NOVANTA INC
Form 10-K
March 06, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2016

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. 001-35083

Novanta Inc.

(Exact name of registrant as specified in its charter)

New Brunswick, Canada (State or other jurisdiction of incorporation or organization)	98-0110412 (I.R.S. Employer Identification No.)
125 Middlesex Turnpike Bedford, Massachusetts, USA (Address of principal executive offices)	01730 (Zip Code)

(781) 266-5700

(Registrant's telephone number, including area code)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Exchange on Which Registered
Common Shares, no par value	The NASDAQ Stock Market LLC

Securities Registered Pursuant to Section 12(g) of the Act:

None

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

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

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

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

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

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

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

The aggregate market value of the Registrant's outstanding common shares held by non-affiliates of the Registrant, based on the closing price of the common shares on the NASDAQ Global Select Market on the last business day of the Registrant's most recently completed second fiscal quarter (July 1, 2016) was $479,741,621. For purposes of this disclosure, common shares held by officers and directors of the Registrant and by persons who hold more than 10% of the Registrant's outstanding common shares have been excluded because such persons may be deemed to be affiliates.

This determination of affiliate status is not necessarily conclusive.

As of February 21, 2017, there were 34,459,387 of the Registrant’s common shares, no par value, issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant’s Definitive Proxy Statement for the Registrant’s Annual Meeting of Shareholders scheduled to be held on May 10, 2017 to be filed with the Securities and Exchange Commission are incorporated by reference in answer to Part III of this Annual Report on Form 10-K.

NOVANTA INC.

FORM 10-K

YEAR ENDED DECEMBER 31, 2016

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As used in this report, the terms “we,” “us,” “our,” “Novanta,” “NOVT” and the “Company” mean Novanta Inc. and its subsidiaries, unless the context indicates another meaning.

Unless otherwise noted, all dollar amounts in this report are expressed in United States dollars.

The following brand and trade names of Novanta Inc. are used in this report: MicroE, Celera Motion, Westwind, Synrad, Cambridge Technology, ExoTec Precision, General Scanning, Photo Research, JADAK, NDS, NDSsi, Applimotion, Lincoln Laser, Skyetek and Reach Technology.

PART I

Cautionary Note Regarding Forward Looking Statements

Except for historical information, the matters discussed in this Annual Report on Form 10-K are forward looking statements that involve risks, uncertainties and assumptions that, if they never materialize or if they prove incorrect, could cause our consolidated results to differ materially from those expressed or implied by such forward looking statements. The Company makes such forward looking statements under the provision of the “Safe Harbor” section of the Private Securities Litigation Reform Act of 1995. Actual future results may vary materially from those projected, anticipated, or indicated in any forward looking statements as a result of various important factors, including those set forth in Item 1A of this Annual Report on Form 10-K under the heading “Risk Factors.” Readers should also carefully review the risk factors described in the other documents that we file with the SEC from time to time. In this Annual Report on Form 10-K, the words “anticipates,” “believes,” “expects,” “intends,” “future,” “could,” “estimates,” “plans,” “woul “potential,” “continues” and similar words or expressions (as well as other words or expressions referencing future events, conditions or circumstances) identify forward looking statements. Forward looking statements also include the assumptions underlying or relating to any of the forward looking statements. The forward looking statements contained in this Annual Report include, but are not limited to, statements related to: our belief that the Purchasing Managers Index (PMI) may provide an indication of the impact of general economic conditions on our sales into the advanced industrial end market; anticipated financial performance; expected liquidity and capitalization; drivers of revenue growth and our growth expectations in various markets; management’s plans and objectives for future operations, expenditures and product development, and investments in research and development; business prospects; potential of future product releases and expansion of our product and service offerings; anticipated revenue performance; industry trends; market conditions; our competitive positions; changes in economic and political conditions; changes in accounting principles; changes in actual or assumed tax liabilities; expectations regarding tax exposures; anticipated reinvestment of future earnings and dividend policy; anticipated expenditures in regard to the Company’s benefit plans; future acquisitions, integration and dispositions and anticipated benefits from acquisitions; anticipated use of currency hedges; ability to repay our indebtedness; our intentions regarding the use of cash; expectations regarding legal and regulatory environmental requirements and our compliance thereto; and other statements that are not historical facts. All forward looking statements included in this document are based on information available to us on the date hereof. We will not undertake and specifically decline any obligation to update any forward looking statements, except as required under applicable law.

Item 1. Business

Overview

Novanta Inc. and its subsidiaries (collectively referred to as “Novanta”, the “Company”, “we”, “us”, “our”) design, develop, manufacture and sell precision photonic and motion control components and subsystems to Original Equipment Manufacturers (“OEMs”) in the medical and advanced industrial markets. We combine deep expertise at the intersection of photonics and motion to solve complex technical challenges. This enables us to engineer core components and sub-systems that deliver extreme precision and performance, tailored to our customers’ demanding applications. We deliver highly engineered photonics, vision and precision motion solutions to customers around the world.

Novanta Inc. was founded and initially incorporated in Massachusetts in 1968 as General Scanning, Inc. (“General Scanning”). In 1999, General Scanning merged with Lumonics Inc. The post-merger entity, GSI Lumonics Inc., continued under the laws of the Province of New Brunswick, Canada. In 2005, the Company changed its name to GSI Group Inc. Through a series of strategic divestitures and acquisitions between 2008 and 2015, the Company transformed from a focus on the semiconductor industry to primarily selling components and sub-systems to OEMs in the medical and advanced industrial markets. The Company changed its name to Novanta Inc. in May 2016.

Strategy

Our strategy is to drive sustainable, profitable growth through short-term and long-term initiatives, including:

- disciplined focus on our diversified business model of providing mission-critical functionality to long life-cycle OEM customer platforms in attractive medical and advanced industrial niche markets;
- improving our business mix to increase medical sales as a percentage of total revenue by:
  - introducing new products aimed at attractive medical applications, such as minimally invasive and robotic surgery, ophthalmology, patient monitoring, drug delivery, clinical laboratory testing and life science equipment;
  - deepening our key account management relationships with and driving cross selling of our product offerings to leading medical equipment manufacturers; and
  - pursuing complementary medical technology acquisitions;

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- increasing our penetration of high growth advanced industrial applications, such as laser materials processing, robotics, automation and metrology, by working closely with OEM customers to launch application specific products that closely match the requirements of each application;
- broadening our portfolio of enabling proprietary technologies and capabilities through increased investment in new product development, expanded sales and marketing channels to reach target customers, and investments in application development to further penetrate existing customers, while expanding the applicability of our solutions to new markets;
- broadening our product and service offerings through the acquisition of innovative and complementary technologies and solutions in medical and advanced industrial technology applications, including increasing our recurring revenue streams such as services, spare parts and consumables;
- improving our existing operations to expand profit margins and improve customer satisfaction by implementing lean manufacturing principles and strategic sourcing across our major production sites; and
- attracting, retaining, and developing world-class talented and motivated employees.

Acquisitions

In January 2017, the Company acquired approximately 35% of the outstanding shares of Laser Quantum Limited ("Laser Quantum"), a Manchester, United Kingdom-based provider of solid state continuous wave lasers, femtosecond lasers, and optical light engines to OEMs in the medical market, for a total purchase price of £25.5 million ($31.8 million in U.S. dollars). As a result of the acquisition of these additional shares, the Company's equity ownership percentage increased from approximately 41% to approximately 76% and the future financial results of Laser Quantum will be consolidated in the Company's consolidated financial statements.

Also in January 2017, the Company acquired ThingMagic, a Woburn, Massachusetts-based provider of ultra high frequency ("UHF") radio frequency identification ("RFID") modules and finished RFID readers to OEMs in the medical and advanced industrial markets, for a total purchase price of $19.2 million, subject to customary working capital adjustments.

In May 2016, the Company acquired Reach Technology Inc., a Fremont, California-based provider of embedded touch screen technology solutions to OEMs in the medical and advanced industrial markets, for a total purchase price of $9.4 million.

In December 2015, the Company acquired all assets and certain liabilities of Skyetek Inc., a Denver, Colorado-based provider of embedded and standalone RFID solutions for OEM customers in the medical and advanced industrial markets, for a total purchase price of $2.8 million.

In November 2015, the Company acquired certain assets and liabilities of Lincoln Laser Company, a Phoenix, Arizona-based provider of ultrafast precision polygon scanners and other optical scanning solutions for the medical and advanced industrial markets, for a total purchase price of $12.1 million.

In February 2015, the Company acquired Applimotion Inc., a Loomis, California-based provider of advanced precision motor and motion control technology to OEM customers in the medical and advanced industrial markets, for a total purchase price of $14.0 million.

In March 2014, the Company acquired JADAK LLC, JADAK Technologies Inc. and Advance Data Capture Corporation (together, "JADAK"), a North Syracuse, New York-based provider of optical data collection and machine vision technologies to OEM medical device manufacturers, for a total purchase price of $93.7 million.

In January 2013, the Company acquired NDS Surgical Imaging LLC ("NDS"), a San Jose, California-based company that designs, manufactures, and markets high definition visualization solutions and imaging informatics products for the surgical, radiology and patient monitoring market segments, for a total final purchase price of $75.4 million.

Divestitures and Product Rationalization

We continuously evaluate our business mix and financial performance. Since 2011, we have executed a series of divestitures in line with our strategy.

In January 2016, the Company discontinued its radiology products, sold under the Dome brand name and operated within the Company’s Visualization Solutions product line. Total revenue from these products was approximately $1.4 million, $9.4 million and $11.5 million in 2016, 2015, and 2014, respectively.

In June 2015, the Company finalized an agreement to divest its 50% owned joint venture in India, Excel Laser Technology Private Limited, for net cash proceeds of $0.2 million.

In April 2015, the Company completed the sale of its fiber laser business, operated under the JK Lasers brand name, for $29.6 million in cash.

In July 2014, the Company completed the sale of the Scientific Lasers business, operated under the Continuum and Quantronix brand names, for $6.5 million in cash.

In May 2013, the Company sold the Semiconductor Systems business, operated under the GSI Group brand name, for $9.7 million in cash.

In October 2012, the Company divested the Lasers Systems business, operated under the Control Laser and Baublys brand names, for $6.6 million in cash.

Segments

The Company evaluates the performance of, and allocates resources to, its segments based on revenue, gross profit and operating profit. The Company's reportable segments have been identified based on commonality and adjacency of technologies, applications, and customers amongst the Company's individual product lines.

The following table shows the external revenues, gross profit margin and operating profit for each of the segments for the year ended December 31, 2016 (dollars in thousands):

	Revenue	Gross Profit Margin	Operating Profit
Photonics	$174,158	44.0 %	$34,825
Vision	$122,250	38.6 %	$(1,277)
Precision Motion	$88,350	45.3 %	$21,101

See Note 16 to Consolidated Financial Statements for additional financial information about our reportable segments.

Photonics

The Photonics segment (formerly known as Laser Products) designs, manufactures and markets photonics-based solutions, including CO2 laser sources, and laser scanning and laser beam delivery products, to customers worldwide. The segment serves highly demanding photonics-based applications such as industrial material processing, metrology, medical and life science imaging, and medical laser procedures. The vast majority of the segment's product offerings are sold to OEM customers. The segment sells these products both directly, utilizing a highly technical sales force, and indirectly, through resellers and distributors.

The Photonics segment is comprised of three product lines:

Product Line	Key End Market	Brand Names	Description
Laser Beam Delivery Components	Advanced Industrial and Medical	Cambridge Technology, Lincoln Laser & ExoTec Precision	Galvanometer and polygon-based optical scanning components. These products provide precise control and delivery of laser beams through motorized manipulation of mirrors and optical elements and are integrated by OEM manufacturers with their controlling hardware and software. Applications include material processing (such as laser marking, laser machining and laser drilling), scanning microscopy, laser-based vision correction, optical coherence tomography imaging, high resolution printing, holographic imaging and storage, metrology, and 2D or 3D imaging.
Laser Beam Delivery Solutions	Advanced Industrial and Medical	Cambridge Technology, Lincoln Laser & Synrad	Galvanometer and polygon based optical scan heads. These products provide precise control and delivery of laser beams through motorized manipulation of mirrors and optical elements in two and three-axis scan heads, scanning subsystems, and controlling hardware and software. Applications include material processing (such as laser marking, laser coding, laser engraving, laser machining and laser drilling), scanning microscopy, laser-based vision correction, optical coherence tomography imaging, high resolution printing, holographic imaging and storage, metrology, and 2D or 3D imaging. Laser processing heads are used for laser cutting and welding as well as for brazing in the advanced industrial market.
CO_2 Lasers	Advanced Industrial	Synrad	Both continuous and pulsed CO2 lasers with power ranges from 5 to 400 watts. Applications include coding, marking, engraving, cutting and trimming of metals and non-metals, fine materials processing, additive manufacturing, packaging converting, and medical applications in dental and dermatology.

Vision

The Vision segment (formerly known as Vision Technologies) designs, manufactures and markets a wide range of medical grade technologies, including visualization solutions, imaging informatics products, optical data collection and machine vision technologies, RFID technologies, thermal printers, light and color measurement instrumentation, and embedded touch screen solutions, to customers worldwide. The vast majority of the segment’s product offerings are sold to OEM customers. The segment sells these products both directly, utilizing a highly technical sales force, and indirectly, through resellers and distributors.

The Vision segment has nine product lines:

Product Line	Key End Market	Brand Names	Description
Visualization Solutions	Medical	NDS, NDSsi	High definition visualization solutions for minimally invasive surgery and patient monitoring applications.
Video Processing	Medical	NDS, NDSsi	Imaging management for visual information, including real-time distribution, documentation, control, and streaming for multiple imaging modalities for surgical applications.
Wireless OR Solutions	Medical	NDS, NDSsi	High definition wireless transmission of video signals to replace video cables in minimally invasive surgical equipment.
Touch Panel Displays	Medical and Advanced Industrial	Reach Technology	Embedded capacitive and resistive touch panel technology that delivers high-performance solutions.
Machine Vision	Medical and Advanced Industrial	JADAK	Camera-based machine vision products and solutions performing image analysis within medical devices.
Radio Frequency Identification (RFID)	Medical and Advanced Industrial	JADAK, Skyetek	RFID technologies via High-Frequency (HF) and Ultra-High Frequency (UHF) readers, writers and antennas, for applications such as surgical part tracking and counterfeit detection.
Barcode Scanning	Medical and Advanced Industrial	JADAK	Embedded and handheld data collection products for barcode scanning.
Thermal Chart Recorders	Medical	JADAK	Rugged thermal chart recorders for patient monitoring, defibrillator equipment, blood gas analyzers, and pulse oximeters.
Light and Color Measurement	Advanced Industrial and Medical	Photo Research	Light and color measurement devices, including spectroradiometers, photometers, and color characterization software, used in research and development and quality control testing.

Precision Motion

The Precision Motion segment designs, manufactures and markets optical encoders, precision motor and motion control technology, air bearing spindles and precision machined components to customers worldwide. The vast majority of the segment’s product offerings are sold to OEM customers. The segment sells these products both directly, utilizing a highly technical sales force, and indirectly, through resellers and distributors.

The Precision Motion segment includes four product lines:

Product Line	Key End Market	Brand Names	Description
Optical Encoders	Advanced Industrial and Medical	Celera Motion, MicroE	Precision optical encoders from core product brand, MicroE. Applications include motion control of equipment and instruments used in the semiconductor and electronics manufacturing, industrial and medical robotics, metrology, satellite communications, medical devices, and laboratory and diagnostics equipment.
Precision Motors	Advanced Industrial and Medical	Celera Motion, Applimotion	Precision direct drive motor components from core product brand, Applimotion. Applications include motion control of equipment and instruments used in the semiconductor and electronics manufacturing, industrial and medical robotics, autonomous vehicles, metrology, satellite communications, surveillance, medical devices, and laboratory and diagnostics equipment.
Integrated Motion Control Solutions	Advanced Industrial and Medical	Celera Motion	Precision integrated motion control solutions. Applications include motion control of equipment and instruments used in the semiconductor and electronics manufacturing, industrial and medical robotics, autonomous vehicles, metrology, satellite communications, surveillance, medical devices, and laboratory and diagnostics equipment.
Air Bearing Spindles	Advanced Industrial	Westwind	High-speed and precision air bearing spindles used in the PCB manufacturing, automotive coating, semiconductor manufacturing equipment, micro machining and power generation markets.

End Markets

We primarily operate in two end markets: the advanced industrial market and the medical market.

Advanced Industrial Market

For the year ended December 31, 2016, the advanced industrial market accounted for approximately 60% of the Company’s revenue. Revenue from our products sold to the advanced industrial market is affected by a number of factors, including changing technology requirements and preferences of our customers, productivity or quality investments in a manufacturing environment, the financial condition of our customers, changes in regulatory requirements and laws, and general economic conditions. We believe that the Purchasing Managers Index (PMI) on manufacturing activities specific to different regions around the world may provide an indication of the impact of general economic conditions on our sales into the advanced industrial market.

Medical Market

For the year ended December 31, 2016, the medical market accounted for approximately 40% of the Company’s revenue. Our revenue from products sold to the medical market is generally affected by hospital and other health care provider capital spending, changes in regulatory requirements and laws, aggregation of purchasing by healthcare networks, trends in surgical procedures, changes in technology requirements, changes in customer or patient preferences, and general demographic trends.

Customers

We have a diverse group of customers that include companies that are global leaders in their industries. Many of our customers participate in several market industries. No customer accounted for greater than 10% of our consolidated revenue during the years ended December 31, 2016, 2015 or 2014.

Customers of our Photonics, Vision, and Precision Motion segments include a large number of original equipment manufacturers who integrate our products into their systems for sale to end users. We also sell directly to end users. Our customers include leaders in the medical and advanced industrial markets. A typical OEM customer will usually evaluate our products and our ability to provide application knowledge and expertise, post-sales application support and services, supply chain management over long durations, manufacturing capabilities, product quality, global presence, and product customization before deciding to incorporate our products into their products or systems. Customers generally choose suppliers based on a number of factors, including product performance, reliability, application support, price, breadth of the supplier's product offerings, the financial condition of the supplier, and the geographical coverage offered by the supplier. Once certain of our products have been designed into a given OEM customer's product or system, there are generally significant barriers to subsequent supplier changes, especially in the medical market.

Seasonality

While our revenues are not highly seasonal on a consolidated basis, the revenues of some of our individual product lines, particularly our visualization solutions, imaging informatics, and thermal printer products, are impacted by seasonality due to hospital budgeting cycles.

Backlog

As of December 31, 2016 and 2015, our consolidated backlog was approximately $115.0 million and $96.8 million, respectively. The majority of orders included in backlog represent open orders for products and services that, based on management's projections, have a reasonable probability of being delivered over the subsequent twelve month period. Orders included in backlog may be canceled or rescheduled by customers without significant penalty. Management believes that backlog is not a meaningful indicator of future business prospects for any of our business segments due to the short lead time required on our products and the ability of customers to reschedule or cancel orders. Therefore, backlog as of any particular date should not be relied upon as indicative of our revenues for any future period.

Manufacturing

Manufacturing functions are performed internally when management chooses to maintain control over critical portions of the production process or for cost related reasons while some of the less critical portions are outsourced to third parties. To the extent it makes financial sense, we will consider outsourcing additional portions of the production process.

Products offered by our Photonics segment are manufactured at facilities in Bedford, Massachusetts; Mukilteo, Washington; Phoenix, Arizona; Taunton, United Kingdom; and Suzhou, China. Products offered by our Vision segment are manufactured at facilities in Syracuse, New York and San Jose, California. Products offered by our Precision Motion segment are primarily manufactured at facilities in Bedford, Massachusetts; Loomis, California; Poole, United Kingdom; and Suzhou, China.

Many of our products are manufactured under ISO 9001 certification, while the majority of our products manufactured for the medical market are manufactured under ISO 13485 certification. Certain visualization solutions, thermal printers and imaging informatics products are manufactured under current good manufacturing practices (CGMPs), which is a requirement of their medical device classification by the U.S. Food and Drug Administration (the "FDA"). In addition, certain visualization solutions, thermal printers and imaging informatics products are manufactured under section 510(k) of the FDA.

Research and Development and Engineering

We incur research and development and engineering expenses as part of our ongoing operations. We are strongly committed to research and development for core technology programs directed at creating new products, product enhancements, increasing our addressable market, and new applications for existing products. We are also committed to funding research into future market opportunities. Our markets have experienced rapid technological changes and product innovations. We believe that continued timely development of new products and product enhancements to serve existing and new markets is necessary for us to remain competitive. Research and development and engineering expenses were $32.0 million, or 8.3% of revenue, for the year ended December 31, 2016, compared to $31.0 million, or 8.3% of revenue, for the year ended December 31, 2015 and $29.0 million, or 7.9% of revenue, for the year ended December 31, 2014.

Marketing, Sales and Distribution

We sell our products globally, primarily through our direct sales force. Sales to foreign jurisdictions are largely based on a direct sales force, but occasionally are sold through distributors, including manufacturers’ representatives, to either augment our selling effort or address a local market where we have no direct sales force. Our local sales, applications, and service teams and our distributors work closely with our customers to ensure customer satisfaction with our products. We have sales and service centers located in North America, Europe, China, and Japan.

To support our sales efforts we maintain and continue to invest in a number of application centers around the world, where our application experts work closely with customers on integrating and using our solutions in their equipment. The applications span a wide range, with teams residing in several facilities in the United States, Europe and Asia.

Competition

The markets in which we compete are dynamic and highly competitive. Due to the wide range of our products, we face many different types of competition and competitors. This affects our ability to sell our products and the prices at which these products are sold. Our competitors range from large foreign and domestic organizations, which produce a comprehensive array of goods and services and may have greater financial and other resources than we do, to small firms producing a limited number of goods or services for specialized market segments.

Competitive factors in our Photonics, Vision, and Precision Motion segments include product performance, price, quality and reliability, features, compatibility of products with existing systems, technical support, product breadth, market presence, on-time delivery and our overall reputation. We believe that our products offer a number of competitive advantages. However, some of our competitors are substantially larger and have greater financial and other resources.

Raw Materials, Components and Supplies

Each of our businesses uses a wide variety of raw materials, key components and parts that are generally available from alternative sources of supply and in adequate quantities from domestic and foreign sources. In some instances, we design and/or re-engineer the parts and components used in our products. For certain critical raw materials, key components and parts used in the production of some of our principal products, we have identified only a limited number of suppliers or, in some instances, a single source of supply. We also rely on a limited number of independent contractors to manufacture subassemblies for some of our products.

For a further discussion of the importance and risks associated with our supply chain, see applicable risk factors under Item 1A of this Annual Report on Form 10-K.

Patents and Intellectual Property

We rely upon a combination of copyrights, patents, trademarks, trade secret laws and restrictions on disclosure to protect our intellectual property rights. We hold a number of registered and pending patents in the United States and other countries. In addition, we also have trademarks registered in the United States and foreign countries. We will continue to actively pursue applications for new patents and trademarks as we deem appropriate. However, there can be no assurance that any other patents will be issued to us or that such patents, if and when issued, will provide any protection or benefit to us.

Although we believe that our patents and pending patent applications are important, we rely upon several additional factors that are essential to our business success, including: market position, technological innovation, know-how, application knowledge and product performance. Considering the diversified nature of our businesses, we do not believe that any individual patent is material to our business as a whole. However, there can be no assurance that we will be able to sustain these advantages.

We also protect our proprietary rights by controlling access to our proprietary information and by maintaining confidentiality agreements with our employees, consultants, and certain customers and suppliers. For a further discussion of the importance of risks associated with our intellectual property rights, see applicable risk factors under Item 1A of this Annual Report on Form 10-K.

Human Resources

As of December 31, 2016 and 2015, we employed 1,269 and 1,262 employees, respectively. We also employ temporary and contract personnel that are not included in the headcount numbers.

Geographic Information

We are a multinational company with approximately 60% of our 2016 revenue outside the United States and approximately 17% of our net property, plant and equipment outside the United States as of December 31, 2016. Geographic information is discussed in Note 16 to the Consolidated Financial Statements. For a further discussion of the risks associated with our foreign operations, see applicable risk factors under Item 1A of this Annual Report on Form 10-K.

Government Regulation

Our current and contemplated activities and the products and processes that will result from such activities are subject to substantial government regulations, both in the United States and internationally. Most of our production facilities are subject to various federal, state, local, and/or foreign environmental regulations, related to the use, storage, handling, and disposals of regulated materials, chemicals, and certain waste products. Such rules are subject to change by the governing agencies and we monitor those changes closely. We expect all operations to meet the legal and regulatory environmental requirements. Although we believe that our safety procedures for using, handling, storing and disposing of such materials comply with the standards required by federal and state laws and regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials.

We may face the potential of increasing complexity in our product designs and procurement operations due to the evolving nature of product compliance standards. Those standards may impact the material composition of our products entering specific markets. Such regulations went into effect in the European Union (“EU”) in 2006 (“The Restriction of Hazardous Substances Directive” (“RoHS”)) and in 2007 (“Registration, Evaluation, Authorisation and Restriction of Chemicals” (“REACH”)), and in China in 2007 (“Management Methods for Controlling Pollution Caused by Electronic Information Products Regulation” (“China-RoHS”)).

Our capital expenditures, earnings, and competitive position have not been, and are not expected to be materially affected by our compliance with federal, state, and local environmental provisions which have been enacted or adopted to regulate the distribution of materials into the environment.

United States Food and Drug Administration

Certain products manufactured by us are integrated into systems by our customers that are subject to certain regulations administered by the United States Food and Drug Administration. We must comply with certain quality control measurements in order for our products to be effectively used in our customers’ end products. Non-compliance with quality control measurements could result in loss of business with our customers, fines and penalties.

We are subject to certain medical device regulations. Medical devices are subject to extensive and rigorous regulation by the Food and Drug Administration and by other federal, state and local authorities. The Federal Food, Drug and Cosmetic Act and related regulations govern the conditions of safety, efficacy, clearance, approval, manufacturing, quality system requirements, labeling, packaging, distribution, storage, record keeping, reporting, marketing, advertising, and promotion of products. Non-compliance with applicable requirements can result in, among other things, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, refusal by the government to grant premarket clearance or approval of products, withdrawal of clearances and approvals, and criminal prosecution.

Other Information

We maintain a website with the address www.novanta.com. We are not including the information contained on our website as part of, or incorporating it by reference into, this Annual Report on Form 10-K. We make available, free of charge through our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to these reports as soon as reasonably practicable after we electronically file these materials with, or otherwise furnish them to, the Securities and Exchange Commission ("SEC"). In addition, our reports and other information are filed with securities commissions or other similar authorities in Canada, and are available over the Internet at www.sedar.com.

Item 1A. Risk Factors

The following risk factors could have a material adverse effect on our business, financial position, results of operations and cash flows and could cause the market value of our common shares to fluctuate or decline. These risk factors may not include all of the important factors that could affect our business or that could cause our future financial results to differ materially from historic or expected results or cause the market price of our common shares to fluctuate or decline.

Risks Relating to our Business

Our results of operations could be adversely affected by economic and political conditions and the effects of these conditions on our customers' businesses and levels of business activities.

A large portion of our product sales are dependent on the need for increased capacity, productivity and cost saving initiatives, improved product quality and performance, and new investments by our customers. Weaknesses in our end markets could negatively impact our revenue and gross margin and consequently have a material adverse effect on our business, financial condition and results of operations. Moreover, a severe and/or prolonged overall economic downturn or a negative or uncertain political climate could adversely affect our customers' financial condition and the timing or levels of business activity of our customers and the industries we serve. In particular, reduced growth expectations in China, the uncertain European financial situation, and political and economic uncertainty in the United States as a result of the new U.S. presidential administration could have an impact on our customers' financial condition and ability to maintain product orders in the future. This may reduce the demand for our products or depress pricing for our products and have a material adverse effect on our results of operations. Changes in global economic conditions could also shift demand to products or services for which we do not have competitive advantages. This could negatively affect the amount of business that we are able to obtain. In addition, if we are unable to successfully anticipate changing economic and political conditions, we may be unable to effectively plan for and respond to those changes, and our business could be negatively affected.

Our business depends significantly upon our customers' capital expenditures, which are subject to cyclical market fluctuations.

Certain sub-segments of the advanced industrial market we serve, including the microelectronics and industrial capital equipment markets, are cyclical and have historically experienced periods of oversupply, resulting in downturns in demand for capital equipment in which many of our products are used. The timing, length and severity of these cycles and their impact on our business are difficult to predict. Further, our order levels or results of operations for a given period may not be indicative of order levels or results of operations for subsequent periods. For the foreseeable future, our operations will continue to depend upon industries that are subject to market cycles which, in turn, could adversely affect the market demand for our products.

We experienced significant cyclical end market fluctuations in the past. We cannot predict when slowdowns will recur or that the impact of such slowdowns will be more or less significant compared to historical fluctuations.

Our business success depends upon our ability to respond to fluctuations in product demand, but doing so may require us to incur costs despite limited visibility toward future business declines.

In periods of weak demand, we may be required to reduce costs while maintaining the ability to motivate and retain key employees at the same time. Additionally, to remain competitive, we must continually invest in research and development, which may inhibit our ability to reduce costs in a down cycle. Long product lead-times create a risk that we may purchase or manufacture inventories of products that we are unable to sell.

During a period of increasing demand and rapid growth, we must be able to increase manufacturing capacity quickly. Our inability to quickly increase production in response to a surge in demand could prompt customers to look for alternative sources of supply or leave our customers without a supply, both of which events could harm our reputation and make it difficult for us to retain our existing customers or to obtain new customers.

The success of our business depends on our ability to continuously innovate and to manage transition to new product innovations.

Technology requirements in our markets are constantly advancing. We must continually introduce new products that meet evolving customer needs. Our ability to grow depends on the successful development, introduction and market acceptance of new or enhanced products that address our customers' requirements. Developing new technology is a complex and uncertain process requiring us to accurately anticipate technological and market trends and meet those trends with responsive products. Additionally, this requires that we manage the transition from older products to minimize disruption in customer ordering patterns, avoid excess inventory and ensure adequate supplies of new products. Failure to develop new products, failed market acceptance of new products or problems associated with new product transitions could harm our business.

If we fail to introduce new products in a timely manner, we may lose market share and be unable to achieve revenue growth targets.

Our research and development efforts may not lead to the successful introduction of products within the time frame that our customers demand. Our competitors may introduce new or improved products, processes or technologies that make our current or proposed products obsolete or less competitive. We may encounter delays or problems in connection with our research and development efforts. Product development delays may result from numerous factors, including:

- changing product specifications and customer requirements;
- inability to manufacture new products cost effectively;
- difficulties in reallocating engineering resources and overcoming resource limitations;
- changing market or competitive product requirements; and
- unanticipated engineering complexities.

New products often take longer to develop, may have fewer features than originally considered desirable, and have higher costs than initially estimated. There may be difficulty in sourcing components for new products and delays in starting volume production. New products may also not be commercially successful. Any of these adverse developments could harm our business and our results of operations.

Customer order timing and other factors beyond our control may cause our operating results to fluctuate from period to period.

Changes in customer order timing and the existence of certain other factors beyond our control may cause our operating results to fluctuate from period to period. Such factors include:

- fluctuations in our customers' businesses;
- timing and recognition of revenues from customer orders;
- timing and market acceptance of new products or enhancements introduced by us or our competitors;
- availability of parts from our suppliers and the manufacturing capacity of our subcontractors;
- decisions by customers to reduce their purchases of our products;
- changes in the prices of our products or of our competitors' products; and
- fluctuations in foreign currency exchange rates.

We may receive several large orders in one quarter from a customer and then receive no orders from that customer in the next quarter. As a result, the timing of revenue recognition from customer orders can cause significant fluctuations in our operating results from quarter to quarter. In addition, our sales are reactive to changes in our customers' businesses. For instance, a customer that placed a large order in one period could subsequently experience a downturn in business and, as a result, could cancel an order or reduce the amount of products it purchases from us in future periods.

A delay in a shipment near the end of a reporting period due to rescheduling or cancellation by customers or unexpected production delays experienced by us may cause revenue in the period to decline significantly and may have a material adverse effect on our operations for that period.

We cannot predict how the market will react to new products introduced by us or to enhancements made to our existing products. If any of our new or enhanced products contain defects or perceived defects or have reliability, quality or compatibility problems or perceived problems, or if our competitors release similar products or enhancements at the same time that are more widely accepted by our customers, our revenue and results of operations for one or more reporting periods could be adversely affected.

In addition, we or our competitors may raise or lower the prices of products in response to market demands or competitive pressures. If we lower the prices of our products, or if our competitors lower the prices of their products such that demand for our products weakens, our revenue for one or more quarters may decline and our operating results would be adversely affected. Changes in foreign currency exchange rates can also cause significant fluctuations in our results of operations from quarter to quarter.

As a result of these factors, our results of operations for any quarter are not necessarily indicative of results to be expected in future periods.

If we experience a significant disruption in, or breach in security of, our information technology systems, our business may be adversely affected.

We rely on information technology systems throughout the Company to manage orders, process shipments to customers, manage inventory levels and maintain financial information. Certain events could result in the disruption of our systems, including power outages, computer attacks by hackers, viruses, catastrophes, hardware and software failures and other unforeseen events. If we were to experience a significant period of disruption in information technology systems that involve our interactions with customers or suppliers, it could result in the loss of revenue and customers and significant incremental costs, which could adversely affect our business. In addition, security breaches of our information technology systems could result in the misappropriation or unauthorized disclosure of confidential information belonging to us or to our employees, partners, customers or suppliers, which could result in significant financial or reputational damage to us.

As we transact a portion of our sales, and maintain significant cash balances, in foreign currencies, changes in interest rates, credit ratings or foreign currency rates could have a material adverse effect on our financial position, results of operations, and cash flows.

A portion of our revenue is derived from our European and Asian operations and includes transactions in Euros, British Pounds and Japanese Yen, while our products are mainly manufactured in the United States, United Kingdom and China. In the event of a decline in the value of the Euro, Japanese Yen or British Pound, we would typically experience a decline in our revenues and profit margins. If we increase the selling prices on our products sold in Europe and Japan in order to maintain profit margins and recover costs, we may lose customer sales to lower cost competitors.

Additionally, balances maintained in foreign currencies create additional financial exposure to changing foreign currency rates. If foreign currency rates were to change rapidly, we could incur material losses.

Our reliance on international operations in foreign countries subjects us to risks not typically faced by companies operating exclusively in the United States.

During the year ended December 31, 2016, approximately 60% of our revenues were derived from operations and customers outside of the United States. The scope of our international operations subjects us to risks which could materially impact our results of operations, including:

- foreign exchange rate fluctuations;
- increases in shipping costs;
- longer customer payment cycles;
- greater difficulty in collecting accounts receivable;
- use of incompatible systems and equipment;
- problems with staffing and managing foreign operations in diverse cultures;
- protective tariffs;
- trade barriers and export/import controls;
- transportation delays and interruptions;
- increased vulnerability to the theft of, and reduced protection for, intellectual property rights;
- government currency control and restrictions, delays, penalties or required withholdings on repatriation of earnings;
- the impact of recessionary foreign economies; and
- acts of terrorism.

The new U.S. presidential administration has withdrawn the United States from the Trans-Pacific Partnership trade agreement and has made various comments suggesting the possible re-negotiation of or withdrawal from other trade agreements and the potential imposition of new import barriers. We cannot predict whether the United States or any other country will impose new quotas, tariffs, taxes or other trade barriers upon the importation or exportation of our products or supplies or gauge the effect that new barriers would have on our financial position or results of operations.

We also are subject to risks that our operations outside the United States could be conducted by our employees, contractors, service providers, representatives or agents in ways that violate the Foreign Corrupt Practices Act or other similar anti-bribery laws. Any such violations could have a negative impact on our business and could result in government investigations and/or injunctive, monetary or other penalties. Moreover, we face additional risks that our anti-bribery policy and procedures may be violated by third-party sales representatives or other agents that help sell our products or provide other services, because such representatives or agents are not our employees and it may be more difficult to oversee their conduct.

Increased outsourcing of components manufacturing to manufacturers outside the United States leads to additional risks which could negatively impact our business.

We are increasingly outsourcing the manufacture of subassemblies to suppliers based in China and elsewhere overseas in order to reduce our manufacturing cost. However, economic, political or trade problems with foreign countries could substantially impact our ability to obtain critical parts needed in the timely manufacture of our products, or could substantially increase the costs of these parts. Additionally, this practice increases our vulnerability to the theft of, and reduced protection for, our intellectual property.

Our global operations are subject to extensive and complex import and export rules that vary among the legal jurisdictions in which we operate. Failure to comply with these rules could result in substantial penalties.

Due to the international scope of our operations, we are subject to a complex system of import and export related laws and regulations, including U.S. export control and customs regulations and customs regulations of other countries. These regulations are complex and vary among the legal jurisdictions in which we operate. Any alleged or actual failure to comply with such regulations may subject us to government scrutiny, investigation and civil and criminal penalties, and may limit our ability to import or export our products or to provide services outside the United States. Any of these penalties could have a material impact on our financial position, results of operations and cash flows.

The results of the United Kingdom's referendum on withdrawal from the European Union and the recent U.S. presidential election may have a negative effect on global economic conditions, financial markets and our business, which could reduce the price of our common shares.

We are a multinational company with worldwide operations, including business operations and investments in the United Kingdom, Europe and China. In June 2016, a majority of voters in the United Kingdom elected to withdraw from the European Union in a national referendum. Although the referendum was advisory, the United Kingdom government has indicated that it intends to commence the withdrawal process in the near future. The terms of any withdrawal are subject to a negotiation period that could last at least two years after the government of the United Kingdom formally initiates the withdrawal process. The referendum has created significant uncertainty about the future relationship between the United Kingdom and the European Union, and has given rise to calls for the governments of other European Union member states to consider withdrawal. If the United Kingdom and the European Union are unable to negotiate acceptable withdrawal terms or if other European Union member states pursue withdrawal, barrier-free access between the United Kingdom and other European Union member states or among the European economic area overall could be diminished or eliminated. These developments in turn may inhibit our sales of products, mobility of our personnel, and our access to capital.

The result of the recent presidential election in the United States has introduced greater uncertainty regarding U.S. trade, tax and health care policies, among other things. The new U.S. presidential administration has withdrawn the United States from the Trans-Pacific Partnership trade agreement and has made various comments suggesting the possible re-negotiation of or withdrawal from other trade agreements and the potential imposition of new import barriers. The new presidential administration and U.S. Congress have also called for comprehensive tax law reform, which may result in disallowance of tax deductions for imported merchandise, disallowance of tax deductions for interest or changes in foreign income taxation for U.S.-based multinationals or income taxation for multinationals that are organized in countries other than the United States. The new presidential administration and U.S. Congress have also called for the repeal of the U.S. Patient Protection and Affordable Care Act (the "PPACA"). These developments and the lack of clarity regarding future U.S. tax, trade and health care policies have created significant uncertainty that could have a material adverse effect on global economic conditions and the stability of global financial markets. Any major changes in these policies could have a material adverse effect on our business, financial condition and results of operations and reduce the price of our common shares. Because of the global nature of our business, and our strategy to increase our sales to the medical market, our business may be particularly impacted by any major changes in U.S. trade, tax and health care policies.

Others may violate our intellectual property rights and cause us to incur significant costs to protect our rights.

Our future success depends in part upon our intellectual property rights, including trade secrets, know-how and continuing technological innovation. We do not have personnel dedicated to the oversight, organization and management of our intellectual property. There can be no assurance that the steps we take to protect our intellectual property rights will be adequate to prevent misappropriation or disclosure. It is possible that, despite our efforts, other parties may use, obtain or try to copy our technology and products. There can be no assurance that other companies are not investigating or developing other technologies that are similar to ours, that any patents will be issued from any application filed by us or that, if patents are issued, the claims allowed will be sufficient to deter or prohibit others from marketing similar products. In addition, our patents may be challenged, invalidated or circumvented in a legal or administrative proceeding. Policing unauthorized use of our intellectual property rights is difficult and time consuming and may involve initiating claims or litigation against third parties for infringement of our proprietary rights, which could be costly.

Our efforts to protect our intellectual property rights against infringement may not be effective in some foreign countries where we operate or sell our products. If we fail to adequately protect our intellectual property in these countries, we may lose significant business to our competitors.

Our operating results would suffer if we are unable to successfully defend against claims of infringement by third parties.

We have received in the past, and could receive in the future, notices from third parties alleging that our products infringe patent or other proprietary rights. These allegations could result in significant costs and diversion of the attention of management. In the event that any third party makes a valid claim against us or our customers and a license is not available to us on commercially reasonable terms, our operating results would be adversely affected. Adverse consequences may also apply if we fail to avoid litigation for infringement or misappropriation of proprietary rights of third parties. If a successful claim were brought against us and we are found to have infringed a third-party's intellectual property rights, we could be required to pay substantial amounts for damages or be enjoined from using the technology deemed to be infringing, or from using, making or selling products deemed to be infringing. If we have supplied infringing products to third parties, we may be obligated to indemnify these third parties for any damages that they may be required to pay to the patent holder and for any losses that they may sustain as a result of the infringement.

We operate in highly competitive industries and, if we lose competitive advantages, our business would suffer adverse consequences.

Some of our competition comes from established competitors that have greater financial, engineering, manufacturing and marketing resources than we do. Our competitors will continue to improve the design and performance of their existing products and introduce new products. It is possible that we may not successfully differentiate our current and proposed products from the products of our competitors, or that the marketplace will not consider our products to be superior to competing products. To remain competitive, we will be required to invest heavily in research and development, marketing and customer service and support. However, we may not be able to make the necessary technological advances to maintain our competitive position and our products may not receive market acceptance. These factors would cause us not to be able to compete successfully in the future. Increased competition may also result in price reductions, reduced profit margins, loss of market share and an inability to generate cash flows that are sufficient to maintain or expand our development of new products.

Our results of operations will be adversely affected if we fail to successfully integrate future acquisitions into our business or to grow the acquired businesses.

As part of our business strategy, we expect to broaden our product and service offerings by acquiring businesses, technologies, assets and product lines that, we believe, complement or expand our existing businesses. In recent years, we have made a number of acquisitions, and we expect to continue to make acquisitions in the future. We may fail to successfully integrate acquisitions into our business and, as a result, may fail to realize the synergies, cost savings and other benefits expected from acquisitions. If we are not able to successfully achieve these objectives, the anticipated benefits of such acquisitions may not be realized fully or at all, and our results of operations could be adversely affected. As a result of the number of recent and expected future acquisitions in a relatively short amount of time, these risks may be heightened due to our management team's limited resources available to integrate these new businesses.

Further, our ability to maintain and increase profitability of an acquired business will depend on our ability to manage and control operating expenses and to generate and sustain increased levels of revenue. Our expectations to achieve more consistent and predictable levels of revenue and to increase profitability as a result of any acquisition may not be realized. Such revenues and profitability may even decline as we integrate operations into our business. If revenues of acquired businesses grow more slowly than we anticipate or decline, or if their operating expenses are higher than we expect, we may not be able to sustain or increase their profitability, in which case our financial condition will suffer and our stock price could decline. For example, reductions in orders by a customer within our Visualization Solutions product line have caused our revenues in that business in 2014, 2015 and 2016 to be lower than we had expected when we acquired the business. Moreover, our acquisition activities may divert management's attention from our regular operations. Managing a larger and more geographically dispersed operation and product portfolio could also pose challenges for our management team. In addition, through our acquisitions, we may assume liabilities, losses or costs for which we are not indemnified or insured or for which our indemnity or insurance is inadequate. Any such liabilities may have a material adverse effect on our financial position or results of operations.

Our business strategy may include making strategic divestitures. There can be no assurance that any divestitures will provide business benefit.

Our business strategy includes divesting certain non-core businesses. We sold certain assets and liabilities of our Laser Systems businesses in October 2012, our Semiconductor Systems business in May 2013, our Scientific Lasers business in July 2014, and our JK Lasers business in April 2015. There may be additional sales of other non-core businesses in the future. The divestiture of an existing business could reduce our future profits and operating cash flows and make our financial results more volatile. A divestiture could also cause a decline in the price of our common shares and increased reliance on other elements of our core business operations. If we do not successfully manage the risks associated with a divestiture, our business, financial condition, and results of operations could be adversely affected. In addition, there could be other negative unforeseen effects from a divestiture. We also may not find suitable purchasers for our non-core businesses and may continue to pay operating costs associated with these businesses. Failed attempts to divest non-core businesses may distract management's attention from other business activities, erode employee morale and customers' confidence, and harm our business.

If we do not attract and retain our key personnel, our ability to execute our business strategy will be limited.

Our success depends, to a significant extent, upon the continued service of our executive officers, key management and technical personnel, particularly our experienced engineers, and upon our ability to continue to attract, retain, and motivate qualified personnel. The competition for these employees is intense. The loss of the services of one or more of our key personnel could have a material adverse effect on our operating results. In addition, there could be a material adverse effect on us should the turnover rates for engineers and other key personnel increase significantly or if we are unable to continue to attract qualified personnel.

Our success also depends on our ability to execute leadership succession plans. The inability to successfully transition key management roles could have a material adverse effect on our operating results.

We have undertaken restructuring and realignment activities in the past, and we will continue to assess our operating structure in the future. These actions may not improve our financial position, and may ultimately prove detrimental to our operations and sales.

We have undertaken restructuring and realignment activities in the past, and we will continue to assess our operating structure in the future. Our ability to reduce operating expenses is dependent upon the nature of the actions we take to reduce expenses and our subsequent ability to implement those actions and realize expected cost savings. We may need to take additional restructuring actions, such as eliminating or consolidating certain of our facilities, reducing our headcount, or eliminating certain positions for a variety of reasons, including deterioration in global economic conditions or significant declines in demand for our products. Failure to successfully implement such restructuring activities could adversely affect our ability to meet customer demand for our products and could increase the cost of production versus our projections, both of which could adversely impact our operating results. Further, expenses and cost inefficiencies associated with our restructuring activities, including severance costs and the loss of trained employees with knowledge of our business and operations, could exceed our expectations and negatively impact our financial results. The elimination or consolidation of operations could also result in restructuring charges that would adversely affect our results of operations and financial condition.

Product defects or problems with integrating our products with other vendors' products may seriously harm our business and reputation.

We produce complex products that can contain latent defects or performance problems. This could happen to both existing and new products. Such defects or performance problems could be detrimental to our business and reputation.

In addition, customers frequently integrate our products with other vendors' products. When problems occur in a combined environment, it may be difficult to identify the source of the problem. These problems may cause us to incur significant warranty and repair costs, divert the attention of our engineering personnel from our product development efforts, and cause significant customer relationship issues.

Disruptions in the supply of certain key components and other goods from our suppliers, including limited or single source suppliers, could have an adverse effect on the results of our business operations, and could damage our relationships with customers.

The production of our products requires a wide variety of raw materials, key components and other goods that are generally available from alternate sources of supply. However, certain critical raw materials, key components and other goods required for the production and sale of some of our principal products are available from limited or single sources of supply. If the receipt of certain limited source or single source materials is delayed, our relationship with customers may be harmed if such delays cause us to miss our scheduled shipment deadlines. Our current or alternative sources may not be able to continue to meet all of our demands on a timely basis. If suppliers or subcontractors experience difficulties or fail to meet any of our manufacturing requirements, our business would be harmed until we are able to secure alternative sources, if any, on commercially reasonable terms. A prolonged inability to obtain certain raw materials, key components or other goods is possible and could have a significant adverse effect on our business operations, damage our relationships with customers, or even lead to permanent loss of customer orders.

In addition, certain of our businesses buy components, including limited or sole source items, from competitors of our other businesses. This dynamic may adversely impact our relationship with these suppliers. For example, these suppliers could increase the price of those components or reduce their supply of those components to us, which could have a significant adverse effect on our business operations or lead to permanent loss of customer orders.

Production difficulties and product delivery delays or disruptions could have a material adverse effect on our business.

We assemble our products at our facilities in the United States, the United Kingdom and China. Each of our products is typically manufactured in a single manufacturing location. If production activities at any of our manufacturing facilities were disrupted by a natural disaster or otherwise, our operations would be negatively impacted until we could establish alternative production and service operations. Significant production difficulties could be the result of:

- mistakes made while transferring manufacturing processes between locations;
- changing process technologies;
- ramping production;
- installing new equipment at our manufacturing facilities;
- implementing new information technology systems;
- shortage of key components; and
- loss of electricity or employees’ access to the manufacturing facilities due to natural disasters.

In addition, we may experience product delivery delays in the future. We ship a significant portion of our products to our customers through independent package delivery and import/export companies. We also ship our products through national trucking firms, overnight carrier services and local delivery practices. If one or more of the package delivery or import/export providers experience significant disruption in services or institutes a significant price increase, the delivery of our products could be disrupted or delayed. Such events could cause us to incur increased shipping costs that could not be passed on to our customers, negatively impacting our profitability and our relationships with customers.

We are subject to regulations by various federal, state and foreign agencies that require us to comply with a wide variety of regulations, including those regarding the manufacture of products and the shipping of our products.

Certain medical devices that we manufacture are subject to regulations by the U.S. Food and Drug Administration and similar international agencies. These regulations govern a wide variety of product activities, from design and development to labeling, manufacturing, promotion, sales and distribution. If we fail to comply with such regulations, we may have to recall products and cease their manufacture and distribution, which would increase our costs and reduce our revenues.

In recent years, the medical industry has undergone significant changes in order to reduce healthcare costs. This includes cuts in Medicare, consolidation of healthcare distribution companies and collective purchasing arrangements by office-based healthcare practitioners. Foreign and domestic governments have also undertaken efforts to control healthcare costs through legislation and regulation. In March 2010, President Obama signed into law health care reform legislation in the form of the PPACA. Many of the impacts of the PPACA will not be known until those regulations are enacted over the next several years. Moreover, the new U.S. presidential administration and U.S. Congress have called for the repeal of some or all of the PPACA, which has created additional uncertainty in the health care industry. The implementation, or any modification or repeal, of health care reform and medical cost containment measures in the U.S. and in foreign countries in which we operate could:

- change the price that we might establish for our products, which may result in lower product revenues to us;
- change requirements related to safety monitoring, labeling changes, restrictions on product distribution or use, or other measures after the introduction of our products to market, which could affect our costs of doing business, or otherwise adversely affect the market for our products; and
- create new laws, regulations and judicial decisions affecting pricing or marketing practices.

Changes in governmental regulation of our business or our products could reduce demand for our products or increase our expenses.

We are subject to many governmental regulations, including but not limited to the laser radiation safety regulations of the Radiation Control for Health and Safety Act administered by the National Center for Devices and Radiological Health, a branch of the U.S. Food and Drug Administration, and certain health regulations related to the manufacture of products using beryllium, an element used in some of our products. Among other things, these regulations require us to file annual reports, to maintain quality control and sales records, to perform product testing, to distribute appropriate operating manuals, to conduct safety reviews, to incorporate design and operating features in products sold to end-users and to certify and label our products. Depending on the class of the product, various warning labels must be affixed and certain protective devices must be installed.

We are also subject to regulatory oversight, including comparable enforcement remedies, in the markets we serve. We compete in many markets in which we and our customers must comply with federal, state, local and international regulations, such as environmental, health and safety and food and drug regulations. We develop, configure and market our products to meet customer needs created by those regulations. Any significant changes in these regulations could reduce demand for our products or increase our expenses, which in turn could adversely affect our business, financial condition, results of operations and cash flows.

Conflict minerals regulations could limit the supply and increase the cost of certain metals used in manufacturing our products.

In August 2012, the Securities and Exchange Commission adopted rules requiring disclosures by public companies concerning tin, tantalum, tungsten and gold (collectively known as “conflict minerals”) that are necessary to the functionality or production of products manufactured or contracted to be manufactured. The rules require companies to perform due diligence, and disclose and report whether or not such minerals originated from the Democratic Republic of Congo or any of the adjoining countries. There are, and will be, costs associated with complying with the disclosure requirements, such as costs related to determining the source of certain minerals used in our products, as well as costs of possible changes to processes or sources of supply as a consequence of such verification activities. As our supply chain is complex, we may not be able to sufficiently verify the origins of the relevant minerals used in our products through the due diligence procedures that we implement, which may harm our reputation. In addition, we may encounter challenges to satisfy those customers who require that all of the components of our products be certified as conflict-free, which could place us at a competitive disadvantage if we are unable to do so.

Compliance or the failure to comply with current and future environmental regulations could cause us significant expense.

Our operations are subject to a variety of federal, state, local and international environmental regulations relating to the use, storage, discharge and disposal of hazardous chemicals used during our manufacturing process or the recycling of products we manufacture. We are subject to the federal regulation of the Environmental Protection Agency in the United States and comparable authorities in other countries. If we fail to comply with any present or future regulations, we could be subject to regulatory fines.

Future developments, administrative actions or liabilities relating to environmental matters could have a material adverse effect on our business, results of operations or financial condition. It is difficult to anticipate how such regulations will be implemented and enforced. We continue to evaluate the necessary steps for compliance with regulations as they are enacted. Certain regulations may require us to re-design our products to ensure compliance with the applicable standards. These redesigns may adversely affect the performance of our products, add greater testing lead-times for product introductions and reduce our profitability.

If we fail to implement new information technology systems successfully, our business could be adversely affected.

We rely on centralized information systems throughout the Company to keep financial records, process orders, manage inventory, process shipments to customers, and operate other critical functions. We are in the process of upgrading our information technology infrastructure, including implementing new enterprise resource planning (ERP) systems and other complementary information technology systems. We have invested, and will continue to invest, significant capital and human resources in the upgrades and new ERP systems. Any disruptions, delays or deficiencies in the transition, design and implementation of the upgrades and new ERP systems, particularly any disruptions, delays or deficiencies that impact our operations, could have a material adverse effect on our results of operations and cash flows.

We may experience difficulties as we transition to these new upgraded systems and processes, including loss of data and the ability to process customer orders, ship products, provide services and support to our customers, issue sales invoices, collect accounts receivable, fulfill contractual obligations, satisfy internal and external financial reporting requirements in a timely manner, or otherwise run our business. We may also experience decreases in productivity as our personnel implement these systems and become familiar with the new systems. In addition, as we are dependent upon our ability to gather and promptly transmit accurate information to key decision makers, our business, results of operations and financial condition may be materially and adversely affected if our information technology infrastructure does not allow us to transmit accurate information, even for a short period of time. Furthermore, the transition, design and implementation of upgrades and new ERP systems may be much more costly than we anticipated.

Our results of operations will be adversely affected if we fail to realize the full value of our intangible assets.

As of December 31, 2016, our total assets included $169.9 million of net intangible assets, including goodwill. Net intangible assets consist principally of goodwill, customer relationships, patents, trademarks, core technologies and technology licenses. Goodwill and indefinite-lived intangible assets are tested for impairment at least on an annual basis. All other intangible assets are evaluated for impairment should discrete events occur that call into question the recoverability of the intangible assets.

Adverse changes in our business, adverse changes in the assumptions used to determine the fair value of our reporting units, or the failure to grow our businesses may result in an impairment of our intangible assets, which could adversely affect our results of operations. For example, the Company recorded a non-cash impairment charge of $41.4 million in the consolidated financial statements for the year ended December 31, 2014 as a result of lower expectations for revenue and operating profit from our NDS business.

We are exposed to the credit risk of some of our customers and to credit exposures in weakened markets, which could adversely affect our results of operations.

Customers with liquidity issues may lead to additional bad debt expense. There can be no assurance that our open credit customers will pay the amounts they owe to us or that the reserves we maintain will be adequate to cover such credit exposures. In addition, to the extent that turmoil in the credit markets makes it more difficult for some customers to obtain financing, their ability to pay may be adversely impacted. Our customers' failure to pay and/or our failure to maintain sufficient reserves could have a material adverse effect on our future cash flows and financial condition.

Our reliance upon third party distribution channels subjects us to credit, inventory, business concentration, and business failure risks beyond our control.

We sell many of our products through resellers, distributors, and system integrators. As these third parties tend to have more limited financial resources than OEM and end-user customers, they generally represent sources of increased credit risk. Any downturn in the business of our resellers, distributors, and systems integrators would in turn harm our results of operations and financial condition.

Our sales also depend upon the ability of our OEM customers to develop and sell systems that incorporate our products. Adverse economic conditions, large inventory positions, limited marketing resources and other factors influencing these OEM customers could have a substantial adverse effect on our financial results. We cannot assure investors that our OEM customers will not experience financial or other difficulties that could adversely affect their operations and, in turn, adversely affect our results of operations and financial condition.

Risks Relating to Taxes

Tax audits by tax authorities could adversely affect future results.

We are subject to regular examination of our income tax returns by the Internal Revenue Service ("IRS") and other tax authorities. We regularly assess the likelihood of favorable or unfavorable outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. Although we believe our tax estimates are reasonable, there can be no assurance that any final determination will not be materially different than the treatment reflected in our historical income tax provisions and accruals, which could materially and adversely affect our financial condition, net income and earnings per share.

Our effective tax rate is subject to fluctuation, which could impact our financial position and earnings per share.

Our effective tax rate is subject to fluctuation as the effective income tax rate for each year is a function of (a) taxable income levels in numerous tax jurisdictions, (b) our ability to utilize recognized deferred tax assets, (c) taxes, interest, or penalties resulting from tax audits and, (d) credits and deductions as a percentage of total taxable income. From time to time, the United States, foreign and state governments make substantive changes to tax rules where significant judgment is required to determine the impact of such changes on our provision for income taxes. Further, such tax law changes may cause our effective tax rate to fluctuate between periods.

We may be subject to U.S. federal income taxation even though Novanta Inc. is a non-U.S. corporation.

Novanta, Inc. is a holding company organized in Canada and is subject to Canadian tax laws. However, we are subject to U.S. tax rules and file U.S. federal income tax returns for our operations in the United States. In addition, distributions or payments from entities in one jurisdiction to entities in another jurisdiction may be subject to withholding taxes. We do not intend to operate in a manner that will cause Novanta, Inc. to be treated as engaged in a U.S. trade or business or otherwise be subject to U.S. federal income taxes on its income, but it generally will be subject to U.S. federal withholding tax on certain U.S.-sourced passive income items, such as dividends and certain types of interest.

Risks Relating to Our Common Shares and Our Capital Structure

We may require additional capital to adequately respond to business challenges or opportunities and repay or refinance our existing indebtedness, and this capital may not be available on acceptable terms or at all.

We may require additional capital to adequately respond to future business challenges or opportunities, including, but not limited to, the need to develop new products or enhance our existing products, maintaining or expanding research and development projects, the need to build inventory or to invest other cash to support business growth, and opportunities to acquire complementary businesses and technologies.

As of December 31, 2016, we had outstanding debt of $81.3 million under the amended and restated senior secured credit agreement (the "Second Amended and Restated Credit Agreement") and $215.0 million available to be drawn under the revolving credit facility. If we are unable to satisfy the conditions in the Second Amended and Restated Credit Agreement or our needs exceed the amounts available under the revolving credit facility, we may need to engage in equity or debt financings to obtain additional funds. If we raise additional funds through further issuances of equity or convertible debt securities, our existing shareholders could suffer significant dilution. Any new equity securities we issue could have rights, preferences and privileges superior to those of the holders of our common shares. Further, our Second Amended and Restated Credit Agreement restricts our ability to obtain additional debt financing from other sources. If we are unable to obtain adequate financing or obtain financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly limited. In addition, the terms of any additional equity or debt issuances may adversely affect the value and price of our common shares.

Global credit conditions have varied widely over the last several years and could continue to vary significantly in the future. Although these conditions have not affected our current plans, adverse credit conditions in the future could have a negative impact on our ability to execute on future strategic activities.

Our existing indebtedness could adversely affect our future business, financial condition and results of operations.

As of December 31, 2016, we had $81.3 million of outstanding debt. This level of debt could have significant consequences on our future operations, including:

- reducing the availability of our cash flow to fund working capital, capital expenditures, research and development efforts, acquisitions and other general corporate purposes, and limiting our ability to obtain additional financing for these purposes;
- limiting our flexibility in planning for or reacting to, and increasing our vulnerability to, changes in our business, market changes in the industries in which we operate and the general economy; and
- placing us at a competitive disadvantage compared to our competitors that have less debt or are less leveraged.

Any of the above-listed factors could have an adverse effect on our business, financial condition and results of operations.

In addition, our Amended and Restated Credit Agreement contains covenants that will limit our ability to engage in activities that may be in our long-term best interests. Our failure to comply with those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all of our borrowings thereunder.

The market price for our common shares may be volatile.

The market price of our common shares could be subject to wide fluctuations. These fluctuations could be caused by:

- quarterly variations in our results of operations;
- changes in earnings estimates by analysts;
- conditions in the markets we serve; or
- general market or economic conditions.

In addition, the stock market has experienced extreme price and volume fluctuations in recent years. These fluctuations have had a substantial effect on the market prices of many companies, often unrelated to the operating performance of the specific companies. These market fluctuations could adversely affect the price of our common shares.

We may not have access to the cash flow and other assets of our subsidiaries that may be needed to service our indebtedness and fund our operations.

Although much of our business is conducted through our subsidiaries, none of our subsidiaries are obligated to make funds available to us. Local laws and regulations and/or the terms of our indebtedness may restrict certain of our subsidiaries from paying dividends and otherwise transferring assets to us. We cannot assure you that applicable laws and regulations and/or the terms of our indebtedness will permit our subsidiaries to provide us with sufficient dividends, distributions or loans when necessary. Therefore, our ability to make payments on our indebtedness and fund our operations may be adversely affected if our subsidiaries cannot distribute funds to us.

Certain significant shareholders could have substantial influence over our Board of Directors and our outstanding common shares, which could limit our other shareholders' ability to influence the outcome of key transactions.

Our largest shareholders and their respective affiliates, in the aggregate, beneficially own a substantial amount of our outstanding common shares. As a result, these shareholders may be able to influence matters requiring approval by our shareholders, including the election of directors and the approval of mergers, or other extraordinary transactions. One of these shareholders also serves on our Board of Directors and therefore could have a substantial influence over our Board of Directors. These significant shareholders may have interests that differ from other shareholders and may vote in a way that may be adverse to the interests of other shareholders.

Certain provisions of our articles of incorporation may delay or prevent a change in control of the Company.

Our corporate documents and our existence as a corporation under the laws of New Brunswick subject us to provisions of Canadian law that may enable our Board of Directors to resist a change in control of the Company. These provisions include:

- limitations on persons authorized to call a special meeting of shareholders;
- the ability to issue an unlimited number of common shares; and
- advance notice procedures required for stockholders to nominate candidates for election as directors or to bring matters before an annual meeting of shareholders.

These anti-takeover defenses could discourage, delay or prevent a transaction involving a change in control of the Company. These provisions could also discourage proxy contests and make it more difficult for shareholders to elect directors of their choosing and cause us to take other corporate actions that shareholders desire. In addition, New Brunswick law provides that cumulative voting is mandatory in director elections which can result in stockholders holding less than a majority of shares being able to elect persons to the Board of Directors and prevent a majority stockholder from controlling the election of all of the directors.

Risks Relating to Our Internal Controls

If we fail to maintain appropriate internal controls in the future, we may not be able to report our financial results accurately, which may adversely affect our stock price and our business.

While our management and our independent registered public accounting firm concluded that our internal control over financial reporting was effective as of December 31, 2016, it is possible that material weaknesses may be identified in the future.

If we are unable to maintain effective internal controls, we may not have adequate, accurate or timely financial information, and we may be unable to meet our reporting obligations as a publicly traded company or comply with the requirements of the SEC or the Sarbanes-Oxley Act of 2002. This could result in a restatement of our financial statements, the imposition of sanctions, including the inability of registered broker dealers to make a market in our common shares, or investigation by regulatory authorities. Any such action or other negative results caused by our inability to meet our reporting requirements or to comply with legal and regulatory requirements or by disclosure of an accounting, reporting or control issue could adversely affect the trading price of our securities and our business. Material weaknesses in our internal control over financial reporting could also reduce our ability to obtain financing or could increase the cost of any financing we obtain.

As part of our growth strategy, we may make additional acquisitions of privately held businesses. Prior to becoming part of our consolidated company, the acquired business would not be required to implement or maintain the disclosure controls and procedures or internal control over financial reporting that are required of public companies. We are required to integrate the acquired businesses into our consolidated company's system of disclosure controls and procedures and internal control over financial reporting, but we cannot provide assurance as to how long the integration process may take for our recently acquired businesses or any businesses that we may acquire in the future. Additionally, we may need to improve our internal control or those of any business we acquire and may be required to design enhanced processes and controls in order to make such improvements. This could result in significant costs to us and could require us to divert substantial resources, including management time, from other activities.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The principal owned and leased properties of the Company and its subsidiaries as of December 31, 2016 are listed in the table below.

Location	Principal Use	Current Segment (a)	Approximate Square Feet	Owned/Leased
Bedford, Massachusetts, USA	Manufacturing, R&D, Marketing, Sales and Administration	1,3,4	147,000	Leased; expires in 2019
San Jose, California, USA	Manufacturing, R&D, Marketing, Sales and Administration	2	73,000	Leased; expires in 2019
Mukilteo, Washington, USA	Manufacturing, R&D, Marketing, Sales and Administration	1	63,000	Owned
North Syracuse, New York, USA	Manufacturing, R&D, Marketing, Sales and Administration	2	55,000	Leased; expires in 2029
Suzhou, People’s Republic of China	Manufacturing, R&D, Marketing, Sales and Administration	1,2,3	55,000	Leased; expires in 2018
Poole, United Kingdom	Manufacturing, R&D, Marketing, Sales and Administration	3	51,000	Building owned; land leased through 2078
Phoenix, Arizona, USA	Manufacturing, R&D, Marketing, Sales and Administration	1	31,000	Owned
Taunton, United Kingdom	Manufacturing, R&D, Marketing and Sales	1	19,000	Leased; expires in 2017

Loomis, California, USA	Manufacturing, R&D, Marketing, Sales and Administration	3	23,000	Leased; expires in 2018

a) The facilities house product lines that belong to the following segments:
1 — Photonics Segment
2 — Vision Segment
3 — Precision Motion Segment
4 — Corporate
A portion of our leased facility in San Jose, California is currently underutilized. As of December 31, 2016, the Company had exited approximately 22,000 square feet of this facility.

Additional research and development, sales, service and logistics sites are located in Arizona, California, Colorado, and Oregon (United States); Munich, Germany; Breda, the Netherlands; Brno, Czech Republic; Tokyo, Japan; Beijing and Shenzhen, China; and Milan, Italy. These additional offices are leased facilities occupying approximately 60,000 square feet in the aggregate, and are related to our Photonics, Vision and Precision Motion segments. In June 2016, the Company exited the leased facility in Zevenhuizen, the Netherlands totaling 18,300 square feet and needs to continue to pay for the leased facility until November 2017.

In connection with the sale of our Scientific Lasers business, we assigned to the buyer the lease for a facility in California, where the Scientific Lasers business operated. The buyer assumed all of our rights and obligations under the original lease, including the duty to pay the rent for the remainder term of the lease. So long as the buyer performs its obligations as the tenant, as required by the Asset and Equity Purchase Agreement for its acquisition of the Scientific Lasers business, the Company has no responsibilities for the lease. Should the buyer cease performance under the lease, however, the landlord could still pursue the Company as the original tenant until February 28, 2019, the end of the lease term. The Company has indemnification rights against the buyer under the Asset and Equity Purchase Agreement for such buyer's default.

Laser Quantum, in which the Company holds approximately 76% equity ownership through the acquisition of approximately 35% of additional equity interest in January 2017, is headquartered in Manchester, United Kingdom. Additional facilities are located in the United States and Germany. The aggregate amount of space currently occupied by Laser Quantum is approximately 36,000 square feet.

Item 3. Legal Proceedings

The Company is subject to various legal proceedings and claims that arise in the ordinary course of business. The Company does not believe that the outcome of these claims will have a material adverse effect upon its financial condition or results of operations but there can be no assurance that any such claims, or any similar claims, would not have a material adverse effect upon its financial condition or results of operations.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Information

The Company's common shares, no par value, are traded on the NASDAQ Global Select Market. Prior to May 12, 2016, the Company's shares were traded under the symbol "GSIG". Since May 12, 2016, the Company's shares have traded under the symbol "NOVT". The following table sets forth the high and low prices of the Company's common shares during the periods indicated.

	2016		2015	
	High	Low	High	Low
First Quarter	$14.16	$11.73	$14.47	$12.27
Second Quarter	$16.00	$13.90	$15.75	$13.15
Third Quarter	$17.39	$15.02	$15.05	$12.08
Fourth Quarter	$21.40	$16.80	$14.59	$12.81

Holders

As of the close of business on February 21, 2017, there were approximately 36 holders of record of the Company's common shares. Since many of the common shares are registered in "nominee" or "street" names, the Company believes that the total number of beneficial owners is considerably higher.

Dividend Policy

The Company has never declared or paid cash dividends on its common shares and does not anticipate paying any cash dividends in the foreseeable future.

Purchases of Equity Securities by the Issuer and Affiliated Purchaser

In October 2013, the Company's Board of Directors authorized a share repurchase plan for the repurchase of up to an aggregate of $10.0 million of the Company's common stock. The share repurchase plan does not obligate the Company to acquire any particular amount of our common stock. No time limit was set for the completion of the share repurchase program, and the program may be suspended or discontinued at any time.

Since the adoption of the share repurchase plan, the Company repurchased 282 thousand shares of our common stock for an aggregate purchase price of $3.8 million at an average price of $13.43 per share. No repurchases occurred during the quarter ended December 31, 2016. The Company had $6.2 million available for share repurchases under the authorized share repurchase plan as of December 31, 2016.

Performance Graph

The following graph compares the cumulative total return to stockholders for the Company's common shares for the period from December 31, 2011 through December 31, 2016 with the NASDAQ Composite Index and the Russell 2000 Index. The comparison assumes an investment of $100 is made on December 31, 2011 in the Company's common shares and in each of the indices and, in the case of the indices, it also assumes reinvestment of all dividends. The performance shown is not necessarily indicative of future performance.

	December 31, 2011	December 31, 2012	December 31, 2013	December 31, 2014	December 31, 2015	December 31, 2016
Novanta Inc.	$ 100.00	$ 84.65	$ 109.87	$ 143.89	$ 133.14	$ 205.28
NASDAQ Composite Index	$ 100.00	$ 117.45	$ 164.57	$ 188.84	$ 201.98	$ 219.89
Russell 2000 Index (1)	$ 100.00	$ 116.35	$ 161.52	$ 169.43	$ 161.95	$ 196.45

Item 6. Selected Financial Data

The selected financial data set forth below is not necessarily indicative of results of future operations, and should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7 and the consolidated financial statements and related notes thereto in Item 8 of this Annual Report on Form 10-K to fully understand factors that may affect the comparability of the information presented below. The selected consolidated financial data in this section is not intended to replace the consolidated financial statements.

The consolidated statements of operations data for the years ended December 31, 2016, 2015 and 2014 and the consolidated balance sheet data as of December 31, 2016 and 2015 are derived from our audited consolidated financial statements in this Annual Report on Form 10-K. The consolidated statements of operations data for the years ended December 31, 2013 and 2012 and the consolidated balance sheet data as of December 31, 2014, 2013 and 2012 are derived from our audited consolidated financial statements that are not included in this Annual Report on Form 10-K.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(In thousands, except per share data)				
Consolidated Statements of Operations Data:					
Revenue	$384,758	$373,598	$364,706	$316,910	$243,796
Gross profit	162,452	157,890	150,167	132,227	105,518
Operating expenses (1)	129,889	128,957	166,973	112,781	85,256
Operating income (loss) from continuing operations (1)	32,563	28,933	(16,806)	19,446	20,262
Income (loss) from continuing operations before income taxes (1) (2)	32,522	46,022	(17,915)	16,177	16,702
Income tax provision (benefit) (3)	10,519	10,394	(1,006)	6,200	(11,595)
Income (loss) from continuing operations	22,003	35,628	(16,909)	9,977	28,297
Loss from discontinued operations, net of tax	—	(13)	(5,607)	(2,054)	(10,974)
Gain (loss) on disposal of discontinued operations, net of tax (4)	—	—	(1,726)	(592)	2,255
Consolidated net income (loss)	22,003	35,615	(24,242)	7,331	19,578
Less: Net income attributable to noncontrolling interest	—	—	(10)	(22)	(40)
Net income (loss) attributable to Novanta Inc.	$22,003	$35,615	$(24,252)	$7,309	$19,538
Earnings (loss) per common share from continuing operations:					
Basic	$0.63	$1.03	$(0.49)	$0.29	$0.84
Diluted	$0.63	$1.02	$(0.49)	$0.29	$0.84
Loss per common share from discontinued operations:					
Basic	$—	$(0.00)	$(0.21)	$(0.08)	$(0.26)
Diluted	$—	$(0.00)	$(0.21)	$(0.08)	$(0.26)
Earnings (loss) per common share attributable to Novanta Inc.:					
Basic	$0.63	$1.03	$(0.70)	$0.21	$0.58
Diluted	$0.63	$1.02	$(0.70)	$0.21	$0.58
Weighted average common shares outstanding—basic	34,694	34,579	34,352	34,073	33,775
Weighted average common shares outstanding—diluted	34,914	34,827	34,352	34,396	33,936

(1) The Company recorded an impairment charge of $41.4 million in 2014 related to goodwill ($19.6 million) and intangible assets ($21.8 million) of our NDS business acquired in January 2013.

(2) The Company sold its JK Lasers business in 2015 and recorded a gain on disposal of $19.6 million.

(3) The Company released $15.3 million of valuation allowance on deferred tax assets in 2012 based on the conclusion that it was more likely than not that its deferred tax assets in the U.S. and U.K. would be realized in the future.

(4) The Company sold its Scientific Lasers business in 2014, Semiconductor Systems business in 2013 and Laser Systems business in 2012 and recorded a (loss) gain on disposal, net of tax, of ($1.7) million, ($0.6) million and $2.3 million, respectively.

	December 31, 2016	2015	2014	2013	2012
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash and cash equivalents	$68,108	$59,959	$51,146	$60,980	$65,788
Total assets (1)	425,637	416,045	396,294	375,916	333,711
Debt, current (1)	7,366	7,385	7,345	7,306	7,270
Debt, long-term (1)	70,554	88,426	105,030	61,303	38,982
Long-term liabilities, excluding debt	25,717	25,965	25,951	10,917	11,308
Total Novanta Inc. stockholders’ equity	258,870	244,701	210,825	241,984	227,809

(1) In April 2015, the Financial Accounting Standards Board issued Accounting Standards Update (“ASU”) 2015-03, “Simplifying the Presentation of Debt Issuance Costs.” ASU 2015-03 requires debt issuance related costs to be presented in the balance sheet as a direct reduction to the carrying amount of the associated debt liability. The Company adopted the provisions of ASU 2015-03 during 2015. Amounts prior to 2015 have been revised to conform to the current year presentation.

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

Management’s Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”) should be read in conjunction with the Consolidated Financial Statements and Notes included in Item 8 of this Annual Report on Form 10-K. The MD&A contains certain forward looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. In addition to historical financial information, the following discussion and analysis contains forward looking statements that involve risks, uncertainties and assumptions. These forward looking statements include, but are not limited to, anticipated financial performance; expected liquidity and capitalization; drivers of revenue growth and our growth expectations in various markets; management’s plans and objectives for future operations, expenditures and product development, and investments in research and development; business prospects; potential of future product releases and expansion of our product and service offerings in general; anticipated revenue performance; industry trends; market conditions; our competitive positions; changes in economic and political conditions; changes in accounting principles; changes in actual or assumed tax liabilities; expectations regarding tax exposures; anticipated reinvestment of future earnings and dividend policy; anticipated expenditures in regard to the Company’s benefit plans; future acquisitions and dispositions and anticipated benefits from acquisitions; anticipated use of currency hedges; ability to repay our indebtedness; our intentions regarding the use of cash; expectations regarding legal and regulatory environmental requirements and our compliance thereto; and other statements that are not historical facts. These forward looking statements are neither promises nor guarantees, but involve risks and uncertainties that may cause actual results to differ materially from those contained in the forward looking statements. Our actual results could differ materially from those anticipated in these forward looking statements as a result of various important factors, including those set forth in Item 1A of this Annual Report on Form 10-K under the heading “Risk Factors.” The words “anticipates,” “believes,” “expects,” “intends,” “future,” “could,” “estimate “would,” “should,” “potential,” “continues,” and similar words or expressions (as well as other words or expressions referencing future events, conditions or circumstances) identify forward looking statements. Readers should not place undue reliance on any such forward looking statements, which speak only as of the date they are made. Management and the Company disclaim any obligation to publicly update or revise any such statement to reflect any change in its expectations or in events, conditions, or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those contained in the forward looking statements, except as required under applicable law.

Business Overview

Novanta Inc. and its subsidiaries (collectively referred to as “Novanta”, the “Company”, “we”, “us”, “our”) design, develop, manufacture and sell precision photonic and motion control components and subsystems to Original Equipment Manufacturers (“OEMs”) in the medical and advanced industrial markets. We combine deep expertise at the intersection of photonics and motion to solve complex technical challenges. This enables us to engineer core components and sub-systems that deliver extreme precision and performance, tailored to our customers’ demanding applications. We deliver highly engineered photonics, vision and precision motion solutions to customers around the world.

End Markets

We primarily operate in two end markets: the advanced industrial market and the medical market.

Advanced Industrial Market

For the year ended December 31, 2016, the advanced industrial market accounted for approximately 60% of the Company’s revenue. Revenue from our products sold to the advanced industrial market is affected by a number of factors, including changing technology requirements and preferences of our customers, productivity or quality investments in a manufacturing environment, the financial condition of our customers, changes in regulatory requirements and laws, and general economic conditions. We believe that the Purchasing Managers Index (PMI) on manufacturing activities specific to different regions around the world may provide an indication of the impact of general economic conditions on our sales into the advanced industrial market.

Medical Market

For the year ended December 31, 2016, the medical market accounted for approximately 40% of the Company’s revenue. Our revenue from products sold to the medical market is generally affected by hospital and other health care provider capital spending, changes in regulatory requirements and laws, aggregation of purchasing by healthcare networks, trends in surgical procedures, changes in technology requirements, changes in customer or patient preferences, and general demographic trends.

Strategy

Our strategy is to drive sustainable, profitable growth through short-term and long-term initiatives, including:

- disciplined focus on our diversified business model of providing mission-critical functionality to long life-cycle OEM customer platforms in attractive medical and advanced industrial niche markets;
- improving our business mix to increase medical sales as a percentage of total revenue by:
  - introducing new products aimed at attractive medical applications, such as minimally invasive and robotic surgery, ophthalmology, patient monitoring, drug delivery, clinical laboratory testing and life science equipment;
  - deepening our key account management relationships with and driving cross selling of our product offerings to the leading medical equipment manufacturers; and
  - pursuing complementary medical technology acquisitions;
- increasing our penetration of high growth advanced industrial applications, such as laser materials processing, robotics, automation and metrology, by working closely with OEM customers to launch application specific products that closely match the requirements of each application;
- broadening our portfolio of enabling proprietary technologies and capabilities through increased investment in new product development, expanded sales and marketing channels to reach target customers, and investments in application development to further penetrate existing customers, while expanding the applicability of our solutions to new markets;
- broadening our product and service offerings through the acquisition of innovative and complementary technologies and solutions in medical and advanced industrial technology applications, including increasing our recurring revenue streams such as services, spare parts and consumables;
- improving our existing operations to expand profit margins and improve customer satisfaction by implementing lean manufacturing principles and strategic sourcing across our major production sites; and
- attracting, retaining, and developing world-class talented and motivated employees.

Significant Events and Updates

Acquisition of Laser Quantum Limited

On January 10, 2017, the Company acquired approximately 35% of the outstanding shares of Laser Quantum Limited ("Laser Quantum"), a Manchester, United Kingdom-based provider of solid state continuous wave lasers, femtosecond lasers, and optical light engines to OEMs in the medical market, for a total purchase price of £25.5 million ($31.8 million). The acquisition was financed with cash on hand and a $30.0 million draw-down on our revolving credit facility. In addition, the Company and the minority equity holders entered into a call and put option for the purchase and sale of all remaining Laser Quantum shares held by the minority equity holders in 2020, subject to certain conditions. The purchase price for the remaining shares will be based on a multiple of Laser Quantum EBITDA for the twelve months ending December 31, 2019, as defined in the call and put option agreement. As a result of this transaction, the Company's ownership position in Laser Quantum increased from approximately 41% to approximately 76%. As of December 31, 2016, the financial results of Laser Quantum were accounted for under the equity method of accounting. As a result of the acquisition of the additional shares, the future financial results of Laser Quantum will be consolidated in the Company's consolidated financial statements. In connection with the purchase price allocation under the business combination rules, the Company expects to recognize a pre-tax gain of $25 million to $28 million during the first quarter of 2017, representing the excess fair value of our previously held equity interest in Laser Quantum over its carrying value. Laser Quantum will be included in our Photonics reportable segment.

Acquisition of ThingMagic

On January 10, 2017, the Company acquired ThingMagic, a Woburn, Massachusetts-based provider of ultra high frequency ("UHF") radio frequency identification ("RFID") modules and finished RFID readers to OEMs in the medical and advanced industrial markets, for a total purchase price of $19.2 million, subject to customary working capital adjustments. The acquisition was financed with cash on hand and a $12.0 million draw-down on our revolving credit facility. ThingMagic will be included in our Vision reportable segment.

Acquisition of Intangible Assets

On December 14, 2016, the Company acquired certain video processing and video management technologies used in medical visualization solutions, for a total purchase price of $4.0 million. The acquisition is accounted for as an acquisition of selective assets

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because the acquired assets do not meet the definition of a business. These developed technology assets are part of our Vision reportable segment.

Acquisition of Reach Technology

On May 24, 2016, the Company acquired 100% of the outstanding stock of Reach Technology Inc. ("Reach"), a Fremont, California-based provider of embedded touch screen technology solutions for OEMs in the medical and advanced industrial markets, for a total purchase price of $9.4 million, net of working capital adjustments. Reach specializes in technologies that deliver high-performance touch screen solutions for OEMs with a focus on medical applications. The acquisition expands the range of human interface solutions to enhance our value proposition with medical OEM customers. Reach is included in our Vision reportable segment.

Second Amended and Restated Senior Credit Facility

On May 19, 2016, we entered into the Second Amended and Restated Credit Agreement, which matures on May 19, 2021 and provides for an aggregated credit facility of $300.0 million, comprised of a $75.0 million, 5-year term loan facility and a $225.0 million, 5-year revolving credit facility (collectively, the "Senior Credit Facilities"). The Second Amended and Restated Credit Agreement amended and restated our previous senior credit facility that had a maturity date of December 27, 2017 and provided for an aggregated credit facility of $225.0 million, comprised of a $50.0 million, 5-year term loan facility and a $175.0 million, 5-year revolving credit facility. The Senior Credit Facilities may be increased by an additional uncommitted $125.0 million in the aggregate, subject to the satisfaction of certain customary covenants.

2016 Restructuring

During the third quarter of 2015, the Company initiated the 2016 restructuring program, which included consolidating certain of our manufacturing operations to optimize our facility footprint and better utilize resources, costs associated with discontinuing our radiology product line and reducing redundant costs due to productivity cost savings and business volume reductions. We substantially completed the 2016 restructuring program during the second quarter of 2016, incurring costs amounting to $3.0 million during the year ended December 31, 2016. The Company expects to incur additional restructuring charges of $0.2 million to $0.3 million related to the 2016 restructuring plan in the next twelve months.

Overview of Financial Results

Total revenue for 2016 was $384.8 million, an increase of $11.2 million, or 3.0%, versus the prior year. The net effect of our acquisition and divestiture activities resulted in an increase in revenue of $0.7 million, or 0.1%. Foreign exchange rates adversely impacted our revenue by $1.7 million, or 0.5%, during the year ended December 31, 2016.

Operating income from continuing operations increased $3.6 million from $28.9 million in 2015 to $32.5 million in 2016. This increase was primarily attributable to an increase in gross profit of $4.6 million as a result of higher revenue, partially offset by an increase in research and development and engineering (“R&D”) expenses and amortization of purchased intangible assets of $1.6 million primarily due to current year and prior year acquisitions.

Diluted earnings per share (“EPS”) from continuing operations of $0.63 in 2016 decreased $0.39 from an EPS of $1.02 in 2015. This decrease was primarily attributable to lower other income as a result of the $19.6 million gain recognized from the JK Lasers divestiture in the prior year, partially offset by an increase in operating income from continuing operations and foreign currency gains in the current year versus foreign currency losses in the prior year.

The specific components of our operating results for 2016, 2015 and 2014 are further discussed below.

Results of Operations

The following table sets forth our results of operations as a percentage of revenue for the years indicated:

	2016	2015	2014
Revenue	100.0%	100.0%	100.0%
Cost of revenue	57.8	57.7	58.8
Gross profit	42.2	42.3	41.2
Operating expenses:			
Research and development and engineering	8.3	8.3	7.9
Selling, general and administrative	21.2	22.0	23.1
Amortization of purchased intangible assets	2.1	2.0	2.8
Restructuring, acquisition and divestiture related costs	2.1	2.2	0.5
Impairment of goodwill and intangible assets	—	—	11.4
Total operating expenses	33.8	34.5	45.8
Operating income (loss) from continuing operations	8.5	7.7	(4.6)
Interest income (expense), net	(1.2)	(1.4)	(1.4)
Foreign exchange transaction gains (losses), net	0.6	(0.0)	0.4
Other income (expense), net	0.6	0.7	0.7
Gain on disposal of business	—	5.3	—
Income (loss) from continuing operations before income taxes	8.5	12.3	(4.9)
Income tax provision (benefit)	2.7	2.8	(0.3)
Income (loss) from continuing operations	5.7	9.5	(4.6)
Loss from discontinued operations, net of tax	—	(0.0)	(1.5)
Loss on disposal of discontinued operations, net of tax	—	—	(0.4)
Consolidated net income (loss)	5.7	9.5	(6.6)
Less: Net income attributable to noncontrolling interest	—	—	—
Net income (loss) attributable to Novanta Inc.	5.7%	9.5%	(6.6)%

Revenue

The following table sets forth external revenue by reportable segment for 2016, 2015 and 2014 (dollars in thousands):

	2016	2015	2014	% Change 2016 vs. 2015	% Change 2015 vs. 2014
Photonics	$174,158	$168,331	$177,726	3.5 %	(5.3)%
Vision	122,250	124,725	122,187	-2.0%	2.1 %
Precision Motion	88,350	80,542	64,793	9.7 %	24.3 %
Total	$384,758	$373,598	$364,706	3.0 %	2.4 %

Photonics

Photonics segment revenue in 2016 increased by $5.8 million, or 3.5%, versus 2015, as a result of an increase in revenue of our laser beam delivery products of $10.1 million primarily attributable to the Lincoln Laser acquisition in November 2015, partially offset by a decrease of $5.7 million in JK Lasers products as a result of the JK Lasers divestiture in April 2015.

Photonics segment revenue in 2015 decreased by $9.4 million, or 5.3%, versus 2014, as a result of the JK Lasers divestiture, which reduced segment revenues by $16.7 million, partially offset by an increase in revenue of our laser beam delivery products and CO2 lasers products due to an increase in demand in the advanced industrial market and certain medical applications and the Lincoln Laser acquisition.

Vision

Vision segment revenue in 2016 decreased by $2.5 million, or 2.0%, versus 2015. The decrease was primarily due to a $13.4 million decline in our visualization solutions revenue attributable to our decision to discontinue our radiology products, which accounted for a $7.9 million decrease in revenue, and lower demand for our surgical products, and a $2.6 million decline in our thermal printers products revenue. These were partially offset by an increase in revenue from our optical data collection products of $8.1 million and an increase in revenue as a result of the acquisition of Reach of $5.6 million.

Vision segment revenue in 2015 increased by $2.5 million, or 2.1%, versus 2014. The increase was primarily due to revenue from our optical data collection business being included in reported revenue in the prior year only following the JADAK acquisition in March 2014 and increases in revenue from our thermal printers and light and color measurement products, partially offset by a decline in our visualization solutions revenue as a result of our radiology products and customer qualification cycles.

Precision Motion

Precision Motion segment revenue in 2016 increased by $7.8 million, or 9.7%, versus 2015. The increase was principally driven by an increase in revenue of our motor components products of $6.9 million as a result of increased demand in the advanced industrial and medical markets.

Precision Motion segment revenue in 2015 increased by $15.7 million, or 24.3%, versus 2014. This increase was principally driven by an increase in revenue of $14.0 million as a result of the Applimotion acquisition and increased revenue of our optical encoders products as a result of increased customer volumes in both the medical and advanced industrial markets, partially offset by a $4.2 million decline in revenue of our air bearing spindles products due to lower demand from the printed circuit board industry.

Gross Profit

The following table sets forth the gross profit and gross profit margin for each of our reportable segments for 2016, 2015 and 2014 (dollars in thousands):

	2016	2015	2014
Gross profit:			
Photonics	$76,696	$73,602	$74,224
Vision	47,181	48,966	48,678
Precision Motion	40,044	36,709	28,333

Unallocated Corporate and Shared Services	(1,469)	(1,387)	(1,068)
Total	$162,452	$157,890	$150,167
Gross profit margin:			
Photonics	44.0 %	43.7 %	41.8 %
Vision	38.6 %	39.3 %	39.8 %
Precision Motion	45.3 %	45.6 %	43.7 %
Total	42.2 %	42.3 %	41.2 %

Gross profit and gross profit margin can be influenced by a number of factors, including product mix, pricing, volume, manufacturing efficiencies and utilization, costs for raw materials and outsourced manufacturing, headcount, inventory obsolescence and warranty expenses.

Photonics

Photonics segment gross profit for 2016 increased $3.1 million, or 4.2%, versus 2015, primarily due to an increase in revenue and an increase in gross profit margin. Photonics segment gross profit margin was 44.0% for 2016, compared with a gross profit margin of 43.7% for 2015. Gross margin improvements from continuous improvement productivity initiatives were mostly offset by lower margins from the Lincoln Laser acquisition which was included in the operating results for the full year in 2016 versus only two months in 2015.

Photonics segment gross profit for 2015 decreased $0.6 million, or 0.8%, versus 2014, primarily due to a decline in revenue as a result of the JK Lasers divestiture, which decreased gross profit by $4.9 million, partially offset by revenue growth in our laser beam delivery products and CO2 laser products and an increase in gross profit margin. Photonics segment gross profit margin was 43.7% for 2015, compared with a gross profit margin of 41.8% for 2014. The increase in gross profit margin was primarily attributable to the JK Lasers divestiture, which accounted for 1.3 percentage point of the 1.9 percentage point increase. The remaining increase in gross profit margin was driven by increases in volume in our laser beam delivery and CO2 laser products, product mix, and continuous improvement productivity initiatives.

Vision

Vision segment gross profit for 2016 decreased $1.8 million, or 3.6%, versus 2015. The decrease was primarily attributable to a decline in revenue and a $1.6 million charge related to the discontinuation of our radiology products. Vision segment gross profit margin was 38.6% for 2016, compared with a gross profit margin of 39.3% for 2015. The decrease was primarily attributable to costs associated with discontinuing our radiology products, which resulted in a 1.3 percentage point decrease in gross profit margin.

Vision segment gross profit for 2015 increased $0.3 million, or 0.6%, versus 2014. The increase was primarily attributable to a decline in intangible asset amortization expense, partially offset by product mix. Vision segment gross profit margin was 39.3% for 2015, compared with a gross profit margin of 39.8% for 2014. The 0.5 percentage point decrease in gross profit margin was primarily attributable to product mix, offset by lower intangible asset amortization expense. Included in gross profit for 2015 was amortization of developed technologies of $2.2 million. Included in gross profit for 2014 was amortization of developed technologies and amortization of inventory fair value step-ups of $3.7 million.

Precision Motion

Precision Motion segment gross profit for 2016 increased $3.3 million, or 9.1%, versus 2015, primarily due to an increase in revenue. Precision Motion segment gross profit margin was 45.3% for 2016, compared with a gross profit margin of 45.6% for 2015. The slight decrease in gross margin was attributable to product mix as a result of stronger growth from lower margin products.

Precision Motion segment gross profit for 2015 increased $8.4 million, or 29.6%, versus 2014, primarily due to an increase in revenue and gross profit margin. Precision Motion segment gross profit margin was 45.6% for 2015, compared with a gross profit margin of 43.7% for 2014. The 1.9 percentage point increase in gross profit margin was primarily attributable to an increase in volumes, product mix and continuous improvement productivity initiatives.

Operating Expenses

The following table sets forth operating expenses for 2016, 2015 and 2014 (dollars in thousands):

	2016	2015	2014	% Change 2016 vs. 2015	% Change 2015 vs. 2014
Research and development and engineering	$32,002	$31,043	$28,954	3.1 %	7.2 %
Selling, general and administrative	81,691	82,049	84,380	(0.4)%	(2.8)%
Amortization of purchased intangible assets	8,251	7,611	10,262	8.4 %	(25.8)%
Restructuring, acquisition and divestiture related costs	7,945	8,254	1,935	(3.7)%	326.6%
Impairment of goodwill and intangible assets	—	—	41,442	N/A	N/A
Total	$129,889	$128,957	$166,973	0.7 %	(22.8)%

Research and Development and Engineering Expenses

R&D expenses are primarily comprised of employee compensation and related expenses and cost of materials for R&D projects.

R&D expenses were $32.0 million, or 8.3% of revenue, in 2016, versus $31.0 million, or 8.3% of revenue, in 2015. R&D expenses increased in terms of total dollars primarily due to increased R&D expenses from acquisitions, partially offset by decreased costs as a result of the JK Lasers divestiture.

R&D expenses were $31.0 million, or 8.3% of revenue, in 2015, versus $29.0 million, or 7.9% of revenue, in 2014. R&D expenses increased in terms of total dollars and as a percentage of revenue, primarily due to acquisitions, partially offset by the JK Lasers divestiture.

Selling, General and Administrative Expenses

Selling, general and administrative ("SG&A") expenses include costs for sales and marketing, sales administration, finance, human resources, legal, information systems and executive management.

SG&A expenses were $81.7 million, or 21.2% of revenue, in 2016, versus $82.0 million, or 22.0% of revenue, in 2015. SG&A expenses decreased in terms of total dollars and as a percentage of revenue primarily due to a $3.7 million decrease in costs from our visualization solutions business as a result prior year restructuring programs and the discontinuation of our radiology products and a $1.1 million decrease in costs as a result of the JK Lasers divestiture, partially offset by a $2.5 million increase in costs from acquisitions in 2016 and 2015 and $1.3 million of CEO transition costs.

SG&A expenses were $82.0 million, or 22.0% of revenue, in 2015, versus $84.4 million, or 23.1% of revenue, in 2014. SG&A expenses decreased in terms of total dollars and as a percentage of revenue primarily due to the JK Lasers divestiture and lower compensation expense, partially offset by increases from acquisitions in 2015 and the JADAK acquisition in March 2014 being included for the full year in 2015.

Amortization of Purchased Intangible Assets

Amortization of purchased intangible assets is charged to our Photonics, Vision and Precision Motion segments. Amortization of core technologies is included in cost of revenue in the consolidated statement of operations. Amortization of customer relationships, trademarks, backlog and other intangibles are included in operating expenses in the consolidated statement of operations.

Amortization of purchased intangible assets, excluding the amortization for developed technologies that is included in cost of revenue, was $8.3 million, or 2.1% of revenue, in 2016, versus $7.6 million, or 2.0% of revenue, in 2015. The increase, in terms of total dollars and as a percentage of revenue, was related to the increase in amortization of acquired intangible assets from acquisitions in 2016 and 2015.

Amortization of purchased intangible assets, excluding the amortization for developed technologies that is included in cost of revenue, was $7.6 million, or 2.0% of revenue, in 2015, versus $10.3 million, or 2.8% of revenue, in 2014. The decrease, in terms of total dollars and as a percentage of revenue, was related to a decrease in amortization of acquired intangible assets from acquisitions in 2014.

Restructuring, Acquisition and Divestiture Related Costs

Restructuring, acquisition and divestiture related charges primarily relate to our restructuring programs, acquisition costs incurred for completed acquisitions, acquisition costs related to future potential acquisitions and failed acquisitions, and changes in fair value of contingent considerations. Divestiture costs primarily related to the JK Lasers divestiture in April 2015.

The Company recorded restructuring, acquisition and divestiture related costs of $7.9 million in 2016, versus $8.3 million in 2015. The decrease in restructuring, acquisition and divestiture related costs versus 2015 was primarily due to a $2.9 million decrease in restructuring related charges and a $1.1 million decrease in divestiture related costs as a result of the JK Lasers divestiture in 2015, partially offset by an increase in acquisition related charges of $3.6 million. Restructuring related charges in 2016 were offset by a $1.6 million gain on the sale of our Chatsworth, California facility. Acquisition related costs in 2016 were primarily related to $2.5 million in professional fees in connection with acquisitions and costs of $2.5 million related to transition services and changes in the fair value of contingent considerations related to prior year acquisitions.

The Company recorded restructuring, acquisition and divestiture related costs of $8.3 million in 2015, versus $1.9 million in 2014. The increase in restructuring, acquisition and divestiture related costs is primarily due to the increase in costs related to restructuring programs in 2015. The Company recorded restructuring costs of $5.8 million primarily related to our restructuring programs and divestiture costs related to the JK Lasers divestiture of $1.1 million. The Company recognized acquisition related costs of $1.3 million in 2015, which included expenses of $1.9 million related to acquisitions in 2015, partially offset by a $0.6 million reversal of accruals for earn-out agreements in connection with the 2014 JADAK acquisition. Acquisition related costs were $1.5 million during 2014.

Impairment of Goodwill and Intangible Assets

The Company recorded a non-cash impairment charge of $41.4 million in the consolidated financial statements in 2014 as a result of lower expectations for revenue and operating profit from our NDS business.

Operating Income (Loss) by Segment

The following table sets forth operating income by segment for 2016, 2015 and 2014 (in thousands):

	2016	2015	2014
Operating Income (Loss) from Continuing Operations			
Photonics	$34,825	$35,971	$33,053
Vision	(1,277)	(2,057)	(43,079)
Precision Motion	21,101	16,877	13,023
Unallocated Corporate and Shared Services	(22,086)	(21,858)	(19,803)
Total	$32,563	$28,933	$(16,806)

Photonics

Photonics segment operating income from continuing operations for 2016 decreased by $1.1 million, or 3.2%, from 2015 primarily due to an increase in R&D and SG&A expenses of $6.2 million as a result of the Lincoln Laser acquisition and investments in R&D, sales and marketing resources, partially offset by an increase in gross profit of $3.1 million, and a decrease in restructuring, acquisition and divestiture related costs of $2.0 million primarily due to the JK Lasers divestiture in 2015 and decreases in the fair value of contingent considerations related to the Lincoln Laser acquisition.

Photonics segment operating income from continuing operations for 2015 increased by $2.9 million, or 8.8%, from 2014 primarily due to the improved profitability of the Photonics segment after the JK Lasers divestiture, partially offset by an increase in restructuring and divestiture related costs of $1.7 million. Amortization of intangible assets for the Photonics segment was $4.4 million in 2015 compared to $4.1 million in 2014.

Vision

Vision segment operating loss from continuing operations for 2016 decreased by $0.8 million from 2015 primarily due to a decrease in SG&A expenses of $4.0 million attributable to cost savings from our restructuring programs and a $1.6 million gain from the sale of our facility in Chatsworth, California, partially offset by a decrease in gross profit of $1.8 million, an increase in amortization of intangibles of $1.0 million as a result of acquisitions in 2016 and 2015, an increase in restructuring related costs of $0.8 million, and $1.2 million of transition services costs related to the Reach acquisition.

Vision segment operating loss from continuing operations decreased by $41.0 million from an operating loss of $43.1 million in 2014 to an operating loss of $2.1 million in 2015 primarily due to the NDS goodwill and intangible assets impairment charge recorded in 2014 and a decrease in amortization of purchased intangibles of $4.8 million, partially offset by an increase in R&D expenses as a result of the 2014 JADAK acquisition and an increase in restructuring charges related to our 2016 restructuring program.

Precision Motion

Precision Motion segment operating income from continuing operations for 2016 increased by $4.2 million, or 25.0%, from 2015 primarily due to an increase in gross profit of $3.3 million as a result of higher volume, a reduction of R&D and SG&A expenses of approximately $1.7 million as a result of cost savings from the 2016 restructuring and other cost saving initiatives, and a decrease in restructuring charges of $0.8 million as the majority of the related costs had been recognized as of December 31, 2015. These were partially offset by $1.7 million of costs related to increases in the fair value of contingent considerations for the Applimotion acquisition.

Precision Motion segment operating income from continuing operations for 2015 increased by $3.9 million, or 29.6%, from 2014 primarily due to an increase in gross profit of $8.4 million, partially offset by higher operating expenses due to the Applimotion acquisition and an increase in restructuring charges related to our 2016 restructuring program.

Unallocated Corporate and Shared Services

Unallocated corporate and shared services costs primarily represent costs of corporate and shared service functions and other public company costs that are not allocated to the operating segments, including certain restructuring and most acquisition related costs.

Unallocated corporate and shared services costs for 2016 increased by $0.2 million, or 1.0%, from 2015.

Unallocated corporate and shared services costs for 2015 increased by $2.1 million, or 10.4%, from 2014 primarily due to an increase in professional services costs and an increase in restructuring and acquisition related costs of $1.1 million. Restructuring and acquisition related costs were $2.6 million in 2015, compared to $1.5 million in 2014.

Interest Income (Expense), Foreign Exchange Transaction Gains (Losses), and Other Income (Expense), Net

The following table sets forth interest income (expense), net, foreign exchange transaction gains (losses), net and other income (expense), net for 2016, 2015 and 2014 (in thousands):

	2016	2015	2014
Interest income (expense), net	$(4,559)	$(5,180)	$(5,096)
Foreign exchange transaction gains (losses), net	2,317	(23)	1,281
Other income (expense), net	2,201	2,663	2,706
Gain on disposal of business	—	19,629	—

Interest Income (Expense), Net

Net interest expense was $4.6 million in 2016 versus $5.2 million in 2015. The decrease in net interest expense from 2015 was primarily due to a decrease in average debt levels, partially offset by an increase in the weighted average interest rate on our Senior Credit Facilities. The weighted average interest rate on our Senior Credit Facilities was 3.52% and 3.24% during 2016 and 2015, respectively. Included in net interest expense was non-cash interest expense of approximately $0.9 million in both 2016 and 2015, related to the amortization of deferred financing costs on our debt.

Net interest expense was $5.2 million in 2015 versus $5.1 million in 2014. The weighted average interest rate on our Senior Credit Facilities was 3.24% and 3.25% during 2015 and 2014, respectively. Included in net interest expense was non-cash interest expense of approximately $0.9 million and $1.0 million in 2015 and 2014, respectively, related to the amortization of deferred financing costs on our debt.

Foreign Exchange Transaction Gains (Losses), Net

Foreign exchange transaction gains (losses), net, were $2.3 million net gains in 2016 versus less than $0.1 million net losses for 2015 due to changes in the U.S. Dollar exchange rates against the Euro and British Pound and an unrealized foreign currency loss in 2015 related to the cash proceeds in U.S. dollars from the JK Lasers divestiture being held for a period of time by our UK subsidiary.

Foreign exchange transaction gains (losses), net, were less than $0.1 million net losses in 2015 versus $1.3 million net gains for 2014 due to changes in the U.S. Dollar exchange rates against the Euro, British Pound and Japanese Yen and a $1.3 million foreign currency loss related to the cash proceeds in U.S. dollars from the JK Lasers divestiture being held for a period of time by our UK subsidiary.

Other Income (Expense), Net

We recognized $2.2 million, $2.7 million and $2.7 million of other income in 2016, 2015 and 2014, respectively, primarily related to earnings from our equity-method investment in Laser Quantum.

The summarized financial information for Laser Quantum is as follows (in thousands):

	2016	2015	2014
Revenue	$23,526	$25,599	$23,013
Income from operations	$5,537	$7,362	$7,434
Net income	$5,389	$6,925	$6,627

Gain on Disposal of Business

The gain on disposal of business in 2015 was due to a $19.6 million gain recognized as a result of the JK Lasers divestiture in April 2015.

Income Taxes

We recorded a tax provision of $10.5 million in 2016, as compared to a tax provision of $10.4 million in 2015. The effective tax rate for 2016 was 32.3% of income before taxes, compared to an effective tax rate of 22.6% of income before taxes for 2015. Our effective tax rate in 2016 differs from the Canadian statutory rate of 28.5% primarily due to $0.9 million of international tax rate difference, $1.4 million of non-deductible acquisition related expenses and an increase of $1.2 million in valuation allowance recorded mainly for losses and other temporary differences in Canada. These increases are offset by a $1.1 million benefit due to the Section 199 Domestic Production Activity deduction in the U.S., a $1.1 million benefit associated with R&D and foreign tax credits generated in 2016 and a $0.9 million benefit for changes in local statutory tax rates.

We recorded a tax provision of $10.4 million in 2015, as compared to a tax benefit of $1.0 million in 2014. The effective tax rate for 2015 was 22.6% of income before taxes, compared to an effective tax rate of 5.6% of loss before taxes for 2014. Our effective tax rate in 2015 differs from the Canadian statutory rate of 27.0% primarily due to a $1.4 million benefit from the JK Lasers divestiture, a $0.7 million benefit associated with R&D tax credits generated in 2015, a $0.7 million IRS audit settlement related impact and a decrease of $0.6 million valuation allowance recorded in the U.S.

As a significant portion of the NDS goodwill and intangible assets impairment charge was recognized in Canada, we had a $20.2 million loss before taxes in Canada in 2014 where we do not recognize any tax benefit as a result of the full valuation allowance on deferred tax assets. This significantly reduced the income tax benefit as a percentage of the loss before taxes as reported in the consolidated statement of operations for 2014.

Discontinued Operations

Loss from discontinued operations, net of tax, was zero and less than $0.1 million in 2016 and 2015, respectively. The small loss from discontinued operations in 2015 was due to losses related to the Scientific Lasers business that was divested in July 2014.

Loss from discontinued operations, net of tax, was less than $0.1 million and $7.3 million in 2015 and 2014, respectively. The decrease in the loss from discontinued operations, net of tax, was primarily due to losses related to the Scientific Lasers business, which was sold in July 2014.

Liquidity and Capital Resources

We assess our liquidity in terms of our ability to generate cash to fund our operating, investing, and financing activities. Our primary ongoing cash requirements are funding operations, capital expenditures, investments in businesses, and repayment of our debt and related interest expense. Our primary sources of liquidity are cash flows from operations and borrowings under our revolving credit facility. We believe our future operating cash flows will be sufficient to meet our future operating and capital expenditure cash needs for the foreseeable future, including at least the next 12 months. The availability of borrowings under our revolving credit facility provides an additional potential source of liquidity should it be required for business acquisitions. In addition, we may seek to raise additional capital, which could be in the form of bonds, convertible debt or equity, to fund business development activities or other future investing cash requirements, subject to approval by the lenders in the Second Amended and Restated Credit Agreement.

The sources of our liquidity are subject to all of the risks of our business and could be adversely affected by, among other factors, a decrease in demand for our products, our ability to integrate current and future acquisitions, availability of borrowings under our revolving credit facility, and market changes in general. See “Risks Relating to

Our Common Shares and Our Capital Structure” included in Item 1A of this Annual Report on Form 10-K.

Our ability to make payments on our indebtedness and to fund our operations may be dependent upon the earnings and the distribution of funds from our subsidiaries. Local laws and regulations may restrict certain of our subsidiaries from paying dividends and transferring assets to us. We cannot assure you that applicable laws and regulations and/or the terms of our indebtedness will permit our subsidiaries to provide us with sufficient dividends, distributions or loans when necessary.

In October 2013, the Company’s Board of Directors authorized a share repurchase plan under which the Company may repurchase outstanding shares of the Company’s common stock up to an aggregate amount of $10.0 million. The shares may be repurchased from time to time, at the Company’s discretion, based on ongoing assessment of the capital needs of the business, the market price of the Company’s common stock, and general market conditions. Shares may also be repurchased through an accelerated stock purchase agreement, on the open market or in privately negotiated transactions in accordance with applicable federal securities laws. Repurchases may be made under certain SEC regulations, which would permit common stock to be purchased when the Company would otherwise be prohibited from doing so under insider trading laws. The share repurchase plan does not obligate the Company to acquire any particular amount of common stock. No time limit was set for the completion of the share repurchase program, and the program may be suspended or discontinued at any time. The Company expects to fund the share repurchase through cash on hand and future cash flow from operations. During 2016, the Company repurchased 109 thousand shares in the open market for an aggregate purchase price of $1.6 million at an average price of $14.93 per share. As of December 31, 2016, the Company had repurchased an aggregate of 282 thousand shares for an aggregate purchase price of $3.8 million at an average price of $13.43 per share. As of December 31, 2016, the Company had $6.2 million available for share repurchases under the authorized share repurchase plan.

As of December 31, 2016, $36.0 million of our $68.1 million cash and cash equivalents was held by our subsidiaries outside of the United States and Canada. Generally, our intent is to use cash held in these foreign subsidiaries to fund our local operations or acquisitions by those local subsidiaries. However, in certain instances, we have identified excess cash for which we may repatriate and have established liabilities for the expected tax cost. Additionally, we may use intercompany loans to address short-term cash flow needs for various subsidiaries.

Second Amended and Restated Credit Agreement

In May 2016, we entered into the second amended and restated senior secured credit agreement (the "Second Amended and Restated Credit Agreement"), consisting of a $75.0 million, 5-year term loan facility and a $225.0 million, 5-year revolving credit facility (collectively, the "Senior Credit Facilities"). The Senior Credit Facilities mature in May 2021. The term loan is payable in quarterly installments of $1.9 million with the remaining amount due upon maturity. We may make payments to pay down our revolving credit facility with cash on hand and future cash flow from operations.

As of December 31, 2016, we had term loans of $71.3 million and revolving loans of $10.0 million outstanding under the Second Amended and Restated Credit Agreement. In January 2017, we borrowed an additional $42.0 million to fund the ThingMagic and Laser Quantum acquisitions.

The Second Amended and Restated Credit Agreement contains various covenants that we believe are usual and customary for this type of agreement, including a maximum allowed leverage ratio, and a minimum required fixed charge coverage ratio (as defined in the Second Amended and Restated Credit Agreement). The following table summarizes these financial covenant and our compliance therewith as of December 31, 2016.

	Requirement	Actual December 31, 2016
Maximum consolidated leverage ratio	3.00	1.15
Minimum consolidated fixed charge coverage ratio	1.50	4.30

In addition, the Second Amended and Restated Credit Agreement contains various other customary representations, warranties and covenants applicable to the Company and its subsidiaries, including: (i) limitations on certain payments; (ii) limitations on fundamental changes involving the Company; (iii) limitations on the disposition of assets; and (iv) limitations on indebtedness, investments, and liens.

Cash Flows

Cash and cash equivalents totaled $68.1 million at December 31, 2016, versus $60.0 million at December 31, 2015. The net increase in cash and cash equivalents is primarily related to cash inflows from operating activities of $47.8 million, and net cash proceeds of $7.0 million from the sale of our facilities in Chatsworth, California and Orlando, Florida. These inflows were offset by cash outflows of $13.4 million for the acquisition of Reach and certain intangible assets in the Vision reportable segment, repayments of our debt of $16.3 million, and capital expenditures of $8.5 million.

The following table summarizes our cash and cash equivalent balances, cash flows and unused and available funds under our revolving credit facility for the years indicated (in thousands):

	2016	2015	2014

Cash and cash equivalents	$68,108	$59,959	$51,146
Net cash provided by operating activities of continuing operations	$47,788	$33,429	$43,990
Net cash used in investing activities of continuing operations	$(14,363)	$(1,842)	$(93,541)
Net cash provided by (used in) financing activities of continuing operations	$(23,189)	$(21,535)	$40,281
Unused and available funds under revolving credit facility	$215,000	$105,000	$95,000

Operating Cash Flows

Cash provided by operating activities of continuing operations was $47.8 million in 2016 versus $33.4 million in 2015. Cash provided by operating activities of continuing operations in 2016 increased from the prior year primarily due to the increase in operating income from continuing operations and the dividend from Laser Quantum.

Cash provided by operating activities of continuing operations was positively impacted by an increase in our days payables outstanding from 41 days at December 31, 2015 to 53 days at December 31, 2016 and improvement in our inventory turnover ratio from 3.6 at December 31, 2015 to 3.7 at December 31, 2016. Cash provided by operating activities of continuing operations was negatively impacted by an increase in our days sales outstanding from 57 days at December 31, 2015 to 59 days at December 31, 2016.

Cash provided by operating activities of continuing operations was $33.4 million in 2015 versus $44.0 million in 2014. Income from continuing operations increased in 2015 while changes in operating assets and liabilities decreased cash provided by operating activities of continuing operations by $6.4 million. Cash provided by operating activities of continuing operations was negatively impacted by an increase in our days sales outstanding from 53 days at December 31, 2014 to 57 days at December 31, 2015, a decrease in our days payables outstanding from 45 days at December 31, 2014 to 41 days at December 31, 2015 and an increase in inventories (excluding inventories sold as part of JK Lasers divestiture and inventories from the Applimotion, Lincoln Laser and Skyetek acquisitions). The Company's days sales outstanding was impacted by the timing of sales occurring later in the fourth quarter in 2015 compared to 2014.

Cash used in operating activities of discontinued operations was less than $0.1 million and $1.7 million in 2015 and 2014, respectively. The decrease in cash used in operating activities of discontinued operations in 2015 from 2014 was primarily related to the divestiture of Scientific Lasers business in 2014.

Investing Cash Flows

Cash used in investing activities of continuing operations was $14.4 million during 2016 primarily due to $13.4 million in cash consideration paid for the Reach acquisition and the acquisition of developed technology assets, and $8.5 million in cash paid for capital expenditures, partially offset by $3.6 million in net cash consideration received from the sale of our Orlando, Florida facility in March 2016, $3.4 million in net cash consideration received from the sale of our Chatsworth, California facility in August 2016, and $0.4 million received from the finalization of the Lincoln Laser acquisition working capital adjustments.

Cash used in investing activities of continuing operations was $1.8 million during 2015 primarily due to cash consideration of $26.0 million paid for the Applimotion, Lincoln Laser and Skyetek acquisitions and $5.6 million in capital expenditures, partially offset by $29.6 million in cash proceeds received from the sale of the JK Lasers business.

Cash used in investing activities of continuing operations of $93.5 million in 2014, primarily related to cash consideration of $93.7 million paid for the JADAK acquisition in March 2014 and $5.4 million in capital expenditures, partially offset by proceeds of $5.4 million from an escrow claim related to the NDS acquisition.

Cash provided by investing activities of discontinued operations was $1.5 million during 2016 primarily related to the release of escrow related to our July 2014 Scientific Lasers divestiture. Cash provided by investing activities of discontinued operations was $0.2 million during 2015 primarily related to net cash proceeds from the sale of Excel Laser Technology Private Limited (the "India JV"). This compares to cash provided by investing activities of discontinued operations of $3.8 million in 2014, primarily related to $4.7 million of net proceeds from the sale of the Scientific Lasers business, offset by capital expenditures of $0.9 million.

We have no material commitments to purchase property, plant and equipment. We expect to use approximately $7 million to $9 million in 2017 for capital expenditures related to investments in new property, plant and equipment required in our existing businesses.

Financing Cash Flows

Cash used in financing activities of continuing operations was $23.2 million during 2016, primarily due to $7.5 million of contractual term loan payments, $8.8 million of optional repayments of borrowings under our revolving credit facility, $1.8 million of payroll withholding tax payments on stock-based compensation awards, $1.6 million of repurchases of the Company's common stock, and $1.2 million of capital lease payments. We also paid $2.5 million for debt issuance costs as a result of the Second Amended and Restated Credit Agreement signed in May 2016.

Cash used in financing activities of continuing operations was $21.5 million during 2015, primarily due to $7.5 million of contractual term loan payments, $23.0 million of optional repayments of borrowings under our revolving credit facility and the repurchase of $1.6 million of the Company's common stock, offset by $13.0 million of borrowings under our revolving credit facility to fund the Applimotion acquisition.

Cash provided by financing activities of continuing operations was $40.3 million during 2014, primarily due to $77.0 million of borrowings under our revolving credit facility used to pay a portion of the cash consideration paid for the JADAK acquisition, partially offset by $7.5 million of our contractual term loan payments and $26.0 million of optional repayments of borrowings under our revolving credit facility.

We expect to use $8.4 million of cash in 2017 for financing activities, comprised of quarterly contractual payments of $1.9 million on our term loan facility, and $0.8 million in principal payments for our capital lease obligations. In addition, we may make payments to pay down our revolving credit facility from time to time with future cash flows generated from operating activities.

Other Liquidity Matters

Pension Plans

We maintain a defined benefit pension plan in the U.K. (the “U.K. Plan”). Our U.K. Plan was closed to new members in 1997 and stopped accruing additional pension benefits for existing members in 2003, thereby limiting our obligation to benefits earned through that date. Benefits under this plan were based on the employees’ years of service and compensation as of the date the plan was frozen. On July 1, 2013, the Company provided a Guarantee (the “Guarantee”) in favor of the trustees of the U.K. Plan with respect to all present and future obligations and liabilities under the U.K. Plan (whether actual or contingent and whether owed jointly or severally and in any capacity whatsoever) of Novanta Technologies UK Limited, a wholly owned subsidiary of Novanta Inc.

Our funding policy is to fund pensions based on actuarial methods as permitted by regulatory authorities. The results of funding valuations depend on both the funding deficit and the assumptions that we make with regard to attributes such as asset returns, discount rates, mortality, retail price inflation and other market driven changes. The assumptions used represent one estimate of many possible future outcomes. The final cost to us will be determined by events as they actually become known. Due to the underfunded position that our U.K. Plan currently has and potential changes in the actual outcomes relative to our assumptions, we may have to increase payments to fund this plan in the future. As of December 31, 2016, the projected benefit obligation under the U.K. Plan exceeded the fair value of plan assets by $6.0 million.

Based on the results of the most recent funding valuation completed in 2015, the Company’s annual contributions are expected to be approximately $0.8 million per year in 2017 and will increase by 2.9% per year thereafter.

As a result of the covenant that exists between our U.K. subsidiary and the Plan Trustees regarding the funding of the U.K. Plan, our ability to transfer assets outside our U.K. subsidiary, and its wholly owned subsidiary in China, may be limited.

Off-Balance Sheet Arrangements, Contractual Obligations

Contractual Obligations

The following table summarizes our contractual obligations at December 31, 2016 and the effect such obligations are expected to have on liquidity and cash flows in future years. We have excluded the future cash payments for unrecognized tax benefits of $5.7 million, including interest and penalties, and the future cash payments for contingent consideration of $5.2 million because we are uncertain if and when such amounts may be settled. These unrecognized tax benefits and contingent consideration payments have been further explained in Note 13 and Note 7, respectively, to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K.

Contractual Obligations	Total	2017	2018 - 2019	2020 - 2021	Thereafter
	(In thousands)				
Senior Credit Facilities (1)	$81,250	$7,500	$15,000	58,750	$ —
Interest on Senior Credit Facilities (2)	7,877	2,178	3,708	1,991	—

Capital leases	12,091	1,294	1,751	1,814	7,232
Operating leases (3)	14,266	4,519	5,115	365	4,267
Purchase commitments (4)	30,906	29,069	1,831	6	—
U.K. pension plan (5)	4,453	840	1,755	1,858	—
Total contractual cash obligations	$150,843	$45,400	$29,160	$64,784	$ 11,499

(1) On May 19, 2016, we entered into the Second Amended and Restated Credit Agreement. As of December 31, 2016, a total of $71.3 million of term loan debt and $10.0 million of revolving credit loan were outstanding under the Senior Credit Facilities. The term loan is payable in quarterly installments of $1.875 million with the final installment of $37.5 million due upon maturity in May 2021. The revolving credit facility is due at maturity in May 2021.

(2) For the purpose of this calculation, current interest rates on floating rate obligation (LIBOR plus applicable margin, as defined in the Second Amended and Restated Credit Agreement) were used for the remainder contractual life of the term loan.

(3) These amounts primarily represent the gross amounts due for facilities that are leased. The amounts include payments due with respect to both active operating facilities and idle facilities that have been vacated as a result of our restructuring actions.

(4) Purchase commitments represent unconditional purchase obligations as of December 31, 2016.

(5) Assumes funding obligations equivalent to $0.8 million per year, increasing 2.9% through 2021 based on annual funding contributions in effect as of December 31, 2016. Future funding requirements will be affected by various actuarial assumptions and actual experience of the pension plan.

Off-Balance Sheet Arrangements

Through December 31, 2016, we have not entered into any off-balance sheet arrangements or material transactions with unconsolidated entities or other persons.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. On an ongoing basis, we evaluate our estimates, assumptions and judgments, including those related to revenue recognition, inventory valuation, assessment of the valuation of goodwill, intangible assets and tangible long-lived assets, employee benefit plans, restructuring charges, accounting for income taxes, and accounting for loss contingencies. Actual results could differ significantly from our estimates in the future.

We believe that the following critical accounting policies and estimates most significantly affect the portrayal of our financial condition and results of operations and require the most difficult and subjective judgments.

Revenue Recognition. Revenue from the sale of products is recognized when we meet all four of the criteria for revenue recognition within the fiscal period. These criteria are: evidence of an arrangement exists; delivery has occurred; the price is fixed or determinable; and collection of the resulting receivable is reasonably assured. Revenue recognition requires judgment and estimates, which may affect the amount and timing of revenue recognized in any given period.

The Photonics, Vision, and Precision Motion segments have revenue transactions that are comprised of both single-element and multiple-element transactions. Multiple-element transactions typically include two or more products and occasionally contain non-standard/extended warranties or preventative maintenance plans. For multiple-element transactions, revenue is generally recognized upon shipment, using the relative selling price method in accordance with Accounting Standards Codification (“ASC”) 605-25 “Revenue – Multiple-Element Arrangements”. Single-element transactions are typically recognized upon shipment at their contractually stated prices.

The Company generally provides warranties for its products. The standard warranty period is typically 12 months to 24 months for the Photonics and Precision Motion segments and 12 months to 36 months for the Vision segment. The standard warranty period for product sales is accounted for under the provisions of ASC 450 “Contingencies”, as the Company has the ability to ascertain the likelihood of the liability and can reasonably estimate the amount of the liability. A provision for the estimated cost related to warranty is recorded to cost of revenue at the time revenue is recognized. The Company’s estimate of costs to service the warranty obligations is based on historical experience and expectations of future conditions. To the extent the Company experiences warranty claims or costs associated with servicing those claims that differ from the original estimates, revisions to the estimated warranty liability are recorded at that time, with an offsetting entry recorded to cost of revenue.

The Company occasionally sells separately priced extended/non-standard warranty services or preventative maintenance plans, which are accounted for in accordance with provisions of ASC 605-20-25-3, “Separately Priced Extended Warranty and Product Maintenance Contracts”. Under this guidance, we recognize the separately priced extended/non-standard warranty and preventative maintenance fees ratably over the associated period.

At the request of its customers, the Company may perform professional services, generally for the maintenance and repair of products previously sold to those customers. These services are usually in the form of time and materials based contracts which are short in duration. Revenue for time and materials services is recorded at the completion of services requested under a customer's purchase order.

In May 2014, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") 2014-09, "Revenue from Contracts with Customers", which provides guidance for revenue recognition. ASU 2014-09 requires entities to recognize revenue in a way that depicts the transfer of goods or services to customers at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In August 2015, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers," which delayed the effective date of ASU 2014-09 to the first annual and interim reporting periods beginning after December 15, 2017. Early adoption is permitted, however, no earlier than the original effective date of the first reporting period after December 15, 2016 under ASU 2014-09. Upon adoption, an entity may apply the new guidance either retrospectively to each prior reporting period presented, or using modified retrospective approach which will result in the recording of the cumulative effect of applying the standard to customer contracts not yet completed as of the date of adoption in the beginning retained earnings balance at the date of the initial application. The Company will adopt ASU 2014-09 as of January 1, 2018 and is currently evaluating the impact of the new standard on the Company's consolidated financial statements.

Inventories. Inventories, which include materials and conversion costs, are stated at the lower of cost or market, using a first-in, first-out method. We periodically review these values to ascertain that market value of the inventory continues to exceed its recorded cost. Generally, reductions in inventory value below cost are caused by technological obsolescence of the inventory.

We regularly review inventory quantities on hand and, when necessary, record provisions for excess and obsolete inventory based on either our forecasted product demand and production requirements or historical trailing usage of the product. If our sales do not materialize as planned or at historical levels, we may have to increase our reserve for excess and obsolete inventory, which would reduce our earnings. If actual market conditions are more favorable than anticipated, inventory previously written down may be sold, resulting in lower cost of revenue and higher income from operations than expected in that period.

Valuation of Long-lived Assets. The purchase price we pay for acquired companies is allocated first to the identifiable assets acquired and liabilities assumed at their fair value. Any excess purchase price is then allocated to goodwill. We make various assumptions and estimates in order to assign fair value to acquired tangible and intangible assets and liabilities. These assumptions typically include cash flow forecasts, discount rates, technology royalty rates, and customer attrition rates, among others. Actual cash flows may vary from forecasts used to value these assets at the time of the business combination.

Our most significant identifiable intangible assets are customer relationships, acquired technologies, trademarks and trade names. In addition to our review of the carrying value of each asset, the useful life assumption for each asset, including the classification of certain intangible assets as "indefinite lived," are reviewed on a periodic basis to determine if changes in circumstances warrant revisions to them. All definite-lived intangible assets are amortized over the periods in which their economic benefits are expected to be realized.

Impairment analyses of goodwill and indefinite-lived intangible assets are conducted in accordance with ASC 350, "Intangibles—Goodwill and Other." We test our goodwill balances annually as of the beginning of the second quarter or more frequently if indicators are present or changes in circumstances suggest that an impairment may exist. Should the fair value of the Company's goodwill or indefinite-lived intangible assets decline because of reduced operating performance, market declines, or other indicators of impairment, or as a result of changes in the discount rate, charges for impairment loss may be necessary. In performing the test, we utilize the two-step approach which requires a comparison of the carrying value of each of our reporting units to the fair value of these reporting units. The Company evaluates its goodwill, intangible assets and other long-lived assets for impairment at the reporting unit level which is generally at least one level below our reportable segments. If the carrying value of a reporting unit exceeds its fair value, we calculate the implied fair value of the reporting unit's goodwill and compare it to the carrying value. If the carrying value of goodwill exceeds its implied fair value, an impairment charge is recorded for the difference. The fair value of a reporting unit is primarily based on a discounted cash flow ("DCF") method. The DCF approach requires that we forecast future cash flows for each of the reporting units and discount the cash flow streams based on a weighted average cost of capital ("WACC") that is derived, in part, from comparable companies within similar industries. The DCF calculations also include a terminal value calculation that is based upon an expected long-term growth rate for the applicable reporting unit. The carrying values of each reporting unit include assets and liabilities which relate to the reporting unit's operations. Additionally, reporting units that benefit from corporate assets or liabilities are allocated a portion of those corporate assets and liabilities on a proportional basis.

We assess indefinite-lived intangible assets for impairment on an annual basis, and more frequently if impairment indicators are identified. We also periodically reassess their continuing classification as indefinite-lived intangible assets. Impairment exists if the fair value of the intangible asset is less than its carrying value. An impairment charge equal to the difference is recorded to reduce the carrying value to its fair value.

We evaluate amortizable intangible assets and other long-lived assets for impairment in accordance with ASC 360-10-35-15, “Impairment or Disposal of Long-Lived Assets,” whenever changes in events or circumstances indicate that carrying values may exceed their undiscounted cash flow forecasts. If undiscounted cash flow forecasts indicate that the carrying value of a definite-lived intangible asset or other long-lived asset may not be recoverable, a fair value assessment is performed. For intangible assets, fair value estimates are derived from discounted cash flow forecasts. For other long-lived assets (primarily property, plant and equipment), fair value estimates are derived from the sources most appropriate for the particular asset and have historically included such approaches as sales comparison approach and replacement cost approach. If fair value is less than carrying value, an impairment charge equal to the difference is recorded. We also review the useful life and residual value assumptions for definite-lived intangible assets and other long-lived assets on a periodic basis to determine if changes in circumstances warrant revisions to them.

Factors which may trigger an impairment of our goodwill, intangible assets and other long-lived assets include the following:

- significant underperformance relative to historical or projected future operating results;
- changes in our use of the acquired assets or the strategy for our overall business;

- long-term negative industry or economic trends;
- technological changes or developments;
- changes in competition;
- loss of key customers or personnel;
- adverse judicial or legislative outcomes or political developments;
- significant declines in our stock price for a sustained period of time; and
- the decline of our market capitalization below net book value as of the end of any reporting period.

The occurrence of any of these events or any other unforeseeable events or circumstances that materially affects future operating results or cash flows may cause an impairment that is material to our results of operations or financial position in the reporting period in which it occurs or is identified.

The most recent annual goodwill and indefinite-lived intangible asset impairment test was performed as of the beginning of the second quarter of 2016, noting no impairment. The implied fair values of all reporting units exceeded their carrying values by at least 20%. As of December 31, 2016, there were no indicators of impairment of our long-lived assets.

We maintain a significant balance in our goodwill, intangible assets and other long-lived assets. The following table shows the breakdown of goodwill, intangible assets and property, plant and equipment by reportable segment as of December 31, 2016 (in thousands):

	Goodwill	Intangible Assets, net	Property, Plant & Equipment, net
Photonics	$33,817	$ 22,092	$ 12,865
Vision	57,394	35,209	11,822
Precision Motion	16,917	4,442	3,839
Unallocated Corporate and Shared Services	—	—	6,895
Total	$108,128	$ 61,743	$ 35,421

Contingent Consideration. The purchase price we pay for acquired companies may include a contingent consideration obligation. Contingent consideration is typically measured at fair value at the acquisition date using the Monte Carlo valuation method, and is payable to the former shareholders of the acquired company based on the achievement of certain performance targets. Subsequent to the acquisition date, we update the fair value periodically with updated assumptions for the probability of achieving the targets based on actual performance to date. Any increases or decreases in the estimated fair value of contingent consideration liabilities subsequent to the acquisition date are recorded in the consolidated statement of operations as acquisition related costs until the liability is fully settled. As of December 31, 2016, the Company may have to pay up to $5.7 million contingent consideration related to all acquisitions with open contingency periods. As of December 31, 2016, the Company has recorded an estimated fair value of $5.2 million of contingent consideration obligations relating to its acquisitions of Skyetek, Lincoln Laser and Applimotion.

Pension Plans. Our subsidiary located in the U.K. maintains a defined benefit pension plan (the “U.K. Plan”). The U.K. Plan was closed to new membership in 1997 and stopped accruing for additional pension benefits for existing members in 2003, limiting our obligation to benefits earned through that date. Benefits under this plan were based on the employees’ years of service and compensation as of the date the plan was frozen, adjusted for inflation. At December 31, 2016, the fair market value of the plan assets was $31.3 million, which was $6.0 million, or 16.0%, less than the projected benefit obligation of $37.3 million.

The cost and obligations of our U.K. Plan are calculated using many assumptions. Major assumptions used in the accounting for this pension plan include the discount rate, rate of inflation, mortality rate and expected return on plan assets. Assumptions are determined each year based on data and appropriate market indicators in consultation with a third-party actuary. Should any of these assumptions change, they would have an effect on net periodic pension cost and the unfunded benefit obligation at year end. The most sensitive assumption affecting the determination of our U.K. Plan pension obligation is the discount rate. A 50 basis point decrease in the discount rate as of December 31, 2016 would change the pension obligation by $3.5 million.

Restructuring Charges. In accounting for our restructuring activities, we follow the provisions of ASC 420, “Exit or Disposal Cost Obligations”. In accounting for these obligations, we make assumptions related to the amount of employee severance and benefits related costs, the time period over which facilities will remain vacant, sublease terms, sublease rates, and discount rates. Additionally, we make assumptions on the estimated remaining useful lives of assets being restructured and the residual value of the assets. Estimates and assumptions are based on the best information available at the time the obligation has arisen. These estimates are reviewed and revised as facts and circumstances dictate. Changes in these estimates could have a material effect on the amount previously expensed against our earnings and currently accrued on our consolidated balance sheet.

Accounting for Income Taxes. As part of the process of preparing our consolidated financial statements, we are required to calculate our income tax provision (benefit) in each of the jurisdictions in which we operate. This process involves estimating our current income tax provision (benefit) together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are reported on our consolidated balance sheet.

Judgment is required in determining our worldwide income tax provision. In the ordinary course of a global business, there are many transactions and calculations where the ultimate outcome is uncertain. Although we believe our estimates are reasonable, no assurance can be given that the final outcome of these matters will not be different from that which is reflected in our historical income tax provisions and accruals. Such differences could have a material impact on our income tax provision and net income in the period in which such determination is made.

We record a valuation allowance on our deferred tax assets when it is more likely than not that they will not be realized. We have considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for a valuation allowance. In the event we determine that we are able to realize our deferred tax assets in the future in excess of their net recorded amount, an adjustment to the valuation allowance for the deferred tax assets would be recorded and would increase our net income in the period such determination is made. Likewise, should we determine that we will not be able to realize all or part of our net deferred tax assets in the future, an adjustment to the valuation allowance for the deferred tax assets will be recorded and will reduce our net income in the period such determination is made.

In conjunction with our ongoing review of our actual results and anticipated future earnings, we continuously reassess the possibility of increasing the valuation allowance currently in place on our deferred tax assets. We released $0.1 million valuation allowance against state net operating loss carryforwards and $0.4 million valuation allowance against the U.S. capital loss carryforwards during the year ended December 31, 2016. The decrease of our valuation allowance was determined in accordance with the provisions of ASC 740, “Income Taxes,” which requires an assessment of both positive and negative evidence when determining whether it is more likely than not that deferred tax assets are recoverable. Such assessment is required on a jurisdiction by jurisdiction basis. Based on historical operating income and continuing projected income, future reversals of temporary differences and tax planning strategies, we have concluded that sufficient negative evidence indicates that it is not more likely than not that deferred tax assets will be realized.

The amount of income taxes we pay is subject to audits by federal, state and foreign tax authorities, which may result in proposed assessments. We believe that we have adequately provided for any reasonably foreseeable outcome related to these matters. However, our future results may include favorable or unfavorable adjustments to our tax liabilities in the period that the assessments are made or resolved, or when the statute of limitations for certain periods expires. As of December 31, 2016, the total amount of gross unrecognized tax benefits was $5.0 million, of which $4.0 million would favorably affect our effective tax rate, if recognized. Over the next twelve months, the Company may need to record up to $1.7 million of previously unrecognized tax benefits in the event of statute of limitations closures.

Income and foreign withholding taxes have not been recognized on the excess of the amount for financial reporting purposes over the tax basis of investments in foreign subsidiaries that are essentially permanent in nature. This amount becomes taxable upon a repatriation of assets from a subsidiary or a sale or liquidation of a subsidiary. The amount of undistributed earnings of foreign subsidiaries totaled $15.2 million as of December 31, 2016. The estimated unrecognized deferred income tax liabilities on this temporary difference is approximately $0.2 million.

Loss Contingencies. We are subject to legal proceedings, lawsuits and other claims relating to labor, service and other matters arising in the ordinary course of business. Quarterly, we review the status of each significant matter and assess our potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and the amount can be reasonably estimated, we accrue a liability for the estimated loss. Significant judgment is required in both the determination of probability and the determination as to whether an exposure is reasonably estimable. Because of uncertainties related to these matters, accruals are based only on the best information available at the time. As additional information becomes available, we reassess the potential liability related to our pending claims and litigation and may revise our estimates. Such revisions in the estimates of the potential liabilities could have a material impact on our results of operations and financial position. We expense legal fees as incurred.

Recent Accounting Pronouncements

See Note 2 to Consolidated Financial Statements for recent accounting pronouncements that could have an effect on us.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risk from changes in foreign currency exchange rates and interest rates, which could affect our operating results, financial position and cash flows. We manage our exposure to these market risks through our regular operating and financing activities. We have generally not entered into derivative financial instruments to manage foreign currency exposure to date. However, we may utilize derivative financial instruments or other methods to hedge our exposures to foreign exchange rate fluctuations in the future.

Foreign Currency Exchange Rate Risk and Sensitivity

We are exposed to changes in foreign currency exchange rates which could affect operating results as well as our financial position and cash flows. The foreign currencies to which we have the most significant exchange rate exposure are the Euro, British Pound and Japanese Yen. The Company manages its foreign currency exposures on a consolidated basis, which allows the Company to analyze exposures globally and take into account offsetting exposures in certain balances. The primary foreign currency denominated transactions include revenue and expenses and the resulting accounts receivable and accounts payable balances reflected on our balance sheet and with intercompany trading partners that are eliminated in consolidation. Changes in the fair value of the U.S. dollar compared to foreign currencies will have either a positive or negative effect on our financial position and results of operations from remeasuring non-functional currency monetary assets and liabilities into functional currencies. The effect of translating foreign subsidiaries' balance sheets into U.S. dollars is included in other comprehensive income within stockholders' equity.

A hypothetical depreciation of 10% in foreign currency exchange rates from the quoted foreign currency exchange rates as of December 31, 2016 would impact shareholder equity, primarily cumulative translation adjustments, by $7.9 million or 3%. We did not hold foreign currency derivative contracts as of December 31, 2016.

Interest Rates

Our exposure to market risk associated with changes in interest rates relates primarily to our debt obligations. We have $81.3 million of outstanding variable rate debt as of December 31, 2016. A 100 basis point increase in interest rates at December 31, 2016 would increase our annual pre-tax interest expense by approximately $0.8 million. We do not actively trade derivative financial instruments, but may use them in the future, to manage interest rate positions associated with our debt instruments. We did not hold interest rate derivative contracts as of December 31, 2016.

Item 8. Financial Statements and Supplementary Data

NOVANTA INC.

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Novanta Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows present fairly, in all material respects, the financial position of Novanta Inc. and its subsidiaries at December 31, 2016 and December 31, 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts

March 6, 2017

NOVANTA INC.

CONSOLIDATED BALANCE SHEETS

(In thousands of U.S. dollars or shares)

	December 31, 2016	December 31, 2015
ASSETS		
Current Assets		
Cash and cash equivalents	$ 68,108	$ 59,959
Accounts receivable, net of allowance of $565 and $500, respectively	63,769	57,188
Inventories	59,745	59,566
Prepaid income taxes and income taxes receivable	2,058	2,510
Prepaid expenses and other current assets	5,570	5,989
Total current assets	199,250	185,212
Property, plant and equipment, net	35,421	40,550
Deferred tax assets	8,593	7,885
Other assets	12,502	12,673
Intangible assets, net	61,743	66,269
Goodwill	108,128	103,456
Total assets	$ 425,637	$ 416,045
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Current portion of long-term debt	$ 7,366	$ 7,385
Accounts payable	32,213	24,401
Income taxes payable	3,969	3,985
Accrued expenses and other current liabilities	26,948	21,182
Total current liabilities	70,496	56,953
Long-term debt	70,554	88,426
Deferred tax liabilities	1,294	449
Income taxes payable	5,710	6,071
Other liabilities	18,713	19,445
Total liabilities	166,767	171,344
Commitments and Contingencies (Note 15)		
Stockholders' Equity:		
Common shares, no par value; Authorized shares: unlimited; Issued and outstanding: 34,458 and 34,345, respectively	423,856	423,856
Additional paid-in capital	30,276	29,225
Accumulated deficit	(167,547)	(189,550)
Accumulated other comprehensive loss	(27,715)	(18,830)
Total Novanta Inc. stockholders' equity	258,870	244,701
Noncontrolling interest	—	—
Total stockholders' equity	258,870	244,701
Total liabilities and stockholders' equity	$ 425,637	$ 416,045

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

NOVANTA INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands of U.S. dollars or shares, except per share amounts)

	Year Ended December 31,		
	2016	2015	2014
Revenue	$384,758	$373,598	$364,706
Cost of revenue	222,306	215,708	214,539
Gross profit	162,452	157,890	150,167
Operating expenses:			
Research and development and engineering	32,002	31,043	28,954
Selling, general and administrative	81,691	82,049	84,380
Amortization of purchased intangible assets	8,251	7,611	10,262
Restructuring, acquisition and divestiture related costs	7,945	8,254	1,935
Impairment of goodwill and intangible assets	—	—	41,442
Total operating expenses	129,889	128,957	166,973
Operating income (loss) from continuing operations	32,563	28,933	(16,806)
Interest income (expense), net	(4,559)	(5,180)	(5,096)
Foreign exchange transaction gains (losses), net	2,317	(23)	1,281
Other income (expense), net	2,201	2,663	2,706
Gain on disposal of business	—	19,629	—
Income (loss) from continuing operations before income taxes	32,522	46,022	(17,915)
Income tax provision (benefit)	10,519	10,394	(1,006)
Income (loss) from continuing operations	22,003	35,628	(16,909)
Loss from discontinued operations, net of tax	—	(13)	(5,607)
Loss on disposal of discontinued operations, net of tax	—	—	(1,726)
Consolidated net income (loss)	22,003	35,615	(24,242)
Less: Net income attributable to noncontrolling interest	—	—	(10)
Net income (loss) attributable to Novanta Inc.	$22,003	$35,615	$(24,252)
Earnings (loss) per common share from continuing operations:			
Basic	$0.63	$1.03	$(0.49)
Diluted	$0.63	$1.02	$(0.49)
Loss per common share from discontinued operations:			
Basic	$—	$(0.00)	$(0.21)
Diluted	$—	$(0.00)	$(0.21)
Earnings (loss) per common share attributable to Novanta Inc.:			
Basic	$0.63	$1.03	$(0.70)
Diluted	$0.63	$1.02	$(0.70)
Weighted average common shares outstanding—basic	34,694	34,579	34,352
Weighted average common shares outstanding—diluted	34,914	34,827	34,352
Amounts attributable to Novanta Inc.:			
Income (loss) from continuing operations	$22,003	$35,628	$(16,909)
Loss from discontinued operations	—	(13)	(7,343)
Net income (loss)	$22,003	$35,615	$(24,252)

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

NOVANTA INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(In thousands of U.S. dollars)

	Year Ended December 31,		
	2016	2015	2014
Consolidated net income (loss)	$22,003	$35,615	$(24,242)
Other comprehensive income (loss):			
Foreign currency translation adjustments, net of tax (1)	(7,524)	(4,083)	(6,968)
Pension liability adjustments, net of tax (2)	(1,361)	1,709	(3,146)
Total other comprehensive income (loss)	(8,885)	(2,374)	(10,114)
Total consolidated comprehensive income (loss)	13,118	33,241	(34,356)
Less: Comprehensive income attributable to noncontrolling interest	—	—	(10)
Comprehensive income (loss) attributable to Novanta Inc.	$13,118	$33,241	$(34,366)

(1) The tax effect on this component of comprehensive income was $36, $193 and $622 in 2016, 2015 and 2014, respectively.

(2) The tax effect on this component of comprehensive income was ($462), $307 and ($906) in 2016, 2015 and 2014, respectively.

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

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NOVANTA INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In thousands of U.S. dollars or shares)

	Novanta Inc. Stockholders						
	Capital Stock		Additional Paid-In	Accumulated Other Comprehensive Income	Retained Earnings (Accumulated	Noncontrolling	
	# of Shares	Amount	Capital	(Loss)	Deficit)	Interest	Total
Balance at December 31, 2013	33,991	$423,856	$25,383	$(6,342)	$(200,913)	$419	$242,403
Net loss	—	—	—	—	(24,252)	10	(24,242)
Common stock issued under stock plans	362	—	—	—	—	—	—
Share-based compensation	—	—	4,659	—	—	—	4,659
Net settlement of vested stock awards	(134)	—	(1,666)	—	—	—	(1,666)
Tax benefit (shortfalls) of vested stock awards	—	—	214	—	—	—	214
Other comprehensive loss, net of tax	—	—	—	(10,114)	—	—	(10,114)
Balance at December 31, 2014	34,219	423,856	28,590	(16,456)	(225,165)	429	211,254
Net income	—	—	—	—	35,615	—	35,615
Common stock issued under stock plans	398	—	—	—	—	—	—
Repurchase of common stock	(122)	—	(1,627)	—	—	—	(1,627)
Share-based compensation	—	—	4,065	—	—	—	4,065
Net settlement of vested stock awards	(150)	—	(1,941)	—	—	—	(1,941)
Tax benefit of vested stock awards	—	—	138	—	—	—	138
Other comprehensive loss, net of tax	—	—	—	(2,374)	—	—	(2,374)
Dissolution of minority interest	—	—	—	—	—	(429)	(429)
Balance at December 31, 2015	34,345	423,856	29,225	(18,830)	(189,550)	—	244,701
Net income	—	—	—	—	22,003	—	22,003
Common stock issued under stock plans	351	—	181	—	—	—	181
Repurchase of common stock	(109)	—	(1,634)	—	—	—	(1,634)
Share-based compensation	—	—	4,293	—	—	—	4,293
Net settlement of vested stock awards	(129)	—	(1,789)	—	—	—	(1,789)
Other comprehensive loss, net of tax	—	—	—	(8,885)	—	—	(8,885)
Balance at December 31, 2016	34,458	$423,856	$30,276	$(27,715)	$(167,547)	$—	$258,870

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

NOVANTA INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands of U.S. dollars)

	Year Ended December 31,		
	2016	2015	2014
Cash flows from operating activities:			
Consolidated net income (loss)	$22,003	$35,615	$(24,242)
Less: Loss from discontinued operations, net of tax	—	13	7,333
Income (loss) from continuing operations	22,003	35,628	(16,909)
Adjustments to reconcile income (loss) from continuing operations to net cash provided by operating activities of continuing operations:			
Depreciation and amortization	20,357	19,114	23,797
Provision for inventory excess and obsolescence	3,091	1,934	832
Impairment of goodwill and intangible assets	—	—	41,442
Share-based compensation	4,293	4,387	4,329
Deferred income taxes	(1,766)	(1,692)	(6,736)
Earnings from equity-method investment	(2,191)	(2,657)	(2,700)
Dividend from equity-method investment	2,341	—	—
Gain on disposal of business	—	(19,629)	—
Gain on sale of fixed assets	(1,707)	1	19
Contingent consideration adjustments	1,267	430	—
Non-cash interest expense	882	935	1,379
Other non-cash items	986	1,407	1,567
Changes in assets and liabilities which provided (used) cash, excluding effects from businesses purchased or classified as held for sale:			
Accounts receivable	(6,394)	(7,526)	3,526
Inventories	(2,917)	(3,338)	(991)
Prepaid expenses and other current assets	(1,729)	902	(527)
Prepaid income taxes and income taxes receivable	462	3,431	(206)
Accounts payable, income taxes payable, accrued expenses and other current liabilities	10,590	2,167	(4,698)
Other non-current assets and liabilities	(1,780)	(2,065)	(134)
Cash provided by operating activities of continuing operations	47,788	33,429	43,990
Cash used in operating activities of discontinued operations	—	(13)	(1,701)
Cash provided by operating activities	47,788	33,416	42,289
Cash flows from investing activities:			
Purchases of property, plant and equipment	(8,462)	(5,552)	(5,415)
Acquisition of businesses, net of cash acquired and escrow recovery	(8,958)	(25,987)	(88,238)
Acquisition of intangible assets	(3,980)	—	—
Proceeds from the sale of business, net of transaction costs	—	29,570	—
Proceeds from the sale of property, plant and equipment	7,037	127	112
Cash used in investing activities of continuing operations	(14,363)	(1,842)	(93,541)
Cash provided by investing activities of discontinued operations	1,498	209	3,768

Cash used in investing activities	(12,865)	(1,633)	(89,773)
Cash flows from financing activities:			
Borrowings under revolving credit facility	—	13,000	77,000
Repayments of long-term debt and revolving credit facility	(16,250)	(30,500)	(33,500)
Payments for debt issuance costs	(2,523)	—	(712)
Payments of withholding taxes from stock-based awards	(1,789)	(1,941)	(1,666)
Repurchase of common stock	(1,634)	(1,627)	—
Proceeds from the exercise of stock option	181	—	—
Other financing activities	(1,174)	(467)	(841)
Cash provided by (used in) financing activities of continuing operations	(23,189)	(21,535)	40,281
Cash provided by (used in) financing activities of discontinued operations	—	—	—
Cash provided by (used in) financing activities	(23,189)	(21,535)	40,281
Effect of exchange rates on cash and cash equivalents	(3,585)	(1,435)	(2,631)
Increase (decrease) in cash and cash equivalents	8,149	8,813	(9,834)
Cash and cash equivalents, beginning of year	59,959	51,146	60,980
Cash and cash equivalents, end of year	$68,108	$59,959	$51,146
Supplemental disclosure of cash flow information:			
Cash paid for interest	$2,917	$3,784	$3,793
Cash paid for income taxes	$14,058	$10,688	$6,087
Income tax refunds received	$932	$3,939	$931
Supplemental disclosure of non-cash investing activity:			
Accrual for capital expenditures	$1,253	$1,180	$26
Supplemental disclosure of non-cash financing activity:			
Assets acquired under capital lease obligation	$—	$—	$10,438

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

NOVANTA INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

AS OF DECEMBER 31, 2016

1. Organization and Presentation

Novanta Inc. and its subsidiaries (collectively referred to as “Novanta”, the “Company”, “we”, “us”, “our”) design, develop, manufacture and sell precision photonic and motion control components and subsystems to Original Equipment Manufacturers (“OEMs”) in the medical and advanced industrial markets. We combine deep expertise at the intersection of photonics and motion to solve complex technical challenges. This enables us to engineer core components and sub-systems that deliver extreme precision and performance, tailored to our customers’ demanding applications. We deliver highly engineered photonics, vision and precision motion solutions to customers around the world.

Basis of Presentation

These consolidated financial statements have been prepared by the Company in U.S. dollars and in accordance with U.S. generally accepted accounting principles, applied on a consistent basis.

The consolidated financial statements include the accounts of Novanta Inc. and its wholly owned subsidiaries. Intercompany accounts and transactions have been eliminated.

As of December 31, 2016, the Company had a 41% ownership interest in Laser Quantum Limited (“Laser Quantum”), a privately held company located in the United Kingdom. As of December 31, 2016, the financial results of Laser Quantum were accounted for under the equity method of accounting. On January 10, 2017, the Company acquired approximately 35% of the shares of Laser Quantum. As a result of this transaction, the Company’s ownership position in Laser Quantum increased from approximately 41% to approximately 76%. Laser Quantum will be consolidated in the Company’s consolidated financial statements starting in January 2017.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the dates of the financial statements, and the reported amounts of revenue and expenses during the reporting periods. The Company evaluates its estimates based on historical experience, current conditions and various other assumptions that it believes are reasonable under the circumstances. Estimates and assumptions are reviewed on an on-going basis and the effects of revisions are reflected in the period in which they are deemed to be necessary. Actual results could differ significantly from those estimates.

Foreign Currency Translation

The financial statements of the Company and its subsidiaries outside the United States have been translated into U.S. dollars. Assets and liabilities of foreign operations are translated from foreign currencies into U.S. dollars at the exchange rates in effect on the balance sheet date. Revenue and expenses are translated at the average exchange rate in effect for the period. Accordingly, gains and losses resulting from translating foreign currency financial statements are reported as cumulative translation adjustment, a separate component of other comprehensive income (loss) in stockholders' equity. Foreign currency transaction gains and losses, primarily from transactions denominated in currencies other than the functional currency, are included in the accompanying consolidated statements of operations.

Cash Equivalents

Cash equivalents, primarily money market accounts, are highly liquid investments with original maturities of three months or less. These investments are carried at cost, which approximates fair value.

NOVANTA INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

AS OF DECEMBER 31, 2016

Long-Term Investments

At December 31, 2016 and 2015, the Company had a 41% equity investment in Laser Quantum, a privately held company located in the United Kingdom. During each of the periods presented, the Company used the equity method to account for the results of this entity as it did not have a controlling interest in the entity. The Company recognized investment income of $2.2 million, $2.7 million and $2.7 million during 2016, 2015 and 2014, respectively, which is included in other income (expense) in the accompanying consolidated statements of operations. The Company's net investment in Laser Quantum was $8.5 million and $10.1 million at December 31, 2016 and 2015, respectively, and is included in other assets in the accompanying consolidated balance sheets. In March 2016, the Company received a cash dividend of $2.3 million from Laser Quantum.

The summarized financial information for Laser Quantum is as follows (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Revenue	$23,526	$25,599	$23,013
Income from operations	$5,537	$7,362	$7,434
Net income	$5,389	$6,925	$6,627

	December 31,	
	2016	2015
Total assets (1)	$25,043	$30,159
Total liabilities	$1,556	$2,552

(1) Total assets at December 31, 2016 and 2015 included cash and cash equivalents of $15.5 million and $21.0 million, respectively.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded at the invoiced amount. The Company maintains an allowance for doubtful accounts based on the Company's best estimate of probable credit losses resulting from the inability of the Company's customers to make required payments. The Company determines the allowance based on a variety of factors, including the age of amounts outstanding relative to their contractual due date, specific customer factors, and other known risks and economic trends. Charges related to the allowance for doubtful accounts are included as selling, general and administrative expenses and are recorded in the period that the outstanding receivables are determined to be uncollectible. Account balances are charged off against the allowance when the Company believes it is probable that the receivable will not be recovered.

For the years ended December 31, 2016, 2015 and 2014, changes in the allowance for doubtful accounts were as follows (in thousands):

	2016	2015	2014
Balance at beginning of year	$500	$282	$575
Provision charged to selling, general and administrative expenses	135	285	30
Allowance resulting from acquisitions	15	5	52
Write-offs, net of recoveries of amounts previously reserved	(82)	(29)	(352)
Divestiture of JK Lasers	—	(30)	—
Exchange rate changes	(3)	(13)	(23)
Balance at end of year	$565	$500	$282

Inventories

Inventories, which include materials and conversion costs, are stated at the lower of cost or market, using the first-in, first-out method. Market is defined as replacement cost for raw materials and net realizable value for other inventories. Demo inventory is recorded at the lower of cost or its net realizable value. The Company periodically reviews quantities of inventories on hand and compares these amounts to the expected use of each product. The Company records a charge to cost of revenue for the amount required to reduce the carrying value of inventory to net realizable value. Costs associated with the procurement of inventories such as inbound freight charges, purchasing and receiving costs are capitalized in inventory on the consolidated balance sheets.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost, adjusted for any impairment, less accumulated depreciation. The Company uses the straight-line method to calculate the depreciation of its fixed assets over their estimated useful lives. Estimated useful lives range from 3 to 30 years for buildings and building improvements and 3 to 10 years for machinery and equipment. Leasehold improvements are depreciated over the lesser of their useful lives or the lease terms, including any renewal period options that are reasonably assured of being exercised. Repairs and maintenance costs are expensed as incurred. Certain costs to develop software for internal use are capitalized when the criteria under Accounting Standards Codification ("ASC") 350-40, "Internal-Use Software," are met. Lease arrangements meeting the criteria of ASC 840-30, "Leases – Capital Leases," are capitalized based on the present value of future minimum lease payments and depreciated over the term of the lease.

In 2016, the Company sold its facilities in Chatsworth, California and Orlando, Florida and recognized a gain of $1.7 million as part of restructuring, acquisition and divestiture related costs.

Goodwill, Intangibles and Long-Lived Assets

Goodwill represents the excess of the purchase price over the tangible assets, identifiable intangible assets and assumed liabilities acquired in a business combination. Allocations of the purchase price are based upon a valuation of assets and liabilities acquired. Assets acquired and liabilities assumed are recorded at their estimated fair values as of the acquisition date. The fair values of intangible assets are based on valuations using an income approach, with estimates and assumptions provided by management of the acquired companies and the Company. Goodwill and indefinite-lived intangibles are not amortized but are assessed for impairment at least annually to ensure their current fair values exceed their carrying values.

The Company's most significant intangible assets are patents and acquired technologies, customer relationships, trademarks and trade names. All definite-lived intangible assets are amortized over the periods in which their economic benefits are expected to be realized. The Company reviews the useful life assumptions, including the classification of certain intangible assets as "indefinite-lived", on a periodic basis to determine if changes in circumstances warrant revisions to them. Costs associated with patent and intellectual property applications, renewals or extensions are expensed as incurred.

The Company evaluates its goodwill, intangible assets and other long-lived assets for impairment at the reporting unit level which is generally at least one level below our reportable segments.

Impairment Charges

Impairment analyses of goodwill and indefinite-lived intangible assets are conducted in accordance with ASC 350, “Intangibles —Goodwill and Other”. This guidance specifies that goodwill and other intangible assets must be periodically tested for impairment. The Company tests its goodwill balances annually as of the beginning of the second quarter or more frequently if indicators are present or changes in circumstances suggest that an impairment may exist. The Company utilizes a quantitative analysis to test goodwill for impairment. This two-step approach requires a comparison of the carrying value of each of the Company’s reporting units to the fair value of these reporting units. The fair value of a reporting unit is primarily based on a discounted cash flow (“DCF”) method with a weighted average cost of capital. If the carrying value of a reporting unit exceeds its fair value, the Company calculates the implied fair value of the reporting unit’s goodwill and compares it to the carrying value. If the carrying value of the goodwill exceeds its implied fair value, an impairment charge is recorded for the difference.

The Company assesses indefinite-lived intangible assets for impairment on an annual basis as of the beginning of the second quarter, and more frequently if indicators are present or changes in circumstances suggest that an impairment may exist. The Company will also reassess the continuing classification of these indefinite-lived intangible assets as indefinite-lived when circumstances change such that the useful life may no longer be indefinite. The fair values of the Company’s indefinite-lived intangible assets are determined using the relief from royalty method, based on forecasted revenues. If the fair value of an indefinite-lived intangible asset is less than its carrying value, an impairment charge is recorded for the difference between the carrying value and the fair value of the impaired asset.

NOVANTA INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

AS OF DECEMBER 31, 2016

The carrying amounts of definite-lived long-lived assets are reviewed for impairment whenever changes in events or circumstances indicate that their carrying values may not be recoverable. The recoverability of the carrying value is generally determined by comparison of the asset group’s carrying value to its undiscounted future cash flows. When this test indicates the potential for impairment, a fair value assessment is performed. Once an impairment is determined and measured, an impairment charge is recorded for the difference between the carrying value and the fair value of the impaired asset.

Revenue Recognition

The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, price is fixed or determinable, and collection of the resulting receivable is reasonably assured. Revenue recognition requires judgment and estimates, which may affect the amount and timing of revenue recognized in any given period.

The Company’s revenue transactions are comprised of both single-element and multiple-element transactions. Multiple-element transactions may include two or more products, and occasionally non-standard/extended warranties or preventative maintenance plans. For multiple-element transactions, revenue is generally recognized upon shipment, using the relative selling price method in accordance with ASC 605-25, “Revenue – Multiple-Element Arrangements”. Single-element transactions are typically recognized upon shipment at their contractually stated prices.

The Company generally provides warranties for its products. The standard warranty period is typically 12 months to 24 months for the Photonics and Precision Motion segments and 12 months to 36 months for the Vision segment. The standard warranty period for product sales is accounted for under the provisions of ASC 450 “Contingencies,” as the Company has the ability to ascertain the likelihood of the liability, and can estimate the amount of the liability. A provision for the estimated cost related to warranty is recorded to cost of revenue at the time revenue is recognized. The Company’s estimate of costs to service the warranty obligations is based on historical experience and expectations of future conditions. To the extent that the Company experiences warranty claims or costs associated with servicing those claims that differ from the original estimates, revisions to the estimated warranty liability are recorded at that time.

The Company occasionally sells optional non-standard/extended warranty services and preventative maintenance contracts to customers. The Company accounts for these agreements in accordance with provisions of ASC 605-20-25-3, “Separately Priced Extended Warranty and Product Maintenance Contracts,” under which it recognizes the separately priced extended warranty and preventative maintenance fees ratably over the associated period.

At the request of its customers, may perform professional services, generally for the maintenance and repair of products previously sold to those customers. These services are usually in the form of time and materials based contracts which are short in duration. Revenue for time and materials services is recorded at the completion of services requested under a customer’s purchase order.

Research and Development and Engineering Costs

Research and development and engineering (“R&D”) expenses are primarily comprised of employee related expenses and cost of materials for R&D projects. These costs are expensed as incurred.

Share-Based Compensation

The Company records the expense associated with share-based compensation awards to employees and directors based on the fair value of awards as of the grant date. For stock-based compensation awards that vest over time based on employment, the associated expenses are recognized in the consolidated statements of operations ratably over the vesting period of the award, net of estimated forfeitures. For performance-based restricted stock units, stock-based compensation expenses are recognized ratably over the vesting period when it is probable that the performance targets are expected to be achieved based on management’s projections. Management’s projections are revised, if necessary, in subsequent periods when underlying factors change the evaluation of the probability of achieving the performance targets. Accordingly, share-based compensation expense associated with performance-based restricted stock units may differ significantly from period to period based on changes to the probability of achieving performance targets.

NOVANTA INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

AS OF DECEMBER 31, 2016

Shipping & Handling Costs

Shipping and handling costs are recorded in cost of revenue.

Advertising Costs

Advertising costs are expensed to selling, general and administrative expenses as incurred and were not material for 2016, 2015 and 2014.

Restructuring, Acquisition and Divestiture Related Costs

The Company accounted for its restructuring activities in accordance with the provisions of ASC 420, "Exit or Disposal Cost Obligations." The Company makes assumptions related to the amounts of employee severance benefits and related costs, the time period over which facilities will remain vacant, useful lives and residual value of long-lived assets, sublease terms, sublease rates and discount rates. Estimates and assumptions are based on the best information available at the time the obligation is recognized. These estimates are reviewed and revised as facts and circumstances dictate.

Acquisition related costs incurred to effect a business combination, including finders' fees, legal, valuation and other professional or consulting fees, are expensed as incurred. Acquisition related costs also include expenses recognized under earn-out agreements in connection with acquisitions. Expenses associated with divestiture activities, including legal and professional fees directly related to the completion of a business divestiture, are expensed as incurred.

Accounting for Income Taxes

The asset and liability method is used to account for income taxes. Under the asset and liability method, deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to temporary differences between the financial statement carrying amounts of assets and liabilities and their respective tax bases. This method also requires the recognition of future tax benefits, such as net operating loss carryforwards, to the extent that it is more likely than not that such benefits will be realized. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which the temporary differences are expected to be recovered or settled. A valuation allowance is established to reduce the deferred tax assets if it is more likely than not that some or all of the related tax benefits will not be realized in the future and is reassessed periodically to determine whether it is more likely than not that the tax benefits will be realized in the future and that such valuation should be released.

The majority of the Company's business activities are conducted through its subsidiaries outside of Canada. Earnings from these subsidiaries are generally indefinitely reinvested in the local businesses. Further, local laws and regulations may also restrict certain subsidiaries from paying dividends to their parents. As such, the Company generally does not accrue income taxes for the repatriation of such earnings in accordance with ASC 740, “Income Taxes.” To the extent that there are excess accumulated earnings that the Company intends to repatriate from any such subsidiaries, the Company recognizes deferred tax liabilities on such foreign earnings.

The Company assesses its income tax positions and records tax benefits for all years subject to examination based on the evaluation of the facts, circumstances, and information available at each reporting date. For those tax positions with a greater than 50 percent likelihood of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information, the Company records a tax benefit. For those income tax positions that are not likely to be sustained, no tax benefit is recognized in the consolidated financial statements. The Company recognizes interest and penalties related to uncertain tax positions as part of the provision for income taxes.

Recent Accounting Pronouncements

Goodwill Impairment

In January 2017, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2017-04, “Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment,” which simplifies the accounting for goodwill impairment. The amendment in ASU 2017-04 removes Step-two of the goodwill impairment test, which requires a hypothetical purchase price allocation. ASU 2017-04 will become effective prospectively for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted. The Company is currently evaluating the impact of the new standard on our consolidated financial statements.

NOVANTA INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

AS OF DECEMBER 31, 2016

Business Combinations

In January 2017, the FASB issued ASU 2017-01, "Business Combinations (Topic 805): Clarifying the Definition of a Business," which provides further clarification of the definition of a business with the objective to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets versus businesses. The amendments in ASU 2017-01 provide a screen to determine when a set of assets and activities is not a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. This screen is expected to reduce the number of transactions that need to be further evaluated. If the screen is not met, the amendments in ASU 2017-01 (i) require that to be considered a business, a set of assets and liabilities acquired must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output; and (ii) remove the evaluation of whether a market participant could replace missing elements. ASU 2017-01 will become effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. Early adoption is permitted for transactions for which the acquisition date occurs before the issuance date of ASU 2017-01, only when the transaction has not been reported in financial statements that have been issued or made available for issuance. ASU 2017-01 should be applied using a prospective transition method for each period presented. The Company early adopted this pronouncement for a transaction that occurred in December 2016.

Statement of Cash Flows Classification of Certain Cash Receipts and Cash Payments

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments," which provides further clarification on eight cash flow classification issues. The standard further clarifies the classification of the following: (i) debt prepayment or debt extinguishment costs; (ii) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; (iii) contingent consideration payments made after a business combination; (iv) proceeds from the settlement of insurance claims; (v) proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies; (vi) distributions received from equity method investees; (vii) beneficial interests in securitization transactions; and (viii) separately identifiable cash flows and application of the predominance principle. ASU 2016-15 will become effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017, with early adoption permitted. ASU 2016-15 should be applied using a retrospective transition method for each period presented. The Company is currently evaluating the impact of the new standard on our consolidated financial statements.

Share-Based Compensation

In March 2016, the FASB issued ASU 2016-09, "Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting," which amends the accounting for employee share-based payment transactions to require recognition of the income tax effects resulting from the settlement of stock-based awards as income tax provision or benefit in the income statement in the reporting period in which they occur. In addition, ASU 2016-09 requires that all tax-related cash flows resulting from share-based payments, including the excess tax benefits related to the settlement of stock-based awards, be classified as cash flows from operating activities in the statement of cash flows. ASU 2016-09 also requires that cash paid through directly withholding shares for tax-withholding purposes be classified as a financing activity in the statement of cash flows. In addition, ASU 2016-09 allows companies to make an accounting policy election to either estimate the number of awards that are expected to vest, consistent with existing U.S. GAAP, or account for forfeitures when they occur. The new standard is effective for annual reporting periods beginning after December 15, 2016, with early adoption permitted. The Company adopted ASU 2016-09 during the second quarter of 2016, which required no retrospective adjustments to the consolidated financial statements. The adoption of ASU 2016-09 had an impact of less than $0.1 million on income from continuing operation on the Company's consolidated statements of operations for the year ended December 31, 2016. The adoption of ASU 2016-09 had no impact on the prior year consolidated financial statements.

Leases

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)," which provides comprehensive lease accounting guidance. The standard requires entities to recognize lease assets and liabilities on the balance sheet and to disclose key information about leasing arrangements. ASU 2016-02 will become effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, with early adoption permitted. The Company is currently evaluating the impact of the new standard on our consolidated financial statements.

Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern

In August 2014, the FASB issued ASU 2014-15, "Presentation of Financial Statements - Going Concern (Subtopic 205-40)," which requires management to assess a company's ability to continue as a going concern and to provide related footnote disclosures in certain circumstances. ASU 2014-15 will be effective for annual reporting periods ending after December 15, 2016, with early adoption permitted. The Company adopted this pronouncement in the fourth quarter of 2016. The adoption of ASU 2014-15 had no impact on our consolidated financial statements.

Revenue from Contracts with Customers

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers," which provides guidance for revenue recognition. ASU 2014-09 supersedes the revenue recognition requirements in ASC 605, "Revenue Recognition," and requires entities to recognize revenue in a way that depicts the transfer of goods or services to customers at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 will be effective for annual and interim reporting periods beginning after December 15, 2016. Early adoption is not permitted. Upon adoption, an entity may apply the new guidance either retrospectively to each prior reporting period presented or retrospectively only to customer contracts not yet completed as of the date of adoption with the cumulative effect of initially applying the standard recognized in beginning retained earnings at the date of the initial application. In August 2015, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers – Deferral of the Effective Date," which defers the effective date of ASU 2014-09 by one year, with the option of early adoption as of the original effective date. The amendment in ASU 2015-14 will result in ASU 2014-09 being effective for annual and interim reporting periods beginning after December 15, 2017. The Company is currently evaluating the impact of the new standard on our consolidated financial statements and plans to adopt the standard beginning in the first quarter of 2018.

3. Business Combinations

2016 Acquisitions

Reach

On May 24, 2016, the Company acquired 100% of the outstanding stock of Reach Technology Inc. ("Reach"), a Fremont, California-based provider of embedded touch screen technology solutions for OEMs in the medical and advanced industrial markets, for a total purchase price of $9.4 million, net of working capital adjustments. The Company expects that the addition of Reach will enable the Company to enhance its value proposition with medical OEM customers by adding Reach's high-performance touch screen solutions to its product offerings.

The final purchase price allocation is as follows (in thousands):

	Amount
Cash	$238
Accounts receivable	991
Inventory	1,611
Prepaid expenses and other current assets	12
Intangible assets	3,953
Goodwill	4,715
Total assets acquired	11,520
Accounts payable	280
Other liabilities	148
Deferred tax liabilities	1,474
Total liabilities assumed	1,902
Total assets acquired, net of liabilities assumed	9,618
Less: cash acquired	238
Total purchase price, net of cash acquired	$9,380

NOVANTA INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

AS OF DECEMBER 31, 2016

The fair value of intangible assets is comprised of the following (dollar amounts in thousands):

	Estimated Fair Value	Weighted Average Amortization Period
Customer relationships	$ 2,770	15 years
Developed technology	500	7 years
Trademarks and trade names	258	10 years
Backlog	425	1 year
Total	$ 3,953	

The purchase price allocation resulted in $4.7 million of goodwill and $4.0 million of identifiable intangible assets, none of which is expected to be deductible for tax purposes. Intangible assets are being amortized over their weighted average useful lives primarily based upon the pattern in which anticipated economic benefits from such assets are expected to be realized. The goodwill recorded represents the anticipated incremental value of future cash flow potential attributable to: (i) Reach's ability to grow their business with existing and new customers, including leveraging the Company's customer base, and (ii) cost improvements due to scale and more efficient operations.

The operating results of Reach were included in the Company's results of operations beginning on May 24, 2016. Reach contributed revenues of $5.6 million and a loss from continuing operations before income taxes of $0.6 million for the year ended December 31, 2016. Operating loss from continuing operations before income taxes for the year ended December 31, 2016 included transition costs of $1.2 million recognized under earn-out agreements. The pro forma financial information reflecting the operating results of Reach, as if it had been acquired as of January 1, 2015, would not differ materially from the operating results of the Company as reported for the year ended December 31, 2015. Reach is included in the Company's Vision reportable segment.

2015 Acquisitions

Skyetek

On December 18, 2015, the Company acquired all assets and certain liabilities of Skyetek Inc. ("Skyetek"), a Denver, Colorado-based provider of embedded and standalone radio frequency identification ("RFID") solutions for medical OEMs, for a total purchase price of $2.8 million, net of working capital adjustments. The purchase price includes $2.6 million in cash paid for the acquisition and $0.2 million in estimated fair value of future contingent consideration payable upon the achievement of certain sales order commitment targets from October 2015 through June 2017. The undiscounted range of possible contingent consideration is zero to $0.3 million. Skyetek specializes in high frequency ("HF") and ultra high frequency ("UHF") RFID technologies that maximize efficiency and visibility for OEMs serving the medical and advanced industrial markets. The acquisition creates an expanded range of highly competitive RFID solutions that significantly enhances our value proposition to OEM customers in various industries, but especially within the healthcare industry where there is an ever-growing need for improvements in workflow solutions, patient safety, anti-counterfeiting, and asset tracking throughout the hospital environment.

Lincoln Laser

On November 9, 2015, the Company acquired certain assets and liabilities of Lincoln Laser Company ("Lincoln Laser"), a Phoenix, Arizona-based provider of ultrafast precision polygon scanners and other optical scanning solutions for the medical, food processing, and advanced industrial markets, for a total purchase price of $12.1 million, net of working capital adjustments. This total purchase price includes $9.8 million in cash paid for the acquisition and $2.3 million in estimated fair value of future contingent consideration payable upon the achievement of certain revenue targets for fiscal year 2016. The undiscounted range of the contingent consideration under the purchase and sale agreement was zero to $6.0 million. The actual contingent consideration payment was $1.4 million, which was paid during the first quarter of 2017. Lincoln Laser specializes in ultrafast scanning solutions, leveraging their expertise in polygon scanner design and electro-optic subsystems. The acquisition creates an expanded range of highly competitive beam delivery technologies. Lincoln Laser contributed revenues of $1.9 million and a loss from continuing operations before income taxes of $0.3 million for the year ended December 31, 2015.

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Applimotion

On February 19, 2015, the Company acquired 100% of the outstanding stock of Applimotion Inc. (“Applimotion”), a Loomis, California based provider of advanced precision motor and motion control technology to OEM customers in the medical and advanced industrial markets, for a total purchase price of $14.0 million, net of working capital adjustments. This total purchase price includes $13.0 million in cash paid for the acquisition and $1.0 million in estimated fair value of future contingent considerations payable upon the achievement of certain revenue targets for the fiscal years 2015 to 2017. The undiscounted range of contingent considerations is zero to $4.0 million. Applimotion specializes in motor applications that require highly precise and dynamic motion control. The acquisition enhances our strategic position in precision motion control by enabling us to offer a broader range of motion control technologies and integrated solutions. Applimotion contributed revenues of $14.0 million and income from continuing operations before income taxes of $1.0 million for the year ended December 31, 2015.

The final purchase price for Skyetek, Lincoln Laser and Applimotion was allocated as follows (in thousands):

	Amount
Cash	$331
Accounts receivable	3,166
Inventory	3,544
Prepaid expenses and other current assets	148
Property and equipment	3,220
Intangible assets	11,370
Goodwill	12,668
Other assets	10
Total assets acquired	34,457
Accounts payable	1,681
Other liabilities	1,197
Deferred tax liabilities	2,308
Total liabilities assumed	5,186
Total assets acquired, net of liabilities assumed	29,271
Less: cash acquired	331
Total purchase price, net of cash acquired	28,940
Less: contingent consideration	3,459
Net cash used for acquisition of businesses	$25,481

The fair value of intangible assets for Skyetek, Lincoln Laser and Applimotion is comprised of the following (dollar amounts in thousands):

	Estimated Fair Value	Weighted Average Amortization Period
Customer relationships	$ 4,266	12 years
Developed technology	4,993	10 years
Trademarks and trade names	593	9 years
Non-compete covenant	684	4 years
Backlog	834	1 year
Total	$ 11,370	

The purchase price allocation resulted in $12.7 million of goodwill and $11.4 million of identifiable intangible assets, $10.3 million of which is expected to be deductible for tax purposes. Intangible assets are being amortized over their weighted average useful lives primarily based upon the pattern in which anticipated economic benefits from such assets are expected to be realized. The goodwill recorded represents the anticipated incremental value of future cash flow potential attributable to: (i) the ability to develop and market new products and technologies; (ii) the ability to develop relationships with new customers; and (iii) expected sales synergies from cross-selling current and future product offerings of Skyetek, Lincoln Laser, Applimotion and the Company to OEM customers.

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AS OF DECEMBER 31, 2016

The results of the SkyeTek, Lincoln Laser and Applimotion acquisitions were included in the Company's results of operations beginning on the respective acquisition dates. The pro forma financial information reflecting the operating results of Skyetek, Lincoln Laser and Applimotion as if they had been acquired on January 1, 2014 is not presented herein as it would not differ materially from the operating results of the Company as reported for 2014. Skyetek, Lincoln Laser and Applimotion are included in the Company's Vision, Photonics and Precision Motion reportable segments, respectively.

2014 Acquisitions

JADAK

On March 14, 2014, the Company acquired 100% of the outstanding equity interests of JADAK, LLC, JADAK Technologies, Inc., and Advanced Data Capture Corporation (collectively, "JADAK"), a North Syracuse, New York-based provider of optical data collection and machine vision technologies to OEM medical device manufacturers, for $93.7 million in cash, net of working capital adjustments. The addition of JADAK has enabled the Company to offer a broader range of highly engineered enabling technologies to leading medical equipment manufacturers. JADAK contributed revenues of $45.4 million and loss from continuing operations before income taxes of $2.7 million for the year ended December 31, 2014.

The final purchase price allocation is as follows (in thousands):

	Amount
Cash	$1,140
Accounts receivable	7,907
Inventory	6,865
Property and equipment	904
Intangible assets	40,250
Goodwill	44,584
Other assets	2,064
Total assets acquired	103,714
Accounts payable	3,057
Other liabilities	2,380
Deferred tax liabilities	3,481
Total liabilities assumed	8,918
Total assets acquired and liabilities assumed	94,796
Less: cash acquired	1,140
Total purchase price, net of cash acquired	$93,656

The fair value of JADAK intangible assets is comprised of the following (in thousands):

	Estimated Fair Value	Weighted Average Amortization Period
Customer relationships	$ 23,570	20 years
Developed technology	10,910	10 years
Trademarks and trade names	2,130	10 years
Backlog	1,810	1 year
Non-compete covenant	1,830	5 years
Total	$ 40,250	

The purchase price allocation resulted in $44.6 million of goodwill and $40.3 million of identifiable intangible assets, $61.8 million of which is expected to be deductible for tax purposes. Intangible assets are being amortized over their weighted average useful lives primarily based upon the pattern in which economic benefits related to such assets are expected to be realized. The amount of goodwill recorded represents the anticipated incremental value of future cash flow potential attributable to: (i) JADAK's ability to develop and market new products and technologies; (ii) JADAK's ability to develop relationships with new customers; and

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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(iii) expected sales synergies from cross-selling current and future product offerings of both JADAK and the Company to OEM customers.

Acquisition Costs

The Company recognized acquisition costs of $0.2 million, $0.9 million and $0.7 million in the years ended December 31, 2016, 2015 and 2014, respectively, related to the acquisitions of Reach, Skyetek, Lincoln Laser, Applimotion and JADAK. These amounts were included in restructuring, acquisition and divestiture related costs in the consolidated statements of operations.

4. Discontinued Operations and Divestitures

Divestitures

In April 2015, the Company completed the sale of certain assets and liabilities of the JK Lasers business, previously included in the Photonics reportable segment, for approximately $29.6 million in cash, net of final working capital adjustments and transactions costs. The Company recognized a pre-tax gain on sale of $19.6 million in the consolidated statement of operations. The JK Lasers business divestiture does not qualify for discontinued operations accounting treatment.

Discontinued Operations

In June 2015, the Company finalized an agreement to divest its 50% owned joint venture, the India JV, and recorded a pre-tax loss of less than $0.1 million in operating loss from discontinued operations, net of tax in the consolidated statement of operations during the year ended December 31, 2015. The India JV was reported as discontinued operations in the Company’s consolidated financial statements because it was part of the Scientific Lasers business that the Company divested in July 2014. All assets, liabilities, accumulated other comprehensive income and non-controlling interest of the India JV were derecognized as of the date of the agreement.

In July 2014, the Company completed the sale of certain assets and liabilities of the Scientific Lasers business, operating under the Continuum and Quantronix brand names, for approximately $6.5 million, net of working capital adjustments, and recognized a $1.7 million loss, net of tax, in the consolidated statement of operations during the year ended December 31, 2014. The Company began accounting for the Scientific Lasers business, which was previously included in the Photonics reportable segment, as discontinued operations in the first quarter of 2014. In accordance with the purchase and sale agreement, $1.5 million of the sales proceeds was held in escrow until January 2016. The Company reported the $1.5 million escrow in other current assets on the consolidated balance sheet as of December 31, 2015. In January 2016, the $1.5 million escrow was released to the Company in full and is reported as cash flow from investing activities of discontinued operations.

The following table presents the operating results which are reported as discontinued operations in the Company's consolidated statements of operations (in thousands):

	Year Ended December 31,	
	2015	2014
Revenue from discontinued operations	$—	$10,514
Loss from discontinued operations, before income tax	$(13)	$(8,059)
Loss from discontinued operations, net of tax	$(13)	$(5,607)
Loss on disposal of discontinued operations, net of tax	$—	$(1,726)

The loss from discontinued operations for the year ended December 31, 2014 included a $3.0 million fair value write-down of the Scientific Lasers business to its fair value less costs to sell and a $0.5 million fair value write-down of the India JV.

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AS OF DECEMBER 31, 2016

5. Accumulated Other Comprehensive Income (Loss)

Comprehensive income (loss) is defined as net income or loss and other changes in stockholders' equity that do not represent transactions with stockholders or in the Company's stock. Changes in accumulated other comprehensive income (loss) is as follows (in thousands):

	Total accumulated other comprehensive income (loss)	Cumulative translation adjustment	Pension liability
Balance at December 31, 2013	$ (6,342)	$ 1,353	$(7,695)
Other comprehensive income	(10,488)	(6,968)	(3,520)
Amounts reclassified from other comprehensive income (loss) (1)	374	—	374
Balance at December 31, 2014	$ (16,456)	$ (5,615)	$(10,841)
Other comprehensive loss	(3,249)	(4,083)	834
Amounts reclassified from other comprehensive income (loss) (1)	875	—	875
Balance at December 31, 2015	$ (18,830)	$ (9,698)	$(9,132)
Other comprehensive income	(9,611)	(7,524)	(2,087)
Amounts reclassified from other comprehensive income (loss) (1)	726	—	726
Balance at December 31, 2016	$ (27,715)	$ (17,222)	$(10,493)

(1) The amounts reclassified from other comprehensive income (loss) were included in selling, general and administrative expenses in the consolidated statements of operations.

6. Goodwill, Intangible Assets and Impairment Charges

Goodwill

The following table summarizes changes in goodwill during the year ended December 31, 2016 (in thousands):

	December 31, 2016
Balance at beginning of year	$ 103,456
Net working capital adjustment of Lincoln Laser acquisition	(43)
Goodwill acquired from Reach acquisition	4,715

Balance at end of year	$ 108,128

Goodwill acquired from the Reach acquisition is reflected in the Vision segment. Goodwill by reportable segment as of December 31, 2016 is as follows (in thousands):

	Reportable Segment			
	Photonics	Vision	Precision Motion	Total
Goodwill	$136,278	$89,116	$33,963	$259,357
Accumulated impairment of goodwill	(102,461)	(31,722)	(17,046)	(151,229)
Total	$33,817	$57,394	$16,917	$108,128

Goodwill by reportable segment as of December 31, 2015 is as follows (in thousands):

	Reportable Segment			
	Photonics	Vision	Precision Motion	Total
Goodwill	$136,321	$84,401	$33,963	$254,685
Accumulated impairment of goodwill	(102,461)	(31,722)	(17,046)	(151,229)
Total	$33,860	$52,679	$16,917	$103,456

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AS OF DECEMBER 31, 2016

Intangible Assets

Intangible assets as of December 31, 2016 and 2015, respectively, are summarized as follows (dollar amounts in thousands):

	December 31, 2016			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted Average Remaining Life (Years)
Amortizable intangible assets:				
Patents and acquired technologies	$84,742	$ (67,902)	$ 16,840	7.6
Customer relationships	69,554	(42,934)	26,620	12.9
Customer backlog	622	(540)	82	0.9
Non-compete covenant	2,514	(1,419)	1,095	2.0
Trademarks and trade names	10,709	(6,630)	4,079	8.3
Amortizable intangible assets	168,141	(119,425)	48,716	10.2
Non-amortizable intangible assets:				
Trade names	13,027	—	13,027	
Total	$181,168	$ (119,425)	$ 61,743	

	December 31, 2015			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted Average Remaining Life (Years)
Amortizable intangible assets:				
Patents and acquired technologies	$82,821	$ (66,297)	$ 16,524	7.7
Customer relationships	67,168	(36,914)	30,254	13.6
Customer backlog	2,644	(2,589)	55	1.0
Non-compete covenant	2,514	(882)	1,632	3.2
Trademarks and trade names	10,711	(5,934)	4,777	9.1
Amortizable intangible assets	165,858	(112,616)	53,242	11.0
Non-amortizable intangible assets:				
Trade names	13,027	—	13,027	
Total	$178,885	$ (112,616)	$ 66,269	

Amortizable intangible assets as of December 31, 2016 include intangible assets recognized in conjunction with the acquisition of certain video processing and video management technologies used in medical visualization solutions in December 2016. The fair value of intangible assets acquired is comprised of the following (dollar amounts in thousands):

	Estimated Fair Value	Weighted Average Amortization Period
Developed technology	$ 3,980	10 years
Total	$ 3,980	

All definite-lived intangible assets are amortized either on a straight-line basis or an economic benefit basis over their remaining estimated useful life. Amortization expense for customer relationships and definite-lived trademarks, trade names and other intangibles is included in operating expenses in the accompanying consolidated statements of operations. Amortization expense for patents and acquired technologies is included in cost of revenue in the accompanying consolidated statements of operations. Amortization expense is as follows (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Amortization expense – cost of revenue	$4,164	$4,712	$6,143
Amortization expense – operating expenses	8,251	7,611	10,262
Total amortization expense	$12,415	$12,323	$16,405

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Estimated future amortization expense for each of the five succeeding years and thereafter is as follows (in thousands):

Year Ending December 31,	Cost of Revenue	Operating Expenses	Total
2017	$ 3,658	$ 7,384	$ 11,042
2018	2,274	6,713	8,987
2019	2,083	4,691	6,774
2020	1,931	2,718	4,649
2021	1,767	2,290	4,057
Thereafter	5,127	8,080	13,207
Total	$ 16,840	$ 31,876	$48,716

Impairment Charges

The most recent annual goodwill and indefinite-lived intangible asset impairment test was performed as of the beginning of the second quarter of 2016, noting no impairment. Implied fair values of all reporting units exceeded their carrying values by at least 20%.

The Company did not have any goodwill or indefinite-lived intangible asset impairment charges during 2015 or 2016.

During the fourth quarter of 2014, the Company performed an interim impairment review of the goodwill and intangible assets related to the NDS reporting unit. First, the Company performed a long-lived asset recoverability test in accordance with ASC 360-10-35-15, “Impairment or Disposal of Long-Lived Assets,” on the lowest level of identifiable cash flows, which was determined to be the NDS business. The recoverability test compared the carrying value of the NDS business to the undiscounted cash flows. As a result of this recoverability test, the Company determined that the assets were not recoverable. The Company then determined the fair value of the NDS business using a discounted cash flow methodology, which resulted in a $21.9 million intangible assets impairment charge in the fourth quarter of 2014. The impairment charge is reflected in the operating results of the Vision segment.

Subsequent to impairing the NDS business’s long-lived assets, step one of the goodwill impairment analysis was performed. As the carrying value of the NDS reporting unit exceeded its implied fair value, the Company performed the second step of the goodwill impairment test, comparing the implied fair value of the reporting unit’s goodwill with its carrying value to measure the impairment loss. The Company recorded a $19.6 million goodwill impairment charge in the fourth quarter of 2014. The impairment charge is reflected in the operating results of the Vision segment.

7. Fair Value Measurements

ASC 820, “Fair Value Measurement,” establishes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the third is considered unobservable:

Level 1: Quoted prices for identical assets or liabilities in active markets which the Company can access.

Level 2: Observable inputs other than those described in Level 1.

Level 3: Unobservable inputs.

Cash equivalents

The Company’s cash equivalents are investments in money market accounts, which represent the only asset the Company measures at fair value on a recurring basis. The Company determines the fair value of our cash equivalents using a market approach based on quoted prices in active markets. The fair values of cash, accounts receivable, income taxes receivable, accounts payable, income taxes payable and accrued expenses and other current liabilities approximate their carrying values because of their short-term nature.

Contingent consideration

On December 18, 2015, the Company acquired all assets and certain liabilities of Skyetek. Under the purchase and sale agreement for the Skyetek acquisition, the owners of Skyetek are eligible to receive contingent consideration based on the achievement of certain sales order commitment targets from October 2015 through June 2017. If such targets are achieved, the contingent consideration will be payable in 2017. The Company recognized an estimated fair value of $0.2 million as part of the purchase price as of the acquisition date. Subsequent changes in the estimated fair value of this contingent liability will be recorded in the consolidated statement of operations in restructuring, acquisition and divestiture related costs until the liability is fully settled. There have been no changes to the fair value of the contingent consideration since the acquisition date.

On November 11, 2015, the Company acquired Lincoln Laser. Under the purchase and sale agreement for the Lincoln Laser acquisition, the shareholders of Lincoln Laser are eligible to receive contingent consideration based on the achievement of certain revenue targets for fiscal year 2016. The estimated fair value of the contingent consideration of $2.3 million was determined based on the Monte Carlo valuation method and was recorded as part of the purchase price as of the acquisition date. Subsequent changes in the estimated fair value of this contingent liability will be recorded in the consolidated statement of operations in restructuring, acquisition and divestiture related costs until the liability is fully settled. Based on the actual operating results for fiscal year 2016, the fair value of the contingent consideration for Lincoln Laser was $1.4 million as of December 31, 2016.

On February 19, 2015, the Company acquired Applimotion. Under the purchase and sale agreement for the Applimotion acquisition, the former shareholders of Applimotion are eligible to receive contingent consideration based on the achievement of certain revenue targets for fiscal years 2015 to 2017. If such targets are achieved, the contingent consideration will be payable in cash in two installments in 2017 and 2018, respectively. The estimated fair value of the contingent consideration of $1.0 million was determined based on the Monte Carlo valuation method and was recorded as part of the purchase price as of the acquisition date. Subsequent changes in the estimated fair value of this contingent liability will be recorded in the consolidated statement of operations in restructuring, acquisition and divestiture related costs until the liability is fully settled. Under the Monte Carlo valuation method, the fair value of the contingent consideration for Applimotion was $3.6 million as of December 31, 2016.

The following table summarizes the fair values of our assets and liabilities measured at fair value on a recurring basis as of December 31, 2016 (in thousands):

	Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Unobservable Inputs (Level 3)
Assets				
Cash equivalents	$ 9,569	$ 9,569	$ —	$ —
Liabilities				
Contingent consideration - Current	$ 2,775	$ —	$ —	$ 2,775
Contingent consideration - Long-term	2,381	—	—	2,381
	$ 5,156	$ —	$ —	$ 5,156

The following table summarizes the fair values of our assets and liabilities measured at fair value on a recurring basis as of December 31, 2015 (in thousands):

	Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Unobservable Inputs (Level 3)
Assets				
Cash equivalents	$ 4,657	$ 4,657	$ —	$ —
Liabilities				
Contingent consideration - Long-term	$ 3,889	$ —	$ —	$ 3,889

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

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Changes in the fair value of our Level 3 contingent consideration for the years ended December 31, 2016 and 2015 were as follows (in thousands):

	Contingent Consideration
Balance at December 31, 2014	$ —
Acquisition of Applimotion	965
Fair value adjustment of Applimotion	430
Acquisition of Lincoln Laser	2,344
Acquisition of Skyetek	150
Balance at December 31, 2015	$ 3,889
Fair value adjustment of Applimotion	2,178
Fair value adjustment of Lincoln Laser	(911)
Balance at December 31, 2016	$ 5,156

The following table provides quantitative information associated with the fair value measurement of the Company's Level 3 liabilities:

Liability	December 31, 2016 Fair Value (in thousands)	Valuation Technique	Unobservable Inputs	Percentage Applied
Contingent consideration (Applimotion) (1)	$3,573	Monte Carlo simulation	Historical and projected revenues for fiscal years 2015 to 2017	N/A
			Revenue volatility	41.3%
			Cost of debt	3.49%
			WACC	11.0%
Contingent consideration (Lincoln Laser) (2)	$1,433	N/A	Historical revenues	100%

(1) Based on Applimotion's fiscal 2015 and 2016 revenue results, the Company will pay $1.2 million contingent consideration in the first quarter of 2017.

(2) The Company will pay $1.4 million as the final Lincoln Laser contingent consideration payment in the first quarter of 2017.

As of December 31, 2016, the significant unobservable inputs used in the Monte Carlo simulation to fair value the Applimotion contingent consideration included forecasted revenue, revenue volatility and discount rate. Increases or decreases in the inputs would result in a higher or lower fair value measurement.

Except for the assets and liabilities acquired from the Applimotion, Lincoln Laser and Skyetek acquisitions, as disclosed in Note 3, there were no assets and liabilities that were measured at fair value on a non-recurring basis during 2016. See Note 10 for discussion of the estimated fair value of the Company's outstanding debt and Note 12 for discussion of the estimated fair value of the Company's pension plan assets.

8. Earnings (Loss) per Common Share

Basic earnings (loss) per common share is computed by dividing net income (loss) by the weighted average number of common shares outstanding during the year. For diluted earnings (loss) per common share, the denominator also includes the dilutive effect of outstanding restricted stock units determined using the treasury stock method. Dilutive effects of contingently issuable shares are included in the weighted average dilutive share calculation when the contingencies have been resolved. For years in which net losses are generated, the dilutive potential common shares are excluded from the calculation of diluted earnings per share as the effect would be anti-dilutive.

NOVANTA INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

AS OF DECEMBER 31, 2016

The following table sets forth the computation of basic and diluted earnings (loss) per share (in thousands, except per share amounts):

	Year Ended December 31,		
	2016	2015	2014
Numerators:			
Income (loss) from continuing operations	$22,003	$35,628	$(16,909)
Consolidated loss from discontinued operations	—	(13)	(7,333)
Less: income attributable to noncontrolling interest	—	—	(10)
Loss from discontinued operations attributable to Novanta Inc.	—	(13)	(7,343)
Net income (loss) attributable to Novanta Inc.	$22,003	$35,615	$(24,252)
Denominators:			
Weighted average common shares outstanding— basic	34,694	34,579	34,352
Dilutive potential common shares	220	248	—
Weighted average common shares outstanding— diluted	34,914	34,827	34,352
Antidilutive common shares excluded from above	85	—	439
Basic Earnings (Loss) per Common Share:			
From continuing operations	$0.63	$1.03	$(0.49)
From discontinued operations	$—	$(0.00)	$(0.21)
Basic earnings (loss) per share attributable to Novanta Inc.	$0.63	$1.03	$(0.70)
Diluted Earnings (Loss) per Common Share:			
From continuing operations	$0.63	$1.02	$(0.49)
From discontinued operations	$—	$(0.00)	$(0.21)
Diluted earnings (loss) per share attributable to Novanta Inc.	$0.63	$1.02	$(0.70)

Common Stock Repurchases

In October 2013, the Company's Board of Directors authorized a share repurchase plan under which the Company may repurchase outstanding shares of the Company's common stock up to an aggregate amount of $10.0 million. The shares may be repurchased from time to time, at the Company's discretion, based on ongoing assessment of the capital needs of the business, the market price of the Company's common stock, and general market conditions. Shares may also be repurchased through an accelerated stock purchase agreement, on the open market or in privately negotiated transactions in accordance with applicable federal securities laws. Repurchases may be made under certain SEC regulations, which would permit common stock to be purchased when the Company would otherwise be prohibited from doing so under insider trading laws. The share repurchase plan does not obligate the Company to acquire any particular amount of common stock. No time limit was set for the completion of the share repurchase program, and the program may be suspended or discontinued at any time. The Company expects to fund the share repurchase through cash on hand and future cash flow from operations. During 2016, the Company repurchased 109 thousand shares in the open market for an aggregate purchase price of $1.6 million at an average price of $14.93 per share. During 2015, the Company repurchased 122 thousand shares in the open market for an aggregate purchase price of $1.6 million at an average price of $13.29 per share. As of December 31, 2016, the Company had repurchased an aggregate of 282 thousand shares for an aggregate purchase price of $3.8 million at an average price of $13.43 per share.

NOVANTA INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

AS OF DECEMBER 31, 2016

9. Supplementary Balance Sheet Information

The following tables provide the details of selected balance sheet items as of the dates indicated (in thousands):

Inventories

	December 31,	
	2016	2015