope of Topic 718, *Compensation - Stock Compensation* which currently only includes share-based payments to employees to include share-based payments issued to non-employees for goods or services. Consequently, the accounting for share-based payments to non-employees and employees will be substantially aligned. ASU 2018-07 supersedes Subtopic 505-50, *Equity - Equity-Based Payments to Non-Employees*. The guidance is effective for public companies for the interim and annual periods beginning after December 15, 2018. Early adoption is permitted, but no earlier than a company's adoption date of Topic 606, *Revenue from Contracts with Customers*. At this time, the Company does not recognize the existence of any non-employee relationships involving share-based payments; therefore, the Company's adoption of ASU 2018-07 did not have a material impact on the Company's financial statements.

3. INVESTMENTS

The Company invests its available cash primarily in U.S. Treasury securities, investment grade commercial paper, FDIC guaranteed certificates of deposit, common stock and corporate notes. Investments classified as available-for-sale debt securities are carried at fair value with unrealized gains and losses recorded in accumulated other comprehensive income (loss). Investments in equity securities are reported at fair value, with both realized and unrealized gains and losses recorded in other income (expense), in the consolidated statements of operations.

The following table presents the amortized cost and gross unrealized losses on all securities at March 31, 2019:

	Amortized cost	Gross unrealized gains		Gross unrealized losses		Fair value
	(in thousands)					
Short-term investments:						
U.S. Treasury securities	\$ 14,416	\$ —		\$ —		\$ 14,416
Common stock	1,813	—		(19)		\$ 1,794
Total short-term investments	<u>\$ 16,229</u>	<u>\$ —</u>		<u>\$ (19)</u>		<u>\$ 16,210</u>

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The following table presents the amortized cost and gross unrealized losses on all securities at December 31, 2018:

	Amortized cost	Gross unrealized gains		Gross unrealized losses		Fair value
	(in thousands)					
Short-term investments:						
U.S. Treasury securities	\$ 14,357	—		(1)		\$ 14,356
Total short-term investments	<u>\$ 14,357</u>	<u>\$ —</u>		<u>\$ (1)</u>		<u>\$ 14,356</u>

The Company values its investments at fair value, defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The standard describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value, which are the following:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company's fixed-income available-for-sale debt securities consist of U.S. Treasury securities, high-quality investment grade commercial paper, FDIC guaranteed certificates of deposit and corporate notes. Investments in equity securities consist of common stock. The Company values these securities based on pricing from pricing vendors, who may use quoted prices in active markets for identical assets (Level 1 inputs) or inputs other than quoted prices that are observable either directly or indirectly (Level 2 inputs) in determining fair value. The valuation techniques used to measure the fair value of the Company's financial instruments having Level 2 inputs were derived from non-binding market consensus prices that are corroborated by observable market data, quoted market prices for similar instruments, or pricing models, such as discounted cash flow techniques.

The following table summarizes the Company's financial assets measured at fair value on a recurring basis as of March 31, 2019:

Level 1	Level 2	Level 3	Total
(in thousands)			

Cash equivalents:						
Money market funds	\$	3,091	\$	—	\$	3,091
Investments:						
Available-for-sale securities — current:						
U.S. Treasury securities		—	14,416		14,416	
Common stock		1,794	—		1,794	
Total	\$	4,885	\$	14,416	\$	19,301

The following table summarizes the Company's financial assets measured at fair value on a recurring basis as of December 31, 2018:

	Level 1	Level 2	Level 3	Total		
	(in thousands)					
Cash equivalents:						
Money market funds	\$	2,821	\$	—	\$	2,821
Investments:						
Available-for-sale securities — current:						
U.S. Treasury securities		—	14,356		14,356	
Total	\$	2,821	\$	14,356	\$	17,177

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There are no terms or conditions restricting the Company from redeeming any of its investments.

In addition to the debt securities noted above, the Company had approximately \$6.4 million and \$8.4 million of time deposits included in cash and cash equivalents as of March 31, 2019 and December 31, 2018, respectively.

4. SIGNIFICANT CUSTOMERS

For the three months ended March 31, 2019, the Company had three customers individually that accounted for approximately 21%, 20% and 18% of revenue. For the three months ended March 31, 2018, the Company had three customers individually that accounted for approximately 17%, 16% and 10% of revenue. No other customer accounted for 10% or more of the Company's revenues during the three months ended March 31, 2019 and 2018.

Customers individually representing more than 10% of trade receivables accounted for approximately 71% and 79% of accounts receivable as of March 31, 2019 and December 31, 2018, respectively.

5. STOCKHOLDERS' EQUITY

Common shares reserved

As of March 31, 2019, the Company had reserved 86,540 shares of common stock for issuance upon the exercise of outstanding common stock options and vesting of RSUs. Also, 326,786 shares of the Company's common stock were reserved for future grants of stock options and RSUs (or other similar equity instruments) under the Rubicon Technology, Inc. 2016 Stock Incentive Plan (the "2016 Plan") as of March 31, 2019.

Preferred stock

At the Company's 2018 annual meeting ("2018 Annual Meeting") of stockholders, an amendment to the Company's Eighth Amended and Restated Certificate of Incorporation (as amended, the "Certificate of Incorporation") was approved to decrease the Company's authorized number of shares of preferred stock from 5,000,000 shares to 1,000,000 shares. Subsequent to receiving stockholder approval at the 2018 Annual Meeting, the Company filed with the Secretary of State of the State of Delaware a Certificate of Amendment to decrease the authorized number of preferred shares, consequently reducing the number of total authorized shares from 13,200,000 to 9,200,000.

6. STOCK INCENTIVE PLANS

In August 2007, the Company adopted the Rubicon Technology Inc. 2007 Stock Incentive Plan, which was amended and restated effective in March 2011 (the "2007 Plan"), and which allowed for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock, RSUs, performance awards and bonus shares. The maximum number of shares that could be awarded under the 2007 Plan was 440,769 shares. Options granted under the 2007 Plan entitled the holder to purchase shares of the Company's common stock at the specified option exercise price, which could not be less than the fair value of the common stock on the grant date. On June 24, 2016, the plan terminated with the adoption of the Rubicon Technology, Inc. 2016 Stock Incentive Plan, (the "2016 Plan"). Any existing awards under the 2007 Plan remain outstanding in accordance with their current terms under the 2007 Plan.

In June 2016, the Company's stockholders approved adoption of the 2016 Plan effective as of March 17, 2016, which allows for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock, RSUs, performance awards and bonus shares. The Compensation Committee of the Board administers the 2016 Plan. The committee determines the type of award to be granted, the fair value, the number of shares covered by the award, and the time when the award vests and may be exercised.

Pursuant to the 2016 Plan, 326,786 shares of the Company's common stock plus any shares subject to outstanding awards under the 2007 Plan that subsequently expire unexercised, are forfeited without the delivery of shares or are settled in cash, will be available for issuance under the 2016 Plan. The 2016 Plan will automatically terminate on March 17, 2026, unless the Company terminates it sooner.

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The following table summarizes the activity of the stock incentive and equity plans as of March 31, 2019, and changes during the three months then ended:

	Shares available for grant	Number of options outstanding	Weighted-average option exercise price	Number of restricted stock and board shares issued	Number of RSUs outstanding
At January 1, 2019	295,067	69,083	\$ 12.10	99,570	50,176

Granted	(925)	—	—	—	925
Exercised/issued	—	—	—	—	(1,000)
Cancelled/forfeited	32,644	(32,644)	12.95	—	—
At March 31, 2019	<u>326,786</u>	<u>36,439</u>	<u>\$ 11.33</u>	<u>99,570</u>	<u>50,101</u>

The Company's aggregate intrinsic value is calculated as the difference between the exercise price of the underlying stock options and the fair value of the Company's common stock. Based on the fair value of the common stock at March 31, 2019, there was \$50,280 of intrinsic value arising from 34,000 stock options exercisable or outstanding.

The Company uses the Black-Scholes option pricing model to value stock options. The Company uses historical stock price average to determine its volatility assumptions. The assumed risk-free rates were based on U.S. Treasury rates in effect at the time of grant with a term consistent with the expected option lives. The expected term is based upon the vesting term of the Company's options. The forfeiture rate of 28.99% is based on the history of forfeited options. The expense is allocated using the straight-line method. For the three months ended March 31, 2019 and 2018, the Company recorded \$7,000 and \$17,000, respectively, of stock option compensation expense. As of March 31, 2019, the Company had \$59,000 of total unrecognized compensation cost related to non-vested stock option awards granted under the Company's stock-based plans that it expects to recognize over a weighted-average period of 1.50 years.

A summary of the Company's non-vested options during the three months ended March 31, 2019, is presented below:

	Options	Weighted-average exercise price
Non-vested options at January 1, 2019	21,992	\$ 6.86
Granted	—	—
Vested	—	—
Cancelled/forfeited	—	—
Non-vested options at March 31, 2019	<u>21,992</u>	<u>\$ 6.86</u>

Pursuant to an employment agreement, the Company granted 30,902 and 59,098 RSUs to a key executive in 2018 and 2017, respectively.

The following table summarizes the award vesting terms for the remaining unvested RSUs under this grant:

Number of RSUs	Target price
15,000	\$ 11.00
15,000	\$ 12.50
15,000	\$ 14.00

The RSUs vest in the amounts set forth above on the first date the 15-trading day average closing price of the Company's common stock equals or exceeds the corresponding target price for the common stock before May 12, 2021. At the time the negotiation of the terms of the employment agreement began, the closing price of the common stock was \$5.50. On the date of grant, the closing price of the common stock was \$6.30.

The Company used a Monte Carlo simulation model valuation technique to determine the fair value of RSUs granted because the awards vest based upon achievement of market price targets. The Monte Carlo simulation model utilizes multiple input variables that determine the probability of satisfying the market condition stipulated in the award and calculates the fair value of each RSU.

The daily expected stock price volatility is based on a three-year historical volatility of the Company's common stock. The daily expected dividend yield is based on annual expected dividend payments. The average daily risk-free interest rate is based on the three-year treasury yield as of the grant date. Each of the tranches is calculated to have its own fair value and requisite service period. The fair value of each tranche is amortized over the requisite or derived service period which is up to four years.

The Company did not record any RSU expense for the three months ended March 31, 2019. For the three months ended March 31, 2018, the Company recorded \$90,000 of RSU expense. As of March 31, 2019, there was approximately \$7,000 of unrecognized compensation cost related to the non-vested RSUs.

A summary of the Company's RSUs during the three months ended March 31, 2019, is presented below:

	RSUs outstanding	Weighted average price at time of grant	Aggregate intrinsic value
Non-vested RSUs as of January 1, 2019	50,176	\$ 6.31	
Granted	925	7.95	
Vested	(1,000)	7.77	
Cancelled	—	—	
Non-vested RSUs at March 31, 2019	<u>50,101</u>	<u>\$ 6.32</u>	<u>\$ 316,368</u>

For the three months ended March 31, 2019 and 2018, the Company recorded \$4,000 and \$57,000, respectively, of stock compensation expense related to restricted stock.

The Company's board of directors are compensated partially in cash and partially in restricted stock. For the three months ended March 31, 2019, no restricted stock shares were issued to our directors. For the three months ended March 31, 2018, 6,592 shares of restricted stock were issued to our directors. As of March 31, 2019 and December 31, 2018, outstanding non-vested restricted stock shares were 2,454.

7. COMMITMENTS AND CONTINGENCIES

Litigation

From time to time, the Company experiences routine litigation in the normal course of its business.

In the third quarter of 2018, the Company received a summons from Bartmann, Perales & Dolter, LLC, the former lessor of the Franklin Park, Illinois, property the Company leased previously, alleging that the Company owes \$175,000 in overdue rent payments, property taxes and restoration costs. The Company intends to vigorously defend the allegation and has asserted a counterclaim pursuant to the terms of the lease agreement for reimbursement of costs and expenses to maintain the condition and repair for said property. The management of the Company does not believe this pending litigation will have a material adverse effect on the

8. INCOME TAXES

In 2017, the U.S. enacted the Tax Cuts and Jobs Act (the “Act”) which, among other provisions, reduced the U.S. corporate tax rate from 35% to 21% effective January 1, 2018. The SEC issued guidance, Staff Accounting Bulletin 118, on accounting for the tax effects of the Act. The guidance allows the Company to record provisional amounts for those impacts, with the requirement that the accounting be completed in a period not to exceed one year from the date of enactment. The Company has completed its accounting for the tax effects of enactment of the Act. The deemed inclusion from the repatriation tax increased from \$3.9 million at the time of provision to \$5.0 million at the time the calculation was finalized for the 2018 tax return. The increase of the inclusion related primarily to the refinement of Malaysia earnings and profits. As the Company is in a full valuation allowance position, an equal benefit adjustment was recorded for the impact of the increase of the deemed repatriation tax.

The Company is subject to taxation in the U.S., Malaysia and in a U.S. state jurisdiction. On a quarterly basis, the Company assesses the recoverability of deferred tax assets and the need for a valuation allowance. Such evaluations involve the application of significant judgment, and multiple factors, both positive and negative, are considered. For the period ended March 31, 2019, a valuation allowance has been included in the 2019 forecasted effective tax rate. The Company is in a cumulative loss position for the past three years, which is considered significant negative evidence that is difficult to overcome on a “more likely than not” standard through objectively verifiable data. Under the accounting standards, objective verifiable evidence is given greater weight than subjective evidence such as the Company’s projections for future growth. Based on an evaluation in accordance with the accounting standards, as of December 31, 2015, a valuation allowance has been recorded against the net U.S. deferred tax assets in order to measure only the portion of the deferred tax assets that are more likely than not to be realized based on the weight of all available evidence. At March 31, 2019, the Company continues to be in a three-year cumulative loss position, therefore, until an appropriate level of profitability is attained, the Company expects to maintain a full valuation allowance on its U.S. and Malaysia net deferred tax assets. Any U.S. and Malaysia tax benefits or tax expense recorded on the Company’s consolidated statement of operations will be offset with a corresponding adjustment from the use of the net operating loss (“NOL”) carryforward asset which currently has a full valuation allowance. In the event that the Company changes its determination as to the amount of deferred tax assets that can be realized, the Company will adjust its valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made.

The tax provision for the three months ended March 31, 2019, is based on an estimated combined statutory effective tax rate. The Company recorded for the three months ended March 31, 2019, a tax expense of \$4,000, for an effective tax rate of 6.42%. For the three months ended March 31, 2019, the difference between the Company’s effective tax rate and the U.S. federal 21% statutory rate and state 6.2% (net of federal benefit) statutory rate was primarily related to the change in the Company’s U.S. and Malaysia valuation allowances, U.S. research and development credit, Malaysia foreign tax rate differential and Malaysia withholding taxes on intercompany loan interest.

ITEM 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward Looking Statements

All statements, other than statements of historical facts, included in this Quarterly Report on Form 10-Q, including statements regarding our estimates, expectations, beliefs, intentions, projections or strategies for the future, results of operations, financial position, net sales, projected costs, prospects and plans and objectives of management for future operations may be “forward-looking statements” within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. We have based these forward-looking statements on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives and financial needs. These forward looking statements can be identified by the use of terms and phrases such as “believe,” “plan,” “intend,” “anticipate,” “target,” “estimate,” “expect,” “forecast,” “prospects,” “goals,” “potential,” “likely,” and the like, and/or future-tense or conditional constructions such as “will,” “may,” “could,” “should,” etc. (or the negative thereof). Items contemplating or making assumptions about actual or potential future sales, market size and trends or operating results also constitute forward-looking statements.

Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Before investing in our common stock, investors should be aware that the occurrence of the risks, uncertainties and events described in the section entitled “Risk Factors” in our Annual Report on Form 10-K, for the year ended December 31, 2018, and elsewhere in this Quarterly Report could have a material adverse effect on our business, results of operations and financial condition.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, forward-looking statements are inherently subject to known and unknown business, economic and other risks and uncertainties that may cause actual results to be materially different from those discussed in these forward-looking statements. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Quarterly Report. We assume no obligation to update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Quarterly Report, other than as may be required by applicable law or regulation. If one or more of these risks or uncertainties materialize, or if the underlying assumptions prove incorrect, our actual results may vary materially from those expected or projected.

You should read this Quarterly Report, the documents that we reference in this Quarterly Report and have filed with the SEC as exhibits, and our Annual Report on Form 10-K for the year ended December 31, 2018, with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

Unless otherwise indicated, the terms “Rubicon,” the “Company,” “we,” “us,” and “our” refer to Rubicon Technology, Inc. and our consolidated subsidiaries.

OVERVIEW

We are a vertically integrated, advanced materials provider specializing in monocrystalline sapphire for applications in optical and industrial systems. We use our proprietary crystal growth technology to produce high-quality sapphire products to meet our customers exacting specifications. We believe that we continue to have a reputation as one of the highest quality sapphire producers in the market. We provide optical and industrial sapphire products in various shapes and sizes, including round and rectangular windows and blanks, domes, tubes and rods.

Historically, we have also provided sapphire products to the LED and mobile device markets, which are the largest markets for sapphire. However, given competitive pressures in those markets, in the fourth quarter of 2016 we announced our decision to limit our focus in to the optical and industrial sapphire markets and exit the LED market. Following this decision, we developed a plan to close our Malaysia facility, and scale down and consolidate remaining operations in the U.S.

In 2018, we completed individual sales and held auctions for assets located in Malaysia and at each of our U.S. properties, resulting in the sale of certain of our excess equipment and consumable assets. We continue to seek buyers for a few pieces of our remaining unsold Malaysia equipment. In 2018, we completed the sale of our manufacturing and office facility located in Batavia, Illinois. We are pursuing the sale of our parcel of land in Batavia, Illinois, and the sale or lease of our 65,000 square-foot manufacturing facility in Penang, Malaysia. The timing on the sale or lease of this real estate is difficult to predict.

We operate in a very competitive market. Our ability to expand our optical and industrial business and acceptance of new product offerings are difficult to predict.

In addition, our current optical and industrial sapphire business serves smaller markets than our historical undertakings, therefore, we are actively evaluating the acquisition of profitable companies outside of the sapphire market to utilize our substantial NOL carryforwards.

Historically, a significant portion of our revenue has been derived from sales to relatively few customers. For the three months ended March 31, 2019, we had had three customers individually that accounted for approximately 21%, 20% and 18% of revenue. For the three months ended March 31, 2018, we had three customers individually that accounted for approximately 17%, 16% and 10% of revenue. Our principal customers have been defense subcontractors, industrial manufacturers, fabricators and resellers. No other customer accounted for 10% or more of our revenues during the three months ended March 31, 2019 and 2018. We expect our sales to continue to be concentrated among a small number of customers. However, we also expect that our significant customers may change from time to time.

We recognize revenue based upon the shipping terms with our customers. Delays in product orders or changes to the timing of shipments could cause our quarterly revenue to vary significantly. We sell our products on a global basis, and historically derived a significant portion of our revenue from customers outside of the U.S., with the majority of our sales to the Asian and European markets. Following the decision to limit our focus to the optical and industrial sapphire markets, a major source of our revenue is derived from the North American market. All of our revenue and corresponding accounts receivable are denominated in U.S. dollars. Substantially all of our revenue is generated by our direct sales force and we expect this to continue in the future.

We manage direct sales, grow and fabricate sapphire parts and ship from our facility located in Bensenville, Illinois. Previously, we leased this property, and it served as the headquarters of our operations and one of our growth facilities. In 2018, we vacated our leased Franklin Park, Illinois, facility due to the expiration of our lease. Additionally, in 2018, we completed the purchase of our Bensenville property and consolidated all of our operations into this facility.

Our cost of goods sold consists primarily of manufacturing materials, labor, manufacturing-related overhead, such as utilities, depreciation, provisions for excess and obsolete inventory reserves, idle plant charges, outsourcing costs, freight and warranties. We purchase materials and supplies to support current and future demand for our products. We are subject to variations in the cost of consumable assets from period to period because we do not have long-term fixed-price agreements with our suppliers. We currently outsource some of our production processes and needs.

Our operating expenses are comprised of sales and marketing, and general and administrative (“G&A”) expenses. G&A expenses consist primarily of compensation and associated costs for finance, human resources, information technology and administrative activities, including charges for accounting, legal services and insurance. Additionally, the majority of our stock-based compensation relates to administrative personnel and is accounted for as a G&A expense.

Other income consists of interest income and realized gains and losses on investments and currency translation.

We account for income taxes under the asset and liability method, whereby the expected future tax consequences of temporary differences between the book value and the tax basis of assets and liabilities are recognized as deferred tax assets and liabilities, using enacted tax rates in effect for the year in which the differences are expected to be recognized. Our analysis of ownership changes that limit the utilization of our NOL carryforwards as of December 31, 2018, shows no impact on such utilization. In order to protect our NOL carryforwards, in December 2017, we implemented a stockholders’ rights plan. We are in a cumulative loss position for the past three years. Based on an evaluation in accordance with the accounting standards, a valuation allowance has been recorded against the net U.S. and Malaysia deferred tax assets in order to measure only the portion of the deferred tax assets that are more likely than not to be realized based on the weight of all available evidence. Until an appropriate level of profitability is attained, we expect to maintain a full valuation allowance on our U.S. and Malaysia net deferred tax assets.

We continue to review a variety of strategic alternatives with a goal of providing greater value to our stockholders. These alternatives could result in, among other things, further modifying or eliminating certain of our operations, selling material assets, seeking additional financing, selling the business, making investments, effecting a merger, consolidation or other business combination, partnering or other collaboration agreements, or potential acquisitions or recapitalizations, or we may continue to operate with our current business plan and strategy. We cannot provide assurance that this process will result in the consummation of any transaction, or that the consummation of any transaction will provide greater value to our stockholders.

RESULTS OF CONSOLIDATED OPERATIONS THREE MONTHS ENDED MARCH 31, 2019 AND 2018

The following table sets forth our consolidated statements of operations for the periods indicated:

	Three months ended March 31,	
	2019	2018
	(in thousands)	
Revenue	\$ 920	\$ 1,039
Cost of goods sold	585	932
Gross profit	335	107
Operating expenses:		
General and administrative	426	622
Sales and marketing	95	119
Research and development	—	33
Gain on sale or disposal of assets	(75)	(562)
Total operating expenses	446	212
Loss from operations	(111)	(105)
Other income	171	72
Income (loss) before income taxes	60	(33)
Income tax expense	(4)	(7)
Net income (loss)	\$ 56	\$ (40)

The following table sets forth our consolidated statements of operations as a percentage of revenue for the periods indicated:

	Three months ended March 31,	
	2019	2018
	(percentage of total)	

Revenue	100%	100%
Cost of goods sold	64	90
Gross profit	36	10
Operating expenses:		
General and administrative	46	60
Sales and marketing	10	11
Research and development	—	3
Gain on sale or disposal of assets	(8)	(54)
Total operating expenses	48	20
Loss from operations	(12)	(10)
Other income	19	7
Income (loss) before income taxes	7	(3)
Income tax expense	—	(1)
Net income (loss)	7%	(4)%

Revenue. Revenue was \$920,000 and \$1,039,000 for the three months ended March 31, 2019 and 2018, respectively, a decrease of \$119,000. This decrease in revenue from our optical and industrial sapphire business was due to an increased emphasis on limiting our sales to profitable orders; also, due to fluctuations in demand and timing of orders.

Gross profit. Gross profit was \$335,000 and \$107,000 for the three months ended March 31, 2019 and 2018, respectively, an increase of \$228,000. This improvement was primarily attributable to an increase in pricing and a decrease in production costs of \$200,000, as a result of improved production efficiency. Additionally, based on a revised estimate, we recorded an adjustment of \$28,000 of expected remaining payments related to our government contract.

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General and administrative expenses. General and administrative expenses were \$426,000 and \$622,000 for the three months ended March 31, 2019 and 2018, respectively, a decrease of \$196,000. The decrease was largely attributable to a reduction in employee compensation costs of \$118,000 on a lower headcount, of which \$66,000 of the decrease was related to a higher executive stock grant compensation cost recorded for the three months ended March 31, 2018. We also experienced a decrease in the administrative office maintenance, connectivity and business insurance costs of \$60,000 on renegotiated contracts and policies. Additionally, we recorded lower audit and tax consulting expense of \$59,000. The general and administrative expenses for the three months ended March 31, 2018 was lower due to an adjustment of \$43,000 due to the reimbursement of legal expenses which was related to a recovery of certain SEC compliance counsel costs.

Sales and marketing expenses. Sales and marketing expenses were \$95,000 and \$119,000 for the three months ended March 31, 2019 and 2018, respectively, a decrease of \$24,000. The decrease in sales and marketing expenses was primarily attributable to a decrease in employee compensation costs on a lower headcount.

Research and development expenses. Research and development expenses were \$33,000 for the three months ended March 31, 2018. We did not record any expenses attributable to the research and development in the three months ended March 31, 2019, which resulted in a decrease of \$33,000. This was attributable to a temporary suspension of research and development activities.

Gain on sale or disposal of assets. For the three months ended March 31, 2019, we recorded a gain on sale or disposal of assets of \$75,000, which was attributable to a partial reimbursement for a dispute related to the purchase of equipment in 2016. In 2018, we held multiple auctions and completed individual sales of certain of our excess equipment and consumable assets located in the U.S. and Malaysia. As the result of these sales, for the three months ended March 31, 2018, we recorded a gain on disposal of assets of \$562,000 on the sales of fully depreciated and previously written down equipment, small tools and consumable assets.

Other income. Other income was \$171,000 and \$72,000 for the three months ended March 31, 2019 and 2018, respectively, an increase of \$99,000. The increase in other income was primarily due to better money management and an increase in interest rates, causing an increase in the interest income of \$110,000 on short-term investment securities. This was partially offset by a decrease in the realized gain on foreign currency translation of \$11,000.

Income tax (benefit) expense. In accordance with ASC740 “Accounting for Income Taxes” (“ASC740”), we evaluate our deferred income tax assets quarterly to determine if valuation allowances are required or should be adjusted. At March 31, 2019, we continue to be in a three-year cumulative loss position; therefore, until an appropriate level of profitability is attained, we expect to maintain a valuation allowance on net deferred tax assets related to future U.S. and Malaysia tax benefits and will no longer accrue tax benefits or tax expense on our Consolidated Statement of Operations. The tax provision for the three months ended March 31, 2019, is based on an estimated combined statutory effective tax rate. For the three months ended March 31, 2019, the difference between the Company’s effective tax rate of 6.42% and the U.S. federal 21% statutory rate and state 6.2% (net of federal benefit) statutory rate was primarily related to the change in our U.S. and Malaysia NOL valuation allowances, U.S. research and development credit, Malaysia foreign tax rate differential and Malaysia withholding taxes on intercompany loan interest.

LIQUIDITY AND CAPITAL RESOURCES

We have historically funded our operations using a combination of issuances of common stock and cash generated from our operations. In addition to this, recently, we have used the funds obtained through selling our excess equipment to fund our operations.

As of March 31, 2019, we had cash, cash equivalents and short-term investments totaling \$25.7 million, including cash of \$6.4 million held in deposits at major banks, \$3.1 million invested in money market funds and \$16.2 million of short-term investments including U.S. Treasury securities, investment grade commercial paper, FDIC guaranteed certificates of deposit, common stock and corporate notes.

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Cash flows from operating activities

The following table represents the major components of our cash flows from operating activities for the three months ended March 31, 2019 and 2018:

	Three months ended	
	March 31,	
	2019	2018
	(in thousands)	
Net income (loss)	\$ 56	\$ (40)
Non-cash items:		
Depreciation and amortization	45	130
Net gain on sale or disposal of assets	(75)	(562)
Stock-based compensation	11	164

Total non-cash items:	(19)	(268)
Working capital:		
Accounts receivable	120	113
Inventories	73	237
Prepaid expenses and other assets	(107)	(106)
Accounts payable	(53)	(360)
Other accruals	11	(98)
Total working capital items:	44	(214)
Net cash provided by (used in) operating activities	\$ 81	\$ (522)

Cash provided by operating activities was \$81,000 for the three months ended March 31, 2019. During such period, we generated a net income of \$56,000, including non-cash items of (\$19,000), and an increase in cash from net working capital of \$44,000. The net working capital cash increase was primarily driven by a decrease in accounts receivable of \$120,000 on collected balances, an increase in accrued payroll of \$83,000 on the timing of payrolls and accrued discretionary bonus compensation, and a decrease of \$73,000 in the work-in-process and consumable inventories used in production. This was partially offset by an increase in prepaid expenses and other assets of \$107,000 on renewed insurance policies and annual contracts, a decrease in accounts payable, accruals and other liabilities of \$102,000 on lower spending and a decrease in advance payments of \$23,000 on completed orders.

Cash used in operating activities was \$522,000 for the three months ended March 31, 2018. During such period, we generated a net loss of \$40,000, including non-cash items of (\$268,000), and a decrease in cash from net working capital of \$214,000. The net working capital cash decrease was primarily driven by a decrease in accounts payable of \$360,000 and a decrease in other accruals of \$98,000 on decreased spending.

Cash flows from investing activities

The following table represents the major components of our cash flows from investing activities for the three months ended March 31, 2019 and 2018:

	Three months ended	
	March 31,	
	2019	2018
	(in thousands)	
Proceeds from sale or disposal of assets	\$ 75	\$ 1,188
Purchases of investments	(1,992)	(2,775)
Proceeds from sales of investments	119	544
Net cash used in investing activities	\$ (1,798)	\$ (1,043)

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Net cash used in investing activities was \$1.8 million for the three months ended March 31, 2019, primarily due to the purchases of investments in U.S. Treasury securities and common stock of \$1.9 million. This was partially offset by the proceeds from sales of investments of \$119,000. Additionally, we received a partial reimbursement in the amount of \$75,000 for a dispute related to the purchase of equipment in 2016.

Net cash used in investing activities was \$1.1 million for the three months ended March 31, 2018, was primarily due to the purchases of investments in commercial paper and corporate notes and bonds of \$2.8 million. This was partially offset by the proceeds from sales of equipment and other assets of \$1.2 million at our U.S. and Malaysia locations. Additionally, this was offset by the proceeds from sales of investments of \$544,000.

We anticipate our capital expenditures related to our sapphire business to be minimal.

Cash flows from financing activities

Net cash used in financing activities was \$32,000 for the three months ended March 31, 2019, which was due to purchases of our treasury stock.

Net cash used in financing activities was \$1,000 for the three months ended March 31, 2018. This was primarily from cash used for taxes on net share settlement of equity awards.

Future liquidity requirements

We believe that our existing cash, cash equivalents, anticipated cash flows from operating activities and proceeds from sales or leases of fixed assets will be sufficient to meet our anticipated cash needs for at least the next twelve months. However, if our ability to generate sufficient operating cash flow or our use of cash in the next twelve months were to significantly adversely change, we may not have enough funds available to continue operating at our current level in future periods. Our cash needs include cash required to fund our operations. If the assumptions underlying our business plan regarding future revenues and expenses change, or if unexpected opportunities or needs arise, we may seek to raise additional cash by selling equity or convertible debt securities. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing stockholders.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

We consider to be critical those accounting policies that require our most subjective or complex judgments, which often result from a need to make estimates about the effect of matters that are inherently uncertain, and that are among the most important of our accounting policies in the portrayal of our financial condition and results of operations. We believe the following to be our critical accounting policies, including the more significant estimates and assumptions used in preparation of our financial statements.

Revenue recognition

We recognize revenue in accordance with ASC Topic 606, *Revenue From Contracts with Customers* ("Topic 606"), when performance obligations under a purchase order or signed quotation are satisfied. Our business practice commits us to manufacture and deliver product upon acceptance of a customer's purchase order or signed quotation ("agreement"). The agreement with the customer includes specifications of the product to be delivered, price, expected ship date and payment terms. Our agreements generally do not contain variable, financing, rights of return or non-cash components. There are no up-front costs to develop the production process. The performance obligation is satisfied at the point in time (single performance obligation) when the product is manufactured to the customer's specification as performance does not create an asset with an alternative use to us. Accordingly, we recognize revenue when the product is shipped, and control of the product, title and risk of loss have been transferred to the customer. We grant credit terms considering normal collection risk. If there is doubt about collection, full prepayment for the order is required. Any payments received prior to shipment are recorded as deferred revenue and included in Advance Payments in the Consolidated Balance Sheets.

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Government Contracts

In 2012, we signed a contract with the Air Force Research Laboratory to produce large-area sapphire windows on a cost plus fixed fee basis. The deliverables under this contract included development of machinery and technology to be able to produce large-area sapphire windows, prove the concept of growing large windows with that equipment, and delivery of large-area sapphire windows. We recorded research and development revenue related to this contract on a gross basis over the contractually defined period of time as the obligations were completed, using the input method of measuring progress, which recognizes revenue as resources are consumed, labor hours expended and costs are incurred, plus a portion of the fixed fee. As we have completed this government contract in 2018, all revenues corresponding to the total value of the contract of \$4.7 million have been recognized as of December 31, 2018. No additional research and development revenue was recorded for the three months ended March 31, 2019.

At March 31, 2019, the costs to complete the contract were in excess of the contract value. In reviewing our current estimates, we expect our remaining payments to be less than \$200,000, which has previously been accrued.

We do not provide maintenance or other services and do not have sales that involve bill & hold arrangements, multiple elements or deliverables. However, we do provide product warranty for up to 90 days, for which we have accrued a warranty reserve of \$7,000 and \$8,000 at March 31, 2019 and December 31, 2018, respectively.

Assets held for sale and long-lived assets

When circumstances, such as adverse market conditions, indicate that the carrying value of a long-lived asset may be impaired, we perform an analysis to review the recoverability of the asset's carrying value. We make estimates of the undiscounted cash flows (excluding interest charges) from the expected future operations of the asset. These estimates consider factors such as expected future operating income, operating trends and prospects, as well as the effects of demand, competition and other factors. If the analysis indicates that the carrying value is not recoverable from future cash flows, an impairment loss is recognized to the extent that the carrying value exceeds the estimated fair value. The estimated fair value of assets is determined using appraisal techniques which assume the highest and best use of the asset by market participants, considering the use of the asset that is physically possible, legally permissible and financially feasible at the measurement date. Any impairment losses are recorded as operating expenses which reduce net income.

For the year ended December 31, 2018, we reviewed the current fair value of our assets and concluded no adjustments were needed. Additionally, no adjustments were recorded for the three months ended March 31, 2019. We will continue to assess our long-lived assets to ensure the carrying amount of these assets is still appropriate given any changes in the asset usage, marketplace and other factors used in determining the current fair value.

Additionally, in the three months ended March 31, 2018, we completed individual sales and held auctions for equipment and consumable assets, resulting in the sale of certain of our excess U.S. and Malaysia assets, which had a total net book value of \$626,000. Based on these sales, a gain on sale or disposal of equipment and consumable assets of \$562,000 was recorded for the three months ended March 31, 2018. We did not record any additional sales of our equipment or consumable assets for the three months ended March 31, 2019. Unsold excess Malaysia equipment continued to be classified as current assets held for sale at March 31, 2019 and December 31, 2018.

We are pursuing the sale of our parcel of land in Batavia, Illinois, and the sale or lease of our 65,000 square-foot facility located in Penang, Malaysia. Although we cannot assure the timing of these sales, these properties were classified as current assets held for sale at March 31, 2019 and December 31, 2018, as it is our intention to complete these sales within the next twelve-month period. We cannot guarantee that we will be able to successfully complete the sale or lease of any assets.

Inventory valuation

We value our inventory at the lower of cost or net realizable value. Net realizable value is determined based on an estimated selling price in the ordinary course of business less reasonably predictable costs of completion and disposal. Raw materials cost is determined using the first-in, first-out method, and work-in-process and finished goods costs are determined on a standard cost basis which includes materials, labor and manufacturing overhead. We establish inventory reserves when conditions exist that suggest inventory may be in excess of anticipated demand or is obsolete based on customer required specifications. We evaluate the ability to realize the value of our inventory based on a combination of factors, including forecasted sales, estimated current and future market value and changes in customers' product specifications.

Our method of estimating excess and obsolete inventory has remained consistent for all periods presented. However, if our recognition of excess or obsolete inventory is, or if our estimates of our inventory's potential utility become, less favorable than currently expected, additional inventory reserves may be required.

We determine our normal operating capacity and record as an expense costs attributable to lower utilization of equipment and staff. For the three months ended March 31, 2019 and 2018, we determined that we were not operating at capacity and recorded costs associated with lower utilization of equipment and staff of \$97,000 and \$238,000, respectively. It is likely we will incur additional adjustments for lower utilization of our equipment and staff in 2019.

Investments

We invest our available cash primarily in U.S. Treasury securities, investment grade commercial paper, FDIC guaranteed certificates of deposit, common stock and corporate notes. Investments classified as available-for-sale debt securities are carried at fair value with unrealized gains and losses recorded in accumulated other comprehensive income (loss). Investments in equity securities are reported at fair value, with both realized and unrealized gains and losses recorded in other income, in the Consolidated Statements of Operations. Investments in which we have the ability and intent, if necessary, to liquidate are classified as short-term.

We review our available-for-sale debt securities investments at the end of each quarter for other-than-temporary declines in fair value based on the specific identification method. We consider various factors in determining whether an impairment is other-than-temporary, including the severity and duration of the impairment, changes in underlying credit ratings, forecasted recovery, our ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value and the probability that the scheduled cash payments will continue to be made. When we conclude that an other-than-temporary impairment has resulted, the difference between the fair value and carrying value is written off and recorded as a charge on the Consolidated Statement of Operations. As of March 31, 2019 and 2018, no impairment was recorded.

Stock-based compensation

We grant stock-based compensation in the form of stock options, RSUs and restricted stock. We expense stock-based compensation based upon the fair value on the date of grant. We use the Black-Scholes option pricing model to determine the fair value of stock options. The determination of the fair value of stock-based payment awards on the date of grant using an option-pricing model is affected by assumptions regarding a number of complex and subjective variables. These variables include our expected stock volatility over the term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rates, forfeitures and expected dividends.

The expected term represents the weighted-average period that our stock options are expected to be outstanding and is based upon the historical data. We estimate the volatility of our common stock based on a historical range of stock price fluctuations. We base the risk-free interest rate that we use in the option pricing model on U.S. Treasury zero-coupon issues with remaining terms similar to the expected terms on the options. We do not anticipate paying any cash dividends in the

foreseeable future and, therefore, use an expected dividend yield of zero in the option pricing model. We are required to estimate forfeitures at the time of grant and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. The current forfeiture rate of 28.99% was based on our past history of forfeitures.

All option grants are granted at an exercise price per share equal to the closing market price of our common stock on the day before the date of grant.

Based on the fair value of the common stock at March 31, 2019, there was \$50,280 of intrinsic value arising from 34,000 stock options exercisable and outstanding.

Pursuant to an employment agreement, we granted 30,902 and 59,098 RSUs to a key executive in 2018 and 2017, respectively. We used a Monte Carlo simulation model valuation technique to determine the fair value of these RSUs because the awards vest based upon achievement of our stock market price targets. The Monte Carlo simulation model utilizes multiple input variables that determine the probability of satisfying the market condition stipulated in the award and calculates the fair value of each RSU. The daily expected stock price volatility is based on a four-year historical volatility of our common stock. The daily expected dividend yield is based on annual expected dividend payments. The average daily risk-free interest rate is based on the three-year treasury yield as of the grant date. Each of the target price tranches is calculated to have its own fair value and requisite service period. The fair value of each tranche is amortized over the requisite or derived service period which is up to four years.

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We allocate stock-based compensation costs using a straight-line method, which amortizes the fair value of each award on a straight-line basis over the service period.

Income tax valuation allowance

In accordance with ASC 740 “Accounting for Income Taxes” (“ASC 740”), we evaluate our deferred income tax assets quarterly to determine if valuation allowances are required or should be adjusted. Evaluating the need for and amount of a valuation allowance for deferred tax assets often requires significant judgment and extensive analysis of all positive and negative evidence available to determine whether all or some portion of the deferred tax assets will not be realized. A valuation allowance must be established for deferred tax assets when it is more likely than not (a probability level of more than 50%) that they will not be realized. In general, “realization” refers to the incremental benefit achieved through the reduction in future taxes payable or an increase in future taxes refundable from the deferred tax assets, assuming that the underlying deductible differences and carryforwards are the last items to enter into the determination of future taxable income. In determining our valuation allowance, we consider the source of taxable income including taxable income in prior carryback years, future reversals of existing temporary differences, the required use of tax planning strategies, and future taxable income exclusive of reversing temporary differences and carryforwards. We are in a cumulative loss position for the past three years, which is considered significant negative evidence by the accounting standards that is difficult to overcome on a “more likely than not” standard through objectively verifiable data. The accounting standards attribute greater weight to objective verifiable evidence than to subjective positive evidence, such as our projections for future growth. Based on an evaluation in accordance with the accounting standards, as of March 31, 2019, a valuation allowance has been recorded against the net U.S. and Malaysia deferred tax assets in order to measure only the portion of the deferred tax assets that are more likely than not to be realized based on the weight of all available evidence. Any U.S. and Malaysia tax benefits or tax expense recorded on the Consolidated Statement of Operations will be offset with a corresponding adjustment from the use of the NOL carryforward asset which currently has a full valuation allowance. In the event that we change our determination as to the amount of deferred tax assets that can be realized, we will adjust our valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made.

RECENT ACCOUNTING PRONOUNCEMENTS

See Note 2 to the Consolidated Financial Statements for a discussion of new accounting standards.

OFF-BALANCE SHEET ARRANGEMENTS

We do not have any off-balance sheet arrangements.

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ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

For the three months ended March 31, 2019, there were no material changes in the information regarding market risk contained in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

ITEM 4. CONTROLS AND PROCEDURES

Management’s evaluation of disclosure controls and procedures

Based on evaluations at March 31, 2019, our chief executive officer and interim chief financial officer (together, our “certifying officers”), with the participation of the management team, have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, and that material information relating to the Company is accumulated and communicated to management, including our certifying officers, as appropriate to allow timely decisions regarding required disclosures.

Changes in internal control over financial reporting

Our certifying officers have concluded that there were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) during the three months ended March 31, 2019, that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II

ITEM 6. EXHIBITS

The exhibits filed or incorporated by reference as a part of this report are listed in the Exhibit Index which appears following the signature page to this Quarterly Report on Form 10-Q and is incorporated by reference.

SIGNATURES

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

Date: May 13, 2019

Rubicon Technology, Inc.

By: /s/ Timothy E. Brog
 Timothy E. Brog
 President, Chief Executive Officer
 and Interim Chief Financial Officer

EXHIBIT INDEX

The Exhibits listed below are filed or incorporated by reference as part of this Quarterly Report on Form 10-Q.

Exhibit No.	Description	Incorporation by Reference
3.1	Eighth Amended and Restated Certificate of Incorporation of Rubicon Technology, Inc.	Filed as Exhibit 3.1 to the registrant's Registration Statement on Form S-1/A, filed on November 1, 2007 (File No. 333-145880)
3.2	Amendment No. 1 to Eighth Amended and Restated Certificate of Incorporation of Rubicon Technology, Inc.	Filed as Appendix A to the registrant's Definitive Proxy Statement on Schedule 14A, filed on April 29, 2011 (File No. 1-33834)
3.3	Amendment No. 2 to Eighth Amended and Restated Certificate of Incorporation of Rubicon Technology, Inc.	Filed as Exhibit 3.1 to the registrant's Current Report on Form 8-K, filed on May 4, 2017 (File No. 1-33834)
3.4	Second Amended and Restated Bylaws of Rubicon Technology, Inc.	Filed as Exhibit 3.3 to the registrant's Quarterly Report on Form 10-Q, filed on May 10, 2016 (File No. 1-33834)
3.5	Certificate of Designations of Series A Junior Participating Preferred Stock of Rubicon Technology, Inc. filed with the Secretary of State of Delaware on December 18, 2017.	Filed as Exhibit 3.1 to the registrant's Current Report on Form 8-K, filed on December 18, 2017 (File No. 1-33834)
3.6	Amendment No. 3 to Eighth Amended and Restated Certificate of Incorporation of Rubicon Technology, Inc.	Filed as Exhibit 3.1 to the registrant's Current Report on Form 8-K, filed on May 15, 2018 (File No. 1-33834)
10.1	Agreement of Sale of 950 Douglas, Batavia, IL	Filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed on August 20, 2018 (File No. 1-33834)
10.2	Agreement of Purchase of 900 East Green Street, Bensenville, IL	Filed as Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed on September 27, 2018 (File No. 1-33834)
31.1*	Certification of Chief Executive Officer and Interim Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	
32.1*	Certification of Chief Executive Officer and Interim 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*	XBRL Instance Document	
101.SCH*	XBRL Taxonomy Extension Schema Document	
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document	
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document	
101.PRE*	XBRL Taxonomy Extension Presentation Document	
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document	

* Filed electronically with this Quarterly Report on Form 10-Q

EX-31.1 2 f10q0319ex31-1_rubicontech.htm CERTIFICATION

Exhibit 31.1

Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Timothy E. Brog, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Rubicon Technology, Inc. (the "registrant");

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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer 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: May 13, 2019

By: /s/ Timothy E. Brog

Timothy E. Brog
President, Chief Executive Officer
and Interim Chief Financial Officer

EX-32.1 3 fl0q0319ex32-1_rubicontech.htm CERTIFICATION

Exhibit 32.1

**Certification Pursuant To Section 906 of the Sarbanes-Oxley Act of 2002,
18 U.S.C. Section 1350**

In connection with the Quarterly Report of Rubicon Technology, Inc. (the "Company") on Form 10-Q for the quarter ended March 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his or her knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; 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: May 13, 2019

By: /s/ Timothy E. Brog

Timothy E. Brog
President and Chief Executive Officer
and Interim Chief Financial Officer

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