BSQUARE CORP /WA
Form 10-K
March 04, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018

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: 000-27687

BSQUARE CORPORATION

(Exact name of registrant as specified in its charter)

Washington	91-1650880
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

110 110th Avenue NE, Suite 300, Bellevue, Washington 98004

(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (425) 519-5900

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

Title of each class	Name of each exchange on which registered
Common Stock, no par value	The NASDAQ Stock Market LLC (NASDAQ Global Market)

Securities registered pursuant to Section 12(g) of the Act: NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes No

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or 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 Emerging growth
Non-accelerated filer Smaller reporting company company

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

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

The aggregate market value of common stock held by non-affiliates of the registrant on June 30, 2018 was approximately $27.5 million and was determined using the closing price of our common stock on that same date per the NASDAQ Global Market ($2.70) and excludes 2,529,104 shares of Common Stock held by directors, officers and shareholders whose beneficial ownership exceeded 5% of the registrant's Common Stock outstanding. The number of shares owned by such persons was determined based upon information supplied by such persons and upon Schedules 13D and 13G, if any, filed with the SEC. Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the registrant, that such person is controlled by or under common control with the registrant, or that such person is an affiliate for any other purpose. There were 12,712,134 shares of our Common Stock outstanding as of June 30, 2018.

The number of shares of common stock outstanding as of January 31, 2019: 12,778,823

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement to be delivered to shareholders in connection with the 2019 annual meeting of shareholders are incorporated by reference into Part III of this Annual Report on Form 10-K.

BSQUARE CORPORATION

FORM 10-K

TABLE OF CONTENTS

		Page
	PART I	
Item 1	Business	1
Item 1A	Risk Factors	8
Item 1B	Unresolved Staff Comments	19
Item 2	Properties	19
Item 3	Legal Proceedings	20
Item 4	Mine Safety Disclosures	20
	PART II	
Item 5	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	21
Item 6	Selected Financial Data	21
Item 7	Management's Discussion and Analysis of Financial Condition and Results of Operations	22
Item 7A	Quantitative and Qualitative Disclosures About Market Risk	28
Item 8	Financial Statements and Supplementary Data	29
Item 9	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	53
Item 9A	Controls and Procedures	53
Item 9B	Other Information	53
	PART III	
Item 10	Directors, Executive Officers and Corporate Governance	54
Item 11	Executive Compensation	54
Item 12	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	54

Item 13	Certain Relationships and Related Transactions, and Director Independence	54
Item 14	Principal Accounting Fees and Services	54
	PART IV	
Item 15	Exhibits, Financial Statement Schedules	55
Item 16	Form 10-K Summary	57
	Signatures	58

PART I

Item 1. Business.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains "forward-looking statements" within the meaning of the safe-harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can often be identified by words such as: "expect," "believe," "estimate," "plan," "strategy," "future," "potential," "continue," "may," "should," "will," and similar references to future periods. Examples include, among others, statements about: expected future growth and operating results, such as revenue and earnings; anticipated levels of capital and other expenditures; future market demand, opportunities and conditions; our belief that we have sufficient liquidity to fund our business operations for at least the next 12 months; expectations of the effect on our financial condition of claims, litigation, contingent liabilities and supplier audits; and strategies for customer retention, growth, new product and service developments, and market position.

Forward-looking statements are neither historical facts nor assurances about future performance. Instead, they are only predictions, based on current beliefs, expectations and assumptions about the future of our business and other future conditions. Forward-looking statements are subject to known and unknown risks, uncertainties and changes in circumstances that are difficult to predict and many of which are outside of our control. Actual events and results may differ materially. Therefore, you should not rely on any of these forward-looking statements.

Any forward-looking statement made by us in this report is based only on information available to us on the date of this report. Except as may be required by law, we undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise.

Our forward-looking statements can be affected by inaccurate assumptions we might make or by known or unknown risks, uncertainties and other factors. We discuss many of these risks, uncertainties and other factors in this Annual Report on Form 10-K in greater detail under the Item 1A — “Risk Factors.” We caution readers that our business and financial performance are subject to substantial risks and uncertainties.

BUSINESS

Overview

As used in this Annual Report on Form 10-K, “we,” “us”, “our”, “the Company” and “BSQUARE” refer to BSQUARE Corporation.

Since our inception, our business has largely been focused on providing software solutions (historically, including reselling software from Microsoft Corporation (“Microsoft”)) and related engineering services to businesses that develop, market and sell dedicated-purpose standalone intelligent systems. Examples of dedicated-purpose standalone intelligent systems include smart, connected computing devices such as smart phones, set-top boxes, point-of-sale terminals, kiosks, tablets and handheld data collection devices, as well as smart vending machines, ATM machines, digital signs and in-vehicle telematics and entertainment devices. We focus on systems that utilize various Microsoft Windows Embedded operating systems as well as devices running other popular operating systems such as Android, Linux, and QNX, and that are usually connected to a network via a wired or wireless connection. Our customers include world-class original equipment manufacturers (“OEMs”), original design manufacturers (“ODMs”), corporate enterprises (“Enterprises”), silicon vendors (“SVs”) and peripheral vendors. A significant portion of our business historically has also been focused on reselling software from Microsoft, from which a majority of our revenue currently continues to be derived.

Beginning in early 2014, we initiated development efforts focused on new proprietary software products addressing the Industrial Internet of Things ("IIoT") market, extracting data from uniquely identifiable devices and applying advanced analytics and machine learning to the data in order to derive meaningful and actionable insights. We believe the work we have engaged in since our inception—namely adding intelligence to discrete standalone devices and systems—embodies much of what is central to the core functionality of IIoT. These software development efforts have driven a new business initiative for BSQUARE, which we refer to as DataV™. Our DataV solution includes software products, applications and services that are designed to turn raw IIoT device data into meaningful and actionable data for our customers.

We began marketing DataV late in the first quarter of 2016 and announced our first three major customer bookings later that year, which comprised software licensing, software maintenance and related systems integration services. During 2017, we began selling data analytics services and DataV application pilots to major industrial customers primarily in the transportation, oil and gas and manufacturing vertical markets. One of these pilots led to a multi-year software-as-a-service ("SaaS") agreement in 2018. The remaining pilots were completed and while no additional licensing arrangements resulted from these pilots, we believe there may be future opportunities with a number of these customers.

We believe that IIoT represents a large, expanding addressable market. We also believe that many potential customers need assistance with their digital transformation activities prior to making long-term solutions commitments, and that these IIoT related services may provide us an inroad to eventual DataV software and services sales. Developing, selling and implementing DataV was our primary focus through 2018. While we will continue to market our DataV software, in 2019 we intend to expand our efforts to market IIOT related services that may or may not include DataV. We will continue to invest in the development of our DataV software in support of existing customer commitments and new customer opportunities. We intend to continue to run our legacy software resale business to maximize cash flow for the foreseeable future. Our legacy professional engineering services business is now managed as a part of our overall services business, which we anticipate will increasingly serve our DataV software and IIOT services customers. We were incorporated in the State of Washington in July 1994. Our principal office is located at 110 110th Avenue NE, Suite 300, Bellevue, Washington 98004, and our telephone number is (425) 519-5900.

Industry Background

The IIoT market continues to emerge and evolve. We continue to believe it presents a large market opportunity for sales of both our software and related services. This market includes consumer, business, government and industrial segments. It encompasses services, software, hardware, connectivity and cloud providers as well as systems integrators. While larger research firms do not yet widely track the size of the IIoT market, available research indicates to us that over time, the deployment of hundreds of billions of connected devices may generate substantial economic value.

The IIoT marketplace is currently being influenced by the following factors:

- Development of machine learning and data analytics software that advances the understanding of complex systems but lacks the capability to effectively process the proliferation of resulting data. This provides an opportunity for solutions such as DataV to develop models of complex mechanical equipment that can be used for predictive reasoning;
- Nearly ubiquitous wireless connectivity, including near-field communications (or NFC), Bluetooth, Wi-Fi and cellular, allowing connectivity and data exchange with large populations of small, remote, and frequently mobile devices;
- Increasing competitive pressures that are forcing a wide array of businesses to invest in automation as a way to improve productivity, reduce costs, and enhance the value of their own offerings; and
- The increasing availability of inexpensive cloud computing and storage capabilities able to scale to the extent likely to be demanded by IIoT.

Sources of Revenue

Our revenue in 2017 and 2018 was derived from the following sources:

	Year Ended December 31,	
(In thousands, except percentages)	2018	2017
Software revenue:		
Third-party software	$61,159	$65,755
Proprietary software	3,954	4,646
Professional engineering service revenue	8,301	10,410
Total revenue	$73,414	$80,811

As a percentage of total revenue:				
Third-party software revenue	83	%	81	%
Proprietary software revenue	5	%	6	%
Professional engineering service revenue	11	%	13	%

2

Software

DataV Software

DataV is BSQUARE's proprietary comprehensive software solution which addresses a variety of business use cases specific to IIoT applications, including:

- Predictive Failure: By employing machine learning and advanced data analytics, DataV can predict, with varying levels of accuracy, future operational conditions for equipment or devices that are part of the overall IIoT system. For many industrial concerns, the operational condition of greatest interest is a failure state. By being able to predict failures before they occur, DataV customers can take steps to remediate the condition more quickly, less expensively and with less operational disruption.
- Adaptive Diagnostics: For equipment that has already failed, DataV can dynamically proscribe diagnostic and repair steps that have the highest probability of quickly and more cost-effectively resolving the problem. DataV employs machine learning, data analytics, and historical repair data to help customers identify underperforming assets and proscribe remediation steps to optimize performance.
- IIoT Device Management: The spread of data-generating devices in IIoT systems introduces a new set of operational problems for industrial concerns. DataV can facilitate IIoT device management, including software and configuration updates, over large-scale populations of connected devices.

Our DataV solution is designed to be implemented in a wide variety of industrial sectors and vertical markets, including commercial transportation, oil and gas extraction, manufacturing, water and power and other vertical markets. These industrial sectors share common operational characteristics, such as the dependence on complex capital equipment where the cost of failure or sub-optimal performance is relatively high. In other cases, our customers are seeking new revenue-generating products or services to enhance operating profitability. We currently provide DataV software through a SaaS model.

We began marketing DataV in early 2016 and secured three contracts for deployment. The first order was from PACCAR, Inc., a heavy-duty truck manufacturer, to employ adaptive diagnostics in order to more rapidly service and repair trucks. This order, valued at $4.3 million, included a perpetual license for DataV, as well as custom systems integration services and annual software maintenance fees. The second DataV order was from Itron, Inc., a large global manufacturer of electric, water, and gas meters for utilities as well as smart city solutions, and targeted IIoT device management. This order, valued at $4.8 million, included $1.9 million for the first year and a $2.9 million four-year extension option, and included a subscription license to use DataV in addition to maintenance and systems integration services. In November 2017, Itron exercised its extension option and renewed its DataV subscription. The third DataV order was from a global provider of candy and beverages to help fulfill their smart vending initiative to add intelligence and to better track in real time, existing fleets of vending machines. This deployment was rolled out in phases beginning in the first quarter of 2018 in selected European geographies.

In 2017, we entered into 19 DataV pilots. In early 2018, one of these pilots led to a multi-year SaaS and related services agreement, initially valued at $2.6 million, with a Fortune 100 global brand to employ DataV to manage a large fleet of distributed equipment. The remaining pilots were completed and, while no additional licensing arrangements transpired from these pilots, we believe there may be future opportunities with a number of these customers. In 2019, as we begin to increasingly focus on selling our IIoT-related services, we intend to limit our investments in DataV software solutions and applications to meet clear customer demand.

Other Proprietary Software

Apart from DataV, we currently offer the following proprietary software products:

- HTML5 Rendering Engine—Our HTML5 Rendering Engine is based on the open-source WebKit platform that is maintained by a number of leading internet and device companies. Using WebKit, device makers can create portable applications and user interfaces for their devices using the industry-standard HTML5 markup language; and
- TestQuest™ 10—TestQuest 10 is our testing automation tool that provides customers with a complete test solution that brings together everything necessary to test connected devices, including tools to create and manage test cases, a platform that allows teams to collaborate on test development, and a reporting tool that allows customers to analyze test results.

By the end of 2016, we had reduced our research and development efforts on these products as our focus has shifted to our DataV solution.

Third-Party Software

We have distribution agreements with multiple third-party software vendors. Our ability to resell these third-party software products, whether as stand-alone products or in conjunction with our own proprietary software and engineering service offerings, provides our customers with a comprehensive solution source for their device project needs. Our primary third-party software offerings include the following:

- For over 20 years, we have been a Microsoft authorized Value-Added Provider ("VAP") of Windows Embedded operating systems and toolkits for the complete line of Windows Embedded products, including major product families such as Windows Embedded Compact, Windows Embedded Standard and Windows Embedded Server. Effective March 1, 2019, pursuant to a new Global Partnership Agreement with Microsoft, we are authorized to sell Windows Embedded operating systems in Canada, the United States, Argentina, Brazil, Chile, Mexico, Peru, Venezuela, Puerto Rico, Cuba, Haiti, Dominican Republic, Jamaica, Trinidad and Tobago, Guadeloupe, Martinique, Bahamas, Barbados, Saint Lucia, Curacao, Aruba, Saint Vincent and the Grenadines, U.S. Virgin Islands, Grenada, Dominica, Cayman Islands, Saint Kitts and Nevis, Sint Maarten, Turks and Caicos Islands, Saint Martin, British Virgin Islands, Sint Eustatius, Saba, Anguilla, Montserrat, Colombia, Saint Barthelemy, Antigua and Barbuda. Of our total revenue, 75% in 2018 and 70% in 2017 resulted from the sale of Windows Embedded operating systems. Our existing distribution agreement for sales of Windows Embedded operating systems in the European Union ("E.U."), the European Free Trade Association, Turkey and Africa, from which we generated approximately 3.7% of our third-party software sales in 2018, expires on June 30, 2019 and will not be renewed thereafter.
    - We have been a Microsoft authorized VAP of Windows Mobile operating systems since November 2009. Along with Windows Mobile operating systems, we also sell Microsoft's Office Mobile product. We are currently authorized to sell Windows Mobile operating systems and related products in North America, South America, Central America (excluding Cuba), Japan, Taiwan, and the region comprised of Europe, the Middle East, and Africa ("EMEA"). Of our total revenue in 2018, 6% was generated through the sale of Windows Mobile operating systems, compared to 10% in 2017. Our current distribution agreements related to Windows Mobile operating systems expire on April 30, 2022;
- We are an authorized distributor for Adobe Flash technologies and Adobe Reader. We have the right to distribute Adobe Flash Lite licenses on a worldwide basis; and
- We are an authorized distributor of Intel Corporation's Embedded Security product in North America.

The sale of Microsoft operating systems has accounted for substantially all of our third-party software revenue historically, including approximately 97% of third-party software revenue in 2018 and 98% in 2017.

Professional Engineering Services

Traditional Professional Engineering Services (PES)

Our traditional services business has served hundreds of customers for over two decades. This work is concentrated on embedded software engineering for small, remote devices. Customers engage us for engineering services due to our extensive experience in the areas of device software development and testing, as well as embedded and mobile operating systems. We believe that engaging us on a new device design typically results in shorter development cycles and reduced time-to-market, lower overall costs to complete projects, and enhanced product robustness and features, which a customer may otherwise have been unable to achieve.

Revenue from professional engineering services derived from our engagement with a national Fortune 100 brand was $4.2 million, or 50%, of total revenue from these services in 2018, and $3.7 million, or 36%, of total professional engineering services revenue in 2017.

Revenue derived from our engagement with Google was $1.0 million, or 12%, of our total revenue from professional engineering services in 2018 and $2.9 million, or 28% of such revenue in 2017.

IoT-Related Services

Upon launching of our DataV software solutions in 2016, we also began providing integration and customization services as a significant element of each software sale. These services are required to integrate DataV into the customer's environment, develop custom applications that use DataV, and, in many cases, operate the DataV solution for the customer. DataV services account for roughly half of the contract value of our DataV deployments, based on our understanding of customer needs ahead of their readiness to address digital transformation.

In late 2018 we launched a new services offering focused on helping businesses employ IIoT-enabled remote devices, integrate these devices into cloud IIoT services offered by Amazon Web Services ("AWS") and Microsoft Azure, apply machine learning and advanced analytics to the data generated by these remote devices, and operationalize resulting insights.

Starting in 2019, IIoT-related services will become our primary sales focus and will include the following service offerings:

- data science consulting;
- IIoT edge integration;
- AWS IIoT integration;
- Azure IIoT integration;
- managed hosting;
- development operations consulting; and
- custom application development.

We manage all professional services activities under one operating umbrella.

Strategy

Our strategy is to expand our IIoT service offerings building on our historic business selling embedded system software, our traditional engineering services business, and as a complement to our software sales. We will continue to invest in the development of our proprietary software, including DataV in support of existing customer commitments and new customer opportunities. We intend to leverage our long-standing relationship with Microsoft selling embedded system software and build on that relationship in partnership with Microsoft's Azure and IIOT sales and marketing teams. We will also build on our new relationship with the AWS team.

Relationship with Microsoft

We have a long-standing relationship with Microsoft and this relationship is important to the continuing success of our business. Our credentials as a Microsoft partner include:

- We have been one of Microsoft's largest distributors of Windows Embedded operating systems for over 20 years;
- We have been a distributor of Microsoft's Windows Mobile operating systems since November 2009;
- We were the OED Americas Channel Sales & Marketing Award recipient for Distributor Sales Excellence in 2013;
- We are a Silver Data Analytics partner;
- We are a Silver Data Platform partner;
- We are a Co-Sell Ready ISV Partner for Microsoft; and
- Microsoft has engaged us from time to time on various engineering service engagements.

We work closely with Microsoft executives, developers, product managers and sales personnel. We leverage these relationships in a variety of ways, including:

- We gain early access to new Microsoft embedded software and other technologies;
- We leverage co-marketing resources, content and strategies from Microsoft, including market development funds, to support our own marketing and sales efforts;
- We participate in Microsoft-sponsored trade shows, seminars, and other events;
- We receive sales leads from Microsoft; and
- We receive rebates from Microsoft based upon the achievement of predefined sales objectives.

See Item 1A, "Risk Factors," for more information regarding our relationship with Microsoft.

5

Sales and Marketing

We market our products and professional engineering services utilizing a direct sales model. We have sales personnel throughout the United States and in the United Kingdom. Historically, we have not made significant use of resellers, channel partners, representative agents or other indirect channels. In late 2018 we entered into a three-year Strategic Collaboration Agreement with AWS. This agreement provides funding for research and development and sales and marketing programs that are intended to help accelerate the growth of IoT business initiatives for both us and AWS. As part of this agreement, AWS became the preferred cloud provider for DataV customers. Additionally, in late 2018 we expanded our partnership with Microsoft to include distribution of Windows Embedded operating systems to include new partners within the Microsoft IoT ecosystem and Azure IoT cloud integration services. Key elements of our sales and marketing strategy include direct marketing, content marketing, trade shows, event marketing, public relations, analyst relations, social media properties, customer and strategic alliance partner co-marketing programs and a comprehensive website.

Research and Development

During 2018, substantially all of our research and development personnel were dedicated to the design, development and release of DataV software. Moving into 2019, we intend to limit our investments in DataV software to meet clear customer demand, drawing down personnel dedicated to DataV software development and increasing personnel dedicated to delivering IIoT-related services.

Customers

Targeted customers for DataV services and software solutions include large industrial concerns that either manufacture capital assets, such as a heavy-duty commercial truck manufacturer, or rely on the widespread deployment of capital assets in the operation of their businesses, such as a large for-hire fleet operator. DataV customers may also include manufacturers incorporating DataV within their own offerings in order to enhance capabilities, such as an electric meter manufacturer developing smart grid technology for power utilities.

Customers purchasing third-party software and our other proprietary software solutions and professional engineering services include leading OEMs, ODMs, Enterprises, SVs and peripheral vendors. Representative customers include Honeywell International, Inc., Hewlett Packard, Google, Elo Touch Solutions, Mitsubishi Electric Corporation, Oracle, Omnicell, and several industrial handset companies.

Competition

The IIoT market is still emerging but is already becoming increasingly competitive. Our competitors in this space include, or we anticipate could include, the following:

- Large, established enterprise software and solution providers such as IBM, SAS, Oracle and SAP;
- Cloud IIoT providers such as AWS and Microsoft Azure. Although we are closely partnered with AWS and Microsoft, there are elements of their solutions with which we compete directly;
- Mid-sized companies engaged in business transitions similar to our own, including PTC ThingWorx; and
- Startups funded to enter the IIoT market, including C3IOT and others.

In addition, we anticipate that we will encounter increasing competition in the growing IIoT market from a number of additional software and service providers as we continue to focus on this market in 2019 and beyond and as we expand our focus on providing IIoT-related service offerings.

The market for device software and engineering services is competitive. We face competition from the following:

- Our current and potential customers' internal engineering and research and development departments, which may seek to provide their own IIoT-related services and/or develop their own software solutions which could compete with our IIoT service offerings and proprietary software products;
- Engineering service firms, including off-shore development companies, such as Adeneo, SymphonyTeleca and Wipro;
- ODMs, particularly those in Taiwan and China, with their own software development capabilities;
- Contract manufacturers with their own software development capabilities;

- Mobile and embedded test automation providers including Perfecto Mobile, mVerify, JAMO Solutions, SmartBear Software (AutomatedQA), TestPlant (eggPlant) and Keynote, as well as our customers' and potential customers' internally created tools and manual testing capabilities;
- Microsoft Windows Embedded and Windows Mobile operating system distributors such as Arrow Electronics, Inc. Avnet, Inc. and Synnex Corporation; and
- Marketing agencies and specialized vendors who provide mobile application services.

Some of our competitors focus on only one aspect of our business or offer complementary products that can be integrated with our products. As we develop and bring to market new software products and service offerings, we may begin competing with companies with which we have not previously competed. Further, as we expand the geographic markets into which we sell our services and software solutions, or increase our penetration therein, we may expect to increasingly compete with companies with which we have not previously competed. It is also likely that new competitors will enter the market or that our competitors will form alliances, including alliances with AWS or Microsoft, that may enable them to rapidly increase their market share. New competitors may have lower overhead than we do and may be able to undercut our pricing. We expect that competition will increase as other established and emerging companies enter the connected device market, and as new products and technologies are introduced.

Neither AWS nor Microsoft has agreed to any exclusive arrangement with us, nor has either agreed not to compete against us. Amazon may decide to focus on providing products or services that compete directly with our products and services or partnering with other solution providers that compete with us. Microsoft may decide to bring in-house more of the core-embedded development services and expertise that we currently provide, possibly resulting in reduced software and service revenue opportunities for us. The barrier to entering the market as a provider of Microsoft-based smart connected systems software and services is low. In addition, Microsoft has created marketing programs to encourage systems integrators to work on Windows operating system software and services, including in the evolving IIoT market. These systems integrators may be given substantially the same access by Microsoft to Microsoft technology as we are.

International Operations

Our international operations outside of North America consist principally of engineering services operations in Taipei, Taiwan and Trowbridge, England. Prior to mid-2018 we also maintained a sales and sales support office in Tokyo, Japan. Because our OEM Distribution Agreement with Microsoft for the sale of Microsoft Windows Embedded operating systems (e.g. Windows Embedded Compact) was previously restricted to North America, the majority of our revenue continues to be generated from North America. Revenue generated from customers located outside of North America was approximately 6% of total revenue in both 2018 and 2017. Our distribution rights for Microsoft Windows Embedded products in the E.U., the European Free Trade Association, Turkey and Africa expires on June 30, 2019 and will not be renewed; accordingly, we do not plan to make additional sales and marketing investments during 2019 in those regions.

See Item 1A, "Risk Factors," and Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," for more information regarding our international operations.

Personnel

Our headcount by area was as follows:

	December 31,

	2018	2017
Professional engineering services	36	51
Sales, marketing and administrative	40	78
Research and product development	63	63
Total employees	139	192
Contractors (primarily professional engineering services)	12	6
Total headcount	151	198

Of the total headcount at December 31, 2018, 106 were located in North America, 19 in Taiwan and 26 in the United Kingdom. As conditions necessitate, professional engineering service employees may perform research and development activities and vice versa.

Intellectual Property and Other Proprietary Rights

In general, we strive to protect our intellectual property rights through patent, copyright, trademark and trade secret laws and through contractual arrangements. However, we cannot be certain that our efforts will be effective to prevent the misappropriation of our intellectual property, or to prevent the development and design by others of products or technologies similar to, or competitive with, those developed by us.

Additionally, because a significant portion of our revenue relates to the sale of third-party software products, we also rely on our partners, particularly Microsoft, to appropriately protect their own intellectual property.

As of January 31, 2019, we had fourteen pending United States ("US") patent applications related to DataV, in addition to nine issued US patents related to other products and services. We also have a number of registered trademarks in various jurisdictions. We will continue to pursue appropriate protections for our intellectual property.

See Item 1A, "Risk Factors," for more information regarding our intellectual property and other proprietary rights.

Available Information

We electronically file with or furnish to the Securities and Exchange Commission ("SEC") our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934. We make available on our website at www.bsquare.com, free of charge, copies of these reports, as soon as reasonably practicable after electronically filing such reports with, or furnishing them to the SEC. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this Annual Report on Form 10-K or any of our other reports filed with or furnished to the SEC.

Item 1A. Risk Factors.

As discussed under Item 1 of Part I, "Business—Cautionary Note Regarding Forward-Looking Statements," our actual results could differ materially from those expressed in our forward-looking statements. Factors that might cause or contribute to such differences include, but are not limited to, those discussed below. Additional risks and uncertainties not presently known to us, or that we currently deem immaterial but later emerge as material, may also impair our business operations. If any of the following risks occur, our business, financial condition, operating results, cash flows and the trading price of our common stock could be materially adversely affected.

Risks Related to IIoT Services and DataV Solutions

Beginning in early 2014, we initiated development efforts focused on new proprietary software products addressing the IIoT market. We launched our DataV solution, which includes software products, applications and services that are designed to render raw IIoT device data into meaningful and actionable data for our customers, late in the first quarter of 2016. Developing, selling and implementing DataV was our primary focus through late 2018, representing a transition away from dependence on resale software and professional engineering services toward increased reliance on our own proprietary software and related systems integration services. However, during the fourth quarter of 2018, in response to near-term customer demand and in an effort to improve our profitability, we revised our growth strategy to focus on expanding our IIoT-related service offerings while at the same time reducing further investments in the development of our DataV software. We believe that by first offering customers our IIoT-related service offerings, we may generate additional opportunities to sell our DataV software to such customers. The following risks related to our IIoT-related services and DataV solution may negatively impact our business and operating results.

If our IIoT-related service offerings fail to gain or maintain traction with potential customers, or if we are not successful in converting these opportunities to fully paid DataV licenses, our business would be negatively impacted.

Our strategy to focus on expanding our IIoT-related service offerings is subject to a number of risks, including the following:

- The significant investment of time and financial and other corporate resources required;
- Customer acceptance of our IIoT service offerings;
- Our IIoT service offerings are distinctly different from our traditional engineering services, and our engineers may not have the depth of required experience and we may be unable to hire additional engineers to perform these services;
- Our current sales team may not be able to sell our IIoT service offerings and we may not be able to hire sufficient additional sales personnel;
- Because IIoT- services is a relatively new service offering, the sales cycle may be longer than we anticipate;
- We may be unable to grow our IIoT-related services business rapidly enough to contribute to profitability during 2019;

- If we are unable to generate IIoT service revenue, we may be required to reduce our engineering staff, which would result in the loss of skilled engineers and could adversely impact our ability to develop DataV software in the future; and
- Even if we are successful in selling our IIoT-related services to existing or new customers, we may not be successful in selling our higher-margin DataV software to such customers.

Our ability to maintain and grow our higher-margin proprietary software revenue is contingent on the success of DataV, our proprietary business-focused IIoT software solution. If our DataV software fails to gain or maintain traction with potential customers, or if we are not otherwise successful in developing competitive product offerings that keep pace with technological changes and needs, our business would be negatively impacted.

Proprietary software product revenue provides us with much higher gross profit margins than we typically receive from either our third-party software products or our engineering service offerings and provides other advantages as well. During 2018 and 2017, we invested significant resources in developing and marketing our proprietary DataV solution. Our DataV customer engagements typically commence with an initial proof-of-concept (POC) or pilot project, after which our objective is to convert these customers to a fully paid license of our DataV products and services. However, our DataV software has gained customer traction more slowly than anticipated, and we have not been successful in converting our customers from POCs and pilots to fully paid licenses. Although we have recently revised our growth strategy to focus first on offering our IIoT-related services, there can be no assurance that we will be able to convert customers of our IIoT-related services to fully paid DataV licenses. We have previously made significant investments in the development and marketing of our DataV software, and may continue to do so in the future, which will increase our operating expenses. There can be no assurance that our DataV software will achieve market acceptance or that there will be sufficient revenue generated by sales of our DataV software. The failure to successfully market and sell our DataV software would materially and adversely impact our revenue and operating results.

The IIoT is an emerging market that has not evolved as we anticipated, and there can be no assurance that the IIoT market will evolve as we expect, or that we will be successful in capitalizing on opportunities in this market.

We are currently devoting significant effort and resources to market and sell our IIoT-related services and DataV software to customers within the IIoT market. IIoT is an emerging and evolving market with many potential industry participants and customers, as well as undefined market opportunities and risks. To date, this market has not evolved as we anticipated and may not ultimately evolve as we expect, and our efforts to capitalize on these evolving market opportunities may not be successful in the near term, or at all. If the IIoT market does not materialize as we anticipate, or if our products and services do not achieve market acceptance, our business, financial condition, and operating results would be adversely affected, any of which would likely cause our stock price to decline.

The long sales cycle of our products and services makes our revenue susceptible to fluctuations.

Our recent experience with DataV has shown that the DataV sales cycle can run six to eighteen months because the expense and complexity of the software and service offerings we sell generally require a lengthy customer approval process. Although we anticipate that the sales cycle for our IIoT service offerings may not be as lengthy, there can be no assurance that this will be the case. The sales cycle for our services and products is subject to a number of significant risks over which we have little or no control, including:

- Customers' budgetary constraints and internal acceptance review procedures;
- The effects of economic uncertainties;
- The timing of budget cycles; and
- The timing of customers' competitive evaluation processes.

In addition, to successfully sell our software and engineering service offerings, we must frequently educate our potential customers about the full benefits of our software and services, which can require significant time and expense. This is particularly true given the early stage of the IIoT market. If our sales cycle further lengthens unexpectedly, or if we are unsuccessful in selling our IIoT service offerings or converting customers to fully paid licenses, it would adversely affect the timing and amount of our revenue and our ability to sell higher-margin products, which would adversely impact our business and profitability.

Our DataV operating results have fluctuated significantly and are expected to continue to fluctuate.

Our DataV revenue has not grown as quickly as anticipated which has caused our stock price to decline, and our DataV operating results may continue to fluctuate, which could cause our stock price to continue to decline. Some of the important factors that may cause our DataV operating results to fluctuate include the following:

- The uncertainty and lack of predictability of the new and evolving IIoT market;
- The extent of customer acceptance of our DataV solution;
- Our ability to sell our IIoT-related service offerings and convert such customers to fully paid DataV licenses;
- The degree of conversion of customers from POCs and pilots to fully paid DataV licenses; and
- The timing of recognition of DataV product and services revenue.

These and other factors make it difficult to forecast our quarterly and annual financial results. Many of these factors are not within our control, and the occurrence of one or more of them might cause our operating results to fluctuate and vary widely from our financial forecasts. As such, we believe that quarter-to-quarter comparisons of our operating results may not be meaningful and should not be relied upon as an indication of future performance. Moreover, we may also fail to meet or exceed the expectations of securities analysts or investors, and the market price of our common stock could decline.

Our relationship with AWS is non-exclusive and may not evolve and grow as we anticipate.

We have entered into a non-exclusive Strategic Collaboration Agreement with AWS as our preferred cloud services provider. However, AWS is not obligated to use, market or sell our products or services and can terminate the agreement upon 90 days' notice. If our relationship with AWS does not evolve and grow as we anticipate, our business would be adversely impacted.

If our security measures or those of third-party data center hosting facilities, cloud computing platform providers, or other service partners are breached or unauthorized access is otherwise obtained to our customers' data, our data or our information technology ("IT") systems, our or our customers' confidential or personal information may be compromised or misappropriated, our products and services offerings may be perceived as not being secure, customers may curtail or stop using our products and services, and we may incur significant legal and financial liability.

Our products and services involve the storage and transmission of customers' proprietary data and personal information, and security breaches could result in a risk of loss of this data or information, litigation and possible liability. While we have security measures in place, they may be breached as a result of third-party action, including intentional misconduct by computer hackers, employee error, malfeasance or otherwise and result in someone obtaining unauthorized access to our IT systems, our customers' data or our data, including our intellectual property and other confidential business information. Additionally, third parties may attempt to fraudulently induce employees or customers into disclosing sensitive personal information such as user names, passwords or other information in order to gain access to our customers' data, our data or our IT systems. Because the techniques used to obtain unauthorized access, or to sabotage systems, change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. In addition, our customers may authorize third-party technology providers to access their customer data, and some of our customers may not have adequate security measures in place to protect their data. Because we do not control the IT security of our customers or third-party technology providers, or of the processing of such data by third-party technology providers, we cannot ensure the integrity or security of such transmissions or processing. Malicious third parties may also conduct attacks designed to temporarily deny customers access to our products and services. Any security breach could result in a loss of confidence in the security of our products and services, damage our reputation, negatively impact our future sales, disrupt our business and lead to legal liability.

Interruptions or delays in services from third-party data center hosting facilities or cloud computing platform providers could impair the delivery and availability of our products and services and harm our business.

We currently serve certain of our customers through third-party data center hosting facilities and cloud computing platform providers located in the United States and other countries. Any damage to, or failure of, these systems generally could result in interruptions in the availability of our products and services. We have from time to time experienced, and may continue to experience, such interruptions, which could cause us to issue credits or pay penalties, cause customers to terminate their subscriptions, and adversely affect our customer attrition rates and our ability to attract new customers, all of which would reduce our revenue. Our business would also be harmed if our customers and potential customers believe our product and services offerings are unreliable. Despite contract provisions to protect us, customers may look to us to support and provide warranties for these third-party systems, which may expose us to potential claims, liabilities and obligations for technology or services we did not develop or sell, all of which could harm our business. Further, third-party software and cloud platforms that we currently or may in the future utilize may not continue to be available at reasonable prices, on commercially reasonable terms, or may become unavailable. Any of these outcomes could significantly increase our expenses and result in delays in the provisioning of our products and services until we are able to procure alternative solutions, either by developing equivalent technology or, if available, obtaining such technology through purchase or license from other third parties.

We do not control the operation or security of any of these hosting facilities or cloud computing platforms, and they may be vulnerable to damage or interruption from earthquakes, floods, fires, power loss, telecommunications failures and similar events. They may also be subject to break-ins, sabotage, intentional acts of vandalism and similar misconduct, as well as local administrative actions, changes to legal or permitting requirements and litigation to stop, limit or delay operation. Despite precautions taken by providers of these facilities and platforms, the occurrence of a natural disaster or an act of terrorism, a decision to close the facilities or platforms without adequate notice or other unanticipated problems at these facilities or platforms could result in lengthy interruptions in or cessation of our services.

Privacy concerns and laws, evolving regulation of cloud computing, cross-border data transfer restrictions and other domestic or foreign regulations may limit the use and adoption of our products and services and adversely affect our business.

Regulation related to the provision of services on the internet is evolving and increasing, as federal, state and foreign governments continue to adopt new laws and regulations addressing data privacy and the collection, processing, storage and use of personal information, such as the E.U.'s Data Protection Directive and General Data Protection Regulation ("GDPR") and the California Consumer Privacy Act ("CCPA"). Further, laws and regulations are increasingly aimed at the use of personal information for marketing purposes, such as the E.U.'s ePrivacy Directive and ePrivacy Regulation. Country-specific laws and regulations are subject to new and differing interpretations and may be inconsistent among jurisdictions. Existing laws and regulations, as well as future requirements, could reduce demand for our products and services or restrict our ability to store and process data or, in some cases, impact our ability to offer our products and services in certain locations or our customers' ability to deploy our solutions globally. The costs of compliance with and other burdens imposed by laws, regulations and standards such as GDPR and CCPA may also limit the use and adoption of our products and services, reduce overall demand for our products and services, lead to significant fines, penalties or liabilities for noncompliance, or slow the pace at which we close sales transactions, any of which could harm our business. Furthermore, concerns regarding data privacy may cause our customers' customers to resist providing the data necessary to allow our customers to use our products and services effectively. Even the perception that the privacy of personal information is not satisfactorily protected or does not meet regulatory requirements could inhibit sales of our products and services and could limit adoption of our cloud-based solutions.

Microsoft-Related Risk Factors

Because we provide software and services to customers building devices utilizing Microsoft's Windows Embedded and Windows Mobile operating systems, as well as the fact that a significant portion of our revenue is derived from the sale of Microsoft Windows Embedded and Windows Mobile operating systems, Microsoft has a significant direct and indirect influence on our business. The following Microsoft-related risks may negatively impact our business and operating results.

If we do not maintain our distribution relationship with Microsoft, our revenue would decrease, and our business would be adversely affected.

Effective March 1, 2019, pursuant to a new Global Partnership Agreement with Microsoft, we are authorized to sell Windows Embedded operating systems in Canada, the United States, Argentina, Brazil, Chile, Mexico, Peru, Venezuela, Puerto Rico, Cuba, Haiti, Dominican Republic, Jamaica, Trinidad and Tobago, Guadeloupe, Martinique, Bahamas, Barbados, Saint Lucia, Curacao, Aruba, Saint Vincent and the Grenadines, U.S. Virgin Islands, Grenada, Dominica, Cayman Islands, Saint Kitts and Nevis, Sint Maarten, Turks and Caicos Islands, Saint Martin, British Virgin Islands, Sint Eustatius, Saba, Anguilla, Montserrat, Colombia, Saint Barthelemy, Antigua and Barbuda. Our existing distribution agreement for sales of Windows Embedded operating systems in E.U., the European Free Trade Association, Turkey and Africa, from which we generated approximately 3.7% of our third-party software sales in

2018, expires on June 30, 2019 and will not be renewed thereafter. We have also entered into ODAs with Microsoft pursuant to which we are licensed to sell Microsoft Windows Mobile operating systems to customers in North America, South America, Central America (excluding Cuba), Japan, Taiwan, Europe, the Middle East, and Africa. The ODAs to sell Windows Mobile operating systems are effective through April 30, 2022.

We generated $59.5 million and $64.4 million of revenue in 2018 and 2017, respectively, through our sales of Microsoft operating systems and expect this revenue stream to continue in 2019, although potentially at a declining rate. If the new GPA or any of our other ODAs are terminated by Microsoft (which Microsoft can do unilaterally) or not renewed, third-party software revenue and resulting gross profit could decrease significantly and our operating results would be negatively impacted. Future renewals by Microsoft, if any, could be on less favorable terms, which could also negatively impact our business and operating results.

Microsoft can change its product pricing at any time, and unless we are able to pass through price increases to our customers, our revenue, gross profit and operating results would be negatively impacted. Further, Microsoft currently offers a rebate program in conjunction with our resale activities in which we earn money for achieving certain predefined objectives. If Microsoft changed the way that rebates are earned by eliminating or negatively modifying the rebate program, our gross profit and operating results

would be negatively impacted. We qualified for rebate credits from Microsoft of $2.4 million and $1.7 million in 2018 and 2017, respectively, 30% of which was credited against product invoices and accounted for as a reduction in cost of sales, with the remaining portion as a reduction in marketing expense if and when qualified expenditures are made and claimed.

In January 2019, Microsoft changed the way a portion of its earned rebate may be claimed. The process previously in place under its 2018 program for claiming 30% of the rebates against product invoices was changed; these earned rebate amounts are now credited to the Microsoft Azure Sponsorship program and claimed upon delivery of approved Azure programs. We joined this sponsorship program in January 2019; if we are unable to complete enough qualified Azure programs during each qualification period, we may not be able to claim all or a portion of this rebate.

Our business and results of operations could be negatively impacted by changes Microsoft implements in its pricing of its operating systems.

Microsoft implemented significant pricing changes for its operating systems products, including ending its design registration pricing discounts, terminating its OEM Volume Royalty Program and changing the aggregate volume price structure and product royalties for existing Windows Embedded products effective January 1, 2016, and Microsoft could make further pricing changes in the future. These changes have altered the competitive dynamics because the same pricing discounts are available to all distributors of these Microsoft products. As a distributor of Microsoft products, this impacts both the sales prices we charge our customers and the cost of goods sold we incur for many of the Microsoft products we sell. The amount and impact of these changes to our revenue and gross profit are not determinable; however, they may negatively impact our operating results in future reporting periods. The sale of Microsoft operating systems represented approximately 81% and 80% of our total revenue and approximately 57% and 54% of our total gross margin for the years ended December 31, 2018 and 2017, respectively.

Microsoft has audited our records under the ODAs in the past and may audit our records again in the future, and any negative audit results could result in additional charges and/or the termination of our distributor relationship with Microsoft.

There are provisions in the ODAs that require us to maintain certain internal records and processes for auditing purposes. Non-compliance with these or other contractual requirements could result in the termination of our distributor relationship with Microsoft. Microsoft concluded audits of our records pertaining to the ODAs in 2009 and 2006, neither of which had material findings. It is possible that future audits could result in charges due to any material findings that are found. We may also be contractually liable for payment of royalties to Microsoft in the event that certificates of authenticity are lost, damaged or stolen.

Our business and results of operations would be adversely impacted if Microsoft decided to provide Windows Embedded or Windows Mobile operating systems free of charge to customers.

Microsoft offers certain consumer Windows phone and tablet-based operating systems to customers free of charge, subject to certain limitations. While we do not distribute these operating systems today under our ODAs with Microsoft, if Microsoft were to offer, free of charge, operating systems that we do distribute, our business and results of operations would be adversely impacted.

In recent years, the markets for Windows Embedded and Windows Mobile operating systems have declined; if the markets for these operating systems continue to decline or decline more rapidly than anticipated, our business and operating results would be materially harmed.

A significant portion of our revenue to date has been generated by software and services targeted at customers and devices running various Microsoft Windows Embedded and Windows Mobile operating systems. In recent years, the markets for these systems have declined. If the markets for these operating systems continue to decline or decline more rapidly than anticipated, our business and operating results would be negatively impacted. Continued market acceptance of Microsoft Windows Embedded and Windows Mobile operating systems will depend on many factors, including:

- Microsoft's development and support of various Windows Embedded and Windows Mobile markets. As the developer and primary promoter of Windows Embedded and Windows Mobile operating systems, if Microsoft were to decide to discontinue or lessen its support of these operating systems, potential customers could select competing operating systems, which could reduce the demand for our Microsoft Windows Embedded and Windows Mobile software products and engineering services, from which a significant portion of our revenue continues to be generated;
- The ability of the Microsoft Windows Embedded and Windows Mobile operating systems to compete against existing and emerging operating systems for the smart connected systems market, including iOS from Apple, Inc.; VxWorks and Linux from WindRiver Systems Inc.; Android from Google Inc.; QNX from BlackBerry Limited; and other proprietary operating systems. Microsoft Windows Embedded and Windows Mobile operating systems may be unsuccessful in capturing or retaining a significant share of the smart connected systems market in the future;

- The acceptance by customers of the mix of features and functions offered by Microsoft Windows Embedded and Windows Mobile operating systems; and
- The willingness of software developers to continue to develop and expand the applications running on Microsoft Windows Embedded and Windows Mobile operating systems. To the extent that software developers write applications for competing operating systems that are more attractive to users than those available on Microsoft Windows Embedded and Windows Mobile operating systems, this could cause potential customers to select competing operating systems.

General Business-Related Risk Factors

Our marketplace is extremely competitive, which may result in price reductions, lower gross profit margins and loss of market share.

The IIoT market is still emerging but is already becoming increasingly competitive. Our competitors in this space include, or we anticipate could include, the following:

- Large, established enterprise software and solution providers such as IBM, SAS, Oracle and SAP;
- Cloud IIoT providers such as AWS and Microsoft Azure. Although we are closely partnered with AWS and Microsoft, there are elements of their solutions with which we compete directly;
- Mid-sized companies engaged in business transitions similar to our own, including PTC ThingWorx; and
- Startups funded to enter the IIoT market, including C3IoT and others.

In addition, we anticipate that we will encounter increasing competition in the growing IIoT market from a number of additional software and service providers as we continue to focus on this market in 2019 and beyond, and as we expand our focus on providing IIoT-related service offerings.

The market for device software and engineering services is extremely competitive. We face competition from the following:

- Our current and potential customers' internal engineering and research and development departments, which may seek to provide their own IIoT services and/or develop their own software solutions which could compete with our IIoT-related service offerings and proprietary software products;
- Engineering service firms, including off-shore development companies, such as Adeneo, SymphonyTeleca and Wipro;
- ODMs, particularly those in Taiwan and China, with their own software development capabilities;
- Contract manufacturers with their own software development capabilities;
- Mobile and embedded test automation providers including Perfecto Mobile, mVerify, JAMO Solutions, SmartBear Software (AutomatedQA), TestPlant (eggPlant) and Keynote, as well as our customers' and potential customers' internally created tools and manual testing capabilities;
- Microsoft Windows Embedded and Windows Mobile operating system distributors such as Arrow Electronics, Inc. Avnet, Inc. and Synnex Corporation; and
- Marketing agencies and specialized vendors who provide mobile application services.

Some of our competitors focus on only one aspect of our business or offer complementary products that can be integrated with our products. As we develop and bring to market new software products and service offerings, we may begin competing with companies with which we have not previously competed. Further, as we expand the geographic markets into which we sell our services and related software solutions, or increase our penetration therein, we may expect to increasingly compete with companies with which we have not previously competed. It is also likely that new competitors will enter the market or that our competitors will form alliances, including alliances with AWS or Microsoft, that may enable them to rapidly increase their market share. New competitors may have lower overhead than we do and may be able to undercut our pricing. We expect that competition will increase as other established and emerging companies enter the connected device market, and as new products and technologies are introduced.

Neither AWS nor Microsoft has agreed to any exclusive arrangement with us, nor has either agreed not to compete with us. Amazon may decide to focus on providing products or services that compete directly with our products and services or partnering with other solution providers that compete with us. Microsoft may decide to bring more of the core embedded development services and expertise that we provide in-house, possibly resulting in reduced software and service revenue opportunities for us. The

barrier to entering the market as a provider of Microsoft-based smart connected system software and services is low. In addition, Microsoft has created marketing programs to encourage systems integrators to work on Windows Embedded and Windows Mobile operating system software and services, including in the evolving IIoT market. These systems integrators may be given substantially the same access by Microsoft to Microsoft technology as we are.

Management turnover creates uncertainties and could harm our business.

We have had significant changes in executive leadership in the past including in our executive management team and at the Board level, and more could occur. Changes to strategic or operating goals, which can often occur with the appointment of new executives and Board members, can create uncertainty, may negatively impact our ability to execute quickly and effectively, and may ultimately be unsuccessful. In addition, leadership transition periods are often difficult as the new executives and Board members gain detailed knowledge of our operations, and friction can result from changes in strategy and management style. Management turnover inherently causes some loss of institutional knowledge, which can negatively affect strategy and execution. Until we integrate new personnel, and unless they are able to succeed in their positions, we may be unable to successfully manage and grow our business, and our financial condition and profitability may suffer.

Further, to the extent we experience additional management turnover, competition for top management is high and it may take months to find a candidate that meets our requirements. If we are unable to attract and retain qualified management personnel, our business could suffer.

Because competition for technology industry employees is intense, we may not be able to attract and retain the highly skilled employees we need to support our operations and grow our business.

In the technology industry generally, and in the greater Seattle area in particular, there is intense competition for software engineers, as well as for technology sales and operations personnel. We may not be successful in attracting or retaining such qualified personnel. If we fail to attract new personnel or to retain and motivate our current personnel, our business would be harmed.

We depend on our direct sales force to achieve planned revenue growth in the future, and if our sales force is not successful, our financial condition will be harmed.

We sell our solutions primarily through our direct sales force. During 2018 we experienced turnover in our sales team. In addition, we have recently revised our growth strategy to focus on expanding our IIoT service offerings and our current sales team may not have the requisite expertise to sell our IIoT service offerings. Our ability to achieve planned revenue growth in the future will depend upon the success of our direct sales force and our ability to adapt our sales efforts to address the evolving markets for our solutions. We may not be able to attract or retain sufficient sales personnel in a timely fashion, or at all. If our direct sales force does not perform as expected, our business, financial condition, and operating results could be adversely affected.

Our operating results may be adversely affected by changing economic and market conditions and the uncertain geopolitical environment.

Uncertain economic and political conditions in the U.S. and worldwide have from time to time contributed, and may continue to contribute, to volatility in the technology industries at large, particularly in an emerging market such as IIoT. These factors could potentially result in reduced demand for our products and services as a result of constraints on IT-related capital spending by our customers; purchasing delays; payment delays adversely affecting our cash flow and revenue; and difficulty in accurate budgeting and planning. If global economic and market conditions, or economic conditions in key markets, remain uncertain or deteriorate, we may experience material impacts on our

business, operating results and financial condition.

Our business and operations would be adversely impacted in the event of a failure or interruption of our IT infrastructure.

The proper functioning of our own IT infrastructure is critical to the efficient operation and management of our business. Our IT is vulnerable to cyberattacks, computer viruses, worms and other malicious software programs, physical and electronic break-ins, sabotage and similar disruptions from unauthorized tampering with our computer systems. We believe that we have adopted appropriate measures to mitigate potential risks to our technology infrastructure and our operations from these IT-related and other potential disruptions. However, given the unpredictability of the timing, nature and scope of such disruptions, we could potentially be subject to downtimes, operational delays, other detrimental impacts on our operations or ability to provide products and services to our customers, the compromising of confidential or personal information, destruction or corruption of data, security breaches, other manipulation or improper use of our systems and networks, financial losses from remedial actions, loss of business or potential liability, and/or damage to our reputation, any of which could have a material adverse effect on our cash flows, competitive position, financial condition or results of operations.

We may be subject to product liability, infringement or other legal claims that could result in significant costs.

Our software license and service agreements with our customers typically contain provisions designed to limit our exposure to potential product liability, infringement and other legal claims. It is possible, however, that these provisions may be ineffective under the laws of certain jurisdictions or that our customers may not agree to these limitations. Although we have not experienced any product liability or infringement claims to date, as our business focus continues to transition to the sale of our own proprietary products, the sale and support of our products and services may be subject to such claims in the future. There is a risk that any such claims or liabilities may exceed, or fall outside, the scope of our insurance coverage, and we may be unable to obtain adequate liability insurance in the future. A product liability, infringement or other legal claim brought against us, whether successful or not, could negatively impact our business and operating results.

Our business and results of operations would be adversely impacted in the event that we incur business losses that are not covered by or exceed our existing business insurance coverage.

We are insured against certain business risks and liabilities under our corporate insurance policies. However, to the extent that we incur losses in connection with our business that are not covered by our existing insurance policies or that exceed our existing policy coverage, our business and results of operations would be adversely impacted.

Changing growth strategies, negative business conditions, changes in useful lives, and other factors may negatively affect the carrying value of the intangible assets and goodwill we have acquired.

We evaluate goodwill and intangible assets for impairment on an annual basis or more frequently when an event occurs, or circumstances change that indicate that the carrying value may not be recoverable. Reductions in operating cash flows or projected cash flows of our reporting units could result in an impairment charge that would negatively impact our operating results. For example, we performed our annual goodwill assessment for 2018 in the fourth quarter of 2018 and determined that the carrying value of goodwill was impaired. As a result, an impairment charge of $3.7 million was recorded. Further, business conditions and other factors may also require us to reassess the useful lives associated with intangible assets.

Past acquisitions have proven difficult to integrate, and future acquisitions, if any, could disrupt our business, dilute shareholder value and negatively affect our operating results and may not accrete to our revenue or other operating results or to our business generally.

We have acquired the technologies, assets and/or operations of other companies in the past and may acquire or make investments in companies, products, services and technologies in the future as part of our growth strategy. If we fail to properly evaluate, integrate and execute on our acquisitions and investments, our business and prospects may be seriously harmed. In addition, acquisitions may not be as accretive to our revenue or other operating results as expected. To successfully complete an acquisition, we must properly evaluate the business, technology, market and management team of the acquisition target, accurately forecast the financial impact of the transaction, including accounting charges and transaction expenses, integrate and retain personnel, combine potentially different corporate cultures and effectively integrate products, research and development, sales, marketing and support operations. If we fail to do any of these, we may suffer losses and impair relationships with our employees, customers and strategic partners. Additionally, acquisition activities may distract management from day-to-day operations. We also may be unable to maintain consistently uniform standards, controls, procedures and policies across our entire business as a result, and significant additional demands may be placed on our management and our operations, information services and financial, legal and marketing resources. Finally, acquired businesses may result in unexpected liabilities and contingencies, which may involve compliance with foreign laws, payment of taxes, labor negotiations or other unknown costs and expenses, which could be significant.

We may not be able to raise additional capital if required to support our business, and the issuance of additional equity or convertible debt securities would result in the dilution of our existing shareholders.

Our investment in our DataV business has resulted in a decrease in our cash, cash equivalents and investments from approximately $24.7 million at December 31, 2017 to approximately $16.9 million (including $0.5 million in restricted cash) at December 31, 2018. Although we have recently revised our growth strategy to focus on expanding our IIoT-related service offerings while at the same time reducing investments in the development of our DataV software, we expect to incur additional product development expenses through mid-2019 to complete current projects. If we need to raise additional operating capital to fund our operations, it may be difficult and costly to access the public equity and debt capital markets. In the past, our stock has traded at low volumes and overall investor confidence in the stock market could falter. This could make it difficult or impossible to sell additional shares of our stock in the public market. In addition, it may be difficult and costly to obtain commercial debt financing and we may be unable to borrow funds at acceptable cost, or at all, should the need arise. If we are unable to raise capital as necessary, it may adversely affect our ability to invest in products or fund operations, which would materially harm our business and negatively affect

operating results. If we decide to raise additional funds by issuing equity or convertible debt securities, the ownership percentages of our existing shareholders would be reduced.

Our common stock has experienced and may continue to experience price and volume fluctuations, which could lead to costly litigation for us and make an investment in us less appealing.

Stock markets are subject to significant price and volume fluctuations that may be unrelated to the operating performance of particular companies and the market price of our common stock may therefore frequently change as a result. In addition, the market price of our common stock has fluctuated and may continue to fluctuate substantially due to a variety of other factors, including quarterly fluctuations in our results of operations (including as a result of fluctuations in our revenue recognition), our ability to execute on our current growth strategy in a timely fashion, announcements about technological innovations or new products or services by us or our competitors, market acceptance of new products and services offered by us, developments in the IIoT market, changes in our relationships with our suppliers or customers, our ability to meet analysts' expectations, changes in the information technology environment, changes in earnings estimates by analysts, sales of our common stock by existing holders and the loss of key personnel. In the past, following periods of volatility in the market price of a company's stock, class action securities litigation has often been instituted against such companies. Such litigation, if instituted against us, could result in substantial costs and diversion of management's attention and resources, which would materially adversely affect our business, financial condition and operating results.

We could become subject to taxation in jurisdictions in which we do not believe we currently have tax nexus, which could expose us to additional tax liability that we have not been subject to in the past.

We make sales in many jurisdictions across the United States. We believe we do not have nexus in most of these jurisdictions and, therefore, we believe we are not subject to sales, franchise, income and other state and local taxes in such jurisdictions. However, if we are determined to have tax nexus in other jurisdictions (as a result of more aggressive interpretations of nexus by taxing jurisdictions or otherwise) and we are unable to pass through this cost to our customers, our tax expense will increase which will negatively affect our results of operations. Further, because state and local tax laws are becoming increasingly complex, we anticipate that our cost to monitor our state and local tax compliance will increase which will negatively affect our results of operations. Additionally, there can be no assurance that we do not currently have unknown tax exposure in a state or local tax jurisdiction because of recent tax law changes of which we are unaware, and the resulting liability could be significant and would negatively affect our results of operations.

There may be restrictions on the use of our net operating loss and tax credit carryforwards due to a tax law "ownership change."

We did not generate taxable income in 2017 or 2018 and, as a result, we were unable to use our net operating loss and tax credit carryforwards with respect to such tax years. In addition, Sections 382 and 383 of the Internal Revenue Code restrict the ability of a corporation that undergoes an ownership change to use net operating loss and tax credit carryforwards. At December 31, 2018, we had approximately $73.4 million of federal and $9.0 million of state net operating loss carryforwards and $3.3 million of tax credit carryforwards. Of the federal net operating loss carryforwards, an aggregate of $36.3 million will expire in 2022 and 2023 and we may not generate sufficient taxable income prior to such time in order to fully utilize our net operating loss and tax credit carryforwards before they expire. Moreover, under the applicable tax rules, an ownership change occurs if greater than five percent shareholders of an issuer's outstanding common stock collectively increase their ownership percentage by more than 50 percentage points over a rolling three-year period. As of December 31, 2017, we performed analyses of possible ownership changes which included consideration of a third-party study, and do not believe that an ownership change, as defined by Section 382, has occurred. However, if a tax law ownership change has occurred of which we are not aware, or if a

tax law ownership change occurs in the future, we may have to adjust the valuation of our deferred tax assets and could be at risk of having to pay income taxes notwithstanding the existence of our sizable carryforwards. Further, to the extent that we have utilized our carryforwards from prior years, the existence of a previous tax law ownership change that we did not account for could result in liability for back taxes, interest, and penalties. If we are unable to utilize our carryforwards and/or if we previously utilized carryforwards to which we were not entitled, it would negatively impact our business, financial condition and operating results.

Changes in our effective tax rate may impact our results of operations.

We are subject to taxes in the U.S. and other jurisdictions. Tax rates in these jurisdictions may be subject to significant change due to economic and/or political conditions. A number of other factors may also impact our future effective tax rate including:

- the jurisdictions in which profits are determined to be earned and taxed;
- the resolution of issues arising from tax audits with various tax authorities;
- changes in valuation of our deferred tax assets and liabilities;

- increases in expenses not deductible for tax purposes, including write-offs of acquired intangibles and impairment of goodwill in connection with acquisitions;
- changes in availability of tax credits, tax holidays, and tax deductions;
- changes in share-based compensation; and
- changes in tax laws or the interpretation of such tax laws and changes in generally accepted accounting principles.

In December 2017, the President signed into law new legislation that significantly revised the Internal Revenue Code. The recently enacted federal income tax law, among other things, contained significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21% beginning in 2018, limitation of the tax deduction for interest expense to 30% of adjusted earnings, limitation of the deduction for net operating losses to 80% of current year taxable income and elimination of net operating loss carrybacks, one time taxation of offshore earnings at reduced rates regardless of whether they are repatriated, immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing many business deductions and credits (including reducing the business tax credit for certain clinical testing expenses incurred in the testing of certain drugs for rare diseases or conditions). Notwithstanding the reduction in the corporate income tax rate, the overall impact of the new federal tax law remains uncertain and our business and financial condition could be adversely affected. In addition, it is uncertain if and to what extent various states will conform to the newly enacted federal tax law. The impact of this tax reform on holders of our common stock is also uncertain and could be adverse. We urge shareholders to consult with their legal and tax advisors with respect to this legislation and the potential tax consequences of investing in or holding our common stock.

Intellectual Property-Related Risk Factors

Our software and service offerings could infringe the intellectual property rights of third parties, which could expose us to additional costs and litigation and could adversely affect our ability to sell our products and services or cause shipment delays or stoppages.

It is difficult to determine whether our software products, including DataV, and engineering services infringe third-party intellectual property rights, particularly in a rapidly evolving technological environment in which technologies often overlap and where there may be numerous patent applications pending, many of which are confidential when filed. If we were to discover that one of our software products or service offerings, or a product based on one of our reference designs, violated a third party's proprietary rights, we may not be able to obtain a license on commercially reasonable terms, or at all, to continue offering that product or service. Similarly, third parties may claim that our current or future software products and services infringe their proprietary rights, regardless of whether such claims have merit. Any such claims could increase our costs and negatively impact our business and operating results. In certain cases, we have been unable to obtain indemnification against claims that third-party technology incorporated into our software products and services infringe the proprietary rights of others. However, any indemnification we do obtain may be limited in scope or amount. Even if we receive broad third-party indemnification, these entities may not have the financial capability to indemnify us in the event of infringement. In addition, in some circumstances we are required to indemnify our customers for claims made against them that are based on our software products or services. There can be no assurance that infringement or invalidity claims related to the software products and services we provide or arising from the incorporation by us of third-party technology and claims for indemnification from our customers resulting from such claims, will not be asserted or prosecuted against us. Some of our competitors have, or are affiliated with companies with, substantially greater resources than we have, and these competitors may be able to sustain the costs of complex intellectual property litigation to a greater degree and for longer periods of time than we could. In addition, we expect that software developers will be increasingly subject to infringement claims as the number of products and competitors in the software industry grows, and as the functionality of products in different industry segments increasingly overlap. Such claims, even if not meritorious, could result in the expenditure of significant financial and managerial resources in addition to potential product redevelopment costs and delays. Furthermore, if we were unsuccessful in resolving a patent or other intellectual

property infringement action claim against us, we may be prohibited from developing or commercializing certain of our technologies and products, or delivering services based on the infringing technology, unless we obtain a license from the holder of the patent or other intellectual property rights. There can be no assurance that we would be able to obtain any such license on commercially favorable terms, or at all. If such license were not obtained, we would be required to cease these related business operations, which could negatively impact our business, revenue and operating results.

If we fail to adequately protect our intellectual property rights, competitors may be able to use our technology or trademarks, which could weaken our competitive position, reduce our revenue and increase our costs.

If we fail to adequately protect our intellectual property, our competitive position could be weakened, and our revenue and operating results adversely affected. We rely primarily on confidentiality policies and procedures and contractual provisions as well

as a combination of patent, copyright, trade secret and trademark laws, to protect our intellectual property. These laws, policies and procedures provide only limited protection. It is possible that another party could obtain patents that block our use of some, or all, of our software products and services, including DataV. If that occurred, we would need to obtain a license from the patent holder or design around those patents. The patent holder may or may not choose to make a license available to us on acceptable terms, or at all. Similarly, it may not be possible to design around a blocking patent. In general, there can be no assurance that our efforts to protect our intellectual property rights through patent, copyright, trade secret and trademark laws will be effective to prevent misappropriation of our technology, or to prevent the development and design by others of products or technologies similar to or competitive with those developed by us.

We license our computer source code to customers. There can be no assurance that customers with access to our source code will comply with the license terms or that we will discover any violations of the license terms or, in the event of discovery of violations, that we will be able to successfully enforce the license terms and/or recover the economic value lost from such violations. To license some of our software products, we rely in part on “shrink-wrap” and “click wrap” licenses that are not signed by the end user and, therefore, may be unenforceable under the laws of certain jurisdictions. As with other software, our software products are susceptible to unauthorized copying and uses that may go undetected, and policing such unauthorized use is difficult. A significant portion of our marks include the word “BSQUARE.” Other companies use forms of “BSQUARE” in their marks alone, or in combination with other words, and we cannot prevent all such third-party uses. We license certain trademark rights to third parties. Such licensees may not abide by our compliance and quality control guidelines with respect to such trademark rights. Any of these outcomes could negatively impact our brand, dilute its recognition in the marketplace, or confuse potential customers, all of which could harm our business.

The computer software market is characterized by frequent and substantial intellectual property litigation, which is often complex and expensive, and involves a significant diversion of resources and uncertainty of outcome. Litigation may be necessary in the future to enforce our intellectual property or to defend against a claim of infringement or invalidity. Litigation could result in substantial costs and the diversion of resources and could negatively impact our business and operating results.

Our software or hardware products or the third-party hardware or software integrated with our products or delivered as part of our service offerings may suffer from defects or errors that could impair our ability to sell our products and services.

Software and hardware components as complex as those needed for dedicated purpose intelligent systems frequently contain errors or defects, especially when first introduced or when new versions are released. We have had to delay commercial release of certain versions of our products until problems were corrected and, in some cases, have provided product enhancements to correct errors in released products. Some of our contracts require us to repair or replace products that fail to work. To the extent that we repair or replace products, our expenses may increase. In addition, it is possible that by the time defects are fixed, the market opportunity may decline which may result in lost revenue. Moreover, to the extent that we provide increasingly complex and comprehensive products and services, particularly those focused on IIoT hardware, and rely on third-party manufacturers and suppliers to manufacture these products, we will be dependent on the ability of such third-party manufacturers and suppliers to correct, identify and prevent manufacturing errors or defects. Errors or defects that are discovered after commercial release could result in loss of revenue or delay in market acceptance, diversion of development resources, damage to our reputation and increased service and warranty costs, all of which could negatively impact our business and operating results.

If we are unable to license key software from third parties, our business could be harmed.

We sometimes integrate third-party software with our proprietary software and engineering service offerings or sell such third-party software offerings on a standalone basis (e.g. Microsoft Windows Embedded and Mobile operating systems under our ODAs with Microsoft). If our relationships with these third-party software vendors were to deteriorate, or be eliminated in their entirety, we might be unable to obtain licenses on commercially reasonable terms, if at all. In the event that we are unable to obtain these third-party software offerings, we would be unable to continue to generate revenue from our reseller relationships or, with respect to our proprietary software and engineering services offerings, we would be required to develop this technology internally, assuming it was economically or technically feasible, or seek similar software offerings from other third parties assuming there were competing offerings in the marketplace, which could delay or limit our ability to introduce enhancements or new products, or to continue to sell existing products and engineering services, thereby negatively impacting our revenue and operating results.

Governance-Related Risk Factors

It might be difficult for a third party to acquire us even if doing so would be beneficial to our shareholders.

Certain provisions of our articles of incorporation, bylaws and Washington law may discourage, delay or prevent a change in the control of us or a change in our management, even if doing so would be beneficial to our shareholders. Our Board of Directors has the authority under our articles of incorporation to issue preferred stock with rights superior to the rights of the holders of common stock. As a result, preferred stock could be issued quickly and easily with terms calculated to delay or prevent a change in

control of our company or make removal of our management more difficult. In addition, our Board of Directors is divided into three classes. The directors in each class serve for three-year terms, one class being elected each year by our shareholders. This system of electing and removing directors may discourage a third party from making a tender offer or otherwise attempting to obtain control of our company because it generally makes it more difficult for shareholders to replace a majority of our directors. In addition, Chapter 19 of the Washington Business Corporation Act generally prohibits a "target corporation" from engaging in certain significant business transactions with a defined "acquiring person" for a period of five years after the acquisition, unless the transaction or acquisition of shares is approved by a majority of the members of the target corporation's Board of Directors prior to the time of acquisition. This provision may have the effect of delaying, deterring or preventing a change in control of our company. The existence of these anti-takeover provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock.

International Operations-Related Risk Factors

Our international operations expose us to greater intellectual property, management, collections, regulatory and other risks.

Customers outside of North America generated 6% of our total revenue both 2018 and 2017. We currently have sizable operations outside of North America in Taiwan and the United Kingdom ("U.K."). Our international activities and operations expose us to a number of risks, including the following:

- Greater difficulty in protecting intellectual property due to less stringent foreign intellectual property laws and enforcement policies;
- Longer collection cycles than we typically experience in North America;
- Unfavorable changes in regulatory practices and tariffs;
- Compliance with complex regulatory regimes or restrictions on import and export of our goods and services;
- Complex and/or adverse tax laws and/or changes thereto. Additionally, we may be subject to income, withholding and other taxes for which we may realize no current benefit despite the existence of significant net operating loss and tax credit carryforwards in the U.S.;
- Loss or reduction of withholding tax exemptions;
- The impact of fluctuating exchange rates between the U.S. dollar and foreign currencies;
- General economic and political conditions in international markets which may differ from those in the U.S.;
- Increased exposure to potential liability under the Foreign Corrupt Practices Act;
- Added cost and administrative burden associated with creating and operating business structures in other jurisdictions;
- Potential labor costs and risks associated with employees and labor laws in other geographies; and
- The inherent risks of working in a certain highly regulated and/or controlled economies where relationships between company management and government officials is critical to timely processing of approvals required to conduct business.
- In addition, on June 23, 2016, the U.K. held a referendum in which voters approved an exit from the E.U., commonly referred to as "Brexit". As a result of the referendum, the British government began negotiating the terms of the U.K.'s future relationship with the E.U. Although it remains unknown what those terms will be, it is possible that there will be greater restrictions on imports and exports between the U.K. and E.U. countries and increased regulatory complexities, which could adversely impact our operations and business in both the U.K. and the E.U.

These risks could have a material adverse effect on the financial and managerial resources required to operate our foreign offices, as well as on our future international revenue, which could negatively impact our business and operating results.

As our customers seek more cost-effective locations to develop and manufacture their products, particularly overseas locations, our ability to continue to sell our software products and services to these customers could be adversely affected, which could negatively impact our revenue and operating results.

Due to competitive and other pressures, some of our customers have moved, and others may seek to move, the development and manufacturing of their smart, connected systems to overseas locations, which may limit our ability to sell our software and services to these customers. As an example, under our ODAs with Microsoft, we are currently only able to sell Microsoft Windows Embedded operating systems to our customers in the United States, Canada, the Caribbean (excluding Cuba), Mexico, the E.U.

(through June 30, 2019) and the European Free Trade Association. If our customers, or potential customers, move their manufacturing overseas to locations in which our business may be limited, we may be less able to remain competitive, which could negatively impact our revenue and operating results.

Item 1B. Unresolved Staff Comments.
Not applicable.

Item 2. Properties.
As of December 31, 2018, our corporate headquarters had 24,061 square feet of leased space in a single location in Bellevue, Washington. The lease term ends in May 2020.

In North America, we also lease office space in Boston, Massachusetts. We lease office space overseas in Taipei, Taiwan; and Trowbridge, England, U.K. We believe that our facilities have sufficient capacity to support our current operational needs as well as short-term growth plans.

Item 3. Legal Proceedings.
None.

Item 4. Mine Safety Disclosures.
Not applicable.

PART II

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

Market Information

Our common stock is traded on the NASDAQ Global Market under the symbol "BSQR."

Holders

As of January 31, 2019, there were 112 holders of record of our common stock. Because many shares of our common stock are held by brokers and other institutions on behalf of shareholders, we are unable to determine the total number of shareholders represented by these holders of record.

Item 6. Selected Financial Data.

Not applicable.

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with our consolidated financial statements and related notes. This Management's Discussion and Analysis of Financial Condition and Results of Operations may contain some statements and information that are not historical facts but are forward-looking statements. For a discussion of these forward-looking statements, and of important factors that could cause results to differ materially from the forward-looking statements contained in this report, see Item 1 of Part I, "Business—Cautionary Note Regarding Forward-Looking Statements," and Item 1A of Part I, "Risk Factors."

Overview

Since our inception, our business has largely been focused on providing software solutions (including reselling software from Microsoft Corporation ("Microsoft")) and related engineering services to businesses that develop, market and sell dedicated-purpose standalone intelligent systems. Examples of dedicated-purpose standalone intelligent systems include smart, connected computing devices such as smart phones, set-top boxes, point-of-sale terminals, kiosks, tablets and handheld data collection devices, as well as smart vending machines, ATM machines, digital signs and in-vehicle telematics and entertainment devices. We focus on systems that utilize various Microsoft Windows Embedded operating systems as well as devices running other popular operating systems such as Android, Linux, and QNX, and that are usually connected to a network via a wired or wireless connection. Our customers include world-class original equipment manufacturers ("OEMs"), original design manufacturers ("ODMs"), corporate enterprises ("Enterprises"), silicon vendors ("SVs") and peripheral vendors. A significant portion of our business historically has also been focused on reselling software from Microsoft, from which a majority of our revenue currently continues to be derived.

Beginning in early 2014, we initiated development efforts focused on new proprietary software products addressing the Industrial Internet of Things ("IIoT") market, extracting data from uniquely identifiable devices and applying advanced analytics and machine learning to the data in order to derive meaningful and actionable insights. While IIoT is a relatively new market, we believe the work we have engaged in since our inception—namely adding intelligence to discrete standalone devices and systems—embodies much of what is central to the core functionality of IIoT. These software development efforts have driven a new business initiative for BSQUARE, which we refer to as DataV™. Our DataV solution includes software products, applications and services that are designed to turn raw IIoT device data into meaningful and actionable data for our customers.

We began marketing DataV late in the first quarter of 2016 and announced our first three major customer bookings later that year which comprised software licensing, software maintenance and related systems integration services. During 2017 we began selling data analytics services and DataV application pilots to major industrial customers primarily in the transportation, oil and gas, and manufacturing vertical markets. One of these pilots led to a multi-year SaaS and related services agreement in 2018. The remaining pilots were completed, and while no additional licensing arrangements resulted from these pilots, we believe there may be future opportunities with a number of these customers.

We believe that IIoT represents a large, expanding addressable market. We also believe that many potential customers need assistance with their digital transformation activities prior to making long-term solutions commitments, and that these IIoT related services may provide us an inroad to eventual DataV software and services sales. Developing, selling and implementing DataV was our primary focus through 2018. While we will continue to market our DataV software, in 2019 we intend to expand our efforts to market IIOT related services that may or may not include DataV. We will continue to invest in the development of our DataV software in support of existing customer commitments and new customer opportunities. We intend to continue to run our legacy software resale business to maximize cash flow for the foreseeable future. Our legacy professional engineering services business is now managed

as a part of our overall services business, which we anticipate will increasingly serve our DataV software and IIOT services customers.

Critical Accounting Judgments

Revenue recognition

We recognize revenue when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration that we expect to receive in exchange for those goods or services. We generate all of our revenue from contracts with customers.

Third-party software

We sell third-party software licenses based upon a customer purchase order, shipping a certificate of authenticity ("COA") to satisfy this single performance obligation. These shipments are also subject to limited return rights; historically, returns have averaged less than one-quarter of one percent. We recognize revenue from third-party products at the time of shipment when the customer accepts control of the COA.

Proprietary software

We sell our proprietary software products to customers under a contract or by purchase order. Our DataV software contracts generally include professional services, a perpetual or term license and support and maintenance. In contracts with multiple performance obligations, we identify each performance obligation and evaluate whether the performance obligations are distinct within the context of the contract at contract inception. Performance obligations that are not distinct at contract inception are combined. Contracts that include software customization may result in the combination of the customization services with the software license as one distinct performance obligation. The transaction price is generally in the form of a fixed fee at contract inception. Certain DataV contracts also include variable consideration in the form of royalties earned when customers meet contractual volume thresholds. We allocate the transaction price to each distinct performance obligation based on the estimated standalone selling price for each performance obligation. We then look to how control of the software transfers to the customer in order to determine the timing of revenue recognition. In contracts that include customer acceptance, we recognize revenue when we have delivered the software and received customer acceptance. We recognize revenue from support and maintenance over the service delivery period. We recognize revenue from royalties in the period of usage.

Our non-DataV software products generally do not include customization or modification services and are sold in the form of term licenses. These software licenses represent one distinct performance obligation. Revenue is recognized when the software is delivered to the customer.

There are two items involving revenue recognition on DataV software contracts that require us to make more difficult and subjective judgments: the determination of which performance obligations are distinct within the context of the overall contract and the estimated standalone selling price of each performance obligation. In instances where our DataV contracts include significant customization or modification services, the customization and modification services are generally combined with the software license and recorded as one distinct performance obligation. We estimate the standalone selling price of each performance obligation based on either a cost-plus-margin approach or an adjusted market assessment approach. In instances where we have observable selling prices for professional services and support and maintenance, we may apply the residual approach to estimate the standalone selling price of software licenses.

Professional engineering services

We enter into contracts for professional engineering services, including for our IIoT-related service offerings, that include software development and customization. We identify each performance obligation in our professional engineering services contracts at contract inception. The contracts generally include project deliverables specified by each customer. The performance obligations in the contracts are generally combined into one deliverable. The contract pricing is either at stated billing rates per service hour and material costs or at a fixed amount. Services provided under professional engineering contracts generally result in the transfer of control of the applicable deliverable over time. We recognize revenue on service contracts based on time and materials as we have the right to invoice. We recognize revenue on fixed fee contracts on the proportion of labor hours expended to the total hours expected to complete the contract performance obligation. Certain professional engineering contracts include substantive customer acceptance provisions, in which case, we recognize revenue upon customer acceptance.

The determination of the total labor hours expected to complete the performance obligations on fixed fee contracts involves significant judgment. We incorporate revisions to hour and cost estimates when the causal facts become

known. In certain situations, when it is impractical for us to reasonably measure the outcome of a performance obligation, and where we anticipate that we will not incur a loss, an adjusted cost-based input method is used for revenue recognition. Equal amounts of revenue and cost are recognized during the contract period, and profit is recognized when the project is completed and accepted.

We measure our estimate of completion on fixed-price contracts, which in turn determines the amount of revenue we recognize, based primarily on actual hours incurred to date and our estimate of remaining hours necessary to complete the contract. These estimates factor in such variables as the remaining tasks, the complexity of the tasks, the contracted quality of the software to be provided, the customer's estimated delivery date, integration of third-party software and quality thereof and other factors. Every fixed-price contract requires various approvals within our company, including by our Chief Executive Officer if significant. This approval process takes into consideration several factors, including the complexity of engineering required. Historically, our estimation processes related to fixed-price contracts have been accurate based on the information known at the time of the reporting of our results. However, percentage-of-completion estimates require significant judgment. During the year ended December 31, 2018, we delivered professional engineering services under four fixed-price service contracts. The estimated remaining labor hours and costs to complete these contracts represent management's best estimates based on the facts and circumstances as of the filing of this report. If there are changes to the underlying facts and circumstances, we record the revisions to our calculations in the period the changes are noted. For illustrative purposes only, if we were 10% under in our estimate of remaining labor hours and costs on the fixed-bid contracts active during the year ended December 31, 2018, our revenue could have been overstated by approximately $15,000 for 2018.

Intangible assets and goodwill

We evaluate our intangible assets for indications of impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Our intangible assets consist of customer relationships arising from business acquisitions. We periodically assess the value of our intangible assets. Factors that could trigger an impairment analysis include significant under-performance relative to historical or projected future operating results, significant changes in the manner of our use of the acquired assets or the strategy for our overall business or significant negative industry or economic trends. If this evaluation indicates that the value of the intangible asset may be impaired, we assess the likelihood of recoverability of the net carrying value of the asset over its remaining useful life. If this assessment indicates that the intangible asset is not recoverable, based on the estimated undiscounted future cash flows of the technology over the remaining useful life, we reduce the net carrying value of the related intangible asset to fair value.

We evaluate goodwill for impairment annually during the fourth quarter or more frequently when an event occurs, or circumstances change that indicate that the carrying value may not be recoverable. We have three reporting units for the purpose of evaluating goodwill for impairment—third-party software, proprietary software and professional engineering services. See Note. 14, Information about Operating Segments and Geographic Areas in the Notes to our Consolidated Financial Statements in Item 8.

For reporting units that carry goodwill, we test for impairment by performing an optional qualitative assessment to determine whether the fair value of the reporting unit is more likely than not less than the carrying amount. Alternatively, at our option, we can forego performing the qualitative assessment and proceed directly to perform the quantitative impairment test by comparing the fair value of the reporting unit with its carrying amount, including goodwill, and recording a goodwill impairment charge for the excess. Any such impairment charges could be significant and have a material adverse effect on our reported financial results.

Taxes

As part of the process of preparing our consolidated financial statements, we are required to estimate income taxes in each of the countries and other jurisdictions in which we operate. This process involves estimating our current tax expense together with assessing temporary differences resulting from the differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities. Net operating losses and tax credits, to the extent not already utilized to offset taxable income or income taxes, also give rise to deferred tax assets. We must then assess the likelihood that any deferred tax assets will be realized from future taxable income, and, to the extent we believe that recovery is not likely, we must establish a valuation allowance. We are required to use judgment as to the appropriate weighting of all available evidence when assessing the need for the establishment or the release of valuation allowances. As part of this analysis, we examine all available evidence on a jurisdiction-by-jurisdiction basis and weigh the positive and negative information when determining the need for full or partial valuation allowances. The evidence considered for each jurisdiction includes, among other items, (i) the historical levels of income or loss over a range of time periods that extends beyond the two years presented, (ii) the historical sources of income and losses, (iii) the expectations and risk associated with underlying estimates of future taxable income, (iv) the expectations and risk associated with new product offerings and uncertainties with the timing of future taxable income, and (v) prudent and feasible tax planning strategies. Significant judgment is required in determining our provision for income taxes, deferred tax assets and liabilities and any valuation allowance recorded against our deferred tax assets. We estimate the valuation allowance related to our deferred tax assets on a quarterly basis.

Our sales may be subject to other taxes, particularly withholding taxes, due to our sales to customers in countries other than the United States. The tax regulations governing withholding taxes are complex, causing us to have to make

assumptions about the appropriate tax treatment. Further, we make sales in many jurisdictions across the United States, where tax regulations are varied and complex. We must therefore continue to analyze our state tax exposure and determine what the appropriate tax treatments are, and make estimates for sales, franchise, income and other state taxes.

Results of Operations

The following table presents our summarized results of operations for the periods indicated. Our historical operating results are not necessarily indicative of the results for any future period.

(In thousands, except percentages)	Year Ended December 31, 2018	2017	$ Change	% Change
Revenue	$73,414	$80,811	$(7,397)	(9)%
Cost of revenue	57,904	62,689	(4,785)	(8)%
Gross profit	15,510	18,122	(2,612)	(14)%
Operating expenses	29,441	27,543	1,898	7 %
Loss from operations	(13,931)	(9,421)	(4,510)	48 %
Other income, net	207	214	(7)	(3)%
Loss before income taxes	(13,724)	(9,207)	(4,517)	49 %
Income tax (expense) benefit	(13)	149	(162)	(109)%
Net loss	$(13,737)	$(9,058)	$(4,679)	52 %

Revenue

We generate revenue from the sale of software, both our own proprietary software and third-party software that we resell, and the sale of professional engineering services. Total revenue decreased in 2018 compared to 2017, primarily due to lower sales of Microsoft Windows Embedded and Mobile operating systems and lower professional engineering service revenue, predominantly in North America. Additionally, we recognized approximately $3.0 million in DataV software revenue in 2017 that did not recur in 2018.

One customer, Honeywell International, Inc., accounted for 10% and 15% of total revenue in 2018 and 2017, respectively. No other customers accounted for 10% or more of total revenue in those periods.

Additional revenue details were as follows:

(In thousands, except percentages)	Year Ended December 31, 2018	2017	$ Change	% Change
Revenue:				
Third-party software	$61,159	$65,755	$(4,596)	(7)%
Proprietary software	3,954	4,646	(692)	(15)%
Professional engineering service revenue	8,301	10,410	(2,109)	(20)%
Total revenue	$73,414	$80,811	$(7,397)	(9)%
As a percentage of total revenue:				
Third-party software revenue	83 %	81 %		
Proprietary software revenue	5 %	6 %		
Professional engineering service revenue	11 %	13 %		

Total revenue consists of sales of third-party software and revenue realized from sales of our own proprietary software products, which include software license sales and support and maintenance revenue, and professional engineering services that support proprietary DataV software customers and legacy service customers.

Third-party software revenue decreased in 2018 compared to 2017, driven primarily by lower sales of Microsoft Windows Embedded operating systems. Sales of Microsoft operating systems represented approximately 81% and 80% of our total revenue and 57% and 54% of our total gross profit for 2018 and 2017, respectively.

Proprietary software revenue also decreased in 2018 compared to 2017, primarily due to lower DataV software revenue recognized in 2018 due to the timing of license acceptance as well as a decrease in legacy software products revenue. We expect that revenue from sales of both DataV and our other proprietary software will continue to fluctuate in timing and amount in future periods and will decline over time as they approach the end of their respective life cycles.

Professional engineering service revenue decreased in 2018 compared to 2017, due to declines in service revenue generated in North America, Asia and Europe with the completion in early 2017 of several existing customer projects and a shift in our sales generation priorities and staffing to DataV software and service solutions. Our largest professional engineering customers in 2018 were Coca-Cola and Google. We expect professional engineering service revenue to grow over time as we continue our strategic focus on DataV and other IIoT-related service offerings. We will continue to serve our legacy services customers as long as our contracts are profitable, and such revenue will continue to vary in timing and amounts.

Gross profit and gross margin

Cost of software revenue consists primarily of the cost of third-party software products payable to third-party vendors and support costs associated with our proprietary software products. Cost of service revenue consists primarily of salaries and benefits, contractor costs and re-billable expenses, related facilities and depreciation costs, and amortization of certain intangible assets related to acquisitions.

Gross profit and gross margin were as follows:

	Year Ended December 31,							
(In thousands, except percentages)	2018		2017		$ Change		% Change [1]	
Third-party software gross profit	$9,751		$10,594		$(843)		(8)	%
Third-party software gross margin	16	%	16	%	-		(—)	%
Proprietary software gross profit	$3,560		$4,483		$(923)		(21)	%
Proprietary software gross margin	90	%	96	%	-		(6)	%
Professional engineering service gross profit	$2,199		$3,045		$(846)		(28)	%
Professional engineering service gross margin	26	%	29	%	-		(3)	%
Total gross profit	$15,510		$18,122		$(2,612)		(14)	%
Total gross margin	21	%	22	%	-		(1)	%

[1] For gross margin, amounts represent percentage point change.

Third-party software gross profit declined in 2018 compared to 2017, primarily as a result of lower third-party software sales, but gross margins were relatively stable. We experienced increased competition with respect to a number of larger third-party software accounts during 2018 as price protections under the Microsoft volume pricing arrangement, which ended in 2016, reduced per account revenue from these accounts. The per account revenue reductions were more heavily weighted to lower margin customers, resulting in slightly improved gross margins in 2017 and 2018. Gross profit on third-party software was positively impacted in 2018 and 2017 by rebate credits we received from Microsoft for the sale of Windows Embedded operating systems earned through the achievement of defined objectives. In accordance with Microsoft rebate program rules, we allocate 30% of rebates to reduce cost of sales, with the remaining 70% to offset qualified marketing expenses in the period the expenditures are incurred. Under the Microsoft rebate program, we recorded $718,000 and $499,000 of rebates in 2018 and 2017, respectively, which were accounted for as reductions in cost of revenue. Additionally, we recorded $0.7 million in rebates in 2018 and 2017, which were accounted for as reductions in marketing expenses. There was a balance of approximately $329,000 in outstanding rebates for which we qualified as of December 31, 2018. If qualified program expenditures are made, these will be accounted for as reductions in marketing expenses in the period in which such expenditures are made.

Proprietary software gross profit and gross margin decreased in 2018 compared to 2017, due to lower DataV software revenue recognized in 2018 due to the timing of license acceptance as well as a decrease in legacy software products revenue. We anticipate that software gross profit and gross margin will continue to fluctuate in future periods due to the timing of DataV software revenue recognition.

Professional engineering service gross profit and gross margin decreased in 2018 compared to 2017, primarily due to incurring certain fixed costs that were supported by lower revenue in 2018 compared to 2017.

Operating expenses

Operating expenses were as follows:

(In thousands, except percentages)	Year Ended December 31, 2018	2017	$ Change	% Change
Operating expenses:				
Selling, general and administrative	$17,074	$20,982	$(3,908)	(19)%
Research and development	8,629	6,561	2,068	32 %
Goodwill impairment	3,738	-	3,738	100 %
Total operating expenses	$29,441	$27,543	$1,898	7 %
As a percentage of total revenue:				
Selling, general and administrative	23 %	26 %		
Research and development	12 %	8 %		
Goodwill impairment	5 %	-		

Selling, general and administrative

Selling, general and administrative (“SG&A”) expenses consist primarily of salaries and related benefits, commissions and bonuses for our sales, marketing and administrative personnel and related facilities and depreciation costs, as well as professional services fees (e.g., consulting, legal, audit and tax). SG&A expenses decreased in 2018 compared to 2017, due to lower spending across the board for sales, marketing and customer support, finance, legal and executive areas.

Research and development

Research and development (“R&D”) expenses consist primarily of salaries and benefits for software development and quality assurance personnel, contractor and consultant costs and related facilities and depreciation costs. R&D expenses increased in 2018 compared to 2017, due to higher spending for continued development of our DataV software product line.

Goodwill impairment

Goodwill impairment expense resulted from our annual goodwill assessment in the fourth quarter of 2018, where the carrying value of goodwill was determined to be fully impaired, resulting in an impairment charge of $3.7 million.

Other income and loss

Other income and loss consists primarily of interest income on our cash and investments, gains and losses we may recognize on our investments, gains and losses on foreign exchange transactions and other items. The decrease in 2018 compared to 2017 was primarily due to lower total interest earned on our cash and investments and foreign exchange rate fluctuations.

Income taxes

Income tax expense for 2018 related to state and local income taxes. Income tax benefit for 2017 related to discrete items (including U.K. stock compensation tax benefits, a U.K. net operating loss carryback, an international tax reserve release and a refund of U.S. alternative minimum tax as a result of an amended return), partially offset by Japan tax expense.

Liquidity and Capital Resources

As of December 31, 2018, we had $16.9 million of cash, cash equivalents and investments (including $0.5 million in restricted cash), compared to $24.8 million at December 31, 2017, reflecting a net use of approximately $7.8 million in cash, cash equivalents and investments. We generally invest our excess cash in high quality marketable investments. These investments generally include corporate notes and bonds, commercial paper and money market funds, although specific holdings can vary from period to period depending upon our cash requirements. Our investments held at December 31, 2018 had minimal default risk and short-term maturities.

Operating activities used cash of approximately $7.4 million in 2018, which included a net loss of $13.7 million, partially offset by non-cash adjustments of $5.1 million and a working capital contribution of approximately $1.3 million. Operating activities used cash of approximately $8.2 million in 2017, which included a net loss of approximately $9.1 million, partially offset by non-cash adjustments of approximately $2.4 million and a working capital usage of approximately $1.5 million.

Investing activities provided cash of approximately $5.1 million in 2018, primarily due to net cash inflows on short-term investments of $5.5 million, partially offset by capital expenditures of $0.5 million. Investing activities provided cash of

approximately $6.5 million in 2017, primarily due to net cash inflows on short-term investments of $7.0 million, partially offset by capital expenditures of $0.4 million.

Financing activities provided no cash in 2018 and $0.2 million in 2017 resulting from the exercise of stock options.

We believe that our existing cash, cash equivalents and investments will be sufficient to meet our needs for working capital and capital expenditures for at least the next 12 months.

Contractual commitments

Future operating lease commitments were as follows as of December 31, 2018 (in thousands):

2019	$1,195
2020	623
2021	60
Total	$1,878

Recently Issued Accounting Standards

See Note 1, “Summary of Significant Accounting Policies” in the Notes to Consolidated Financial Statements in Item 8.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.
Not applicable.

Item 8. Financial Statements and Supplementary Data.

BSQUARE CORPORATION

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm	30
Consolidated Balance Sheets as of December 31, 2018 and 2017	31
Consolidated Statements of Operations and Comprehensive Loss for 2018 and 2017	32
Consolidated Statements of Shareholders' Equity for 2018 and 2017	33
Consolidated Statements of Cash Flows for 2018 and 2017	34
Notes to Consolidated Financial Statements	35

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders

BSQUARE Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of BSQUARE Corporation (the "Company") as of December 31, 2018 and 2017, the related consolidated statements of operations and comprehensive loss, shareholders' equity, and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2018 and 2017, and the consolidated results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Moss Adams LLP

Seattle, Washington

March 1, 2019

We have served as the Company’s auditor since 2006.

BSQUARE CORPORATION

CONSOLIDATED BALANCE SHEETS

(In thousands, except share amounts)

	December 31,	
	2018	2017
ASSETS		
Current assets:		
Cash and cash equivalents	$10,005	$12,859
Restricted cash	263	—
Short-term investments	6,409	11,895
Accounts receivable, net of allowance for doubtful accounts of $40 at December 31, 2018 and $50 at December 31, 2017	11,581	18,014
Prepaid expenses and other current assets	685	548
Contract assets	1,053	937
Total current assets	29,996	44,253
Restricted cash, long term	263	—
Equipment, furniture and leasehold improvements, net	911	989
Deferred tax assets	7	—
Intangible assets, net	267	365
Goodwill	—	3,738
Other non-current assets including contract assets	550	89
Total assets	$31,994	$49,434
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Third-party software fees payable	$7,620	$10,547
Accounts payable	565	375
Accrued compensation	1,629	2,266
Other accrued expenses	653	681
Deferred rent, current portion	347	339
Deferred revenue, current portion	1,652	3,219
Total current liabilities	12,466	17,427
Deferred rent	150	516
Deferred revenue	1,037	61
Commitments and contingencies (Note 9)		
Shareholders' equity:		
Preferred stock, no par: 10,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock, no par: 37,500,000 shares authorized; 12,777,573 issued and outstanding at December 31, 2018 and 12,664,489 issued and outstanding at December 31, 2017	138,280	137,622
Accumulated other comprehensive loss	(926)	(916)
Accumulated deficit	(119,013)	(105,276)
Total shareholders' equity	18,341	31,430
Total liabilities and shareholders' equity	$31,994	$49,434

See notes to consolidated financial statements.

BSQUARE CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(In thousands, except per share amounts)

	Year Ended December 31,	
	2018	2017
Revenue:		
Third-party software	$61,159	$65,755
Proprietary software	3,954	4,646
Professional engineering service	8,301	10,410
Total revenue	73,414	80,811
Cost of revenue:		
Third-party software	51,408	55,161
Proprietary software	394	163
Professional engineering service	6,102	7,365
Total cost of revenue	57,904	62,689
Gross profit	15,510	18,122
Operating expenses:		
Selling, general and administrative	17,074	20,982
Research and development	8,629	6,561
Goodwill impairment	3,738	—
Total operating expenses	29,441	27,543
Loss from operations	(13,931)	(9,421)
Other income, net	207	214
Loss before income taxes	(13,724)	(9,207)
Income tax (expense) benefit	(13)	149
Net loss	$(13,737)	$(9,058)
Basic loss per share	$(1.08)	$(0.72)
Diluted loss per share	$(1.08)	$(0.72)
Shares used in per share calculations:		
Basic	12,712	12,594
Diluted	12,712	12,594
Comprehensive loss:		
Net loss	$(13,737)	$(9,058)
Other comprehensive income (loss):		
Foreign currency translation, net of tax	(17)	25
Unrealized gain on investments, net of tax	7	—
Total other comprehensive income (loss)	(10)	25
Comprehensive loss	$(13,747)	$(9,033)

See notes to consolidated financial statements.

BSQUARE CORPORATION

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In thousands, except share amounts)

	Preferred Stock		Common Stock		Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount	Shares	Amount			
Balance as of December 31, 2016	-	$ -	12,532,348	$135,660	$ (941)	$ (96,607)	$ 38,112
Cumulative effect of accounting changes	-	$ -	-	$-	$ 15	$ 389	404
Exercise of stock options	-	-	54,692	174	-	-	174
Share-based compensation, including issuance of restricted stock	-	-	77,449	1,757	-	-	1,757
Net loss	-	-	-	-	-	(9,058)	(9,058)
Foreign currency translation adjustment, net of tax	-	-	-	31	10	-	41
Balance as of December 31, 2017	-	-	12,664,489	137,622	(916)	(105,276)	31,430
Exercise of stock options	-	-	2,422	9	-	-	9
Share-based compensation, including issuance of restricted stock	-	-	113,535	678	-	-	678
Shares of restricted stock withheld for taxes	-	-	(2,873)	(10)	-	-	(10)
Net loss	-	-	-	-	-	(13,737)	(13,737)
Foreign currency translation adjustment, net of tax	-	-	-	(19)	(17)	-	(36)
Unrealized gain on investments, net of tax	-	-	-	-	7	-	7
Balance as of December 31, 2018	-	$ -	12,777,573	$138,280	$ (926)	$ (119,013)	$ 18,341

See notes to consolidated financial statements.

BSQUARE CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Year Ended December 31,	
	2018	2017
Cash flows from operating activities:		
Net loss	$(13,737)	$(9,058)
Adjustments to reconcile net loss to net cash from operating activities:		
Depreciation and amortization	639	634
Stock-based compensation	678	1,757
Goodwill impairment	3,738	-
Deferred income taxes	—	(16)
Changes in operating assets and liabilities:		
Accounts receivable, net	6,433	2,814
Prepaid expenses and other assets	(115)	331
Contract assets	(644)	149
Third-party software fees payable	(2,927)	(4,284)
Accounts payable and accrued expenses	(475)	317
Deferred revenue	(591)	(547)
Deferred rent	(358)	(320)
Net cash used by operating activities	(7,359)	(8,223)
Cash flows from investing activities:		
Purchases of equipment and furniture	(463)	(439)
Proceeds from maturities of short-term investments	18,125	33,532
Purchases of short-term investments	(12,595)	(26,544)
Net cash provided by investing activities	5,067	6,549
Cash flows from financing activities—proceeds from exercise of stock options	9	202
Effect of exchange rates on cash	(45)	19
Net decrease in cash, restricted cash, and cash equivalents	(2,328)	(1,453)
Cash, restricted cash, and cash equivalents, beginning of year	12,859	14,312
Cash, restricted cash, and cash equivalents, end of year	$10,531	$12,859
Supplemental cash flow information:		
Cash paid for income taxes	$75	$256

See notes to consolidated financial statements.

BSQUARE CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Description of Business and Accounting Policies

Description of business

BSQUARE Corporation ("BSQUARE") was incorporated in Washington State in July 1994. Since our inception, our business has largely been focused on providing software solutions (including reselling software from Microsoft Corporation ("Microsoft")) and related engineering services to businesses that develop, market and sell dedicated-purpose standalone intelligent systems. Examples of dedicated-purpose standalone intelligent systems include smart, connected computing devices such as smart phones, set-top boxes, point-of-sale terminals, kiosks, tablets and handheld data collection devices, as well as smart vending machines, ATM machines, digital signs and in-vehicle telematics and entertainment devices.

Beginning in early 2014, we initiated development efforts focused on new proprietary software products addressing the Industrial Internet of Things ("IIoT") market, extracting data from uniquely identifiable devices and applying advanced analytics and machine learning to the data in order to derive meaningful and actionable insights. We believe that IIoT represents a large, expanding addressable market. We also believe that many potential customers need assistance with their digital transformation activities prior to making long-term solutions commitments, and that these IIoT related services may provide us an inroad to eventual DataV software and services sales. Developing, selling and implementing DataV was our primary focus through 2018. While we will continue to market our DataV software, in 2019 we intend to expand our efforts to market IIOT related services that may or may not include DataV. We will continue to invest in the development of our DataV software in support of existing customer commitments and new customer opportunities. We intend to continue to run our legacy software resale business to maximize cash flow for the foreseeable future. Our legacy professional engineering services business is now managed as a part of our overall services business, which we anticipate will increasingly serve our DataV software and IIOT services customers.

Basis of consolidation

The consolidated financial statements include the accounts of BSQUARE and our wholly owned subsidiaries. All intercompany balances and transactions have been eliminated.

Recently adopted accounting standards

In January 2017, the FASB issued ASU No. 2017-04, "Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment" ("ASU 2017-04"), simplifying how an entity is required to test goodwill for impairment by eliminating step two from the goodwill impairment test as referenced in Accounting Standards Codification ("ASC") 350, Intangibles – Goodwill and Other ("ASC 350"). As a result, an entity should perform an annual or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount, recognizing an impairment charge for the amount by which the carrying amount exceeds the fair value of the reporting unit. Any impairment loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. ASU 2017-04 is effective for fiscal years and interim periods within those years beginning after December 15, 2019, with early adoption permitted on testing dates after January 1, 2017. We elected to early adopt this ASU as of January 1, 2018 on a prospective basis for annual or interim goodwill impairment tests performed after that date. We chose to early adopt this ASU in order to perform our annual goodwill impairment test by comparing the fair value of the professional engineering service reporting unit to its carrying value to assess impairment. When performing our annual

impairment test in the fourth quarter of 2018, we recorded a goodwill impairment charge of $3.7 million. See Note 6, Goodwill and Intangible Assets.

In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows (Topic 230), Restricted Cash, with respect to amending the statement of cash flows explanations to require that amounts generally described as restricted cash and restricted cash equivalents are included with cash and cash equivalents when recording the beginning-of-period and end-of-period amounts shown on the statement of cash flows. The amendments do not provide a definition of restricted cash or restricted cash equivalents. We adopted the amendments in the fourth quarter of 2018.

Use of estimates

Preparing financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Examples include provisions for bad debts and income taxes, estimates of progress on professional engineering service arrangements, bonus accruals, fair value of intangible assets and property and equipment, fair values of stock-based awards and the fair values of acquired assets and liabilities, among other estimates. Actual results may differ from these estimates.

Income (loss) per share

We compute basic per share amounts using the weighted average number of common shares outstanding during the period and exclude any dilutive effects of common stock equivalent shares, such as options and restricted stock units ("RSUs"). We consider RSUs as outstanding and include them in the computation of basic income or loss per share only when vested. We compute diluted per share amounts using the weighted average number of common shares outstanding plus common stock equivalent shares outstanding during the period using the treasury stock method. We exclude common stock equivalent shares from the computation if their effect is anti-dilutive. Unvested but outstanding RSUs are included in the diluted per share calculation. In a period where we are in a net loss position, the diluted loss per share is computed using the basic share count.

The following table presents a reconciliation of the number of shares used in the calculation of basic and diluted per share amounts (in thousands):

	Year Ended December 31,	
	2018	2017
Weighted average common shares outstanding, basic	12,712	12,594
Dilutive potential common shares	—	—
Weighted average common shares outstanding, diluted	12,712	12,594

Common stock equivalent shares of approximately 1,714,000 and 1,227,000 were excluded from the computation of diluted per share amounts for the years ended December 31, 2018 and 2017, respectively, because their effect was anti-dilutive.

Cash, cash equivalents and investments

We invest our excess cash primarily in highly liquid debt instruments of U.S. government agencies and municipalities, debt instruments issued by foreign governments, corporate commercial paper, money market funds, and corporate debt securities. We classify all highly liquid investments with stated maturities of three months or less from date of purchase as cash equivalents and all highly liquid investments with stated maturities of greater than three months as short-term investments.

Short-term investments consist entirely of marketable securities, which are all classified as available-for-sale securities and are recorded at their estimated fair value. We determine the appropriate classification of our investments at the time of purchase and reevaluate such designation at each balance sheet date. We may or may not hold securities with stated maturities greater than 12 months until maturity. As we view these securities as available to support current operations, we classify securities with maturities less than 12 months as short-term investments. We carry these securities at fair value and report the unrealized gains and losses, net of taxes, as a component of shareholders' equity, except for unrealized losses determined to be other than temporary, which are recorded in other expense.

Restricted cash

Restricted cash represents two deposits at a financial institution; one held as security on a letter of credit expiring during 2020 on our headquarters lease obligation, the other held as security on our corporate credit card line.

Financial instruments and concentrations of risk

Financial instruments that potentially subject us to concentrations of credit risk consist principally of cash, cash equivalents, short-term investments, and accounts receivable.

Allowance for doubtful accounts

We record accounts receivable at the invoiced amount net of an estimated allowance for doubtful accounts to reserve for potentially uncollectible receivables. We review customers that have past due invoices to identify specific customers with known disputes or collectability issues. In determining the amount of the allowance, we make judgments about the creditworthiness of significant customers based on ongoing credit evaluations.

Equipment, furniture and leasehold improvements

We account for equipment, furniture and leasehold improvements at cost less accumulated depreciation and amortization. We compute depreciation of equipment and furniture using the straight-line method over the estimated useful lives of the assets, generally three years. Leasehold improvements are amortized using the straight-line method over the shorter of the lease term or estimated useful lives, ranging from two to ten years. We expense maintenance and repair costs as incurred. When assets are retired or otherwise disposed of, gains or losses are included in the consolidated statements of operations. When facts and circumstances indicate that the value of long-lived assets may be impaired, we perform an evaluation of recoverability comparing

the carrying value of the asset to projected undiscounted future cash flows. Upon indication that the carrying value of such assets may not be recoverable, we recognize an impairment loss as a charge against current operations based on the difference between the carrying value of the asset and its fair value.

Intangible assets

Intangible assets were recorded in connection with business acquisitions and are stated at estimated fair value at the time of acquisition less accumulated amortization. We amortize our acquired intangible assets using the straight-line method using lives ranging from one to ten years. We review intangible assets for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. We measure recoverability of these assets by comparing the carrying amounts to the future undiscounted cash flows the assets are expected to generate. If intangible assets are considered impaired, the impairment to be recognized equals the amount by which the carrying value of the asset exceeds its fair market value.

Goodwill

We evaluate goodwill for impairment annually during the fourth quarter or more frequently when an event occurs, or circumstances change that indicate that the carrying value may not be recoverable. We have three reporting units for the purpose of evaluating goodwill for impairment—third-party software, proprietary software and professional engineering services. See Note 14, “Information about Operating Segments and Geographic Areas.”

For reporting units that carry goodwill, we test for impairment by performing an optional qualitative assessment to determine whether the fair value of the reporting unit is more likely than not less than the carrying amount. If we determine that the fair value of the reporting unit is more likely greater than its carrying amount, we test for impairment by comparing the fair value of the reporting unit to the carrying value, including goodwill, recording an impairment charge for the excess. Alternatively, at our option, we can forego performing the qualitative assessment and proceed directly to perform the impairment test by comparing the fair value of the reporting unit with its carrying amount, including goodwill, and recording an impairment charge for the excess.

Third-party software fees payable

We record all fees payable and accrued liabilities related to the sale of third-party software, such as Microsoft Windows Embedded and Windows Mobile operating systems, as third-party software fees payable.

Research and development

Costs incurred internally in researching and developing a computer software product are charged to expense until technological feasibility has been established for the product. Once technological feasibility is established, all software costs would be capitalized until the product is available for general release to customers. Judgment is required in determining when technological feasibility of a product is established. Generally, this would be reached after all high-risk development issues have been resolved through coding and testing and would occur shortly before the product is released. Research and development expense was $8.6 million and $6.6 million in 2018 and 2017, respectively

Internally-developed software

We capitalize payroll and benefits costs incurred internally during the application development stage of developing a computer software product for general release to customers. Amortization of costs incurred after this point is included in cost of revenue over the estimated life of the products. As of December 31, 2018 and 2017, we recorded net capitalized costs of $945,000 and $0 in 2018 and 2017, respectively. Net capitalized costs as of December 31, 2018 have been classified on our consolidated balance sheets as follows: $329,000 is classified as equipment, furniture, and leasehold improvements, net, $226,000 is classified as contract assets and $390,000 is classified as other long-term assets, including contract assets.

Advertising costs

All costs of advertising, including cooperative marketing arrangements, are expensed as incurred. Advertising expense was $171,000 and $388,000 in 2018 and 2017, respectively.

Stock-based compensation

The estimated fair value of stock-based awards is recognized as compensation expense over the requisite service period, net of estimated forfeitures. We estimate forfeitures of stock-based awards based on historical experience and expected future activity. The fair value of RSUs is determined based on the number of shares granted and the quoted price of our common stock on the date of grant. The fair value of stock options is estimated at the grant date based on the fair value of each vesting tranche as calculated by the Black-Scholes-Merton (“BSM”) option-pricing model. The BSM model requires various highly judgmental assumptions

including expected volatility and option life. If any of the assumptions used in the BSM model change significantly, stock-based compensation expense may differ materially in the future from that recorded in the current period.

Comprehensive loss

Comprehensive loss refers to net loss and other revenue, expenses, gains and losses that, under generally accepted accounting principles, are recorded as an element of shareholders' equity but are excluded from the calculation of net loss.

Income taxes

We are subject to income taxes in the U.S. and certain foreign jurisdictions. Significant judgment is required in determining our provision for income taxes. We compute income taxes using the asset and liability method, under which deferred income taxes are provided for on the temporary differences between the financial reporting basis and the tax basis of our assets and liabilities. Our deferred tax amounts are measured using currently enacted tax rates that are expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

We apply judgment as to the appropriate weighting of all available evidence when assessing the need for the establishment or the release of valuation allowances. As part of this analysis, we examine all available evidence on a jurisdiction-by-jurisdiction basis and weigh the positive and negative information when determining the need for full or partial valuation allowances. The evidence considered for each jurisdiction includes, among other items, (i) the historical levels of income or loss over a range of time periods that extends beyond the two years presented, (ii) the historical sources of income and losses, (iii) the expectations and risk associated with underlying estimates of future taxable income, (iv) the expectations and risk associated with new product offerings and uncertainties with the timing of future taxable income, and (v) prudent and feasible tax planning strategies. Based on the analysis conducted as of December 31, 2018, we determined that we would not release, in full or in part, the valuation allowance against our U.S. gross deferred tax assets.

We recognize tax benefits from an uncertain position only if it is "more likely than not" that the position is sustainable, based on its technical merits. The tax benefit of a qualifying position is the largest amount of tax benefit that is greater than fifty percent likely of being realized upon ultimate settlement with a taxing authority having full knowledge of all relevant information. Interest and penalties related to uncertain tax positions are classified in the consolidated financial statements as income tax expense.

Foreign currency

The functional currency of foreign subsidiaries is their local currency. Accordingly, assets and liabilities are translated into U.S. dollars at exchange rates in effect at the balance sheet date. Resulting translation adjustments are included in other comprehensive loss and accumulated other comprehensive loss, a separate component of shareholders' equity. The net gains and losses resulting from foreign currency transactions are recorded in the period incurred and were not significant for any of the periods presented.

Revenue recognition

The following is a description of principal activities from which we generate revenue. Revenue is recognized when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration that we expect to receive in exchange for those goods or services. We generate all of our revenue from contracts with customers.

Third-party software

We sell third-party software licenses based upon a customer purchase order, shipping a certificate of authenticity (“COA”) to satisfy this single performance obligation. These shipments are also subject to limited return rights; historically, returns have averaged less than one-quarter of one percent. In accordance with Topic 606, we will continue to recognize revenue from third-party products at the time of shipment when the customer accepts control of the COA.

Proprietary software

We sell our proprietary software products to customers under a contract or by purchase order. Our DataV software contracts generally include professional services, a perpetual or term license and support and maintenance. In contracts with multiple performance obligations, we identify each performance obligation and evaluate whether the performance obligations are distinct within the context of the contract at contract inception. Performance obligations that are not distinct at contract inception are combined. Contracts that include software customization may result in the combination of the customization services with the software license as one distinct performance obligation. The transaction price is generally in the form of a fixed fee at contract inception. Certain DataV contracts also include variable consideration in the form of royalties earned when customers meet contractual volume thresholds. We allocate the transaction price to each distinct performance obligation based on the estimated standalone selling price for each performance obligation. We then look to how control transfers to the customer in order to

determine the timing of revenue recognition. In contracts that include customer acceptance, we recognize revenue when we have delivered the software and received customer acceptance. We recognize revenue from support and maintenance performance obligations over the service delivery period. We recognize revenue from royalties in the period of usage.

Our non-DataV software products generally do not include customization or modification services and are sold in the form of term licenses. These software licenses represent only one distinct performance obligation. Revenue is recognized when the software is delivered to the customer.

There are two items involving revenue recognition on DataV software contracts that require us to make more difficult and subjective judgments: the determination of which performance obligations are distinct within the context of the overall contract and the estimated standalone selling price of each performance obligation. In instances where our DataV contracts include significant customization or modification services, the customization and modification services are generally combined with the software license and recorded as one distinct performance obligation. We estimate the standalone selling price of each performance obligation based on either a cost-plus-margin approach or an adjusted market assessment approach. In instances where we have observable selling prices for professional services and support and maintenance, we may apply the residual approach to estimate the standalone selling price of software licenses.

Professional engineering services

We enter into contracts for professional engineering services, including for our IIoT-related service offerings, that include software development and customization. We have certain legacy contracts to deliver other engineering services to customers that we will continue to serve as long as they are profitable; some of our legacy services customers may become DataV customers. To date, the majority of our DataV services contracts are fixed fee pilot programs. We identify each performance obligation in our professional engineering services contracts at contract inception. The contracts generally include project deliverables specified by each customer. The performance obligations in the contracts are generally combined into one deliverable. The contract pricing is either at stated billing rates per service hour and material costs or at a fixed amount. Services provided under the majority of our professional engineering contracts generally result in the transfer of control of the applicable deliverable over time. For most legacy service contracts, we recognize revenue on service contracts based on time and materials as we have the right to invoice. We recognize revenue on fixed fee contracts on the proportion of labor hours expended (under Topic 606, the ‘input method’) to the total hours expected to complete the contract performance obligation. Certain professional engineering contracts include substantive customer acceptance provisions, in which case we recognize revenue upon customer acceptance. For most DataV pilot service contracts we recognize revenue upon completion of the pilot.

For contracts that require the input method for revenue recognition, the determination of the total labor hours expected to complete the performance obligations on fixed fee contracts involves significant judgment. We incorporate revisions to hour and cost estimates when the causal facts become known. In certain situations, when it is impractical for us to reasonably measure the outcome of a performance obligation, and where we anticipate that we will not incur a loss, an adjusted cost-based input method is used for revenue recognition. Equal amounts of revenue and cost are recognized during the contract period, and profit is recognized when the project is completed and accepted.

Recently issued accounting pronouncements

In February 2016, the FASB issued ASU No. 2016-02, “Leases” (“ASU 2016-02”), to make leasing activities more transparent and comparable, requiring most leases to be recognized by lessees on their balance sheets as right-of-use assets, along with corresponding lease liabilities. ASU 2016-02 is effective for annual periods beginning after December 31, 2018 and interim periods within that year, with early adoption permitted. We expect to adopt ASU 2016-02 effective January 1, 2019 and elect the modified retrospective transition method, recording a cumulative-effect adjustment as of that date and presenting comparative prior year periods in accordance with ASC Topic 840.

On the date of adoption, we expect to record a cumulative adjustment to recognize new net lease liabilities of approximately $1.7 million to $1.8 million and new right-of-use ("ROU") assets of approximately $1.2 million to $1.3 million, for operating leases on our consolidated balance sheets, based on the present value of remaining rental payments for existing operating leases. As part of adoption, we also plan to de-recognize approximately $0.5 million in deferred rent. We do not expect adoption to have a material impact on our consolidated statements of operations and comprehensive loss or shareholders' equity. However, adoption will create additional disclosures, including changes to non-cash disclosures on our consolidated statements of cash flows. We currently expect to elect the short-term lease recognition exemption for our facility rental and equipment leases (all leases that qualify), which means that we will not recognize ROU assets or lease liabilities for existing short-term leases as of the date of adoption. In addition, we expect to apply a package of practical expedients to forego reassessing:

- whether any expired or existing contracts are or contain leases,
- lease classification for any expired or existing leases, and
- initial direct costs for any existing leases.

2. Revenue Recognition

On January 1, 2017, we adopted Topic 606, applying the modified retrospective method to all contracts that were not completed as of that date. We recorded an increase to opening equity of $404,000 as of January 1, 2017 due to the cumulative impact of adopting Topic 606. There was no tax effect on the cumulative impact adjustment due to the valuation allowance on our net deferred tax asset.

Disaggregation of revenue

The following table provides information about disaggregated revenue by primary geographical market, major product line and timing of revenue recognition, and includes a reconciliation of the disaggregated revenue with reportable segments (in thousands):

	Year Ended December 31, 2018				
	Third-Party Software	Proprietary Software	Total Software	Professional Engineering Service	Total
Primary geographical markets:					
North America	$58,523	$ 3,305	$ 61,828	$ 7,260	$69,088
Europe	2,239	115	2,354	701	3,055
Asia	397	534	931	340	1,271
Total	$61,159	$ 3,954	$ 65,113	$ 8,301	$73,414
Major products/services lines:					
Third-party software	$61,159	$ -	$ 61,159	$ -	$61,159
Proprietary software	-	3,954	3,954	-	3,954
Professional engineering services	-	-	-	8,301	8,301
Total	$61,159	$ 3,954	$ 65,113	$ 8,301	$73,414
Timing of revenue recognition:					

Transferred at a point in time	$61,035	$ 2,967	$ 64,002	$ 1,592	$65,594
Transferred over time	124	987	1,111	6,709	7,820
Total	$61,159	$ 3,954	$ 65,113	$ 8,301	$73,414

Contract Balances

The following table provides information about receivables, contract assets and contract liabilities from contracts with customers (in thousands):

	December 31, 2018	December 31, 2017
Receivables	$ 11,581	$ 18,014
Short-term contract assets	1,053	937
Long-term contract assets	528	30
Short-term contract liabilities (deferred revenue)	1,652	3,219
Long-term contract liabilities (deferred revenue)	1,037	61

We receive payments from customers based upon contractual billing schedules. Accounts receivable are recorded when the right to consideration becomes unconditional. Contract assets include amounts related to our contractual right to consideration for completed performance objectives not yet invoiced and deferred contract acquisition costs, which are amortized along with the associated revenue. Contract liabilities include payments received in advance of performance under the contract and are realized with the associated revenue recognized under the contract. We had no asset impairment charges related to contract assets in the period.

Significant changes in contract assets and liabilities balances were as follows (in thousands):

	December 31, 2018	
	Contract Assets	Contract Liabilities (1)
Revenue recognized that was included in the contract liability at beginning of the period	$-	$ 3,663
Transferred to receivables from contract assets recognized at beginning of the period	$263	$ -

(1) Comprised of deferred revenue

Contract acquisition costs

In connection with the adoption of Topic 606, we are required to capitalize certain contract acquisition costs consisting primarily of commissions paid when contracts are signed. As of January 1, 2017, the date we adopted Topic 606, we capitalized $292,000 in contract acquisition costs related to contracts that were not completed. For contracts that have a duration of less than one year, we follow a Topic 606 practical expedient and expense these costs when incurred. For contracts with lives exceeding one year, as is more common with our DataV software bookings, we record these costs in proportion to each completed contract performance obligation. During the years ended December 31, 2018 and December 31, 2017, we recorded $128,000 and $168,000 in amortization of capitalized contract acquisition costs, respectively. There were no impairment losses recorded related to costs capitalized. Contract acquisition costs capitalized during the years ended December 31, 2018 and December 31, 2017 were $748,000 and $87,000, respectively.

Performance obligations

We did not recognize any revenue from performance obligations satisfied in previous periods.

The following table includes estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied or partially unsatisfied at the end of the reporting period, in thousands. The estimated revenue does not include contracts with original durations of one year or less, amounts of variable consideration attributable to royalties, or contract renewals that were unexercised as of December 31, 2018.

	2019	2020	2021	2022
Third-party software	$51	$14	$-	$-
Proprietary software	2,215	2,415	1,240	196
Professional engineering services	-	-	-	-

Practical expedients and exemptions

We generally expense sales commissions when incurred because the amortization period would have been less than one year. We record these costs within selling, general and administrative expenses.

3. Cash and Investments

Cash, cash equivalents, restricted cash, and short-term investments consisted of the following (in thousands):

	December 31,	
	2018	2017
Cash	$6,780	$6,340
Cash equivalents (see detail in Note 4)	3,225	6,519
Restricted cash	263	-
Restricted cash, long-term (see detail in Note 4)	263	-
Total cash, cash equivalents and restricted cash as presented in the statement of cash flows	10,531	12,859
Short-term investments (see detail in Note 4)	6,409	11,895
Total cash, cash equivalents, restricted cash and short-term investments	$16,940	$24,754

4. Fair Value Measurements

We measure our cash equivalents, restricted cash, and short-term investments at fair value. Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability. A three-tier fair value hierarchy is established as a basis for considering such assumptions and for inputs used in the valuation methodologies in measuring fair value:

Level 1: Quoted prices in active markets for identical assets or liabilities.
Level 2: Directly or indirectly observable market-based inputs or unobservable inputs used in models or other valuation methodologies.
Level 3: Unobservable inputs that are not corroborated by market data. The inputs require significant management judgment or estimation.

We classify our cash equivalents, restricted cash, and short-term investments within Level 1 or Level 2 because our cash equivalents and short-term investments are valued using quoted market prices or alternative pricing sources and models utilizing market observable inputs. We review the pricing techniques and methodologies of the independent pricing service for Level 2 investments and believe that the policies adequately consider market activity, either based on specific transactions for the security valued or based on modeling of securities with similar credit quality, duration, yield and structure that were recently traded.

Assets and liabilities measured at fair value on a recurring basis were as follows (in thousands):

	December 31, 2018		
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Direct or Indirect Observable Inputs (Level 2)	Total
Assets			
Cash equivalents:			
Money market funds	$1,277	$ -	$1,277
Corporate commercial paper	-	1,198	1,198
Corporate debt	-	750	750
Total cash equivalents	1,277	1,948	3,225
Restricted cash:			
Money market funds	526		526
Short-term investments:			
Corporate commercial paper	-	3,874	3,874
Corporate debt	-	2,535	2,535
Total short-term investments	-	6,409	6,409
Total assets measured at fair value	$1,803	$ 8,357	$10,160

	December 31, 2017		
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Direct or Indirect Observable Inputs (Level 2)	Total
Assets			
Cash equivalents:			
Money market funds	$2,274	$ -	$2,274

Corporate commercial paper	-	3,245	3,245
Corporate debt	-	1,000	1,000
Total cash equivalents	2,274	4,245	6,519
Short-term investments:			
Corporate commercial paper	-	5,480	5,480
Corporate debt	-	6,415	6,415
Total short-term investments	-	11,895	11,895
Total assets measured at fair value	$2,274	$ 16,140	$18,414

As of December 31, 2018 and 2017, contractual maturities of our short-term investments were less than one year, and gross unrealized gains and losses on those investments were not material.

5. Equipment, Furniture and Leasehold Improvements

Equipment, furniture, and leasehold improvements consisted of the following (in thousands):

	December 31,	
	2018	2017
Computer equipment and software	$1,637	$1,819
Office furniture and equipment	302	321
Leasehold improvements	1,163	1,189
Software development costs	329	—
Total	3,431	3,329
Less: accumulated depreciation and amortization	(2,520)	(2,340)
Equipment, furniture and leasehold improvements, net	$911	$989

Depreciation and amortization expense related to these assets was $541,000 and $536,000 in 2018 and 2017, respectively.

6. Goodwill and Intangible Assets

Goodwill was recorded in connection with the September 2011 acquisition of MPC Data, Ltd. (renamed BSQUARE EMEA, Ltd. in 2015), a United Kingdom based provider of software engineering services. The excess of the acquisition consideration over the fair value of net assets acquired was recorded as goodwill and is included within the professional engineering services ("PES") reporting unit.

For 2018, we performed our annual goodwill assessment in the fourth quarter of 2018. We chose to forego performing the qualitative assessment and proceeded directly to performing the quantitative impairment test by comparing the fair value of our PES reporting unit with its carrying value, including goodwill, recording an impairment charge for the excess. When performing the assessment, we determined the fair value of our PES reporting unit based on our forecast of future revenue and expense cash flow streams. Based on the uncertainty of future sales for new PES services and the results of this assessment, we determined that the carrying value of goodwill was impaired. As a result, an impairment charge of $3.7 million was recorded.

For 2017, we performed our annual impairment assessment in the fourth quarter of 2017; no impairment was indicated and there was no change to the carrying amount of goodwill.

The carrying value of goodwill consisted of the following (in thousands):

	Cost	Impairment Loss	Net Carrying Value
Reconciliation of Goodwill carrying amount:			
Balance at December 31, 2018	$3,738	$ (3,738)	$ -
Balance at December 31, 2017	$3,738	$ -	$ 3,738

Intangible assets relate to customer relationships that we acquired from TestQuest, Inc. in November 2008 and from the acquisition of BSQUARE EMEA, Ltd. in September 2011 and were as follows (in thousands):

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value
Customer relationships:			
Balance as of December 31, 2018	$ 1,275	$ (1,008)	$ 267
Balance as of December 31, 2017	$ 1,275	$ (910)	$ 365

Amortization expense was $98,000 for both 2018 and 2017. Amortization expense in future periods is expected to be as follows (in thousands):

2019 98

2020	98
2021	71
Total	$267

7. Other Income and Loss

Other income and loss consisted of the following (in thousands):

	Year Ended December 31,	
	2018	2017
Interest income	$207	$238
Other income (loss)	-	(24)
Total	$207	$214

8. Income Taxes

Pre-tax loss consisted of the following (in thousands):

	Year Ended December 31,	
	2018	2017
U.S.	$(13,081)	$(8,885)
Foreign	(643)	(322)
Total	$(13,724)	$(9,207)

Income tax benefit (expense) consisted of the following (in thousands):

	Year Ended December 31,	
	2018	2017
Current taxes:		
Federal	$-	$(79)
State and local	13	(1)
Foreign	-	(42)
Current taxes	13	(122)
Deferred taxes:		
Federal	-	-
State and local	-	-
Foreign	-	(27)
Deferred taxes	-	(27)
Total	$13	$(149)

Net deferred tax assets and liabilities consisted of the following (in thousands):

	December 31,	
	2018	2017
Depreciation and amortization	$48	$238
Accrued expenses and reserves	47	148
Deferred revenue	(63)	508
Net operating loss carryforwards	17,443	14,561
Research and development credit carryforwards	3,337	3,037
Stock-based compensation	1,006	940
Other	19	10
Gross deferred tax assets	21,837	19,442
Less: valuation allowance	(21,830)	(19,442)

Net deferred tax assets (liability)	$7	$-

Net deferred tax assets and liabilities were recorded as follows (in thousands):

	December 31, 2018	2017
Deferred tax assets, non-current	$ 7	$ -
Deferred tax liability, non-current	-	-
Net deferred tax assets (liability)	$ 7	$ -

The Tax Cuts and Jobs Act was enacted on December 22, 2017 (the “Tax Act”) and introduced significant changes to U.S. income tax law. Our accounting for the elements of the Tax Act that were effective for 2017 is complete and its impact is reflected in our 2017 and 2018 consolidated financial statements.

The Tax Act reduced the US federal corporate tax rate from 35% in 2017 to 21% beginning in 2018. The anticipated impact of the Tax Act for us was an $8.9 million reduction in our net deferred tax assets in 2017 to reflect the new statutory rate. The rate adjustment to the deferred tax assets, a discrete item for the quarter, was fully offset by a decrease in the valuation allowance so there was no rate impact to us.

Effective in 2018, companies may be subject to global intangible low tax income ("GILTI") which is a tax on foreign income in excess of a deemed return on tangible assets of foreign corporations. Due to the complexity of the GILTI tax rules, companies are allowed to make an accounting policy choice of either (1) treating taxes due on future U.S. inclusions in taxable income related to GILTI as a current-period expense when incurred or (2) factoring such amounts into a company's measurement of its deferred taxes. We are electing to treat taxes due on future U.S. inclusions in taxable income related to GILTI as a current-period expense when incurred, and therefore there was no impact to our deferred tax rate in 2017.

As of December 31, 2018, our deferred tax assets were primarily the result of U.S. net operating loss, research and development credit carryforwards and stock-based compensation expense. We have applied a full valuation allowance against the U.S. deferred tax assets in the U.S. and foreign jurisdictions.

We use judgment as to the appropriate weighting of all available evidence when assessing the need for the establishment or the release of valuation allowances. As part of this analysis, we examine all available evidence on a jurisdiction-by-jurisdiction basis and weigh the positive and negative information when determining the need for full or partial valuation allowances. The evidence considered for each jurisdiction includes, among other items, (i) the historical levels of income or loss over a range of time periods that extends beyond the two years presented, (ii) the historical sources of income and losses, (iii) the expectations and risk associated with underlying estimates of future taxable income, (iv) the expectations and risk associated with new product offerings and uncertainties with the timing of future taxable income, and (v) prudent and feasible tax planning strategies. Based on the analysis conducted as of December 31, 2018, we determined that we would not release, in full or in part, the valuation allowance against our U.S. gross deferred tax assets.

The provision for income taxes differed from the amount of expected income tax expense determined by applying the applicable U.S. statutory federal income tax rate to pre-tax loss as follows (in thousands, except percentages):

	Year Ended December 31,					
	2018			2017		
U.S. Federal tax benefit at statutory rates	$(2,889)	21.0	%	$(3,130)	34.0	%
Impact of:						
Tax credits	(517)	3.8	%	(376)	4.1	%
State income tax	10	(0.1)	%	(1)	0.0	%
International operations	30	(0.2)	%	168	(1.8)	%
Stock-based compensation	2	(—)	%	(130)	1.4	%
Valuation allowance	2,280	(16.6)	%	(5,688)	61.8	%
Expiration of tax attributes	217	(1.6)	%	-	(—)	%
Impact of tax reform	-	(—)	%	8,929	(97.0)	%
Goodwill impairment	784	(5.7)	%	-	(—)	%
Other, net	96	(0.7)	%	79	(0.9)	%
Tax expense (benefit) and effective tax rate	$13	(0.1)	%	$(149)	1.6	%

At December 31, 2018, we had approximately $73.4 million of federal and $9.0 million of state net operating loss carryforwards, which have begun to expire. Of the federal net operating loss carryforwards, approximately $36.3 million will expire in 2022 and 2023. We also have approximately $3.3 million of tax credit carryforwards, which

begin to expire in 2019. Use of these carryforwards may subject us to an annual limitation due to Section 382 of the U.S. Internal Revenue Code that restricts the ability of a corporation that undergoes an ownership change to use its carryforwards. Under the applicable tax rules, an ownership change occurs if holders of more than five percent of an issuer's outstanding common stock, collectively, increase their ownership percentage by more than 50 percentage points over a rolling three-year period. We have performed analyses of possible ownership changes in the past, which included consideration of third-party studies, and do not believe that an ownership change of more than 50 percentage points has occurred.

We have evaluated all the material income tax positions taken on our income tax filings to various tax authorities, and we determined that we did not have unrealized tax benefits related to uncertain tax positions recorded at December 31, 2018 or 2017.

Because of net operating loss and tax credit carryforwards, substantially all of our tax years remain open and subject to examination.

9. Commitments and Contingencies

Contractual commitments

Our commitments include obligations under operating leases, which expire through 2021. We have lease commitments for office space in Bellevue, Washington; Taipei, Taiwan; and Trowbridge, UK. We also lease office in Boston, Massachusetts.

Rent expense was approximately $0.9 million in 2018 and $1.0 million in 2017.

As of December 31, 2018 we had approximately $263,000 held as collateral on a letter of credit with JPMorgan Chase Bank, N.A. (the “Bank”) under the terms of our headquarters facility lease, which was recorded as restricted cash, long-term. Additionally, we had approximately $263,000 held as collateral at the Bank supporting our credit card line, which was been recorded as restricted cash.

Future operating lease commitments are as follows (in thousands):

2019	$1,195
2020	623
2021	60
Total	$1,878

Loss contingencies

From time to time, we are subject to legal proceedings, claims, and litigation arising in the ordinary course of business including tax assessments. We defend ourselves vigorously against any such claims. When (i) it is probable that an asset has been impaired, or a liability has been incurred and (ii) the amount of the loss can be reasonably estimated, we record the estimated loss. We provide disclosure in the notes to the consolidated financial statements for loss contingencies that do not meet both of these conditions if there is a reasonable possibility that a loss may have been incurred that would be material to the financial statements. Significant judgment is required to determine the probability that a liability has been incurred and whether such liability is reasonably estimable. We base accruals made on the best information available at the time, which can be highly subjective. The final outcome of these matters could vary significantly from the amounts included in the accompanying consolidated financial statements.

10. Shareholders’ Equity

Equity compensation plans

We have a stock plan (the “Stock Plan”) and an inducement stock plan for newly hired employees (the “Inducement Plan”) (collectively the “Plans”). Under the Plans, stock options may be granted with a fixed exercise price that is equivalent to the fair market value of our common stock on the date of grant. These options have a term of up to 10 years and vest over a predetermined period, generally four years. Incentive stock options granted under the Stock Plan may only be granted to our employees. The Plans also allow for awards of non-qualified stock options, stock appreciation rights, restricted and unrestricted stock awards, and RSUs.

Stock-based compensation

The estimated fair value of stock-based awards is recognized as compensation expense over the vesting period of the award, net of estimated forfeitures. We estimate forfeitures based on historical experience and expected future activity. The fair value of RSUs is determined based on the number of shares granted and the quoted price of our common stock on the date of grant. The fair value of stock options is estimated at the grant date based on the fair value of each vesting tranche as calculated by the Black-Scholes-Merton ("BSM") option-pricing model. The BSM model requires various highly judgmental assumptions including expected volatility and option life. If any of the assumptions used in the BSM model change significantly, stock-based compensation expense may differ materially in the future from that recorded in the current period. The fair values of our stock option grants were estimated with the following weighted average assumptions:

	Year Ended December 31,	
	2018	2017
Dividend yield	0 %	0 %
Expected life	6.1 years	6.5 years
Expected volatility	56 %	52 %
Risk-free interest rate	2.6%	1.7 %

The impact on our results of operations from stock-based compensation expense was as follows (in thousands, except per share amounts):

	Year Ended December 31,	
	2018	2017
Cost of revenue— professional engineering service	$28	$107
Selling, general and administrative	460	1,414
Research and development	190	236
Total stock-based compensation expense	$678	$1,757
Per basic share	$0.05	$0.14
Per diluted share	$0.05	$0.14

Stock option activity

The following table summarizes stock option activity:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value
Balance at December 31, 2016	1,846,768	$ 4.84	8.19	
Granted	248,100	$ 5.18		
Exercised	(54,692)	$ 3.66		
Forfeited	(91,411)	$ 5.31		
Expired	(36,604)	$ 5.83		
Balance at December 31, 2017	1,912,161	$ 4.88	7.61	
Granted	316,393	$ 3.63		
Exercised	(2,422)	$ 3.59		
Forfeited	(434,374)	$ 4.88		
Expired	(401,746)	$ 4.27		
Balance at December 31, 2018	1,390,012	$ 4.77	6.83	$ —
Vested and expected to vest at December 31, 2018	1,293,384	$ 4.79	6.70	$ —
Exercisable at December 31, 2018	929,224	$ 4.86	6.05	$ —

At December 31, 2018, total compensation cost related to stock options granted but not yet recognized was approximately $521,986, net of estimated forfeitures. This cost will be amortized on the straight-line method over a weighted-average period of approximately 1.2 years.

The following table summarizes certain additional information about stock options:

	Year Ended December 31,	
	2018	2017
Weighted average grant-date fair value for options granted during the year	$1.81	$2.62
Vested options in-the-money	—	603,925
Aggregate intrinsic value of options exercised during the year	$1,853	$104,512

The aggregate intrinsic value represents the difference between the exercise price of the underlying options and the quoted price of our common stock for the number of options that were exercised during the periods indicated. We issue new shares of common stock upon exercise of stock options.

Restricted stock unit activity

The following table summarizes RSU activity:

	Number of Shares	Weighted Average Award Price
Unvested at December 31, 2016	119,606	$ 5.60
Granted	79,819	$ 4.98
Vested	(82,457)	$ 5.39
Forfeited	-	$ -
Unvested at December 31, 2017	116,968	$ 5.33
Granted	251,371	$ 2.72
Vested	(113,535)	$ 4.19
Forfeited	(68,288)	$ 4.30
Unvested at December 31, 2018	186,516	$ 2.87
Expected to vest after December 31, 2018	165,952	$ 2.84

At December 31, 2018, total compensation cost related to RSUs granted but not recognized was approximately $236,000, net of estimated forfeitures. This cost will be amortized on the straight-line method over a weighted-average period of approximately 0.5 years.

Common stock reserved for future issuance

The following table summarizes our shares of common stock reserved for future issuance under the Plans as of December 31, 2018:

Stock options outstanding	1,390,012
Restricted stock units outstanding	186,515
Stock options available for future grant	1,525,900
Common stock reserved for future issuance	3,102,427

11. Employee Benefit Plan

We maintain a Profit Sharing and Deferred Compensation Plan, The BSQUARE Corporation 401(k) Plan and Trust (the “Profit Sharing Plan”) under Section 401(k) of the Internal Revenue Code. Substantially all full-time employees are eligible to participate in the Profit-Sharing Plan. We typically elect to match the participants’ contributions to the Profit-Sharing Plan up to a certain amount subject to vesting. Participants will receive their share of the value of their investments, and any applicable vested match, upon retirement or termination. We made matching contributions of $439,000 and $410,000 in 2018 and 2017, respectively.

12. Significant Concentrations

Significant customer

Honeywell International, Inc. and affiliated entities ("Honeywell") accounted for revenue and accounts receivable as follows (in thousands, except percentages):

	Year Ended December 31,	
	2018	2017
Honeywell revenue	$7,013	$12,278
As a percentage of total revenue	10 %	15 %
	December 31,	
	2018	2017
Honeywell accounts receivable	$2,758	$8,659
As a percentage of total accounts receivable	24 %	48 %

No other customer accounted for 10% or more of total revenue in 2018 or 2017 or 10% or more of total accounts receivable at December 31, 2018 or 2017.

Significant supplier

Effective March 1, 2019, pursuant to a new Global Partnership Agreement with Microsoft, we are authorized to sell Windows Embedded operating systems in Canada, the United States, Argentina, Brazil, Chile, Mexico, Peru, Venezuela, Puerto Rico, Cuba, Haiti, Dominican Republic, Jamaica, Trinidad and Tobago, Guadeloupe, Martinique, Bahamas, Barbados, Saint Lucia, Curacao, Aruba, Saint Vincent and the Grenadines, U.S. Virgin Islands, Grenada, Dominica, Cayman Islands, Saint Kitts and Nevis, Sint Maarten, Turks and Caicos Islands, Saint Martin, British Virgin Islands, Sint Eustatius, Saba, Anguilla, Montserrat, Colombia, Saint Barthelemy, Antigua and Barbuda. Our existing distribution agreement for sales of Windows Embedded operating systems in the E.U., the European Free Trade Association, Turkey and Africa, from which we generated approximately 3.7% of our third-party software sales in 2018, expires on June 30, 2019 and will not be renewed thereafter. We have also entered into ODAs with Microsoft pursuant to which we are licensed to sell Microsoft Windows Mobile operating systems to customers in North America, South America, Central America (excluding Cuba), Japan, Taiwan, Europe, the Middle East, and Africa. The ODAs to sell Windows Mobile operating systems are effective through April 30, 2022.

Software sales under these agreements constitute a significant portion of our software revenue and total revenue. There is no automatic renewal provision in any of these agreements, and these agreements can be terminated unilaterally by Microsoft at any time.

Microsoft currently offers a rebate program to sell Microsoft Windows Embedded operating systems pursuant to which we earn money for achieving certain predefined objectives. In accordance with Microsoft rebate program rules, we allocate 30% of rebates to reduce cost of sales, with the remaining 70% to offset qualified marketing expenses in the period the expenditures are claimed and approved.

Under this rebate program, we recorded rebate credits as follows (in thousands):

	Year Ended December 31,	
	2018	2017
Reductions to cost of revenue	$718	$499
Reductions to marketing expense	$682	$658

There was a balance of approximately $329,000 in outstanding rebate credits for which we qualified as of December 31, 2018. If qualified program expenditures are made, these will be accounted for as reductions in marketing expense in the period in which such expenditures are made.

13. Credit Agreement

Line of credit

In September 2015, we entered into a two-year unsecured line of credit agreement (the “Credit Agreement”) with JPMorgan Chase Bank, N.A. in the principal amount of up to $12.0 million. In September 2016, the Credit Agreement was modified to extend the final due date an additional year to September 2018, at which point it expired. No borrowings were ever outstanding under the Credit Agreement.

50

14. Information about Operating Segments and Geographic Areas

Our chief operating decision-makers (i.e. our Chief Executive Officer and certain direct reports) review financial information presented on a consolidated basis, accompanied by disaggregated information for purposes of allocating resources and evaluating financial performance. There are no segment managers who are held accountable by our chief operating decision-makers, or anyone else, for operations, operating results, or planning for levels or components below the consolidated unit level. We operate within a single industry segment of computer software and services. We have three major product lines—third-party software, proprietary software and professional engineering service--each of which we consider to be operating and reportable segments. We do not allocate costs other than direct cost of goods sold to the segments or produce segment income statements. We do not produce asset information by reportable segment, and it is not presented here. The following table sets forth profit and loss information about our segments (in thousands):

	Year Ended December 31,	
	2018	2017
Third-party software:		
Revenue	$61,159	$65,755
Cost of revenue	51,408	55,161
Gross profit	9,751	10,594
Proprietary software:		
Revenue	3,954	4,646
Cost of revenue	394	163
Gross profit	3,560	4,483
Professional Engineering Service:		
Revenue	8,301	10,410
Cost of revenue	6,102	7,365
Gross profit	2,199	3,045
Total gross profit	15,510	18,122
Operating expenses	29,441	27,543
Other income, net	207	214
Income tax (expense) benefit	(13)	149
Net loss	$(13,737)	$(9,058)

Revenue by geography is based on the sales region of the customer. The following tables set forth revenue and long-lived assets by geographic area (in thousands):

	Year Ended December 31,	
	2018	2017
Total revenue:		
North America	$69,088	$76,062
Asia	1,271	1,644
Europe	3,055	3,105
Total revenue	$73,414	$80,811

	December 31,	
	2018	2017
Long-lived assets:		
North America	$1,578	$991

Asia	91	76
Europe	4,023	4,114
Total long-lived assets	$5,692	$5,181

15. Quarterly Financial Information (Unaudited)

Condensed Consolidated Statements of Operations

2018	Q1	Q2	Q3	Q4
	(in thousands, except per share data)			
Revenue	$20,678	$ 19,203	$ 16,694	$16,839
Gross profit	$5,200	$ 3,261	$ 3,359	$3,690
Loss from operations	$(2,478)	$ (3,718)	$ (2,132)	$(5,603)
Net loss	$(2,434)	$ (3,683)	$ (2,087)	$(5,533)
Basic loss per share	$(0.19)	$ (0.29)	$ (0.16)	$(0.43)
Diluted loss per share	$(0.19)	$ (0.29)	$ (0.16)	$(0.43)
Shares used in per share calculations:				
Basic	12,673	12,697	12,721	12,755
Diluted	12,673	12,697	12,721	12,755

2017	Q1	Q2	Q3	Q4
	(in thousands, except per share data)			
Revenue	$22,841	$ 18,848	$ 19,653	$19,469
Gross profit	$6,253	$ 3,873	$ 4,380	$3,616
Income (loss) from operations	$41	$ (2,619)	$ (2,546)	$(4,297)
Net income (loss)	$202	$ (2,560)	$ (2,468)	$(4,232)
Basic income (loss) per share	$0.02	$ (0.20)	$ (0.20)	$(0.33)
Diluted income (loss) per share	$0.02	$ (0.20)	$ (0.20)	$(0.33)
Shares used in per share calculations:				
Basic	12,550	12,577	12,607	12,640
Diluted	12,848	12,577	12,607	12,640

Condensed Consolidated Balance Sheets

2018	March 31	June 30	September 30	December 31
	(in thousands)			
Cash, cash equivalents, restricted cash and short-term investments	$21,435	$17,861	$ 17,271	$ 16,940
Total current assets	$39,913	$35,514	$ 32,102	$ 29,996
Total assets	$45,110	$41,000	$ 37,648	$ 31,994
Total current liabilities	$15,289	$14,189	$ 12,744	$ 12,466
Total shareholders' equity	$29,340	$25,635	$ 23,858	$ 18,341

2017	March 31	June 30	September 30	December 31
	(in thousands)			
Cash, cash equivalents, restricted cash and short-term investments	$30,984	$27,296	$ 26,758	$ 24,754

Total current assets	$49,092	$47,077	$ 45,021	$ 44,253
Total assets	$54,403	$52,395	$ 50,247	$ 49,434
Total current liabilities	$14,310	$14,445	$ 14,351	$ 17,427
Total shareholders' equity	$39,206	$37,099	$ 35,238	$ 31,430

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure
None.

Item 9A. Controls and Procedures.
Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that the information required to be disclosed in the reports that we file or submit under the Securities Exchange Act of 1934 ("Exchange Act") is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In connection with the preparation of this Annual Report on Form 10-K, our management carried out an evaluation, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, as of December 31, 2018, of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) and 15d-15(e) under the Exchange Act. Based upon this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2018.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of our financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act and includes those policies and procedures that: (a) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (b) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (c) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements. All internal controls, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2018. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control—Integrated Framework (2013).

Based on its assessment, our management concluded that, as of December 31, 2018, our internal control over financial reporting was effective.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the fourth quarter of 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information
None.

53

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Certain information required by this Item regarding our directors and executive officers and will be included in our definitive proxy statement for our 2019 annual meeting of shareholders which will be filed with the SEC no later than 120 days after December 31, 2018 (our "2019 Proxy Statement"), under the captions "Nominees and Continuing Directors" and "Executive Officers," and such information is incorporated herein by this reference.

The information required by this Item regarding compliance by our directors, executive officers and holders of ten percent of a registered class of our equity securities with Section 16(a) of the Securities Exchange Act of 1934 will be included in our 2019 Proxy Statement under the caption "Section 16(a) Beneficial Ownership Reporting Compliance," and such information is incorporated herein by this reference.

The remaining information required by this Item will be included in our 2019 Proxy Statement under the caption "Corporate Governance," and such information is incorporated herein by this reference.

Item 11. Executive Compensation

The information required by this Item will be included in our 2019 Proxy Statement under the captions "Corporate Governance" and "Executive Officer Compensation," and such information is incorporated herein by this reference.

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

The information required by this Item regarding equity compensation plan information will be included in our 2019 Proxy Statement under the caption "Equity Compensation Plan Information," and such information is incorporated herein by this reference.

The information required by this Item regarding security ownership will be included in our 2019 Proxy Statement under the caption "Security Ownership of Principal Shareholders, Directors and Management," and such information is incorporated herein by this reference.

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

The information required by this Item will be included in our 2019 Proxy Statement under the captions "Corporate Governance" and "Certain Relationships and Related Transactions," and such information is incorporated herein by this reference.

Item 14. Principal Accounting Fees and Services

The information required by this Item with respect to principal accounting fees and services will be included in our 2019 Proxy Statement under the captions "Ratify Appointment of Independent Registered Public Accounting Firm" and "Independent Auditors," and such information is incorporated herein by this reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules
(a) Financial Statements and Schedules

1. Financial Statements

See “Index to Consolidated Financial Statements” in Part II Item 8 of this report.

2. Financial Statement Schedules

Financial statement schedules not included herein have been omitted because they are either not required, not applicable, or the information is otherwise included herein.

3. Exhibits

Exhibits are incorporated herein by reference or are filed with this report as indicated below.

(b) Exhibits

Exhibit Number	Description	Filed or Furnished Herewith	Incorporated by Reference				
			Form	Filing Date	Exhibit		File No.
3.1	Amended and Restated Articles of Incorporation		S-1	8/17/1999	3.1	(a)	333-85351
3.1(a)	Articles of Amendment to Amended and Restated Articles of Incorporation		10-Q	8/7/2000	3.1		000-27687
3.1(b)	Articles of Amendment to Amended and Restated Articles of Incorporation		8-K	10/11/2005	3.1		000-27687
3.2	Bylaws and all amendments thereto		10-K	3/19/2003	3.2		000-27687
10.1(1)	Fourth Amended and Restated Stock Plan, as amended		S-8	8/8/2017	4.1		333-219799
10.1(a)(1)	Form of Stock Option Agreement		10-Q	8/9/2012	10.19	(a)	000-27687
10.1(b)(1)	Form of Restricted Stock Grant Agreement		10-Q	8/9/2012	10.19	(b)	000-27687
10.1(c)(1)	Form of Restricted Stock Unit Agreement		10-Q	8/9/2012	10.19	(c)	000-27687
10.2(1)	2011 Inducement Award Plan		10-Q	11/10/2011	10.1		000-27687
10.2(a)(1)	Form of Stock Option Agreement under the 2011 Inducement Award Plan		10-Q	11/10/2011	10.1	(a)	000-27687
10.2(b)(1)	Form of Restricted Stock Unit Agreement under the 2011 Inducement Award Plan		10-K	2/19/2015	10.2	(b)	000-27687
10.3(1)	Form of Indemnification Agreement		10-K	2/21/2017	10.3		000-27687
10.4	Office Lease Agreement between WA—110 Atrium Place, L.L.C. and BSQUARE Corporation		10-K	3/30/2004	10.19		000-27687
10.4(a)	First Amendment to Office Lease with Talon Portfolio Services LLC dated August 26, 2013 and effective June 1, 2013		8-K	8/30/2013	10.1		000-27687
10.5(1)	Employment Letter Agreement with Kevin T. Walsh dated June 26, 2015		10-Q	8/13/2018	10.2		000-27687
10.6(1)	Amendment to employment letter agreement with Kevin T. Walsh dated November 6, 2018	X					
10.7(1)	Employment Letter Agreement with Peter J. Biere dated November 28, 2016		10-K	2/21/2017	10.6		000-27687
10.8(1)	Employment Letter Agreement dated February 23, 2017 with Scott B. Caldwell		10-Q	5/15/2017	10.2		000-27687
10.9(1)	Employment letter agreement with Giles Frith dated August 31, 2016		10-Q	8/13/2018	10.3		000-27687
10.10(1)	Amendment to employment letter agreement with Giles Frith dated June 5, 2018		10-Q	8/13/2018	10.4		000-27687
10.11(1)	Employment letter agreement with Ralph Derrickson dated February 4, 2019	X					
10.12(2)	Microsoft OEM Distribution Agreement for Software Products for Embedded Systems with Microsoft Licensing, GP effective July 1, 2014		10-Q	8/14/2014	10.1		000-27687
10.13			8-K	6/26/2018	10.1		000-27687

	Board Observer Agreement with Palogic Value Fund, L.P, Palogic Value Management, L.P. and Palogic Capital Management, LLC dated June 25, 2018	
21.1	Subsidiaries of the registrant	X
23.1	Consent of Independent Registered Public Accounting Firm	X
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a) under the Securities and Exchange Act of 1934	X
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a) under the Securities and Exchange Act of 1934	X
32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X
32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X
101.INS	XBRL Instance Document	X
101.SCH	XBRL Taxonomy Extension Schema Document	X
101.CAL	XBRL Taxonomy Extension Calculation Document	X

Exhibit Number	Description	Filed or Furnished Herewith	Incorporated by Reference			
			Form	Filing Date	Exhibit	File No.
101.DEF	XBRL Taxonomy Extension Definitions	X				
101.LAB	XBRL Taxonomy Extension Label Document	X				
101.PRE	XBRL Taxonomy Extension Presentation Document	X				

(1) Indicates a management contract or compensatory plan or arrangement.

(2) Confidential treatment has previously been granted by the SEC for certain portions of the referenced exhibit.

(c) Financial Statement Schedules

None.

Item 16. Form 10-K Summary

Not applicable.

SIGNATURES

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

BSQUARE CORPORATION

Date: March 1, 2019 By: /s/ KEVIN T. WALSH
Kevin T. Walsh

Acting Chief Executive Officer

Date: March 1, 2019 By: /s/ Peter J. Biere
Peter J. Biere

Chief Financial Officer, Secretary and Treasurer

POWER OF ATTORNEY

Each person whose individual signature appears below hereby authorizes and appoints Kevin T. Walsh and Peter J. Biere, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his true and lawful attorney-in-fact and agent to act in his name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file, any and all amendments to this report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in fact and agents, and each of them, full power and authority to do and perform each and every act and thing, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on March 1, 2019, on behalf of the registrant and in the capacities indicated.

Signature	Title
/s/ Kevin T. Walsh	Acting Chief Executive Officer
	(Principal Executive Officer)
Kevin T. Walsh	
/s/ Peter J. Biere	Chief Financial Officer, Secretary and Treasurer
	(Principal Financial and Accounting Officer)
Peter J. Biere	
/S/ Andrew S. G. Harries	Chairman of the Board

Andrew S. G. Harries

/S/ Robert J. Chamberlain Director

Robert J. Chamberlain

/S/ Davin W. Cushman Director

Davin W. Cushman

/S/ Mary Jesse Director

Mary Jesse

/S/ Robert J. Peters Director

Robert J. Peters

/S/ William D. Savoy Director

William D. Savoy

/S/ Ryan L. Vardeman Director

Ryan L. Vardeman