ExOne Co
Form 10-Q
May 10, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended March 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 No. 001-35806

The ExOne Company

(Exact name of registrant as specified in its charter)

Delaware	46-1684608
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

127 Industry Boulevard

North Huntingdon, Pennsylvania 15642

(Address of principal executive offices) (Zip Code)

(724) 863-9663

(Registrant's telephone number, including area code)

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

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

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

Large accelerated filer		Accelerated filer
Non-accelerated filer	(Do not check if a smaller reporting company)	Smaller reporting company
		Emerging growth company

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

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

As of May 10, 2018, 16,202,119 shares of common stock, par value $0.01, were outstanding.

IMPLICATIONS OF BEING AN EMERGING GROWTH COMPANY

Since our initial public offering, we have continued to qualify as an “emerging growth company” (“EGC”) as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”). An EGC may take advantage of specified reduced reporting requirements and is relieved of certain other significant requirements that are otherwise generally applicable to public companies.

As an EGC:

- We are exempt from the requirement to obtain an attestation and report from our auditors on the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002;
- We are permitted to provide less extensive disclosure about our executive compensation arrangements;
- We are not required to give our stockholders non-binding advisory votes on executive compensation or golden parachute arrangements; and
- We have elected to use an extended transition period for complying with new or revised accounting standards.

We may choose to take advantage of some, but not all, of these reduced burdens. We will continue to operate under these provisions until December 31, 2018, or such earlier time that we are no longer an EGC. We would cease to be an EGC if we have more than $1.07 billion in annual revenues, qualify as a “large accelerated filer” under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which requires us to have more than $700 million in market value of our common stock held by non-affiliates, or issue more than $1.0 billion of non-convertible debt over a three-year period.

PART I – FINANCIAL INFORMATION

Item 1. Financial Statements.
The ExOne Company and Subsidiaries

Condensed Statement of Consolidated Operations and Comprehensive Loss (Unaudited)

(in thousands, except per-share amounts)

	Three Months Ended March 31,	
	2018	2017
Revenue	$ 11,893	$ 10,869
Cost of sales	9,277	9,266
Gross profit	2,616	1,603
Operating expenses		
Research and development	2,795	1,999
Selling, general and administrative	6,202	6,263
	8,997	8,262
Loss from operations	(6,381)	(6,659)
Other (income) expense		
Interest expense	33	22
Other (income) expense net	(46)	110
	(13)	132
Loss before income taxes	(6,368)	(6,791)
Provision for income taxes	17	—
Net loss	$ (6,385)	$ (6,791)
Net loss per common share:		
Basic	$ (0.40)	$ (0.42)
Diluted	$ (0.40)	$ (0.42)
Comprehensive loss:		
Net loss	$ (6,385)	$ (6,791)
Other comprehensive income:		
Foreign currency translation adjustments	1,402	1,026
Comprehensive loss	$ (4,983)	$ (5,765)

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

The ExOne Company and Subsidiaries

Condensed Consolidated Balance Sheet (Unaudited)

(in thousands, except per-share and share amounts)

	March 31, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$15,222	$21,848
Restricted cash	1,634	330
Accounts receivable net of allowance of $1,199 (2018) and $1,193 (2017)	5,272	8,647
Inventories net	18,603	15,430
Prepaid expenses and other current assets	3,188	1,710
Total current assets	43,919	47,965
Property and equipment net	47,536	46,797
Intangible assets net	—	62
Other noncurrent assets	870	736
Total assets	$92,325	$95,560
Liabilities		
Current liabilities:		
Current portion of long-term debt	$138	$137
Current portion of capital leases	19	15
Accounts payable	5,591	4,291
Accrued expenses and other current liabilities	5,700	6,081
Deferred revenue and customer prepayments	8,752	8,282
Total current liabilities	20,200	18,806
Long-term debt net of current portion	1,473	1,508
Capital leases net of current portion	46	36
Other noncurrent liabilities	1	1
Total liabilities	21,720	20,351
Contingencies and commitments		
Stockholders' equity		
Common stock, $0.01 par value, 200,000,000 shares authorized, 16,149,617 (2018) and 16,124,617 (2017) shares issued and outstanding	161	161
Additional paid-in capital	174,097	173,718
Accumulated deficit	(95,571)	(89,186)
Accumulated other comprehensive loss	(8,082)	(9,484)
Total stockholders' equity	70,605	75,209
Total liabilities and stockholders' equity	$92,325	$95,560

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

The ExOne Company and Subsidiaries

Condensed Statement of Consolidated Cash Flows (Unaudited)

(in thousands)

	Three Months Ended March 31,	
	2018	2017
Operating activities		
Net loss	$(6,385)	$(6,791)
Adjustments to reconcile net loss to net cash (used for) provided by operations:		
Depreciation and amortization	1,488	2,307
Equity-based compensation	379	561
Amortization of debt issuance costs	5	2
Provision for bad debts net	9	123
Provision for slow-moving, obsolete and lower of cost or net realizable value inventories net	16	427
Loss (gain) from disposal of property and equipment net	9	(8)
Changes in assets and liabilities, excluding effects of foreign currency translation adjustments:		
Decrease in accounts receivable	3,518	944
Increase in inventories	(3,486)	(295)
Increase in prepaid expenses and other assets	(1,351)	(902)
Increase in accounts payable	1,244	787
Decrease in accrued expenses and other liabilities	(511)	(195)
Increase in deferred revenue and customer prepayments	219	3,203
Net cash (used for) provided by operating activities	(4,846)	163
Investing activities		
Capital expenditures	(483)	(249)
Proceeds from sale of property and equipment	25	37
Net cash used for investing activities	(458)	(212)
Financing activities		
Payments on long-term debt	(35)	(35)
Payments on capital leases	(4)	(22)
Debt issuance costs	(188)	—
Net cash used for financing activities	(227)	(57)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	209	285
Net change in cash, cash equivalents, and restricted cash	(5,322)	179
Cash, cash equivalents, and restricted cash at beginning of period	22,178	28,155
Cash, cash equivalents, and restricted cash at end of period	$16,856	$28,334
Supplemental disclosure of noncash investing and financing activities		
Transfer of internally developed 3D printing machines from inventories to property and equipment for internal use or leasing activities	$814	$131

Transfer of internally developed 3D printing machines from property and equipment to inventories for sale	$113	$395
Property and equipment acquired through financing arrangements	$14	$48
Property and equipment included in accounts payable	$49	$25
Property and equipment included in accrued expenses and other current liabilities	$50	$—
Debt issuance costs included in accrued expenses and other current liabilities	$76	$—

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

The ExOne Company and Subsidiaries

Condensed Statement of Changes in Consolidated Stockholders' Equity (Unaudited)

(in thousands)

	Common stock Shares	$	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive loss	Total stockholders' equity
Balance at December 31, 2016	16,017	$160	$ 171,116	$ (68,761)	$ (14,735)	$ 87,780
Cumulative-effect adjustment due to the adoption of Financial Accounting Standards Board Accounting Standards Update 2016-16	—	—	—	(408)	—	(408)
Net loss	—	—	—	(6,791)	—	(6,791)
Other comprehensive income	—	—	—	—	1,026	1,026
Equity-based compensation	—	—	561	—	—	561
Common stock issued from equity incentive plan	29	—	—	—	—	—
Balance at March 31, 2017	16,046	$160	$ 171,677	$ (75,960)	$ (13,709)	$ 82,168
Balance at December 31, 2017	16,125	$161	$ 173,718	$ (89,186)	$ (9,484)	$ 75,209
Net loss	—	—	—	(6,385)	—	(6,385)
Other comprehensive income	—	—	—	—	1,402	1,402
Equity-based compensation	—	—	379	—	—	379
Common stock issued from equity incentive plan	25	—	—	—	—	—
Balance at March 31, 2018	16,150	$161	$ 174,097	$ (95,571)	$ (8,082)	$ 70,605

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

The ExOne Company and Subsidiaries

Notes to the Condensed Consolidated Financial Statements (Unaudited)

(dollars in thousands, except per-share and share amounts)

Note 1. Basis of Presentation

Organization

The ExOne Company ("ExOne") is a corporation organized under the laws of the state of Delaware. ExOne was formed on January 1, 2013, when The Ex One Company, LLC, a Delaware limited liability company, merged with and into a Delaware corporation, which survived and changed its name to The ExOne Company (the "Reorganization"). As a result of the Reorganization, The Ex One Company, LLC became ExOne, the common and preferred interest holders of The Ex One Company, LLC became holders of common stock and preferred stock, respectively, of ExOne, and the subsidiaries of The Ex One Company, LLC became the subsidiaries of ExOne. The condensed consolidated financial statements include the accounts of ExOne, its wholly-owned subsidiaries, ExOne Americas LLC (United States); ExOne GmbH (Germany); ExOne Property GmbH (Germany); ExOne KK (Japan); ExOne Italy S.r.l (Italy); and through December 2017, ExOne Sweden AB (Sweden). Collectively, the consolidated group is referred to as the "Company".

The Company filed a registration statement on Form S-3 (No. 333-223690) with the Securities and Exchange Commission ("SEC") on March 15, 2018. The purpose of the Form S-3 was to register, among other securities, debt securities. Subsidiaries of the Company are co-registrants with the Company ("Subsidiary Guarantors"), and the registration statement registered guarantees of debt securities by one or more of the Subsidiary Guarantors. The Subsidiary Guarantors are 100% owned by the Company and any guarantees by the Subsidiary Guarantors will be full and unconditional.

Basis of Presentation

The condensed consolidated financial statements of the Company are unaudited. The condensed consolidated financial statements include all adjustments, consisting of normal recurring adjustments, considered necessary by management to fairly state the results of operations, financial position and cash flows of the Company. All material intercompany transactions and balances have been eliminated in consolidation. The results reported in these condensed consolidated financial statements are not necessarily indicative of the results that may be expected for the entire year. The December 31, 2017 condensed consolidated balance sheet data was derived from the audited financial statements but does not include all disclosures required by accounting principles generally accepted in the United States of America ("GAAP"). This Quarterly Report on Form 10-Q should be read in connection with the Company's Annual Report on Form 10-K for the year ended December 31, 2017, which includes all disclosures required by GAAP.

The preparation of these condensed consolidated financial statements requires the Company to make certain judgments, estimates and assumptions regarding uncertainties that affect the reported amounts of assets, liabilities, revenue and expenses and related disclosure of contingent assets and liabilities. Areas that require significant judgments, estimates and assumptions include accounting for accounts receivable (including the allowance for doubtful accounts); inventories (including the allowance for slow-moving and obsolete inventories); product warranty reserves; contingencies; income taxes (including the valuation allowance on certain deferred tax assets and liabilities for uncertain tax positions); equity-based compensation (including the valuation of certain equity-based compensation awards issued by the Company); and testing for impairment of long-lived assets (including the identification of asset groups by management, estimates of future cash flows of identified asset groups and fair value estimates used in connection with assessing the valuation of identified asset groups). The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for

making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

Certain amounts relating to provision for slow-moving, obsolete and lower of cost or net realizable value inventories – net ($427) in the accompanying condensed statement of consolidated cash flows for the three months ended March 31, 2017, have been reclassified from decrease in inventories to conform to current period presentation.

Recently Adopted Accounting Guidance

On January 1, 2018, the Company adopted Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") ASU 2017-09, "Compensation – Stock Compensation: Scope of Modification Accounting." This ASU requires registrants to apply modification accounting unless three specific criteria are met. The three criteria are: the fair value of the award is the same before and after the modification, the vesting conditions are the same before and after the modification and the classification as a debt or equity award is the same before and after the modification. Management has determined that the adoption of this ASU did not have an impact on the consolidated financial statements of the Company.

On January 1, 2017, the Company adopted FASB ASU 2016-16, "Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory." This ASU modifies existing guidance and is intended to reduce diversity in practice with respect to the accounting for the income tax consequences of intra-entity transfers of assets. The ASU indicates that the former exception to income tax accounting that requires companies to defer the income tax effects of certain intercompany transactions would apply only to intercompany inventory transactions. That is, the exception no longer applies to intercompany sales and transfers of other assets (e.g., property and equipment or intangible assets). Under the former exception, income tax expense associated with intra-entity profits in an intercompany sale or

transfer of assets was eliminated from earnings. Instead, that cost was deferred and recorded on the balance sheet (e.g., as a prepaid asset) until the assets left the consolidated group. Similarly, the entity was prohibited from recognizing deferred tax assets for the increases in tax bases due to the intercompany sale or transfer. A modified retrospective basis of adoption was required for this ASU. As a result, a cumulative-effect adjustment of approximately $408 has been recorded to accumulated deficit on January 1, 2017, in connection with this adoption. This cumulative-effect adjustment relates to the prepaid expense associated with intra-entity transfers of property and equipment included in prepaid expenses and other current assets at December 31, 2016.

Recently Issued Accounting Guidance

The Company considers the applicability and impact of all ASUs issued by the FASB. Recently issued ASUs not listed below were assessed and determined to be either not applicable or are currently expected to have no impact on the consolidated financial statements of the Company.

In August 2016, the FASB issued ASU 2016-15, “Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments.” This ASU is intended to reduce diversity in practice in how certain cash receipts and payments are presented and classified in the statement of cash flows. The standard provides guidance in a number of situations including, among others, settlement of zero-coupon bonds, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, and distributions received from equity method investees. The ASU also provides guidance for classifying cash receipts and payments that have aspects of more than one class of cash flows. This ASU becomes effective for the Company on January 1, 2019. Early adoption is permitted. Management is currently evaluating the potential impact of this ASU on the consolidated financial statements of the Company.

In February 2016, the FASB issued ASU 2016-02, “Leases.” As a result of this ASU, lessees will be required to recognize the following for all leases (with the exception of short-term leases) at the commencement date: a lease liability, which is a lessee’s obligation to make lease payments arising from a lease, measured on a discounted basis; and a right-of-use asset, which is an asset that represents the lessee’s right to use, or control the use of, a specified asset for the lease term. As a result of this ASU, lessor accounting is largely unchanged and lessees will no longer be provided with a source of off-balance sheet financing. This ASU becomes effective for the Company on January 1, 2019. Early adoption is permitted. Lessees (for capital and operating leases) and lessors (for sales-type, direct financing, and operating leases) must apply a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the consolidated financial statements. The modified retrospective approach would not require any transition accounting for leases that expired before the earliest comparative period presented. Lessees and lessors may not apply a full retrospective transition approach. Management is currently evaluating the potential impact of this ASU on the consolidated financial statements of the Company.

In May 2014, the FASB issued ASU 2014-09, “Revenue from Contracts with Customers.” This ASU created a comprehensive framework for all entities in all industries to apply in the determination of when to recognize revenue and, therefore, supersedes virtually all existing revenue recognition requirements and guidance. This framework is expected to provide a consistent and comparable methodology for revenue recognition. The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To achieve this principle, an entity should apply the following steps: identify the contract(s) with a customer, identify the performance obligations in the contract(s), determine the transaction price, allocate the transaction price to the performance obligations in the contract(s), and recognize revenue when, or as, the entity satisfies a performance obligation. In August 2015, the FASB issued ASU 2015-14, “Revenue from Contracts with Customers: Deferral of the Effective Date,” which deferred the effective date of this guidance for the Company until January 1, 2019. Management is currently evaluating the potential impact of these collective changes on the consolidated financial statements of the Company. The Company plans to utilize the modified retrospective method in connection with its future adoption of

this ASU, as amended.

Note 2. Liquidity

On February 6, 2013, the Company commenced an initial public offering of 6,095,000 shares of its common stock at a price to the public of $18.00 per share, of which 5,483,333 shares of common stock were sold by the Company and 611,667 shares of common stock were sold by a selling stockholder (including consideration of the exercise of the underwriters' over-allotment option). The Company received approximately $90,371 in unrestricted net proceeds in connection with this offering (net of underwriting commissions and offering costs).

On September 9, 2013, the Company commenced a secondary public offering of 3,054,400 shares of its common stock at a price to the public of $62.00 per share, of which 1,106,000 shares of common stock were sold by the Company and 1,948,400 shares of common stock were sold by selling stockholders (including consideration of the exercise of the underwriters' over-allotment option). The Company received approximately $64,948 in unrestricted net proceeds in connection with this offering (net of underwriting commissions and offering costs).

On January 8, 2016, the Company announced that it had entered into an At Market Issuance Sales Agreement ("ATM") with FBR Capital Markets & Co. ("FBR") and MLV & Co. LLC ("MLV") pursuant to which FBR and MLV agreed to act as distribution agents in the sale of up to $50,000 in the aggregate of ExOne common stock in "at the market offerings" as defined in Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"). At inception of the ATM, both FBR and MLV were identified as related

parties to the Company on the basis of significant influence in that a member of the Board of Directors of the Company also served as a member of the Board of Directors of FBR (which controlled MLV). The terms of the ATM were reviewed and approved by a sub-committee of the Board of Directors of the Company (which included each of the members of the Audit Committee of the Board of Directors except for the identified director who also held a position on the Board of Directors of FBR). This related party determination subsequently ended on June 1, 2017, when the identified director ceased serving as a member of the Board of Directors of FBR. Terms of the ATM require a 3.0% commission on the sale of common stock under the ATM and an initial reimbursement of certain legal expenses of $25. During the three months ended March 31, 2016, the Company sold 91,940 shares of common stock under the ATM at a weighted average selling price of approximately $9.17 per share resulting in gross proceeds to the Company of approximately $843. Unrestricted net proceeds to the Company from the sale of common stock under the ATM during the three months ended March 31, 2016 were approximately $595 (after deducting offering costs of approximately $248, including certain legal, accounting and administrative costs associated with the ATM, of which approximately $50 was paid to FBR or MLV relating to the aforementioned initial reimbursement of certain legal expenses and commissions on the sale of common stock under the ATM). There have been no sales of shares of common stock under the ATM during any periods subsequent to the three months ended March 31, 2016.

On January 11, 2016, the Company announced that it had entered into a subscription agreement with Rockwell Forest Products, Inc. and S. Kent Rockwell for the registered direct offering and sale of 1,423,877 shares of ExOne common stock at a per share price of $9.13 (a $0.50 premium from the closing price on the close of business on January 8, 2016). Both Rockwell Forest Products, Inc. and S. Kent Rockwell were identified as related parties to the Company, as S. Kent Rockwell served as Chairman and Chief Executive Officer of the Company and was the controlling shareholder of Rockwell Forest Products, Inc. at the time of the transaction. The terms of this transaction were reviewed and approved by a sub-committee of independent members of the Board of Directors of the Company (which included each of the members of the Audit Committee of the Board of Directors). The sub-committee of independent members of the Board of Directors of the Company were advised on the transaction by an independent financial advisor and independent legal counsel. Concurrent with the approval of this sale of common stock under the terms identified, a separate sub-committee of independent members of the Board of Directors of the Company approved the termination of the Company's revolving credit facility with RHI Investments, LLC. Following completion of the registered direct offering on January 13, 2016, the Company received gross proceeds of approximately $13,000. Unrestricted net proceeds to the Company from the sale of common stock in the registered direct offering were approximately $12,447 (after deducting offering costs of approximately $553).

The Company has incurred a net loss in each of its annual periods since its inception. As shown in the accompanying condensed statement of consolidated operations and comprehensive loss, the Company incurred a net loss of approximately $6,385 for the three months ended March 31, 2018. As noted above, the Company has received cumulative unrestricted net proceeds from the sale of its common stock of approximately $168,361 to fund its operations. At March 31, 2018, the Company had approximately $15,222 in unrestricted cash and cash equivalents. In addition, on March 12, 2018, the Company entered into a three-year, $15,000 revolving credit facility with a related party (Note 11).

Management believes that the Company's existing capital resources will be sufficient to support the Company's operating plan. If management anticipates that the Company's actual results will differ from its operating plan, management believes it has sufficient capabilities to enact cost savings measures to preserve capital. Further, the Company may seek to raise additional capital to support its growth through additional debt, equity or other alternatives (including asset sales) or a combination thereof.

Note 3. Accumulated Other Comprehensive Loss

The following table summarizes changes in the components of accumulated other comprehensive loss:

Foreign currency translation adjustments	Three Months Ended March 31, 2018	2017
Balance at beginning of period	$(9,484)	$(14,735)
Other comprehensive income	1,402	1,026
Balance at end of period	$(8,082)	$(13,709)

Foreign currency translation adjustments consist of the effect of translation of functional currency financial statements (denominated in the euro and Japanese yen) to the reporting currency of the Company (United States dollar) and certain long-term intercompany transactions between subsidiaries for which settlement is not planned or anticipated in the foreseeable future.

There were no tax impacts related to income tax rate changes and no amounts were reclassified to earnings for either of the periods presented.

Note 4. Loss Per Share

The Company presents basic and diluted loss per common share amounts. Basic loss per common share is calculated by dividing net loss available to common stockholders by the weighted average number of common shares outstanding during the applicable

period. Diluted loss per common share is calculated by dividing net loss available to common stockholders by the weighted average number of common shares and common equivalent shares outstanding during the applicable period.

As the Company incurred a net loss during each of the three months ended March 31, 2018 and 2017, basic average common shares outstanding and diluted average common shares outstanding were the same because the effect of potential shares of common stock, including stock options (685,970 – 2018 and 357,137 – 2017) and unvested restricted stock issued (52,502 – 2018 and 95,337 – 2017), was anti-dilutive.

The information used to compute basic and diluted net loss per common share was as follows:

	Three Months Ended March 31,	
	2018	2017
Net loss	$(6,385)	$(6,791)
Weighted average shares outstanding (basic and diluted)	16,138,506	16,028,906
Net loss per common share:		
Basic	$(0.40)	$(0.42)
Diluted	$(0.40)	$(0.42)

Note 5. Restructuring

Desenzano del Garda, Italy

In December 2017, the Company committed to a plan to consolidate certain of its three-dimensional (“3D”) printing operations from its Desenzano del Garda, Italy facility into its Gersthofen, Germany facility. These actions were taken as part of the Company’s efforts to optimize its business model and maximize its facility utilization. During the three months ended December 31, 2017, the Company recorded a charge of approximately $72 split between cost of sales ($19) and selling, general and administrative expense ($53) associated with involuntary employee terminations related to this plan. During the three months ended March 31, 2018, the Company recorded an additional charge of approximately $245 associated with other exit costs ($17) and asset impairments ($228) related to this plan. Charges associated with other exit costs recorded during the three months ended March 31, 2018 were recorded to cost of sales in the accompanying condensed statement of consolidated operations and comprehensive loss. Charges associated with asset impairments recorded during the three months ended March 31, 2018 were recorded to cost of sales as a component of depreciation expense in the accompanying condensed statement of consolidated operations and comprehensive loss. Other exit costs relate to the remaining facility rent due under a non-cancellable operating lease following the cessation of operations at the facility in January 2018. Asset impairment charges relate to certain leasehold improvements associated with the exited facility and other equipment which was abandoned by the Company. There are no additional charges expected to be incurred associated with this plan in future periods. The Company settled all amounts previously recorded associated with involuntary employee terminations during the three months ended March 31, 2018. Amounts associated with other exit costs (remaining facility rent payments) of approximately $11 are expected to be settled by the Company during the three months ended June 30, 2018.

North Las Vegas, Nevada and Chesterfield, Michigan

In January 2017, the Company committed to a plan to consolidate certain of its 3D printing operations from its North Las Vegas, Nevada facility into its Troy, Michigan and Houston, Texas facilities and exit its non-core specialty machining operations in its Chesterfield, Michigan facility. These actions were taken as a result of the accelerating adoption rate of the Company’s indirect printing technology in North America which resulted in a refocus of the

Company's operational strategy.

As a result of these actions, during the three months ended March 31, 2017, the Company recorded charges of approximately $984, including approximately $110 associated with involuntary employee terminations, approximately $7 associated with other exit costs and approximately $867 associated with asset impairments. Charges associated with involuntary employee terminations and other exit costs were recorded to cost of sales in the accompanying condensed statement of consolidated operations and comprehensive loss. Charges associated with asset impairments were split between cost of sales ($598), as a component of depreciation expense, and selling, general and administrative expenses ($269), as a component of amortization expense, in the accompanying condensed statement of consolidated operations and comprehensive loss. During the three months ended June 30, 2017, the Company recorded an additional charge of approximately $32 associated with an additional involuntary employee termination which required a service commitment through April 2017. There are no additional charges expected to be incurred associated with this plan in future periods. The Company settled all amounts associated with involuntary employee terminations and other exit costs during 2017.

Charges associated with asset impairments relate principally to the Company's plan to exit its non-core specialty machining operations in its Chesterfield, Michigan facility. On April 21, 2017, the Company sold to a third party certain assets associated with these operations including inventories (approximately $79), property and equipment (approximately $2,475) and other contractual rights (approximately $269). Total gross proceeds from the sale of these assets were approximately $2,050. After deducting costs directly attributable to the sale of these assets (approximately $128), the Company recorded an impairment loss during the three

months ended March 31, 2017, of approximately $859 split between property and equipment ($590) and intangible assets ($269) based on the excess of the carrying value over the estimated fair value of the related assets at March 31, 2017 (recorded to cost of sales in the accompanying condensed statement of consolidated operations and comprehensive loss). During the three months ended June 30, 2017, the Company recorded a loss on disposal of approximately $42.

Separate from the transaction described above, on May 9, 2017, the Company sold to a third party certain property and equipment (principally land and building) associated with its North Las Vegas, Nevada facility. Total gross proceeds from the sale of these assets were approximately $1,950. After deducting costs directly attributable to the sale of these assets (approximately $137), the Company recorded a gain on disposal (recorded to cost of sales in the accompanying condensed statement of consolidated operations and comprehensive loss) during the three months ended June 30, 2017, of approximately $347. Additionally, the Company recorded an impairment loss during the three months ended March 31, 2017, of approximately $8 associated with certain property and equipment which was abandoned in connection with the Company’s exit of its North Las Vegas, Nevada facility.

Note 6. Impairment

During the three months ended March 31, 2018, as a result of continued operating losses and cash flow deficiencies, the Company identified a triggering event requiring a test for the recoverability of long-lived assets held and used at the asset group level. Assessing the recoverability of long-lived assets held and used requires significant judgments and estimates by management.

For purposes of testing long-lived assets for recoverability, the Company operates as three separate asset groups: United States, Europe and Japan. In assessing the recoverability of long-lived assets held and used, the Company determined the carrying amount of long-lived assets held and used to be in excess of the estimated future undiscounted net cash flows of the related assets. The Company proceeded to determine the fair value of its long-lived assets held and used, principally through use of the market approach. The Company’s use of the market approach included consideration of market transactions for comparable assets. Management concluded that the fair value of long-lived assets held and used exceeded their carrying value and as such no impairment loss was recorded.

A significant decrease in the market price of a long-lived asset, adverse change in the use or condition of a long-lived asset, adverse change in the business climate or legal or regulatory factors impacting a long-lived asset and continued operating losses and cash flow deficiencies associated with a long-lived asset, among other indicators, could cause a future assessment to be performed which may result in an impairment of long-lived assets held and used, resulting in a material adverse effect on the financial position and results of operations of the Company.

Note 7. Cash, Cash Equivalents, and Restricted Cash

The following provides a reconciliation of cash, cash equivalents, and restricted cash as reported in the accompanying condensed consolidated balance sheet to the same such amounts shown in the accompanying condensed statement of consolidated cash flows:

	March 31, 2018	December 31, 2017
Cash and cash equivalents	$ 15,222	$ 21,848
Restricted cash	1,634	330
Cash, cash equivalents, and restricted cash	$ 16,856	$ 22,178

Restricted cash at March 31, 2018 includes approximately $1,134 associated with cash collateral required by a German bank for short-term financial guarantees issued by ExOne GmbH in connection with certain commercial transactions requiring security (Note 10). Restricted cash at March 31, 2018 and December 31, 2017 includes approximately $500 and $330, respectively, associated with cash collateral required by a United States bank to offset certain short-term, unsecured lending commitments associated with the Company’s corporate credit card program. Each of the balances described are considered legally restricted by the Company.

Note 8. Inventories

Inventories consist of the following:

	March 31, 2018	December 31, 2017
Raw materials and components	$8,516	$ 7,171
Work in process	5,254	4,630
Finished goods	4,833	3,629
	$18,603	$ 15,430

Raw materials and components consist of consumable materials and component parts and subassemblies associated with 3D printing machine manufacturing and support activities. Work in process consists of 3D printing machines and other products in

varying stages of completion. Finished goods consist of 3D printing machines and other products prepared for sale in accordance with customer specifications.

At March 31, 2018 and December 31, 2017, the allowance for slow-moving and obsolete inventories was approximately $3,530 and $3,437, respectively, and has been reflected as a reduction to inventories (principally raw materials and components).

During the three months ended March 31, 2018 and 2017, the Company recorded a net (credit) charge of approximately ($15) and $206, respectively, to cost of sales in the accompanying condensed statement of consolidated operations and comprehensive loss associated with certain inventories for which cost was determined to exceed net realizable value.

Note 9. Product Warranty Reserves

Substantially all of the Company's 3D printing machines are covered by a standard twelve month warranty. Generally, at the time of sale, a liability is recorded (with an offset to cost of sales) based upon the expected cost of replacement parts and labor to be incurred over the life of the standard warranty. Expected cost is estimated using historical experience for similar products. The Company periodically assesses the adequacy of the product warranty reserves based on changes in these factors and records any necessary adjustments if actual experience indicates that adjustments are necessary. Future claims experience could be materially different from prior results because of the introduction of new, more complex products, a change in the Company's warranty policy in response to industry trends, competition or other external forces, or manufacturing changes that could impact product quality. In the event that the Company determines that its current or future product repair and replacement costs exceed estimates, an adjustment to these reserves would be charged to cost of sales in the period such a determination is made.

The following table summarizes changes in product warranty reserves (such amounts reflected in accrued expenses and other current liabilities in the accompanying condensed consolidated balance sheet for each respective period):

	Three Months Ended March 31,	
	2018	2017
Balance at beginning of period	$1,300	$1,115
Provisions for new issuances	219	236
Payments	(208)	(169)
Reserve adjustments	(187)	(150)
Foreign currency translation adjustments	24	12
Balance at end of period	$1,148	$1,044

Note 10. Contingencies and Commitments

Contingencies

On March 1, 2018, the Company's ExOne GmbH subsidiary notified Voxeljet AG that it has materially breached a 2003 Patent and Know-How Transfer Agreement and asserted its rights to set-off damages as a result of the breaches against the annual license fee due by the Company under the agreement. At this time, the Company cannot reasonably estimate a contingency, if any, related to this matter.

The Company and its subsidiaries are subject to various litigation, claims, and proceedings which have been or may be instituted or asserted from time to time in the ordinary course of business. Management does not believe that the

outcome of any pending or threatened matters will have a material adverse effect, individually or in the aggregate, on the financial position, results of operations or cash flows of the Company.

Commitments

In the normal course of its operations, ExOne GmbH issues short-term financial guarantees and letters of credit to third parties in connection with certain commercial transactions requiring security. ExOne GmbH maintains a credit facility with a German bank which provides for various short-term financings in the form of overdraft credit, financial guarantees, letters of credit and collateral security for commercial transactions for an aggregate of approximately $1,600 (€1,300). In addition, ExOne GmbH may use the credit facility for short-term, fixed-rate loans in minimum increments of approximately $100 (€100) with minimum terms of at least 30 days. The overdraft credit interest rate is fixed at 10.2% while the interest rate associated with commercial transactions requiring security (financial guarantees, letters of credit or collateral security) is fixed at 1.75%. The credit facility has an indefinite term and is subject to cancellation by either party at any time upon repayment of amounts outstanding or expiration of commercial transactions requiring security. There is no commitment fee associated with the credit facility. There are no negative covenants associated with the credit facility. The credit facility has been guaranteed by the Company. At March 31, 2018 and December 31, 2017, there were no outstanding borrowings in the form of overdraft credit or short-term loans under the credit facility. At March 31, 2018, total outstanding financial guarantees and letters of credit issued by ExOne GmbH under the credit facility were approximately $1,134 (€920). Included in the total outstanding financial guarantees and letters of credit issued by ExOne GmbH are approximately $841 (€682) with expiration dates ranging from May 2018 through July 2018 and approximately $293 (€238) which have no expiration date. Financial guarantees and letters of credit issued by ExOne GmbH having no expiration date were released by the counterparty in

May 2018. At December 31, 2017, total outstanding financial guarantees and letters of credit issued by ExOne GmbH under the credit facility were approximately $1,128 (€941).

In connection with the related party revolving credit facility agreement entered into by the Company on March 12, 2018 (Note 11), the Company was required to post cash collateral against outstanding financial guarantees and letters of credit associated with the credit facility (Note 7).

In addition to amounts issued by ExOne GmbH under the credit facility, from time to time, ExOne GmbH enters into separate agreements with the same German bank for additional capacity for financial guarantees and letters of credit associated with certain commercial transactions requiring security. Terms of the separate agreements are substantially similar to those of the existing credit facility except that the German bank requires cash collateral to be posted by ExOne GmbH in connection with any related issuance. At March 31, 2018, total outstanding financial guarantees and letters of credit issued by ExOne GmbH under these separate agreements were approximately $99 (€80) with an expiration date of June 2022. Related to this separate agreement, the requirement for cash collateral was waived by the German bank as it also represents the counterparty in the related transaction.

Note 11. Related Party Revolving Credit Facility

On March 12, 2018, ExOne and its ExOne Americas LLC and ExOne GmbH subsidiaries, as guarantors (collectively, the “Loan Parties”), entered into a Credit Agreement and related ancillary agreements with LBM Holdings, LLC (“LBM”), a company controlled by S. Kent Rockwell, the Executive Chairman of the Company (a related party), relating to a $15,000 revolving credit facility (the “LBM Credit Agreement”) to provide additional funding for working capital and general corporate purposes. The LBM Credit Agreement provides for a term of three years (through March 12, 2021) and bears interest at a rate of one month LIBOR plus an applicable margin of 500 basis points (approximately 6.7% and 6.9% at inception and March 31, 2018, respectively). The LBM Credit Agreement requires a commitment fee of 75 basis points, or 0.75%, on the unused portion of the facility, payable monthly in arrears. In addition, an up-front commitment fee of 125 basis points, or 1.25% (approximately $188), was required at closing. Borrowings under the LBM Credit Agreement are required to be in minimum increments of $1,000. ExOne may terminate or reduce the credit commitment at any time during the term of the LBM Credit Agreement without penalty. ExOne may also make prepayments against the LBM Credit Agreement at any time without penalty. Borrowings under the LBM Credit Agreement have been collateralized by the accounts receivable, inventories and machinery and equipment of the Loan Parties. At inception and March 31, 2018, the total estimated value of collateral was in significant excess of the maximum capacity of the LBM Credit Agreement.

The LBM Credit Agreement contains several affirmative covenants including prompt payment of liabilities and taxes; maintenance of insurance, properties, and licenses; and compliance with laws. The LBM Credit Agreement also contains several negative covenants including restricting the incurrence of certain additional debt; prohibiting future liens (other than permitted liens); prohibiting investment in third parties; limiting the ability to pay dividends; limiting mergers, acquisitions, and dispositions; and limiting the sale of certain property and equipment of the Loan Parties. The LBM Credit Agreement does not contain any financial covenants. The LBM Credit Agreement also contains events of default, including, but not limited to, cross-default to certain other debt, breaches of representations and warranties, change of control events and breaches of covenants.

LBM was determined to be a related party based on common control by the Executive Chairman of the Company. Accordingly, the Company does not consider the LBM Credit Agreement indicative of a fair market value lending. Prior to execution, the LBM Credit Agreement was subject to review and approval by a sub-committee of independent members of the Board of Directors of the Company (which included each of the members of the Audit Committee of the Board of Directors). At the time of execution of the LBM Credit Agreement, the $15,000 in available loan proceeds were deposited into an escrow account with an unrelated, third party financial institution

pursuant to a separate Escrow Agreement by and among the parties. Loan proceeds held in escrow will be available to the Company upon its submission to the escrow agent of a loan request. Such proceeds will not be available to LBM until payment in-full of the obligations under the LBM Credit Agreement and termination of the LBM Credit Agreement. Payments of principal and other obligations will be made to the escrow agent, while interest payments will be made directly to LBM. Provided there exists no potential default or event of default, the LBM Credit Agreement and Escrow Agreement prohibit any acceleration of repayment of any amount outstanding under the LBM Credit Agreement and prohibit termination of the LBM Credit Agreement or withdrawal from escrow of any unused portion of the LBM Credit Agreement.

There were no borrowings by the Company under the LBM Credit Agreement from March 12, 2018 through March 31, 2018.

The Company incurred approximately $264 in debt issuance costs associated with the LBM Credit Agreement (including the aforementioned up front commitment fee paid at closing to LBM). During the three months ended March 31, 2018, the Company recorded interest expense relating to the LBM Credit Agreement of approximately $10, including approximately $4 associated with amortization of debt issuance costs (resulting in approximately $260 in remaining debt issuance costs at March 31, 2018, of which $88 is included in prepaid expenses and other current assets and $172 is included in other noncurrent assets in the accompanying condensed consolidated balance sheet) and $6 associated with the commitment fee on the unused portion of the revolving credit facility for the period from March 12, 2018 through March 31, 2018 (such amounts included in accrued expenses and other current liabilities in the accompanying condensed consolidated balance sheet at March 31, 2018). Amounts payable to LBM at March 31, 2018, were settled by the Company in April 2018.

Note 12. Income Taxes

The provision for income taxes for the three months ended March 31, 2018 and 2017 was $17 and $0, respectively. The Company has completed a discrete period computation of its provision for income taxes for each of the periods presented. The discrete period computation was required as a result of jurisdictions with losses before income taxes for which no tax benefit can be recognized and an inability to generate reliable estimates for results in certain jurisdictions as a result of inconsistencies in generating net operating profits (losses) in those jurisdictions.

The effective tax rate for the three months ended March 31, 2018 and 2017 was 0.3% (provision on a loss) and 0.0%, respectively. The effective tax rate differs from the United States federal statutory rate of 21.0% (2018) and 34.0% (2017) for each of the periods presented primarily due to net changes in valuation allowances for the periods.

In December 2017, the Tax Cuts and Jobs Act (the “Tax Act”) was enacted into law. The Tax Act reduces the corporate income tax rate from 34% to 21% and generally modifies certain United States income tax deductions and the United States taxation of certain foreign earnings, among other changes. The Company is required to recognize the effect of tax law changes in the period of enactment. As a result of the Tax Act, the Company re-measured its United States deferred tax assets and liabilities as well as its valuation allowance against its net United States deferred tax assets at December 31, 2017. In December 2017, the SEC staff issued Staff Accounting Bulletin No. 118: Income Tax Accounting Implications of the 2017 Tax Cuts and Jobs Act (“SAB 118”), which allows the Company to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. As ongoing guidance and accounting interpretation are expected over the next year, the Company considers its accounting of the deferred tax re-measurements and other items to be incomplete due to the forthcoming guidance and its ongoing analysis of final December 31, 2017 data and tax positions. No provisional amounts have been recorded by the Company. The Company expects to complete its analysis within the measurement period in accordance with SAB 118.

The Company has provided a valuation allowance for its net deferred tax assets as a result of the Company not generating consistent net operating profits in jurisdictions in which it operates. As such, any benefit from deferred taxes in any of the periods presented has been fully offset by changes in the valuation allowance for net deferred tax assets. The Company continues to assess its future taxable income by jurisdiction based on recent historical operating results, the expected timing of reversal of temporary differences, various tax planning strategies that the Company may be able to enact in future periods, the impact of potential operating changes on the business and forecast results from operations in future periods based on available information at the end of each reporting period. To the extent that the Company is able to reach the conclusion that its net deferred tax assets are realizable based on any combination of the above factors in a single, or in multiple, taxing jurisdictions, a reversal of the related portion of the Company’s existing valuation allowances may occur.

The Company has a liability for uncertain tax positions related to certain capitalized expenses and intercompany transactions. At March 31, 2018 and December 31, 2017, the liability for uncertain tax positions was approximately $883 and $858, respectively, and was included in accrued expenses and other current liabilities in the accompanying condensed consolidated balance sheet. At March 31, 2018 and December 31, 2017, the Company had an additional liability for uncertain tax positions related to its ExOne GmbH (Germany) subsidiary of approximately $348 and $323, respectively, which were fully offset against net operating loss carryforwards. At March 31, 2018 and December 31, 2017, the Company had an additional liability for uncertain tax positions related to its ExOne KK (Japan) subsidiary of approximately $673 and $594, respectively, which were fully offset against net operating loss carryforwards.

At March 31, 2018, the Company’s ExOne GmbH (2010-2013) and ExOne Property GmbH (2013) subsidiaries were under examination by local taxing authorities. The Company is unable to reasonably predict an outcome related to this

examination, the result of which may be material in a future period to the financial position, results from operations and cash flows of the Company.

Note 13. Equity-Based Compensation

On January 24, 2013, the Board of Directors of the Company adopted the 2013 Equity Incentive Plan (the “Plan”). In connection with the adoption of the Plan, 500,000 shares of common stock were reserved for issuance pursuant to the Plan, with automatic increases in such reserve available each year annually on January 1 from 2014 through 2023 equal to the lesser of 3.0% of the total outstanding shares of common stock as of December 31 of the immediately preceding year or, a number of shares of common stock determined by the Board of Directors, provided that the maximum number of shares authorized under the Plan will not exceed 1,992,241 shares, subject to certain adjustments.

Stock options and restricted stock issued by the Company under the Plan are generally subject to service conditions resulting in annual vesting on the anniversary of the date of grant over a period typically ranging between one and three years. Certain stock options and restricted stock issued by the Company under the Plan vest immediately upon issuance. Stock options issued by the Company under the Plan have a contractual life which expires over a period typically ranging between five and ten years from the date of grant subject to continued service to the Company by the participant.

On February 7, 2018, the Compensation Committee of the Board of Directors of the Company adopted the 2018 Annual Incentive Program (the “Program”) as a subplan under the Plan. The Program provides an opportunity for performance-based compensation to senior executive officers of the Company (excluding the Executive Chairman), among others. The target annual incentive for each

Program participant is expressed as a percentage of base salary and is conditioned on the achievement of certain financial goals (as approved by the Compensation Committee of the Board of Directors) or a combination of financial and non-financial goals. The Compensation Committee of the Board of Directors retains negative discretion over amounts payable under the Program. For 2018, the total target amount payable under the Program is approximately $1,423, with certain amounts to be settled with participants in cash, equity or a combination thereof. During the three months ended March 31, 2018, total compensation expense associated with the Program was approximately $142, split between cost of sales ($21), research and development ($43) and selling general and administrative expenses ($78) in the accompanying condensed statement of consolidated operations and comprehensive loss, of which approximately $66 is expected to be settled in equity by the Company.

The following table summarizes the total equity-based compensation expense recognized under the Plan:

	Three Months Ended March 31,	
	2018	2017
Equity-based compensation expense recognized:		
Stock options	$203	$343
Restricted stock	106	218
Other[a]	70	—
Total equity-based compensation expense before income taxes	379	561
Benefit for income taxes[b]	—	—
Total equity-based compensation expense net of income taxes	$379	$561

(a) Other represents expense associated with the Program and other employee contractual amounts to be settled in equity.

(b) The benefit for income taxes from equity-based compensation for each of the periods presented has been determined to be $0 based on valuation allowances against net deferred tax assets.

At March 31, 2018, total future compensation expense related to unvested awards yet to be recognized by the Company was approximately $679 for stock options and $384 for restricted stock. Total future compensation expense related to unvested awards yet to be recognized by the Company is expected to be recognized over a weighted-average remaining vesting period of approximately 1.3 years.

During the three months ended March 31, 2018, the fair value of stock options granted was estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions:

	March 16, 2018
Weighted average fair value per stock option	$3.77
Volatility	62.58%
Average risk-free interest rate	2.45%
Dividend yield	0.00%
Expected term (years)	3.3

During the three months ended March 31, 2017, the fair value of stock options granted was estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions:

February 10,

	2017
Weighted average fair value per stock option	$5.46 - $5.75
Volatility	62.89% - 63.75%
Average risk-free interest rate	1.89% - 1.94%
Dividend yield	0.00%
Expected term (years)	5.0 - 5.5

For certain stock option awards, volatility is estimated based on the historical volatility of the Company when the expected term of the award is less than the period for which the Company has been publicly traded. For certain stock option awards, volatility is estimated based on the historical volatilities of certain peer group companies when the expected term of the award exceeds the period for which the Company has been publicly traded. The average risk-free rate is based on a weighted average yield curve of risk-free interest rates consistent with the expected term of the awards. Expected dividend yield is based on historical dividend data as well as future expectations. Expected term is calculated using the simplified method as the Company does not have sufficient historical exercise experience upon which to base an estimate.

The activity for stock options was as follows:

	Three Months Ended March 31,					
	2018			2017		
	Number of Options	Weighted Average Exercise Price	Weighted Average Grant Date Fair Value	Number of Options	Weighted Average Exercise Price	Weighted Average Grant Date Fair Value
Outstanding at beginning of period	674,470	$ 11.58	$ 6.41	314,303	$ 15.62	$ 9.38
Stock options granted	24,000	$ 8.36	$ 3.77	44,000	$ 10.10	$ 5.51
Stock options exercised	—	$ —	$ —	—	$ —	$ —
Stock options forfeited	(12,500)	$ 7.91	$ 3.40	(500)	$ 15.74	$ 9.60
Stock options expired	—	$ —	$ —	(666)	$ 15.74	$ 9.60
Outstanding at end of period	685,970	$ 11.53	$ 6.37	357,137	$ 15.08	$ 8.99
Stock options exercisable at end of period	424,627	$ 12.93	$ 7.37	232,471	$ 15.77	$ 9.47
Stock options expected to vest at end of period	261,343	$ 9.25	$ 4.74	124,666	$ 13.80	$ 8.11

At March 31, 2018, there was no intrinsic value associated with stock options exercisable or expected to vest. The weighted average remaining contractual term of stock options exercisable and expected to vest at March 31, 2018, was approximately 6.3 years and 6.6 years, respectively. There were no stock option exercises during the three months ended March 31, 2018 or 2017.

The activity for restricted stock was as follows:

	Three Months Ended March 31,			
	2018		2017	
	Shares of Restricted Stock	Weighted Average Grant Date Fair Value	Shares of Restricted Stock	Weighted Average Grant Date Fair Value
Outstanding at beginning of period	52,502	$ 11.07	94,171	$ 14.29
Restricted stock granted	25,000	$ 8.21	30,000	$ 10.10
Restricted stock vested	(25,000)	$ 10.10	(28,834)	$ 14.69
Restricted stock forfeited	—	$ —	—	$ —
Outstanding at end of period	52,502	$ 10.17	95,337	$ 12.85
Restricted stock expected to vest at end of period	52,502	$ 10.17	95,337	$ 12.85

Restricted stock vesting during the three months ended March 31, 2018 and 2017, had a fair value of approximately $205 and $299, respectively.

Note 14. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for

assets and liabilities which are required to be recorded at fair value, the Company considers the principal or most advantageous market in which the Company would transact and the market-based risk measurements or assumptions that market participants would use in pricing the asset or liability, such as inherent risk, transfer restrictions and credit risk.

The Company applies the following fair value hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

Level 1 Observable inputs such as quoted prices in active markets for identical investments that the Company has the ability to access.

Level 2 Inputs include:

Quoted prices for similar assets or liabilities in active markets;

Quoted prices for identical or similar assets or liabilities in inactive markets;

Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and

Inputs that are derived principally from, or corroborated by, observable market data by correlation or other means.

Level 3 Inputs that are generally unobservable and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability.

The Company is required to disclose its estimate of the fair value of material financial instruments, including those recorded as assets or liabilities in its consolidated financial statements, in accordance with GAAP.

During the three months ended March 31, 2017, the Company entered into two separate foreign exchange forward contracts with a German bank in an effort to hedge the variability of certain foreign exchange risks between the euro (the functional currency of the Company's ExOne GmbH subsidiary) and British pound sterling (the currency basis for cash flows resulting from a commercial sales arrangement with a customer). The first of the two foreign exchange forward contracts was both entered into and settled (in connection with cash received from the customer) during the three months ended March 31, 2017, resulting in a realized gain on settlement of approximately $16 (€15). The second of the two foreign exchange forward contracts remained outstanding at March 31, 2017, and during the three months ended March 31, 2017, generated an unrealized loss of less than $1 (€1). Neither of the contracts was designated as a hedging instrument and accordingly, realized and unrealized gains (losses) have been recorded to other expense (income) – net in the accompanying condensed statement of consolidated operations and comprehensive loss. The Company classified both contracts as Level 2 fair value measurements. There were no such contracts entered into by the Company during the three months ended March 31, 2018. There were no such contracts outstanding at either March 31, 2018 or December 31, 2017.

The carrying values and fair values of other financial instruments (assets and liabilities) not required to be recorded at fair value were as follows:

	March 31, 2018		December 31, 2017	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Cash and cash equivalents	$15,222	$15,222	$21,848	$21,848
Restricted cash	$1,634	$1,634	$330	$330
Debt issuance costs[(a)]	$260	$—	$—	$—
Current portion of long-term debt[(b)]	$138	$144	$137	$142
Current portion of capital leases	$19	$19	$15	$15
Long-term debt net of current portion[(b)]	$1,473	$1,496	$1,508	$1,533
Capital leases net of current portion	$46	$46	$36	$36

(a)

Represents debt issuance costs associated with the Company's related party revolving credit facility (Note 11) of which $88 are included in prepaid expenses and other current assets and $172 are included in other noncurrent assets in the accompanying condensed consolidated balance sheet at March 31, 2018.

(b) Carrying values at March 31, 2018 and December 31, 2017 are net of unamortized debt issuance costs of approximately $29 and $30, respectively.

The carrying amounts of cash and cash equivalents, restricted cash, current portion of long-term debt and current portion of capital leases approximate fair value due to their short-term maturities. The fair value of long-term debt – net of current portion and capital leases – net of current portion have been estimated by management based on the consideration of applicable interest rates (including certain instruments at variable or floating rates) and other available information (including quoted prices of similar instruments available to the Company). Cash and cash equivalents and restricted cash are classified in Level 1; current portion of long-term debt, current portion of capital leases, long-term debt – net of current portion and capital leases – net of current portion are classified in Level 2.

Note 15. Concentration of Credit Risk

During the three months ended March 31, 2018 and 2017, the Company conducted a significant portion of its business with a limited number of customers, though not necessarily the same customers for each respective period. For the three months ended March 31, 2018 and 2017, the Company's five most significant customers represented approximately 37.2% and 40.0% of total revenue, respectively. At March 31, 2018 and December 31, 2017, accounts receivable from the Company's five most significant customers were approximately $1,262 and $4,199, respectively.

Note 16. Related Party Transactions

Revenues

Sales of products and/or services to related parties for the three months ended March 31, 2017 were approximately $8. None of the transactions met a threshold requiring review and approval by the Audit Committee of the Board of Directors of the Company. There were no sales of products and/or services to related parties during the three months ended March 31, 2018.

There were no amounts due from related parties at March 31, 2018 or December 31, 2017.

Expenses

Purchases of products and/or services from related parties during the three months ended March 31, 2018 and 2017, were approximately $6 and $3, respectively. Purchases of products and/or services by the Company during the three months ended March 31, 2018 and 2017 included website design services and leased office space from related parties under common control by the Executive Chairman of the Company. None of the transactions met a threshold requiring review and approval by the Audit Committee of the Board of Directors of the Company.

Amounts due to related parties at March 31, 2018 and December 31, 2017, were approximately $4 and $1, respectively. Amounts due to related parties for both periods are reflected in accounts payable in the accompanying condensed consolidated balance sheet.

Other

Refer to Note 11 for further discussion relating to a revolving credit facility with a related party entered into in March 2018.

Note 17. Subsequent Events

The Company has evaluated all of its activities and concluded that no subsequent events have occurred that would require recognition in the condensed consolidated financial statements or disclosure in the notes to the condensed consolidated financial statements.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.
(dollars in thousands, except per-share amounts)

The following discussion and analysis should be read together with our unaudited condensed consolidated financial statements and related notes thereto set forth in this Quarterly Report on Form 10-Q as well as our Annual Report on Form 10-K for the year ended December 31, 2017.

This Quarterly Report on Form 10-Q may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act with respect to our future financial or business performance, strategies, or expectations. Forward-looking statements typically are identified by words or phrases such as "trend," "potential," "opportunity," "pipeline," "believe," "comfortable," "expect," "anticipate," "current," "intention," "estimate," "position," "assu "continue," "remain," "maintain," "sustain," "seek," "achieve," as well as similar expressions, or future or conditional verbs su as "will," "would," "should," "could" and "may."

We caution that forward-looking statements are subject to numerous assumptions, risks and uncertainties, which change over time. Forward-looking statements speak only as of the date they are made and we assume no duty to and do not undertake to update forward-looking statements. Actual results could differ materially from those anticipated in forward-looking statements and future results could differ materially from historical performance.

In addition to items described under "Risk Factors" in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2017, the following factors, among others, could cause results to differ materially from forward-looking statements or historical performance: our ability to generate operating profits; fluctuations in our revenues and operating results; our competitive environment and our competitive position; our ability to enhance our current 3D printing machines and technology and develop new 3D printing machines; our ability to qualify more industrial materials in which we can print; demand for our products; the availability of skilled personnel; the impact of loss of key management; the impact of market conditions and other factors on the carrying value of long-lived assets; our ability to continue as a going concern; the impact of customer specific terms in machine sale agreements on the period in which we recognize revenue; risks related to global operations including effects of foreign currency; the adequacy of sources of liquidity; the scope, sufficiency of funds for required capital expenditures, working capital, and debt service; dependency on certain critical suppliers; nature or impact of alliances and strategic investments; reliance on critical information technology systems; the effect of litigation, contingencies and warranty claims; liabilities under laws and regulations protecting the environment; the impact of governmental laws and regulations; operating hazards, war, terrorism and cancellation or unavailability of insurance coverage; the impact of disruption of our manufacturing facilities, Production Service Centers ("PSCs") or ExOne Adoption Centers ("EACs"); the adequacy of our protection of our intellectual property; and expectations regarding demand for our industrial products, operating revenues, operating and maintenance expenses, insurance expenses and deductibles, interest expenses, debt levels, and other matters with regard to outlook.

Overview

Our Business

We are a global provider of 3D printing machines and 3D printed and other products, materials and services to industrial customers. Our business primarily consists of manufacturing and selling 3D printing machines and printing products to specification for our customers using our installed base of 3D printing machines. Our machines serve direct and indirect applications. Direct printing produces a component; indirect printing makes a tool to produce a component. We offer pre-production collaboration and print products for customers through our network of PSCs and EACs. We also supply the associated materials, including consumables and replacement parts, and other services, including training and technical support that is necessary for purchasers of our 3D printing machines to print products. We believe that our ability to print in a variety of industrial materials, as well as our industry-leading volumetric output (as measured by build box size and printing speed) uniquely position us to serve the needs of industrial

customers.

Outlook

Our operating priorities include the following:

- Continuing to accelerate the adoption rate of binder jetting technologies. We plan to grow our market leading position with respect to 3D printing solutions for customers and continue advancing our innovations in direct and indirect printing, principally through an expansion of our fine powder (less than 20 micron) direct printing capabilities and development activities associated with large format direct and indirect 3D printing machines. Our focus continues to be industrial markets for utilization of binder jetting technologies for non-polymer based materials. Our strength in industrial markets is rooted in our diverse material capabilities, our lower cost of adoption versus other competing technologies, our faster printing speeds and our scalability to larger product size. We expect to increase our investment in research and development by approximately $6,000 to $8,000 during 2018 (as compared to 2017) as a result of these and other initiatives.
- Evaluation of our business model. We continue to focus our efforts on optimizing our business model, including maximizing our facility utilization and our gross profit. We have consolidated certain of our operations to achieve

efficiencies and we will continue to consider additional strategic decisions resulting in further consolidation, elimination or other modification to our existing machine manufacturing, PSC and other operations, including, but not limited to, converting certain of our PSCs into EACs. We are reviewing our product groups to better manage our product marketing and delivery to our customers to accelerate the adoption rate of our technologies. We are continuously reviewing the industry for developments in printing technologies, materials, methods, innovations or services that offer strategic benefits that can improve, accelerate or advance our products or services.

Strengthening our commercial team and reprioritizing our focus. We have added new talent to our commercial leadership team and have added new tools and processes to improve the efficiency and effectiveness of our selling efforts. As our global installed base of 3D printing machines continues to grow, we continue to invest in our customer-centric approach to managing our operations (including talent addition and the process of converting certain of our PSCs into EACs). Our goal is to collaborate with our customers and remain the market leader and supplier of choice for binder jet technologies and products for industrial applications.

Restructuring

In December 2017, we committed to a plan to consolidate certain of our 3D printing operations from our Desenzano del Garda, Italy facility into our Gersthofen, Germany facility. These actions were taken as part of our efforts to optimize our business model and maximize our facility utilization. As a result of these actions, during the three months ended December 31, 2017, we recorded a charge of approximately $72 split between cost of sales ($19) and selling, general and administrative expense ($53) associated with involuntary employee terminations related to this plan. During the three months ended March 31, 2018, we recorded an additional charge of approximately $245 associated with other exit costs ($17) and asset impairments ($228) related to this plan. Charges associated with other exit costs recorded during the three months ended March 31, 2018 were recorded to cost of sales in the accompanying condensed statement of consolidated operations and comprehensive loss. Charges associated with asset impairments recorded during the three months ended March 31, 2018 were recorded to cost of sales as a component of depreciation expense in the accompanying condensed statement of consolidated operations and comprehensive loss. Other exit costs relate to the remaining facility rent due under a non-cancellable operating lease following the cessation of operations at the facility in January 2018. Asset impairment charges relate to certain leasehold improvements associated with the exited facility and other equipment which we abandoned. There are no additional charges expected to be incurred associated with this plan in future periods. We settled all amounts previously recorded associated with involuntary employee terminations during the three months ended March 31, 2018. We expect to settle amounts associated with other exit costs (remaining facility rent payments) of approximately $11 during the three months ended June 30, 2018.

The consolidation of our 3D printing operations from our Desenzano del Garda, Italy facility into our Gersthofen, Germany facility is not expected to have a significant impact on our revenues in future periods. We expect annualized cost savings related to this consolidation of approximately $875, with approximately $600 in the form of cash cost savings (principally employee-related and other operating costs) and approximately $275 in the form of reduced depreciation expense. Cost savings associated with the exit of this facility are expected to benefit cost of sales by approximately $625 and selling, general and administrative expenses by approximately $250. We expect to invest these cost savings into technological or process advancements that support either long-term cost benefits or revenue growth.

In January 2017, we committed to a plan to consolidate certain of our 3D printing operations from our North Las Vegas, Nevada facility into our Troy, Michigan and Houston, Texas facilities and exit our non-core specialty machining operations in our Chesterfield, Michigan facility. These actions were taken as a result of the accelerating adoption rate of our indirect printing technology in North America which resulted in a refocus of our operational strategy.

As a result of these actions, during the three months ended March 31, 2017, we recorded charges of approximately $984, including approximately $110 associated with involuntary employee terminations, approximately $7 associated with other exit costs and approximately $867 associated with asset impairments. Charges associated with involuntary

employee terminations and other exit costs were recorded to cost of sales in the accompanying condensed statement of consolidated operations and comprehensive loss. Charges associated with asset impairments were split between cost of sales ($598), as a component of depreciation expense, and selling, general and administrative expenses ($269), as a component of amortization expense, in the accompanying condensed statement of consolidated operations and comprehensive loss. During the three months ended June 30, 2017, we recorded an additional charge of approximately $32 associated with an additional involuntary employee termination which required a service commitment through April 2017. There are no additional charges expected to be incurred associated with this plan in future periods. We settled all amounts associated with involuntary employee terminations and other exit costs during 2017.

Charges associated with asset impairments relate principally to our plan to exit our non-core specialty machining operations in our Chesterfield, Michigan facility. On April 21, 2017, we sold to a third party certain assets associated with these operations including inventories (approximately $79), property and equipment (approximately $2,475) and other contractual rights (approximately $269). Total gross proceeds from the sale of these assets were approximately $2,050. After deducting costs directly attributable to the sale of these assets (approximately $128), we recorded an impairment loss during the three months ended March 31, 2017, of approximately $859 split between property and equipment ($590) and intangible assets ($269) based on the excess of the carrying value over the estimated fair value of the related assets at March 31, 2017 (recorded to cost of sales in the accompanying

condensed statement of consolidated operations and comprehensive loss). During the three months ended June 30, 2017, we recorded a loss on disposal of approximately $42.

Separate from the transaction described above, on May 9, 2017, we sold to a third party certain property and equipment (principally land and building) associated with our North Las Vegas, Nevada facility. Total gross proceeds from the sale of these assets were approximately $1,950. After deducting costs directly attributable to the sale of these assets (approximately $137), we recorded a gain on disposal (recorded to cost of sales in the accompanying condensed statement of consolidated operations and comprehensive loss) during the three months ended June 30, 2017, of approximately $347. Additionally, we recorded an impairment loss during the three months ended March 31, 2017, of approximately $8 associated with certain property and equipment which was abandoned in connection with our exit of our North Las Vegas, Nevada facility.

The consolidation of our 3D printing operations from our North Las Vegas, Nevada facility into our Troy, Michigan and Houston, Texas facilities is not expected to have a significant impact on our revenues in future periods. We expect annualized cost savings related to this consolidation of approximately $600, with approximately $570 in the form of cash cost savings (principally employee-related and other operating costs) and approximately $30 in the form of reduced depreciation expense. All cost savings associated with this consolidation are expected to benefit cost of sales. We expect to invest these cost savings into technological or process advancements that support either long-term cost benefits or revenue growth.

We expect annualized reductions in revenue related to our exit of our non-core specialty machining operations in our Chesterfield, Michigan facility of approximately $1,400. Revenues associated with our non-core specialty machining operations in our Chesterfield, Michigan facility were approximately $307 for the three months ended March 31, 2017. We expect annualized cost savings related to this exit of approximately $500, with approximately $200 in the form of cash cost savings (principally employee-related and other operating costs), approximately $200 in the form of reduced depreciation expense and approximately $100 in the form of reduced amortization expense. Cost savings associated with the exit of this facility are expected to benefit cost of sales by approximately $400 and selling, general and administrative expenses by approximately $100. We expect to invest these cost savings into technological or process advancements that support either long-term cost benefits or revenue growth.

Impairment

During the three months ended March 31, 2018, as a result of continued operating losses and cash flow deficiencies, we identified a triggering event requiring a test for the recoverability of long-lived assets held and used at the asset group level. Assessing the recoverability of long-lived assets held and used requires significant judgments and estimates by management.

For purposes of testing long-lived assets for recoverability, we operate as three separate asset groups: United States, Europe and Japan. In assessing the recoverability of long-lived assets held and used, we determined the carrying amount of long-lived assets held and used to be in excess of the estimated future undiscounted net cash flows of the related assets. We proceeded to determine the fair value of our long-lived assets held and used, principally through use of the market approach. Our use of the market approach included consideration of market transactions for comparable assets. Management concluded that the fair value of long-lived assets held and used exceeded their carrying value and as such no impairment loss was recorded.

A significant decrease in the market price of a long-lived asset, adverse change in the use or condition of a long-lived asset, adverse change in the business climate or legal or regulatory factors impacting a long-lived asset and continued operating losses and cash flow deficiencies associated with a long-lived asset, among other indicators, could cause a future assessment to be performed which may result in an impairment of long-lived assets held and used, resulting in a material adverse effect on our financial position and results of operations.

Backlog

At March 31, 2018, our backlog was approximately $26,100 of which approximately $23,700 is expected to be fulfilled during the next twelve months. At December 31, 2017, our backlog was approximately $21,300.

Results of Operations

Net Loss

Net loss for the three months ended March 31, 2018 was $6,385, or $0.40 per basic and diluted share, compared with a net loss of $6,791 or $0.42 per basic and diluted share, for the three months ended March 31, 2017. The decrease in our net loss was principally due to an increase in our revenues and our gross profit offset by an increase in research and development spending (all changes further described below).

Revenue

The following table summarizes revenue by product group:

	Three Months Ended March 31,			
	2018		2017	
3D printing machines	$4,521	38.0 %	$4,273	39.3 %
3D printed and other products, materials and services	7,372	62.0 %	6,596	60.7 %
	$11,893	100.0%	$10,869	100.0%

Revenue for the three months ended March 31, 2018 was $11,893, compared with revenue of $10,869 for the three months ended March 31, 2017, an increase of $1,024, or 9.4%. The increase in revenue resulted from increases in revenue attributable to both of our product groups (3D printing machines and 3D printed and other products, materials and services). The increase in revenues from 3D printing machines resulted from a slightly higher volume of units sold (six 3D printing machines sold during the three months ended March 31, 2018, as compared to five 3D printing machines sold during the three months ended March 31, 2017), better realized pricing on machines sold versus the comparable period and favorable exchange rates (principally the euro versus the United States dollar), offset by an unfavorable mix of machines sold, with four indirect 3D printing machines sold during the three months ended March 31, 2017 versus three indirect 3D printing machines sold during the three months ended March 31, 2018 (indirect 3D printing machines generally bearing a higher average selling price than direct 3D printing machines). The increase in revenues from 3D printed and other products, materials and services principally resulted from an increase in revenues from our direct PSC printing operations as a result of increased customer acceptance of our binder jet technologies and an increase in consumable material and service revenues (maintenance services and replacement components for 3D printing machines) based on an increased global installed base of 3D printing machines along with favorable exchange rates (principally the euro versus the United States dollar). These increases in revenues from 3D printed and other products, materials and services were offset by decreases in product sales associated with our former specialty machining operation located in our Chesterfield, Michigan facility (approximately $307) following the sale of certain assets associated with this operation in April 2017 and a reduction in revenues associated with our indirect PSC and EAC printing operations.

The following table summarizes 3D printing machines sold by type (refer to the “Our Machines and Machine Platforms” section of Part I, Item 1 of our Annual Report on Form 10-K for the year ended December 31, 2017, for a description of 3D printing machines by type):

	Three Months Ended March 31,	
	2018	2017
3D printing machine units sold:		
S-Max	3	4
M-Flex	—	1
Innovent	3	—
	6	5

Cost of Sales and Gross Profit

Cost of sales for the three months ended March 31, 2018 was $9,277, compared with cost of sales of $9,266 for the three months ended March 31, 2017, an increase of $11, or 0.1%. The increase in cost of sales was primarily due to an increase in our variable cost of sales associated with our increase in revenues, an increase in consulting and professional fees of approximately $192 and unfavorable exchange rates (principally the euro versus the United States dollar). Offsetting these increases were decreases in cost of sales associated with a reduction in restructuring and asset impairment related charges (further described below) and a net decrease of approximately $411 in charges associated with slow-moving, obsolete and lower of cost or net realizable value inventories (principally due to a charge of approximately $206 during the three months ended March 31, 2017 associated with certain work in process inventories for which cost was determined to exceed net realizable value).

During the three months ended March 31, 2018, we incurred costs of approximately $245 (approximately $17 in other exit costs and $228 in asset impairments) associated with our consolidation of our 3D printing operations from our facility in Desenzano del Garda, Italy into our Gersthofen, Germany facility. During the three months ended March 31, 2017, we incurred costs of approximately $715 (approximately $110 in employee termination costs, $7 in other exit costs and $598 in asset impairments) associated with our consolidation of our 3D printing operations from our facility in North Las Vegas, Nevada into our Troy, Michigan and Houston, Texas facilities and our exit of our specialty machining operations in Chesterfield, Michigan.

Gross profit for the three months ended March 31, 2018 was $2,616, compared with gross profit of $1,603 for the three months ended March 31, 2017. Gross profit percentage was 22.0% for the three months ended March 31, 2018, compared with 14.7% for the

three months ended March 31, 2017. The change in gross profit was the result of the increase in revenues net of the increase in cost of sales as further described above.

Research and Development

Research and development expenses for the three months ended March 31, 2018 were $2,795, compared with research and development expenses of $1,999 for the three months ended March 31, 2017, an increase of $796, or 39.8%. The increase in research and development expenses was primarily due to an increase in employee-related costs (salaries, benefits and equity-based compensation) of approximately $359, an increase in consulting and professional fees associated with certain machine development and other organizational development activities of approximately $357 and unfavorable exchange rates (principally the euro versus the United States dollar).

We expect to increase our investment in research and development by approximately $6,000 to $8,000 during 2018 (as compared to 2017) in an effort to accelerate the development of our fine powder printing capabilities for direct printing, our large format direct and indirect 3D printing machines and our materials development activities for direct and indirect printing, among other initiatives.

Selling, General and Administrative

Selling, general and administrative expenses for the three months ended March 31, 2018 were $6,202, compared with selling, general and administrative expenses of $6,263 for the three months ended March 31, 2017, a decrease of $61, or 1.0%. The decrease in selling, general and administrative expenses was principally due to the absence of an impairment of intangible assets of approximately $269 associated with our exit of our specialty machining operations in Chesterfield, Michigan and a reduction in our provision for bad debts from customers of approximately $114. Offsetting these decreases were an increase associated with employee-related costs (salaries, benefits and equity-based compensation) of approximately $116, an increase in consulting and professional fees of approximately $106 and unfavorable exchange rates (principally the euro versus the United States dollar).

Interest Expense

Interest expense for the three months ended March 31, 2018 was $33, compared with interest expense of $22 for the three months ended March 31, 2017, an increase of $11, or 50.0%. The increase in interest expense was principally due to interest incurred in connection with our revolving credit facility with a related party executed on March 12, 2018 (approximately $10 during the three months ended March 31, 2018).

Other (Income) Expense – Net

Other (income) expense – net for the three months ended March 31, 2018 was ($46), compared with other (income) expense – net of $110 for the three months ended March 31, 2017. Amounts for both periods consisted principally of interest income on cash and cash equivalents balances and net foreign exchange (gains) losses on commercial transactions and certain intercompany transactions between subsidiaries either settled or planned for settlement in the foreseeable future.

Provision for Income Taxes

The provision for income taxes for the three months ended March 31, 2018 and 2017 was $17 and $0, respectively. We have completed a discrete period computation of our provision for income taxes for each of the periods presented. The discrete period computation was required as a result of jurisdictions with losses before income taxes for which no tax benefit can be recognized and an inability to generate reliable estimates for results in certain jurisdictions as a result of inconsistencies in generating net operating profits (losses) in those jurisdictions.

The effective tax rate for the three months ended March 31, 2018 and 2017 was 0.3% (provision on a loss) and 0.0%, respectively. The effective tax rate differs from the United States federal statutory rate of 21.0% (2018) and 34.0% (2017) for each of the periods presented primarily due to net changes in valuation allowances for the periods.

We have provided a valuation allowance for our net deferred tax assets as a result of our inability to generate consistent net operating profits in jurisdictions in which we operate. As such, any benefit from deferred taxes in any of the periods presented in our condensed consolidated financial statements has been fully offset by changes in the valuation allowance for net deferred tax assets. We continue to assess our future taxable income by jurisdiction based on our recent historical operating results, the expected timing of reversal of temporary differences, various tax planning strategies that we may be able to enact in future periods, the impact of potential operating changes on our business and our forecast results from operations in future periods based on available information at the end of each reporting period. To the extent that we are able to reach the conclusion that net deferred tax assets are realizable based on any combination of the above factors in a single, or multiple, taxing jurisdictions, a reversal of the related portion of our existing valuation allowances may occur.

Impact of Inflation

Our results of operations and financial condition are presented based on historical cost. While it is difficult to accurately measure the impact of inflation due to the imprecise nature of the estimates required, we believe the effects of inflation, if any, on our results of operations and financial condition are not significant.

Liquidity and Capital Resources

Liquidity

We have incurred a net loss in each of our annual periods since our inception. In addition, we incurred a net loss of approximately $6,385 for the three months ended March 31, 2018, respectively. In connection with the completion of our initial public offering and subsequent secondary offerings (including our ATM), we have received cumulative unrestricted net proceeds from the sale of our common stock of approximately $168,361 to fund our operations. At March 31, 2018, we had approximately $15,222 in unrestricted cash and cash equivalents. In addition, on March 12, 2018, we entered into a three-year, $15,000 revolving credit facility with a related party (further described below).

We believe that our existing capital resources will be sufficient to support our operating plan. If we anticipate that our actual results will differ from our operating plan, we believe we have sufficient capabilities to enact cost savings measures to preserve capital. Further, we may seek to raise additional capital to support our growth through additional debt, equity or other alternatives (including asset sales) or a combination thereof.

Related Party Revolving Credit Facility

On March 12, 2018, ExOne and its ExOne Americas LLC and ExOne GmbH subsidiaries, as guarantors (collectively, the "Loan Parties"), entered into a Credit Agreement and related ancillary agreements with LBM Holdings, LLC ("LBM"), a company controlled by S. Kent Rockwell, our Executive Chairman (a related party), relating to a $15,000 revolving credit facility (the "LBM Credit Agreement") to provide additional funding for working capital and general corporate purposes. The LBM Credit Agreement provides for a term of three years (through March 12, 2021) and bears interest at a rate of one month LIBOR plus an applicable margin of 500 basis points (approximately 6.7% and 6.9% at inception and March 31, 2018, respectively). The LBM Credit Agreement requires a commitment fee of 75 basis points, or 0.75%, on the unused portion of the facility, payable monthly in arrears. In addition, an up-front commitment fee of 125 basis points, or 1.25% (approximately $188), was required at closing. Borrowings under the LBM Credit Agreement are required to be in minimum increments of $1,000. ExOne may terminate or reduce the credit commitment at any time during the term of the LBM Credit Agreement without penalty. ExOne may also make prepayments against the LBM Credit Agreement at any time without penalty. Borrowings under the LBM Credit Agreement have been collateralized by the accounts receivable, inventories and machinery and equipment of the Loan Parties. At inception and March 31, 2018, the total estimated value of collateral was in significant excess of the maximum capacity of the LBM Credit Agreement.

The LBM Credit Agreement contains several affirmative covenants including prompt payment of liabilities and taxes; maintenance of insurance, properties, and licenses; and compliance with laws. The LBM Credit Agreement also contains several negative covenants including restricting the incurrence of certain additional debt; prohibiting future liens (other than permitted liens); prohibiting investment in third parties; limiting the ability to pay dividends; limiting mergers, acquisitions, and dispositions; and limiting the sale of certain property and equipment of the Loan Parties. The LBM Credit Agreement does not contain any financial covenants. The LBM Credit Agreement also contains events of default, including, but not limited to, cross-default to certain other debt, breaches of representations and warranties, change of control events and breaches of covenants.

LBM was determined to be a related party based on common control by our Executive Chairman. Accordingly, we do not consider the LBM Credit Agreement indicative of a fair market value lending. Prior to execution, the LBM Credit Agreement was subject to review and approval by a sub-committee of independent members of our Board of Directors (which included each of the members of the Audit Committee of the Board of Directors). At the time of execution of the LBM Credit Agreement, the $15,000 in available loan proceeds were deposited into an escrow account with an unrelated, third party financial institution pursuant to a separate Escrow Agreement by and among the parties. Loan proceeds held in escrow will be available to us upon our submission to the escrow agent of a loan request. Such proceeds will not be available to LBM until payment in-full of the obligations under the LBM Credit Agreement and

termination of the LBM Credit Agreement. Payments of principal and other obligations will be made to the escrow agent, while interest payments will be made directly to LBM. Provided there exists no potential default or event of default, the LBM Credit Agreement and Escrow Agreement prohibit any acceleration of repayment of any amount outstanding under the LBM Credit Agreement and prohibit termination of the LBM Credit Agreement or withdrawal from escrow of any unused portion of the LBM Credit Agreement.

There were no borrowings by us under the LBM Credit Agreement from March 12, 2018 through March 31, 2018.

We incurred approximately $264 in debt issuance costs associated with the LBM Credit Agreement (including the aforementioned up front commitment fee paid at closing to LBM). During the three months ended March 31, 2018, we recorded interest expense relating to the LBM Credit Agreement of approximately $10, including approximately $4 associated with amortization of debt issuance costs (resulting in approximately $260 in remaining debt issuance costs at March 31, 2018, of which $88 is included in prepaid expenses and other current assets and $172 is included in other noncurrent assets in the accompanying condensed consolidated balance sheet) and $6 associated with the commitment fee on the unused portion of the revolving credit facility for the period from March 12, 2018 through March 31, 2018 (such amounts included in accrued expenses and other current liabilities in the accompanying condensed consolidated balance sheet at March 31, 2018). Amounts payable to LBM at March 31, 2018, were settled by us in April 2018.

Cash Flows

The following table summarizes the significant components of cash flows for each of the three month periods ended March 31 and our cash, cash equivalents, and restricted cash balances at March 31, 2018 and December 31, 2017:

	Three Months Ended March 31,	
	2018	2017
Net cash (used for) provided by operating activities	$(4,846)	$ 163
Net cash used for investing activities	(458)	(212)
Net cash used for financing activities	(227)	(57)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	209	285
Net change in cash, cash equivalents, and restricted cash	$(5,322)	$ 179

	March 31, 2018	December 31, 2017
Cash and cash equivalents	$ 15,222	$ 21,848
Restricted cash	1,634	330
Cash, cash equivalents, and restricted cash	$ 16,856	$ 22,178

Operating Activities

Net cash used for operating activities for the three months ended March 31, 2018, was $4,846, compared with net cash provided by operating activities of $163 for the three months ended March 31, 2017. The change of $5,009 was due to an increase in our net loss (net of noncash items) combined with net cash outflows (versus net cash inflows) from changes in assets and liabilities, mostly due to an increase in outflows associated with inventory production (consistent with our operating plans) and a reduction in net cash inflows from customers (principally due to timing of cash collections on 3D printing machine sales).

Investing Activities

Net cash used for investing activities for the three months ended March 31, 2018 was $458, compared with net cash used for investing activities of $212 for the three months ended March 31, 2017.

Activity for both periods included cash outflows for capital expenditures (consistent with our operating plans), offset by proceeds from the sale of property and equipment.

We expect our remaining 2018 capital expenditures to be limited to spending associated with sustaining our existing operations and strategic asset acquisition and deployment (additional estimated spending of less than $1,000).

Financing Activities

Net cash used for financing activities for the three months ended March 31, 2018 was $227, compared with net cash used for financing activities of $57 for the three months ended March 31, 2017.

Uses of cash for both periods included principal payments on outstanding debt and capital leases. Uses of cash for the three months ended March 31, 2018 also included approximately $188 in debt issuance costs associated with our revolving credit facility with a related party (further described above).

Off Balance Sheet Arrangements

In the normal course of our operations, our ExOne GmbH subsidiary issues financial guarantees and letters of credit to third parties in connection with certain commercial transactions requiring security. At March 31, 2018, total outstanding financial guarantees and letters of credit issued by us were approximately $1,233 (€1,000). Included in the total outstanding financial guarantees and letters of credit issued by us are approximately $940 (€762) with expiration dates ranging from May 2018 through June 2022 and approximately $293 (€238) which have no expiration date. Financial guarantees and letters of credit issued by ExOne GmbH having no expiration date were released by the counterparty in May 2018. At December 31, 2017, total outstanding financial guarantees and letters of credit issued by us were approximately $1,224 (€1,021). For further discussion related to financial guarantees and letters of credit issued by us, refer to Note 10 to the condensed consolidated financial statements in Part I Item 1 of this Quarterly Report on Form 10-Q.

Recently Issued and Adopted Accounting Guidance

Refer to Note 1 to the condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Critical Accounting Policies and Estimates

Refer to Note 1 of the consolidated financial statements in Part I, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2017.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risk from fluctuations in foreign currency exchange rates which may adversely affect our results of operations and financial condition. We seek to minimize these risks through regular operating and financing activities and, when we consider it to be appropriate, through the use of derivative financial instruments. We do not purchase, hold or sell derivative financial instruments for trading or speculative purposes.

The local currency is the functional currency for significant operations outside of the United States. The determination of the functional currency of an operation is made based on the appropriate economic and management indicators.

Foreign currency assets and liabilities are translated into their United States dollar equivalents based on period end spot exchange rates, and are included in stockholders' equity as a component of other comprehensive income (loss). Revenues and expenses are translated at average exchange rates. Transaction gains and losses that arise from exchange rate fluctuations are charged to operations as incurred, except for gains and losses associated with certain long-term intercompany transactions for which settlement is not planned or anticipated in the foreseeable future, which are included in accumulated other comprehensive loss in the condensed consolidated balance sheet.

We transact business globally and are subject to risks associated with fluctuating foreign exchange rates. Approximately 60.4% and 67.0% of our consolidated revenue was derived from transactions outside the United States for the three months ended March 31, 2018 and 2017, respectively. This revenue is generated primarily from wholly-owned subsidiaries operating in their respective countries and surrounding geographic areas. This revenue is primarily denominated in each subsidiary's local functional currency, including the euro and Japanese yen. A hypothetical change in foreign exchange rates of +/- 10.0% for the three months ended March 31, 2018, would result in an increase (decrease) in revenue of approximately $700. These subsidiaries incur most of their expenses (other than intercompany expenses) in their local functional currencies.

At March 31, 2018, we held approximately $16,856 in cash, cash equivalents, and restricted cash, of which approximately $13,677 was held by certain of our subsidiaries in United States dollars.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

As of March 31, 2018, we carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) pursuant to Rules 13a-15 and 15d-15 under the Exchange Act. These controls and procedures were designed to provide reasonable assurance that the information required to be disclosed in the reports that we file or submit under the 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, in a manner to allow timely decisions regarding required disclosures. Based on this evaluation, management has concluded that our disclosure controls and procedures were effective as of March 31, 2018 to provide reasonable assurance that the information required to be disclosed in the reports we file or submit under the 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 management, including our Chief Executive Officer and Chief Financial Officer, in a manner to allow timely decisions regarding required disclosures.

Changes in Internal Control over Financial Reporting

There were no changes in our internal controls over financial reporting during the three months ended March 31, 2018, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings.

We are subject to various litigation, claims, and proceedings which have been or may be instituted or asserted from time to time in the ordinary course of business. Management does not believe that the outcome of any pending or threatened matters will have a material adverse effect, individually or in the aggregate, on our financial position, results of operations or cash flows.

Item 1A. Risk Factors.

There have been no material changes from the risk factors as previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2017.

Item 6. Exhibits.

(a)(3) Exhibits

The Exhibits listed on the accompanying Index to Exhibits are filed as part of this Quarterly Report on Form 10-Q.

EXHIBIT INDEX

The agreements and other documents filed as exhibits to this report are not intended to provide factual information or other disclosure other than with respect to the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by us in these agreements or other documents were made solely within the specific context of the relevant agreement or document and may not describe the actual state of affairs as of the date they were made or at any other time.

Exhibit Number	Description	Method of Filing
10.1	Form of Notice of Inclusion in the 2018 Annual Incentive Program.	Filed herewith.
31.1	Rule 13(a)-14(a) Certification of Principal Executive Officer.	Filed herewith.
31.2	Rule 13(a)-14(a) Certification of Principal Financial Officer.	Filed herewith.
32	Section 1350 Certification of Principal Executive Officer and Principal Financial Officer.	Filed herewith.
101.INS	XBRL Instance Document.	Filed herewith.
101.SCH	XBRL Taxonomy Extension Schema Document.	Filed herewith.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.	Filed herewith.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.	Filed herewith.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.	Filed herewith.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.	Filed herewith.

Signatures

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

The ExOne Company

By: /s/ James L. McCarley
James L. McCarley
Chief Executive Officer
(Principal Executive Officer)

Date: May 10, 2018

By: /s/ Brian W. Smith
Brian W. Smith
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Date: May 10, 2018