3D SYSTEMS CORP
Form 10-K
March 14, 2016

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, 2015

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. 001-34220

3D SYSTEMS CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

| | |
|---|---|
| DELAWARE | 95 4431352 |
| (State or Other Jurisdiction of Incorporation or Organization) | (I.R.S. Employer Identification No.) |
| 333 THREE D SYSTEMS CIRCLE | |
| ROCK HILL, SOUTH CAROLINA | 29730 |
| (Address of Principal Executive Offices) | (Zip Code) |

(Registrant's Telephone Number, Including Area Code): (803) 326 3900

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

| Title of each class | Name of each exchange on which registered |
|---|---|
| Common stock, par value $0.001 per share | The New York Stock Exchange |

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 Section 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 (§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 (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 | (Do not check if smaller reporting company) | 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 common stock held by non-affiliates of the registrant on June 30, 2015 was $2,048,138,460. For purposes of this computation, it has been assumed that the shares beneficially held by directors and executive officers of the registrant were "held by affiliates." This assumption is not to be deemed an admission by these persons that they are affiliates of the registrant.

The number of outstanding shares of the registrant's common stock as of March 7, 2016 was 111,627,748.

DOCUMENTS INCORPORATED BY REFERENCE: Portions of the registrant's definitive proxy statement for its 2016 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

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3D SYSTEMS CORPORATION

Annual Report on Form 10 K for the
Year Ended December 31, 2015

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# PART I

## Item 1. Business

### General

3D Systems Corporation ("3D Systems" or the "Company" or "we" or "us") is a holding company incorporated in Delaware in 1993 that operates through subsidiaries in the Americas, Europe and the Middle East (collectively referred to as "EMEA") and the Asia Pacific region ("APAC" or "Asia Pacific"). We market our products and services in those areas as well as in other parts of the world. We provide comprehensive 3D products and services, including 3D printers, print materials, on-demand parts services and digital design and manufacturing tools. Our ecosystem supports advanced applications from the product design shop to the factory floor to the operating room. Our precision healthcare capabilities include simulation, Virtual Surgical Planning ("VSP™"), and printing of medical and dental devices as well as patient-specific surgical instruments.

As the originator of 3D printing and a shaper of future 3D solutions, we have spent our 30 year history enabling professionals and companies to optimize their designs, transform their workflows, bring innovative products to market and drive new business models.

Customers can use 3D printing to design and manufacture complex and unique parts, eliminate expensive tooling, reduce lead times and produce parts locally. Over the past decades, many of our customers have strengthened their competitive advantage by embracing our solutions to enhance and accelerate their product development cycles. A growing number of customers have also transitioned to manufacturing end-use parts and custom products using 3D printing.

Today, we continue to drive the adoption of 3D printing solutions through ongoing product and technology development, focusing on professional and industrial applications and marketplaces, including aerospace and defense, automotive and healthcare.

### Products

We offer a comprehensive range of 3D printers, print materials, software, haptic devices, scanners and virtual surgical simulators.

3D Printers

Our 3D printers transform digital data input generated by 3D design software, CAD software, or other 3D design tools, into printed parts using several unique print engines that employ proprietary, additive layer by layer building processes with a variety of print materials, including plastic, metal, nylon, rubber, wax and composite materials. We offer a broad range of 3D printing technologies including Stereolithography (“SLA”), Selective Laser Sintering (“SLS”), Direct Metal Printing (“DMP”), MultiJet Printing (“MJP”), ColorJet Printing (“CJP”) and PlasticJet Printing (“PJP”).

Our proprietary print engines, which are discussed in more detail below, can produce highly accurate geometries in a wide range of sizes, shapes and materials for parts with a variety of performance characteristics.

SLA Printers

Our SLA 3D printers cure liquid resin materials with a laser beam to produce durable plastic parts with surface smoothness, high resolution, edge definition and tolerances that rival the accuracy of machined or molded plastic parts. We offer SLA printers with a wide range of materials, sizes and price points that are well-suited for prototypes, end-use parts, casting patterns and molds, tooling, fixtures and medical models.

SLS Printers

Our SLS 3D printers use a laser beam to melt and fuse powder-based nylon and engineered plastic and composite print materials to produce very strong and durable parts. Customer uses of our SLS printers include functional test models and end-use parts, such as housings, machinery components, ducting, jigs and fixtures and medical devices and personalized surgery kits and guides.

DMP Printers

Our Direct Metal 3D printers use a laser beam to sinter powders in a variety of metal materials to produce fully dense metal parts with outstanding surface finish and resolution.  We offer DMP printers that can process a wide range of materials and powders, including those with very fine granularity, and have been proven in high volume manufacturing applications. We sell DMP systems in various sizes and certain models optimized for specific metals, including titanium, stainless steel and nickel super alloys. Our DMP printers are well-suited for medical and dental implants, aerospace, automotive, hi-tech and industrial applications, such as conformal cooling, simplifying assemblies, light weight parts, enhanced fluid flow, topology optimization and other complex parts.

MJP Printers

Our MultiJet 3D printers utilize jetting head technology to deliver precise, tough parts with exceptional resolution in tough plastic, wax, elastomer and engineered materials. These printers offer the capability to print in rigid or flexible materials and multiple materials in one build, making them ideal for mechanical functional testing, rapid tooling, jigs and fixtures, casting patterns, over-molding and medical models.

CJP Printers

Our ColorJet 3D printers produce parts from ceramic-like powder based materials. CJP printers build high-definition, full-color parts that can be sanded, drilled, tapped, painted and electroplated, which further expands the options available for finished part characteristics. CJP printers are ideal for producing models used in mechanical design, healthcare, architecture, education, entertainment and packaging applications.

PJP Printers

Our PlasticJet 3D printers utilize a simple, clean and compact plastic extrusion print engine technology to print parts in nylon and other plastics. Our PJP printers are designed to be accurate and affordable for prototyping, assembly and functional testing.

Materials

Our printers utilize a wide range of print materials, the majority of which are proprietary materials that we develop, blend and market. Our comprehensive range of print materials includes plastic, nylon, metal, composite, elastomeric, wax and Class IV bio-compatible materials. We augment and complement our own portfolio of engineered print materials with materials that we develop with or purchase from third parties under private label and distribution arrangements.

We work closely with our customers to optimize the performance of our print materials in their applications. Our expertise in materials science and formulation, combined with our process, software and equipment, enables us to help our customers select the material that best meets their needs with optimal cost and performance results.

As part of our solutions approach our currently offered printers, with the exception of direct metal printers, have built-in intelligence to make them integrated, closed systems. For these printers, we furnish integrated print materials that are specifically designed for use in those printers and that are packaged in smart cartridges and delivery systems. Integrated materials are designed to enhance system functionality, up-time, materials shelf life and overall printer reliability, in addition to the objective of providing our customers with a built-in quality management system and a fully integrated workflow solution.

SLA Materials

We offer a variety of liquid resin materials under the Accura® brand name that are designed to mimic specific, engineered thermoplastic and provide a wide range of characteristics, including tough, durable, clear, castable, polypropylene-like, ABS-like, high-temperature resistant, and Class IV bio-compatible. SLA print materials include general purpose as well as specialized materials, and are ideal for product design and testing, casting, patterns and molds, and healthcare applications such as medical models and devices.

SLS Materials

Our proprietary selective laser sintering materials include a range of soft and rigid plastics, nylon and composite materials marketed under the DuraForm, LaserForm™ and CastForm™ brand names. These lightweight, tough, versatile materials are available in formulations for a wide array of rapid prototyping and direct manufacturing applications. SLS materials are used for high-temperature resistant parts, flexible parts, functional tooling, injection molding tool inserts, investment casting, end-use parts for advanced manufacturing and patient-specific surgical guides.

DMP Materials

Our direct metal printing materials include metal powders. These materials include titanium, stainless steels, tool steels, super alloys, non-ferrous alloys, precious metals and aluminum. Our DMP printers and materials are used for fully dense, fine feature detail parts for industrial and healthcare applications, including aerospace, automotive, semi-conductor and medical and dental devices and implants.

VisiJet Print Materials

Our MJP and CJP printers utilize materials that we market under the VisiJet® brand name. These materials consist of a wide range of plastic, wax, elastomeric, ceramic-like, and engineered materials. VisiJet materials are used in advanced prototyping, design communication and testing, casting, medical modeling, and manufacturing applications.

PJP Print Materials

Materials for use in our PJP 3D printers include polylatic acid (PLA), acrylonitrile butadiene styrene (ABS), polyamide (Nylon) and rinse away support materials.

Software and Related Products

We also provide digital design tools, including software, scanners and haptic devices. We offer products for product design, mold & die design, 3D scan-to-print, reverse engineering, production machining and inspection. These products are designed to enable a more seamless workflow for customers. We also offer proprietary software and drivers embedded within our printers that provide part preparation, part placement, support placement, build platform management and print queue management.

Other Products

As part of our solutions for precision healthcare, we also offer 3D virtual reality simulators and simulator modules for medical applications. These 3D simulators offer clinicians a realistic hands-on experience to master critical skills, prepare for upcoming procedures and create patient specific simulations. We also provide digitizing scanners for medical and mechanical applications.

Services

Warranty, Maintenance and Training Services

We provide a variety of customer services, local application support and field support on a worldwide basis for our products, including installation of new printers at customers’ sites, printer warranties, maintenance agreements, periodic hardware upgrades and software updates. We also provide services to assist our customers and partners in developing new applications for our technologies, to facilitate the use of our technology for specific applications, to train customers on the use of printers and to maintain our printers at customers’ sites.

We provide these services and field support either directly or through a network of partners. We employ customer-support sales engineers globally to support our worldwide customer base, and we are continuing to strengthen and enhance our partner network. We distribute spare parts on a worldwide basis to our customers, primarily from locations in the Americas, EMEA and APAC.

All of our 3D printers are sold with maintenance support that generally covers a warranty period ranging from 90 days to one year. We generally offer service contracts that enable our customers to continue maintenance coverage beyond the initial warranty period. These service contracts are offered with various levels of support and options and are priced accordingly. Our service engineers provide regularly scheduled preventive maintenance visits to customer sites, and we also provide training to our partners to enable them to perform these services.

We also offer upgrade kits for certain of our printers that enable our existing customers to take advantage of new or enhanced printer capabilities. In some cases, we have discontinued upgrade support and maintenance agreements for certain of our older legacy printers.

On-Demand Parts Services

We provide on-demand custom parts manufacturing via our Quickparts® brand through a global network of facilities. We provide a broad range of production and finishing capabilities for precision plastic and metal parts and tooling with a wide range of additive and traditional manufacturing processes.

In addition to the sales of parts, we and our sales partners utilize our on-demand parts operation as a sales and lead generation tool, and third party preferred service providers can also use our on-demand parts service as their comprehensive order-fulfillment center. We also provide on-demand professional 3D scanning, printing and custom parts related to the entertainment industry through our Gentle Giant brand.

Software Services

In addition to our software license products, we offer software maintenance, which includes updates and software support for each software product. Our software products are sold with maintenance service that generally covers a period of one year. We generally offer multi-year maintenance contracts that enable our customers to continue maintenance coverage beyond the initial one year period. These software service contracts typically include free software updates and various levels of technical support.

Healthcare Services

Through our precision healthcare services, we provide medical prototyping and manufacturing services that involve printing and finishing of medical and dental devices, models and tools, as well as modeling and design services, including VSP™. We also provide service on our surgical simulators that are sold under our Simbionix brand.

Global Operations

We operate in the Americas, Europe, the Middle East and the Asia Pacific regions, and market our products and services in those areas as well as to other parts of the world. Revenue in countries outside the U.S. accounted for 49.0%, 49.1% and 44.5% of consolidated revenue in the years ended December 31, 2015, 2014 and 2013, respectively.

In maintaining foreign operations, we expose our business to risks inherent in such operations, including currency fluctuations. Information on foreign exchange risk appears in Part I, Item 1A "Risk Factors", Part II, Item 7A, "Quantitative and Qualitative Disclosures about Market Risk" and Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10 K ("Form 10-K").

Financial information about geographic areas, including revenue, long-lived assets, and cash balances, appears in Note 21 to the Consolidated Financial Statements in Part II, Item 8, "Financial Statements and Supplementary Data," of this Form 10-K ("Consolidated Financial Statements").

Marketing and Customers

Our sales and marketing strategy focuses on an integrated approach that is directed at providing 3D printing centric solutions designed to meet a wide range of customer needs. This integrated approach includes the sales and marketing of our entire portfolio of products and services.

Our sales organization is responsible for the sale of all of our products and services on a worldwide basis and for the management and coordination of our growing network of channel partners. We sell our products and services primarily through partners who are supported by our own channel managers and direct sales people, consisting of salespersons who work throughout the Americas, EMEA and Asia Pacific. In addition, our application engineers provide services through pre-sales and post-sales support and assist customers so that they can take advantage of our latest software, printers, materials and techniques to improve part quality, productivity and range of applications. Our applications engineers also leverage our customer contacts to help identify new application opportunities that utilize our products and services, including access to our on-demand parts service. We maintain our on-demand parts service, a global network of locations providing parts and tooling through both additive and traditional manufacturing solutions, which we sell through a direct sales team and our online platform. In addition to providing a comprehensive range of services to customers, our on-demand parts service also provides relationship building and lead generation opportunities for future sales. We also sell certain of our other products through our website.

In certain areas of the world where we do not operate directly, we have appointed channel partners and distributors who are authorized to sell our products and services on our behalf. Certain of those channel partners and distributors also provide additional services to customers in those geographic areas.

Our customers include major companies and small and midsize businesses in a broad range of industries, including automotive, aerospace, government, defense, technology, electronics, education, consumer goods, energy and healthcare. No single customer accounted for more than 10 percent of our consolidated revenue for the years ended December 31, 2015, 2014 or 2013.

Production and Supplies

At our Rock Hill, South Carolina location, we assemble PJP, MJP, CJP and certain models of our SLA 3D printers, as well as other equipment related to these printers. We produce Vidar branded digitizers in our Herndon, Virginia facility and our Simbionix branded 3D simulators are produced in Airport City, Israel and Rock Hill, South Carolina. Our DMP printers are produced in Corvallis, Oregon, Riom, France and Leuven, Belgium.

We outsource certain SLA, SLS and DMP printer assembly and refurbishment activities to selected design and engineering companies and suppliers. These suppliers also carry out quality control procedures on our printers prior to their shipment to customers. As part of these activities, these suppliers have responsibility for procuring the components and sub-assemblies either from us or third party suppliers. We purchase finished printers from these suppliers pursuant to forecasts and customer orders that we supply to them. While the outsourced suppliers of our printers have responsibility for the supply chain and inventory of components for the printers they assemble, the components, parts and sub-assemblies that are used in our printers are generally available from several potential suppliers.

We produce print materials at our facilities in Barberton, Ohio; Marly and Grüningen, Switzerland and Rock Hill, South Carolina. We also have arrangements with third parties who blend certain print materials according to our specifications that we sell under our own brand names, and we purchase certain print materials from third parties for resale to our customers.

Our equipment assembly and print materials blending activities, on-demand parts services and certain research and development activities are subject to compliance with applicable federal, state and local provisions regulating the storage, use and discharge of materials into the environment. We believe that we are in compliance, in all material respects, with such regulations as currently in effect and that continued compliance with them will not have a material adverse effect on our capital expenditures, results of operations or consolidated financial position.

Research and Development

The 3D printing industry continues to experience technological change and developments in hardware, software and materials. Consequently, we have ongoing research and development programs to develop new products and to enhance our portfolio of products and services, as well as to improve and expand the capabilities of our 3D printers and platforms, materials, software and other products. Our efforts are often augmented by development arrangements with research institutions, customers, suppliers, and assembly and design firms that we have engaged to produce our printers. From time to time, we also engage third-party engineering companies and specialty print materials companies in specific development projects.

In addition to our internally developed technology platforms, we have acquired products or technologies developed by others by acquiring business entities that held ownership rights to the technologies. In other instances, we have licensed or purchased the intellectual property rights of technologies developed by third parties through agreements that may obligate us to pay a license fee or royalty, typically based upon a dollar amount per unit or a percentage of the revenue generated by such products. As noted below, the amount of such royalties was not material to our results of operations or consolidated financial position for the three-year period ended December 31, 2015.

Research and development expenses were $92.8 million, $75.4 million and $43.5 million in 2015, 2014 and 2013, respectively.

No software development costs from acquisitions were capitalized in 2015 or 2014. We capitalized $0.3 million of software development costs from acquisitions in 2013.

Intellectual Property

We regard our technology platforms and materials as proprietary and seek to protect them through copyrights, patents, trademarks and trade secrets. At December 31, 2015 and 2014, we held 1,114 and 1,061 patents worldwide, respectively. At December 31, 2015 and 2014, we had 264 and 262 pending patent applications worldwide, respectively; including applications covering inventions contained in our recently introduced printers and demonstrated technologies. The principal issued patents covering aspects of our various technologies will expire at varying times through the year 2027.

We are a party to various licenses that have had the effect of broadening the range of the patents, patent applications and other intellectual property available to us.

We have also entered into licensing or cross-licensing arrangements with various companies in the United States and other countries that enable those companies to utilize our technologies in their products or that enable us to use their technologies in our products. Under certain of these licenses, we are entitled to receive, or we are obligated to pay, royalties for the sale of licensed products in the U.S. or in other countries. The amount of such royalties was not material to our results of operations or consolidated financial position for the three-year period ended December 31, 2015.

We believe that, while our patents and licenses provide us with a competitive advantage, our success also depends on our marketing, business development, applications know-how and on our ongoing research and development efforts. Accordingly, we believe the expiration of any of the patents, patent applications or licenses discussed above would not be material to our business or financial position.

Competition

We face competition from the development of new technologies or techniques not encompassed by the patents that we own or license and from conventional technologies.

Our competitors also include other suppliers of 3D printers and materials, design and production software, tools and scanners, as well as suppliers of forming manufacturing solutions such as vacuum casting equipment, and suppliers of healthcare simulators. Numerous suppliers of these products operate both internationally and regionally, and many of them have well-recognized product lines that compete with us in a wide range of our product applications.

Competition for most of our 3D printers is based primarily on technology capabilities, process know-how, product application know-how and the ability to provide a full range of products and services to meet customer needs. Accordingly, our ongoing research and development programs are intended to enable us to maintain technological leadership. Certain of the companies providing competing products or services, and those currently developing 3D printing products and services, are well established and may have greater financial resources than us.

Our competitors are also companies that manufacture machines that are used to make models, prototypes, molds and parts. These competitors include suppliers of CNC machines, plastics molding equipment, including injection-molding equipment, traditional machining, milling and grinding equipment, and businesses that use such equipment to produce models, prototypes, and molds and manufacture parts. These conventional machining, plastic molding and metal casting techniques continue to be the most common methods by which plastic and metal parts and tool inserts are manufactured today.

We believe that our future success depends on our ability to provide high quality products and services, enhance our existing portfolio, introduce new products and services on a timely and cost-effective basis, meet changing customer needs, extend our core technologies to new applications and anticipate and respond to emerging standards, business models, service delivery methods and other technological changes.

## Employees

At December 31, 2015 and 2014, we had 2,492 and 2,136 full-time employees, respectively. Although some of our employees outside the U.S. are subject to local statutory employment and labor arrangements, none of our U.S. employees are covered by collective bargaining agreements. We have not experienced any material work stoppages and believe that our relations with our employees are satisfactory.

## Available Information

Our website address is www.3DSystems.com. The information contained on our website is neither a part of, nor incorporated by reference into, this 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, amendments to those reports, and other documents that we file with the Securities and Exchange Commission ("SEC"), as soon as reasonably practicable after we electronically file them with, or furnish them to, the SEC. In addition, the public may read and copy materials we file with the SEC at the SEC's public reference room located at 100 F Street, N.E., Washington, D.C. 20549. Information on the operation of the public reference room can be obtained by calling the SEC at 1-800-SEC-0330.

Several of our corporate governance materials, including our Code of Conduct, Code of Ethics for Senior Financial Executives and Directors, Corporate Governance Guidelines, current charters of each of the standing committees of the Board of Directors and our corporate charter documents and by-laws are available on our website.

## Executive Officers

The information appearing in the table below sets forth the position or positions held by each of our executive officers and his or her age as of March 1, 2016. All of our executive officers serve at the pleasure of the Board of Directors. There are no family relationships among any of our executive officers or directors.

| Name and Current Position | Age as of March 1, 2016 |
|---|---|
| Andrew M. Johnson<br>Interim President and Chief Executive Officer, Chief Legal Officer and Secretary | 41 |
| Charles W. Hull<br>Executive Vice President and Chief Technology Officer | 76 |
| David R. Styka<br>Executive Vice President and Chief Financial Officer | 54 |
| Mark W. Wright<br>Executive Vice President and Chief Operating Officer | 51 |
| Kevin P. McAlea<br>Executive Vice President and Chief Operating Officer, Healthcare | 57 |
| Cathy L. Lewis<br>Executive Vice President and Chief Marketing Officer | 64 |

Abraham N. Reichental resigned as our President and Chief Executive Officer and as a Director, effective at the close of business on October 28, 2015, by mutual agreement with the Board of Directors. Effective upon Mr. Reichental’s resignation on October 28, 2015, the Board of Directors appointed Andrew M. Johnson as our Interim President and Chief Executive Officer and established an Executive Management Committee to provide ongoing leadership and to support our companywide operations and strategic initiatives while it conducts a search for a permanent replacement of Mr. Reichental. This committee consists of Mr. Johnson, Mark Wright, David Styka and Charles Hull. Mr. Wright serves as our Chief Operating Officer, Mr. Styka serves as our Chief Financial Officer and Mr. Hull is our Co-founder, Director, Chief Technology Officer and Chairman of the Executive Management Committee. In addition to Interim President and Chief Executive Officer, Mr. Johnson continues to serve as our Chief Legal Officer and Secretary.

Mr. Johnson has served as Interim President and Chief Executive Officer, Chief Legal Officer and Secretary since October 28, 2015. He served as Executive Vice President and Chief Legal Officer from November 2014 to October 28, 2015, and as Vice President, General Counsel and Secretary from April 2012 to November 2014. Previously, he served as Assistant General Counsel and Assistant Secretary with 3D Systems from July 2006 to April 2012.

Mr. Hull is a founder of the Company and has served on our Board of Directors since 1993. He has served as Chief Technology Officer since 1997 and as Executive Vice President since 2000. He has also previously served in various other executive capacities at the Company since 1986, including Chief Executive Officer, Vice Chairman of the Board of Directors and President and Chief Operating Officer.

Mr. Styka joined the Company in January 2015 as Vice President, Chief Accounting Officer and was promoted to Executive Vice President, Chief Financial Officer in May 2015. Prior to joining the Company, Mr. Styka had served as Vice President – Finance and Treasurer at Family Dollar Stores, Inc. a value retailer, since April 2014, Vice President – Finance from March 2011 to April 2014, and Divisional Vice President – Tax and Inventory from July 2008 to March 2011. Prior to joining Family Dollar, Mr. Styka served in a variety of finance roles, including Chief Accounting Officer, at Wellman, Inc. a PET resin and polyester staple fiber manufacturer, from 1993 to 1997 and 1998 to 2008. Mr. Styka began his career in public accounting at Ernst & Young. Mr. Styka also served as the Chief Accounting Officer of Wellman, Inc., at the time that company filed for Chapter 11 bankruptcy protection at the U.S. Bankruptcy Court for the Southern District of New York in February 2008. He served in such role from March 2007 until he left the company in July 2008 to join Family Dollar Stores, Inc.

Mr. Wright joined the Company after an 18-year career at EMC Corporation, a Fortune 500 provider of web-based computing systems and data storage products. Most recently, he served as Senior Vice President of Business Development and Operations – Lenovo, since April 2014. He served as the Chief Operating Officer, Flash Product Division from October 2012 to April 2014, served as Senior Vice President, Strategic Operations, IIP Division from January to October 2012, Senior Vice President, Business Operations, Unified Storage Division from January 2011 to January 2012 and Vice President, Operations and Business Transformation, Unified Storage Division from 2008 to January 2011.

Dr. McAlea has served as a Vice President of the Company from May 2003 until May 2012. He served as Senior Vice President from May 2012 to October 2014 and as Executive Vice President and Chief Operating Officer, Healthcare since October 2014.

Ms. Lewis joined us as Vice President Global Marketing in October 2009 and served as a Vice President from October 2009 until May 2013. She served as Vice President and Chief Marketing Officer from May 2013 to October 2014 and has served as Executive Vice President and Chief Marketing Officer since October 2014. Before joining 3D Systems, she served as Chief Executive Officer of Desktop Factory, Inc. since 2006, a venture financed technology start-up focused on the development and delivery of a low cost 3D printer. From 2001 to 2006, Ms. Lewis served as Senior Vice President, Marketing for IKON Office Solutions, a global office copying/printing/imaging and related services company.

## Item 1A. Risk Factors

### Forward-Looking Statements

Certain statements made in this Form 10-K that are not statements of historical or current facts are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include the cautionary statements and risk factors set forth below as well as other statements made in this Form 10-K that may involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from historical results or from any future results or projections expressed or implied by such forward-looking statements.

In addition to the statements set forth below that explicitly describe risks and uncertainties to which our business and our financial condition and results of operations are subject, readers are urged to consider statements in future or conditional tenses or that include terms such as “believes,” “belief,” “expects,” “intends,” “anticipates” or “plans” that appear i this Form 10-K to be uncertain and forward-looking. Forward-looking statements may include comments as to our beliefs, expectations and projections as to future events and trends affecting our business. Forward-looking statements are based upon our beliefs, assumptions and current expectations concerning future events and trends, using information currently available to us, and are necessarily subject to uncertainties, many of which are outside our control. We assume no obligation, and do not intend, to update these forward-looking statements, except as required by applicable law. The factors stated under the heading “Risk Factors” set forth below, as well as other factors, could cause actual results to differ materially from those reflected or predicted in forward-looking statements.

If one or more of these or other risks or uncertainties materialize, or if our underlying assumptions prove to be incorrect, actual results may vary materially from those reflected in or suggested by forward-looking statements. Any forward-looking statement that you read in this Form 10-K reflects our current views with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our operations, results of operations, financial condition, growth strategy and liquidity. All subsequent written and oral forward-looking statements attributable to us or to individuals acting on our behalf are expressly qualified in their entirety by this discussion. You should specifically consider the factors identified in this Form 10-K, which could cause actual results to differ materially from those referred to in forward-looking statements.

Risk Factors

The risks and uncertainties described below are not the only risks that we face. Additional risks not currently known to us or that we currently deem not to be material also may impair our business operations, results of operations and financial condition. If any of the risks described below or if any other risks not currently known to us or that we currently deem not to be material actually occurs, our business, results of operations and financial condition could be materially adversely affected. In that event, the trading price of our common stock could decline, and you could lose all or part of your investment in our common stock.

The risks discussed below also include forward looking statements that are intended to provide our current expectations with regard to those risks. There can be no assurance that our current expectations will be met, and our actual results may differ substantially from the expectations expressed in these forward looking statements.

We face significant competition in many aspects of our business, which could cause our revenue and gross profit margins to decline. Competition could also cause us to reduce sales prices or to incur additional marketing or production costs, which could result in decreased revenue, increased costs and reduced margins.

We compete for customers with a wide variety of producers of equipment and software for models, prototypes, other three-dimensional objects and end-use parts as well as producers of print materials and services for this equipment. Some of our existing and potential competitors are researching, designing, developing and marketing other types of competitive equipment and software, print materials and services. Certain of these competitors may have financial, marketing, manufacturing, distribution and other resources substantially greater than ours.

We also expect that future competition may arise from the development of allied or related techniques for equipment and materials that are not encompassed by our patents, from the issuance of patents to other companies that may inhibit our ability to develop certain products, and from improvements to existing print materials and equipment technologies.

Some of our patents have recently expired and others will expire in coming years. Upon expiration of those patents, our competitors may introduce products using the technology previously protected by the expired patents, which products may have lower prices than those of our products. To compete, we may need to reduce our prices for those products, which could adversely affect our revenues, margins and profitability. Additionally, the expiration of our patents could reduce barriers to entry into additive manufacturing, which could result in the reduction of our sales and earnings potential. If competitors using technology previously protected by our expired patents were to introduce products of inferior quality, our potential customers may view the technology negatively, which would have an adverse effect on our image and reputation and on our ability to compete with systems using other additive fabrication technologies.

We intend to continue to follow a strategy of continuing product development to enhance our position to the extent practicable. We cannot assure you that we will be able to maintain our current position in the field or continue to compete successfully against current and future sources of competition. If we do not keep pace with technological change and introduce new products, we may lose revenue and demand for our products. We also incur significant costs associated with the investment in our product development in furtherance of our strategy that may not result in increased revenue or demand for our products and which could negatively affect our operating results.

We believe that our future success depends on our ability to deliver products that meet changing technology and customer needs.

Our business may be affected by rapid technological change, changes in user and customer requirements and preferences, frequent new product and service introductions embodying new technologies and the emergence of new standards and practices, any of which could render our existing products and proprietary technology obsolete. Accordingly, our ongoing research and development programs are intended to enable us to maintain technological leadership. We believe that to remain competitive we must continually enhance and improve the functionality and features of our products, services and technologies. However, there is a risk that we may not be able to:

- Develop or obtain leading technologies useful in our business;

- Enhance our existing products;

- Develop new products, services and technologies that address the increasingly sophisticated and varied needs of prospective customers, particularly in the area of printer speeds and print materials functionality;

- Respond to technological advances and emerging industry standards and practices on a cost-effective and timely basis; or

- Recruit or retain key technology employees.

We have made, and may make in the future, strategic acquisitions that may involve significant risks and uncertainties. We may not realize the anticipated benefits of past or future acquisitions and integration of these acquisitions may disrupt our business and divert management.

We completed four acquisitions in 2015. Acquisitions involve certain risks and uncertainties including, among others, the following:

- Difficulty in integrating newly acquired businesses and operations in an efficient and cost-effective manner, which may also impact our ability to realize the potential benefits associated with the acquisition;

- The risk that significant unanticipated costs or other problems associated with integration may be encountered;

- The challenges in achieving strategic objectives, cost savings and other anticipated benefits;
- The risk that our marketplaces do not evolve as anticipated and that the technologies acquired do not prove to be those needed to be successful in the marketplaces that we serve;
- The risk that we assume significant liabilities that exceed the limitations of any applicable indemnification provisions or the financial resources of any indemnifying party;
- The inability to maintain a relationship with key customers, vendors and other business partners of the acquired businesses;
- The difficulty in maintaining controls, procedures and policies during the transition and integration;
- The potential loss of key employees of the acquired businesses;
- The risk of diverting management attention from our existing operations;
- Difficulties in coordinating geographically disparate organizations and corporate cultures and integrating management personnel with different business backgrounds;
- The potential failure of the due diligence process to identify significant problems, liabilities or other challenges of an acquired company or technology;

· The risk that we incur significant costs associated with such acquisition activity that may negatively impact our operating results before the benefits of such acquisitions are realized, if at all;

· The risk of incurring significant goodwill and other intangible asset impairment charges;

· The risk of incurring significant exit costs if products or services are unsuccessful;

· The entry into marketplaces where we have no or limited direct prior experience and where competitors have stronger marketplace positions;

· The exposure to litigation or other claims in connection with our assuming claims or litigation risks from terminated employees, customers, former shareholders or other third parties; and

· The risk that historical financial information may not be representative or indicative of our results as a combined company.

Historically, we have experienced growth in our operations, both organically and from acquisitions, and we intend to continue to grow. The adaptation of our infrastructure will require, among other things, continued development of our financial and management controls and management information systems, management of our sales channel, continued capital expenditures, the ability to attract and retain qualified management personnel and the training of new personnel. We cannot be sure that our infrastructure, systems, procedures, business processes and managerial controls will be adequate to support the growth in our operations. Any delays in, or problems associated with, implementing, or transitioning to, new or enhanced systems, procedures, or controls to accommodate and support the requirements of our business and operations and to effectively and efficiently integrate acquired operations may adversely affect our ability to meet customer requirements, manage our product inventory, and record and report financial and management information on a timely and accurate basis. These potential negative effects could prevent us from realizing the benefits of an acquisition transaction or other growth opportunity. In that event, our competitive position, revenues, results of operations and financial condition could be adversely affected, which could, in turn, adversely affect our share price and shareholder value.

Our balance sheet contains several categories of intangible assets that we were required to write down in the fourth quarter of 2015 and that we could be required to write off or write down in the future in the event of the impairment of certain of those assets arising from any deterioration in our future performance or other circumstances. Such write-offs or write-downs could adversely impact our earnings and stock price, and our ability to obtain financing in the future.

At December 31, 2015, after recording goodwill and other intangible asset impairment charges, we had $187.9 million in goodwill capitalized on our balance sheet and $157.5 million of other intangible assets, net capitalized on our balance sheet, which represented 38.7% of our total assets.

As discussed below, we completed several business acquisitions during 2015, 2014 and 2013. The majority of the acquisitions have resulted in our recording additional goodwill on our consolidated balance sheet. This goodwill typically arose because the purchase price for these businesses reflected a number of factors including the future earnings and cash flow potential of these businesses, the multiples to earnings, cash flow and other factors, such as prices at which similar businesses have been purchased by other acquirers, the competitive nature of the process by which we acquired the business, and the complementary strategic fit and resulting synergies these businesses bring to existing operations.

Accounting Standards Codification ("ASC") 350, "Intangibles – Goodwill and Other," requires that goodwill and some long-lived intangibles be tested for impairment at least annually. See Notes 2, 6 and 7 to the Consolidated Financial Statements and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Significant Estimates—Goodwill and other intangible and long-lived assets" in Part II, Item 7 of this Form 10-K.

As a result of our annual impairment testing, we recorded goodwill impairment charges of $443.7 million and other intangible assets impairment charges of $93.5 million in the fourth quarter of 2015. The impairment charges are non-cash in nature and do not impact our cash position or cash flows, but such a charge, and possible additional charges in the future could adversely affect our results of operations and stockholders' equity and could adversely affect the trading price of our common stock. We will continue to monitor our reporting units in an effort to determine whether events and circumstances warrant further interim impairment testing. We could be required to write off or write down additional amounts in the future in the event of deterioration in our future performance, sustained slower growth or other circumstances.

We may incur substantial costs enforcing or acquiring intellectual property rights and defending against third party claims as a result of litigation or other proceedings.

In connection with the enforcement of our own intellectual property rights, the acquisition of third-party intellectual property rights or disputes related to the validity or alleged infringement of third party intellectual property rights, including patent rights, we have been, and may in the future be subject to claims, negotiations or complex, protracted litigation. Intellectual property disputes and litigation may be costly and can be disruptive to our business operations by diverting attention and energies of management and key technical personnel, and by increasing our costs of doing business. Although we have successfully defended or resolved past litigation and disputes, we may not prevail in any ongoing or future litigation and disputes.

Third-party intellectual property claims asserted against us could subject us to significant liabilities, require us to enter into royalty and licensing arrangements on unfavorable terms, prevent us from assembling or licensing certain of our products, subject us to injunctions restricting our sale of products, cause severe disruptions to our operations or the marketplaces in which we compete, or require us to satisfy indemnification commitments with our customers including contractual provisions under various license arrangements. In addition we may incur significant costs in acquiring the necessary third-party intellectual property rights for use in our products. Any of these could seriously harm our business.

We may not be able to protect our intellectual property rights and confidential information, including our digital content, from third-party infringers or unauthorized copying, use or disclosure.

Although we defend our intellectual property rights and endeavor to combat unlicensed copying and use of our digital content and intellectual property rights through a variety of techniques, preventing unauthorized use or infringement of our rights is inherently difficult. If our intellectual property becomes subject to piracy attacks, they may harm our business.

Additionally, we endeavor to protect the secrecy of our digital content, confidential information and trade secrets. If unauthorized disclosure of our trade secrets occurs, we could potentially lose trade secret protection. The loss of trade secret protection could make it easier for third parties to compete with our products by copying previously confidential features, which could adversely affect our revenue and operating margins. We also seek to protect our confidential information and trade secrets through the use of non-disclosure agreements. However there is a risk that our confidential information and trade secrets may be disclosed or published without our authorization, and in these situations it may be difficult and/or costly for us to enforce our rights.

Our business and operations could be adversely impacted in the event of a failure of our information technology infrastructure or adversely impacted by a successful cyber-attack.

We have experienced cyber security threats, threats to our information technology infrastructure and unauthorized attempts to gain access to our sensitive information. Prior cyber-attacks directed at us have not had a material impact on our financial results; however this may not continue to be the case in the future. Cyber security assessment analyses undertaken by us have identified and prioritized steps to enhance our cyber security safeguards. We are in the process of implementing these recommendations to enhance our threat detection and mitigation processes and procedures. Despite the implementation of these new safeguards, there can be no assurance that we will be adequately protecting our information or that we will not experience any future successful attacks. The threats we face vary from attacks common to most industries to more advanced and persistent, highly organized adversaries who target us because of the products and services we provide. If we are unable to protect sensitive information, our customers or governmental authorities could question the adequacy of our threat mitigation and detection processes and procedures. Due to the evolving nature of these security threats, however, the impact of any future incident cannot be predicted.

We may be required to expend significant additional resources to modify our cyber security protective measures, to investigate and remediate vulnerabilities or other exposures or to make required notifications, and we may be subject to litigation and financial losses. These costs related to cyber or other security threats or disruptions may not be fully insured or indemnified by other means. Occurrence of any of these events could adversely affect our internal operations, the services we provide to our customers, our future financial results, our reputation or our stock price; or such events could result in the loss of competitive advantages derived from our research and development efforts or other intellectual property or early obsolescence of our products and services.

If we cease to generate net cash flow from operations and if we are unable to raise additional capital, our financial condition could be adversely affected and we may not be able to execute our growth strategy.

We cannot assure you that we will generate cash from operations or other potential sources to fund future working capital needs and meet capital expenditure requirements.

If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring or incurring additional debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to obtain additional capital or refinance any indebtedness will depend on, among other things, the capital markets, our financial condition at such time and the terms and conditions of any such financing or indebtedness. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

From time-to-time we may seek access to additional external sources of capital to fund working capital needs, capital expenditures, acquisitions, and for other general corporate purposes. However, we cannot assure you that capital would be available from external sources such as bank credit facilities, debt or equity financings or other potential sources to fund any of those future needs.

If our ability to generate cash flow from operations and our existing cash becomes inadequate to meet our needs, our options for addressing such capital constraints include, but are not limited to, (i) obtaining additional debt financing or increasing the limit on our current revolving credit facility, (ii) accessing the public capital markets, or (iii) delaying certain of our existing development projects. If it became necessary to obtain additional debt financing it is likely that such alternatives in the current market environment would be on less favorable terms than we have historically obtained, which could have an adverse impact on our consolidated financial position, results of operations or cash flows.

The lack of additional capital resulting from any inability to generate cash flow from operations or to raise equity or debt financing could force us to substantially curtail or cease operations and would, therefore, have an adverse effect on our business and financial condition. Furthermore, we cannot assure you that any necessary funds, if available, would be available on attractive terms or that they would not have a significantly dilutive effect on our existing stockholders. If our financial condition worsens and we become unable to attract additional equity or debt financing or enter into other strategic transactions, we could become insolvent or be forced to declare bankruptcy and we would not be able to execute our growth strategy.

Global economic, political and social conditions and financial markets may harm our ability to do business, adversely affect our sales, costs, results of operations, and cash flow and negatively affect our stock price.

We are subject to global economic, political and social conditions that may cause customers to delay or reduce technology purchases due to economic downturns, volatility in fuel and other energy costs, difficulties in the financial services sector and credit markets, geopolitical uncertainties and other macroeconomic factors affecting spending behavior. We face risks that may arise from financial difficulties experienced by our suppliers, resellers or customers, including, among others, the following:

- Customers or partners to whom we sell our products and services may face financial difficulties or may become insolvent, which could lead to our inability to obtain payment of accounts receivable that those customers may owe;

- Customers and potential customers may experience deterioration of their businesses, which may result in the delay or cancellation of plans to purchase our products;

- Key suppliers of raw materials, finished products or components used in the products that we sell may face financial difficulties or may become insolvent, which could lead to disruption in the supply of printers, print materials or spare parts to our customers; and

- The inability of customers, including resellers, suppliers and contract manufacturers, to obtain credit financing to finance purchases of our products and raw materials used to build those products.

The variety of products that we sell could cause significant quarterly fluctuations in our gross profit margins, and those fluctuations in margins could cause fluctuations in operating income or loss and net income or loss.

We continuously work to expand and improve our products, materials and services offerings, the number of geographic areas in which we operate and the distribution channels we use to reach various target product applications and customers. This variety of products, applications and channels involves a range of gross profit margins that can cause substantial quarterly fluctuations in gross profit and gross profit margins depending upon the mix of product shipments from quarter to quarter. Additionally, the introduction of new products or services may further heighten quarterly fluctuations in gross profit and gross profit margins due to manufacturing ramp-up and start-up costs. We may experience significant quarterly fluctuations in gross profit margins or operating income or loss due to the impact of the mix of products, channels or geographic areas in which we sell our products from period to period. In some quarters, it is possible that our financial performance could be below expectations of analysts and investors. If so, the price of our common stock may be volatile or decline and our cost of capital may increase.

We derive a significant portion of our revenue from business conducted outside the U.S and are subject to the risks of doing business outside the U.S.

For the year ended 2015, 49.0% of our consolidated revenue was derived from customers in countries outside the U.S. There are many risks inherent in business activities outside the U.S. that, unless managed properly, may adversely affect our profitability, including our ability to collect amounts due from customers. While most of our operations outside the U.S. are conducted in highly developed countries, our operations could be adversely affected by, among others, the following:

- Unexpected changes in laws, regulations and policies of non-U.S. governments relating to investments and operations, as well as U.S. laws affecting the activities of U.S. companies abroad;
- Changes in regulatory requirements, including export controls, tariffs and embargoes, other trade restrictions, competition, corporate practices and data privacy concerns;
- Political policies, political or civil unrest, terrorism or epidemics and other similar outbreaks;
- Fluctuations in currency exchange rates;
- Limited protection for the enforcement of contract and intellectual property rights in some countries;
- Difficulties in staffing and managing foreign operations;
- Operating in countries with a higher incidence of corruption and fraudulent business practices;
- Potentially adverse changes in taxation; and
- Other factors, depending upon the specific country in which we conduct business.

These uncertainties may make it difficult for us and our customers to accurately plan future business activities and may lead our customers in certain countries to delay purchases of our products and services. More generally, these geopolitical, social and economic conditions could result in increased volatility in global financial markets and economies.

The consequences of terrorism or armed conflicts are unpredictable, and we may not be able to foresee events that could have an adverse effect on our market opportunities or our business. We are uninsured for losses and interruptions caused by terrorism, acts of war and similar events.

While the geographic areas outside the U.S. in which we operate are generally not considered to be highly inflationary, our foreign operations are sensitive to fluctuations in currency exchange rates arising from, among other things, certain intercompany transactions that are generally denominated, for example, in U.S. dollars rather than their respective functional currencies.

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

We depend on our supply chain for components and sub-assemblies used in our 3D printers and other products and for raw materials used in our print materials. If these relationships were to terminate or be disrupted, our business could be disrupted while we located alternative suppliers and our expenses may increase.

We  have outsourced the assembly of certain of our printers to third party suppliers, we purchase components and sub-assemblies for our printers from third-party suppliers, and we purchase raw materials that are used in our print materials, as well as certain of those print materials, from third-party suppliers.

While there are several potential suppliers of the components, parts and sub-assemblies for our products, we currently choose to use only one or a limited number of suppliers for several of these components, including our lasers, print materials and certain jetting components. Our reliance on a single or limited number of suppliers involves many risks, including, among others, the following:

· Potential shortages of some key components;

· Disruptions in the operations of these suppliers;

· Product performance shortfalls; and

· Reduced control over delivery schedules, assembly capabilities, quality and costs.

While we believe that we can obtain all the components necessary for our products from other manufacturers, we require any new supplier to become "qualified" pursuant to our internal procedures, which could involve evaluation processes of varying durations. We generally have our printers and other products assembled based on our internal forecasts and the supply of raw materials, assemblies, components and finished goods from third parties, which are subject to various lead times. In addition, at any time, certain suppliers may decide to discontinue production of an assembly, component or raw material that we use. Any unanticipated change in the sources of our supplies, or unanticipated supply limitations, could increase production or related costs and consequently reduce margins.

If our forecasts exceed actual orders, we may hold large inventories of slow-moving or unusable parts, which could have an adverse effect on our cash flow, profitability and results of operations. Inversely, we may lose orders if our forecast is low and we are unable to meet demand.

We have engaged selected design and manufacturing companies to assemble certain of our production printers. In carrying out these outsourcing activities, we face a number of risks, including, among others, the following:

· The risk that the parties that we retain to perform assembly activities may not perform in a satisfactory manner;

· The risk of disruption in the supply of printers or other products to our customers if such third parties either fail to perform in a satisfactory manner or are unable to supply us with the quantity of printers or other products that are needed to meet then current customer demand; and

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The risk of insolvency of these suppliers, as well as the risks that we face, as discussed above, in dealing with a limited number of suppliers.

The costs and effects of litigation, investigations or similar matters involving us or our subsidiaries, or adverse facts and developments related thereto, could materially affect our business, operating results and financial condition.

We may be involved from time to time in a variety of litigation, investigations, inquiries or similar matters arising out of our business, including those described in Note 22 to the Consolidated Financial Statements contained in Part II, Item 8 of this Annual Report on Form 10-K. The Company cannot predict the outcome of these or any other legal matters. In the future, we may need to record litigation reserves with respect to these matters because our insurance may not cover all claims that may be asserted against us. Should the ultimate judgments or settlements in any litigation or investigation significantly exceed our insurance coverage, they could have a material adverse effect on our business, financial condition and results of operations.

Our products and services may experience quality problems from time to time that can result in decreased sales and operating margin, product returns, product liability, warranty or other claims that could result in significant expenses and harm to our reputation.

We sell complex hardware and software products, materials and services that can contain undetected design and manufacturing defects or errors when first introduced or as enhancements are released that, despite testing, are not discovered until after the product has been installed and used by customers. Sophisticated software and applications, such as those sold by us, may contain “bugs” that can unexpectedly interfere with the software’s intended operation. Defects may also occur in components and products we purchase from third parties. There can be no assurance we will be able to detect and fix all defects in the hardware, software, materials and services we sell. Failure to do so could result in lost revenue, delayed market acceptance of those products and services, claims from distributors, end-users or others, increased end-user service and support costs, and significant warranty claims and other expenses to correct the defects, diversion of management time and attention and harm to our reputation.

Our operations could suffer if we are unable to attract and retain key management or other key employees.

Our success depends upon the continued service and performance of our senior management and other key personnel. Our senior executive team is critical to the management of our business and operations, as well as to the development of our strategy. The loss of the services of one or more members of our senior executive team could delay or prevent the successful implementation of our growth strategy, or our commercialization of new applications for our systems or other products, or could otherwise adversely affect our ability to manage our company effectively and carry out our business plan. Members of our senior management team may resign at any time. High demand exists for senior management and other key personnel (including scientific, technical and sales personnel) in the 3D printing industry, and there can be no assurance that we will be able to retain such personnel. We experience intense competition for qualified personnel. While we intend to continue to provide competitive compensation packages to attract and retain key personnel, some of our competitors for these employees have greater resources and more experience, making it difficult for us to compete successfully for key personnel. If we cannot attract and retain sufficiently qualified technical employees for our research and development and manufacturing operations, we may be unable to achieve the synergies expected from mergers and acquisitions that we may effect from time to time, or to develop and commercialize new products or new applications for existing products. Furthermore, possible shortages of key personnel, including engineers, in the regions surrounding our facilities could require us to pay more to hire and retain key personnel, thereby increasing our costs.

We may be subject to product liability claims, which could result in material expense, diversion of management time and attention and damage to our business reputation.

The sale and support of our products entails the risk of product liability claims. We may become subject from time to time to product liability claims that could lead to significant expenses. The risk may be heightened when we provide products into certain markets, such as health-care, aerospace and automotive industries.

This risk of product liability claims may also be greater due to the use of certain hazardous chemicals used in the production of certain of our products, including irritants, harmful chemicals and chemicals dangerous to the environment. We may also be subject to claims that our printers have been, or may be used to, create parts that are not in compliance with legal requirements or that infringes on the intellectual property rights of others.

We attempt to include provisions in our agreements with customers that are designed to limit our exposure to potential liability for damages arising from defects or errors in our products and other issues. However, the nature and extent of these limitations vary from customer to customer. Their effect is subject to a variety of legal limitations and it is possible that these limitations may not be effective as a result of unfavorable judicial decisions or laws enacted in the future.

Any claim brought against us, regardless of its merit, could result in significant expense, diversion of management time and attention, damage to our business reputation and failure to retain existing customers or to attract new customers. Although we maintain product liability insurance, such insurance is subject to deductibles and there is no guarantee that such insurance will be available or adequate to protect against all such claims. Costs or payments made in connection with product liability claims could adversely affect our financial condition and results of operations.

We rely on our management information systems for inventory management, distribution, and other key functions. If our information systems fail to adequately perform these functions, or if we experience an interruption in their operation, our business and operating results could be adversely affected.

The efficient operation of our business is dependent on our management information systems. We rely on our management information systems to, among other things, effectively manage our accounting and financial functions, including maintaining our internal controls; to manage our manufacturing and supply chain processes; and to maintain our research and development data. The failure of our management information systems to perform properly could disrupt our business and product development, which may result in decreased sales, increased overhead costs, excess or obsolete inventory, and product shortages, causing our business and operating results to suffer. Although we take steps to secure our management information systems, including our computer systems, intranet and Internet sites, email and other telecommunications and data networks, the security measures we have implemented may not be effective and our systems may be vulnerable to theft, loss, damage and interruption from a number of potential sources and events, including unauthorized access or security breaches, natural or man-made disasters, cyber-attacks, computer viruses, power loss, or other disruptive events. Our reputation and financial condition could be adversely affected if, as a result of a significant cyber event or otherwise, our operations are disrupted or shut down; our confidential, proprietary information is stolen or disclosed; we incur costs or are required to pay fines in connection with stolen customer, employee, or other confidential information; we must dedicate significant resources to system repairs or increase cyber security protection; or we otherwise incur significant litigation or other costs.

We are subject to U.S. and other anti-corruption laws, trade controls, economic sanctions, and similar laws and regulations. Our failure to comply with these laws and regulations could subject us to civil, criminal and administrative penalties and harm our reputation.

Doing business on a worldwide basis requires us to comply with the laws and regulations of the U.S. government and various foreign jurisdictions. These laws and regulations place restrictions on our operations, trade practices, partners and investments. In particular, our operations are subject to U.S. and foreign anti-corruption and trade control laws and regulations, such as the Foreign Corrupt Practices Act (“FCPA”) and United Kingdom Bribery Act (the “Bribery Act”), export controls and economic sanctions programs, including those administered by the U.S. Treasury Department’s Office of Foreign Assets Control (“OFAC”), the State Department's Directorate of Defense Trade Controls (“DDTC”), and the Bureau of Industry and Security (“BIS”). As a result of doing business in foreign countries and with foreign customers, we are exposed to a heightened risk of violating anti-corruption and trade control laws and sanctions regulations.

As part of our business, we may deal with state-owned business enterprises, the employees of which are considered foreign officials for purposes of the FCPA’s prohibition on providing anything of value to foreign officials for the purposes of obtaining or retaining business or securing any improper business advantage. In addition, the provisions of the Bribery Act extend beyond bribery of foreign public officials and also apply to transactions with individuals that a government does not employ. Some of the international locations in which we operate lack a developed legal system and have higher than normal levels of corruption. Our continued expansion outside the U.S., including in Brazil, China, India and developing countries, and our development of new partnerships and joint venture relationships worldwide, could increase the risk of FCPA, OFAC or Bribery Act violations in the future.

As an exporter, we must comply with various laws and regulations relating to the export of products and technology from the U.S. and other countries having jurisdiction over our operations. In the U.S., these laws include the International Traffic in Arms Regulations ("ITAR") administered by the DDTC, the Export Administration Regulations ("EAR") administered by the BIS, and trade sanctions against embargoed countries and destinations administered by OFAC. The EAR governs products, parts, technology and software which present military or weapons proliferation concerns, so-called "dual use" items, and ITAR governs military items listed on the United States Munitions List. Prior to shipping certain items, we must obtain an export license or verify that license exemptions are available. Any failures to comply with these laws and regulations could result in fines, adverse publicity and restrictions on our ability to export our products, and repeat failures could carry more significant penalties.

Violations of anti-corruption and trade control laws and sanctions regulations are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts and revocations or restrictions of licenses, as well as criminal fines and imprisonment. We have established policies and procedures designed to assist our compliance with applicable U.S. and international anti-corruption and trade control laws and regulations, including the FCPA, the Bribery Act and trade controls and sanctions programs administered by OFAC, the DDTC and BIS, and have trained our employees to comply with these laws and regulations. However, there can be no assurance that all of our employees, consultants, agents or other associated persons will not take actions in violation of our policies and these laws and regulations, and that our policies and procedures will effectively prevent us from violating these regulations in every transaction in which we may engage or provide a defense to any alleged violation. In particular, we may be held liable for the actions that our joint venture partners take inside or outside of the United States, even though our partners may not be subject to these laws. Such a violation, even if our policies prohibit it, could have an adverse effect on our reputation, business, financial condition and results of operations. In addition, various state and municipal governments, universities and other investors maintain prohibitions or restrictions on investments in companies that do business with sanctioned countries, persons and entities, which could adversely affect our reputation, business, financial condition and results of operations.

Changes in, or interpretation of, tax rules and regulations may impact our effective tax rate and future profitability.

We are a U.S. based, multinational company subject to taxation in multiple U.S. and foreign tax jurisdictions. Our future effective tax rates could be adversely affected by changes in statutory tax rates or interpretation of tax rules and regulations in jurisdictions in which we do business, changes in the amount of revenue or earnings in the countries with varying statutory tax rates, or by changes in the valuation of deferred tax assets and liabilities.

In addition, we are subject to audits and examinations of previously filed income tax returns by the Internal Revenue Service (“IRS”) and other domestic and foreign tax authorities. We regularly assess the potential impact of such examinations to determine the adequacy of our provision for income taxes and have reserved for potential adjustments that we expect may result from the current examinations. We believe such estimates to be reasonable; however, there is no assurance that the final determination of any examination will not have an adverse effect on our operating results and financial position.

Our business involves the use of hazardous materials, and we must comply with environmental, health and safety laws and regulations, which can be expensive and restrict how we do business.

Our business involves the blending, controlled storage, use and disposal of hazardous materials. We and our suppliers are subject to federal, state and local as well as foreign laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. Although we believe that the safety procedures utilized by us for handling and disposing of these materials comply with the standards prescribed by these laws and regulations, we cannot eliminate the risk of accidental contamination or injury from these materials. In the event of an accident, state, federal or foreign authorities may curtail the use of these materials and interrupt our business operations. If we are subject to any liability as a result of activities involving hazardous materials, our business and financial condition may be adversely affected and our reputation may be harmed.

Regulations related to conflict-free minerals may cause us to incur additional expenses and may create challenges with our customers.

The Dodd-Frank Wall Street Reform and Consumer Protection Act contains provisions to improve transparency and accountability regarding the use of “conflict” minerals mined from the Democratic Republic of Congo (the “DRC”) and adjoining countries. The SEC has established annual disclosure and reporting requirements for those companies who use “conflict” minerals sourced from the DRC and adjoining countries in their products. These requirements could adversely affect the sourcing, supply and pricing of materials used in our products. As there may be only a limited number of suppliers offering conflict-free minerals, we cannot ensure that we will be able to obtain these conflict-free minerals in sufficient quantities or at competitive prices. Compliance with these requirements may also increase our costs, including costs that may be incurred in conducting due diligence procedures to determine the sources of certain minerals used in our products and other potential changes to products, processes or sources of supply as a consequence of such verification activities. In addition, we may face challenges with our customers if we are unable to sufficiently verify the origins of the minerals used in our products.

Our common stock price has been and may continue to be volatile.

The market price of our common stock has experienced, and may continue to experience, considerable volatility. Between January 1, 2014 and December 31, 2015, the trading price of our common stock has ranged from a low of $8.44 per share to a high of $97.28 per share. Numerous factors could have a significant effect on the price of our common stock, including those described or referred to in this “Risk Factors” section of this Form 10-K, as well as, among other things:

· Our perceived value in the securities markets;

· Overall trends in the stock market;

· Announcements of fluctuations in our operating results or the operating results of one or more of our competitors;

· The impact of changes in our results of operations, our financial condition or our prospects;

· Future sales of our common stock or other securities (including any shares issued in connection with earn-out obligations for any past or future acquisition);

· Market conditions for providers of products and services such as ours;

· Executive level management uncertainty or change;

· Changes in recommendations or earnings estimates by securities analysts; and

· Announcements of acquisitions by us or one of our competitors.

The number of shares of common stock issuable in a stock offering, the issuance of restricted stock awards or the issuance of shares in connection with certain acquisitions or the conversion of the notes could dilute the ownership interest of existing stockholders and may affect the market price for our common stock.

We may issue additional securities, from time to time, as necessary to provide flexibility to execute our growth strategy.

Our Certificate of Incorporation, as amended, authorizes our issuance of up to a total 220.0 million shares of common stock, of which 113.1 million shares have been issued or are otherwise currently reserved for issuance. Future issuances could have the effect of diluting our earnings per share as well as our existing stockholders' individual ownership percentages and could lead to volatility in our common stock price.

Additionally, subject to the limitations of our Certificate of Incorporation and applicable law, we are not restricted from issuing additional common stock, including securities that are convertible into or exchangeable for, or that represent the right to receive, common stock. The issuance of additional shares of our common stock in connection with future acquisitions or other issuances of our common stock or convertible securities, including outstanding options, may dilute the ownership interest of our common stockholders.

Sales of a substantial number of shares of our common stock or other equity-related securities in the public market could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity or equity-linked securities. We cannot predict the effect that future sales of our common stock or other equity-related securities would have on the market price of our common stock.

Our Board of Directors is authorized to issue up to 5 million shares of preferred stock.

The Board of Directors is authorized to issue up to 5 million shares of preferred stock, none of which is currently issued or outstanding. The Board of Directors is authorized to issue these shares of preferred stock in one or more classes or series without further action of the stockholders and in that regard to determine the issue price, rights, preferences and privileges of any such class or series of preferred stock generally without any further vote or action by the stockholders. The rights of the holders of any outstanding series of preferred stock may adversely affect the rights of holders of common stock.

Our ability to issue preferred stock gives us flexibility concerning possible acquisitions and financings, but it could make it more difficult for a third party to acquire a majority of our outstanding common stock. In addition, any preferred stock that is issued may have other rights, including dividend rights, liquidation preferences and other economic rights, senior to the common stock, which could have an adverse effect on the market value of our common stock.

Certain provisions of Delaware law contain anti-takeover provisions that may make it more difficult to effect a change in our control.

Certain provisions of the Delaware General Corporation Law could delay or prevent an acquisition or change in control or the replacement of our incumbent directors and management, even if doing so might be beneficial to our stockholders by providing them with the opportunity to sell their shares, possibly at a premium over the then market price of our common stock. One of these Delaware laws prohibits us from engaging in a business combination with any interested stockholder (as defined in the statute) for a period of three years from the date that the person became an interested stockholder, unless certain conditions are met.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We occupy an 80,000 square foot headquarters and research and development facility in Rock Hill, South Carolina, which we lease pursuant to a lease agreement with Lex Rock Hill, LP. After its initial term ending August 31, 2021, the lease provides us with the option to renew the lease for two additional five-year terms. The lease is a triple net lease and provides for the payment of base rent of approximately $0.7 million annually from 2015 through 2020, with a rent escalation in 2016 through 2021. Under the terms of the lease, we are obligated to pay all taxes, insurance, utilities and other operating costs with respect to the leased premises.

We own our Lawrenceburg, Tennessee and Tulsa, Oklahoma production facilities and lease various other facilities throughout the world. The table below summarizes our facilities greater than 10,000 square feet per location.

| Location | Square Feet | Primary Function |
|---|---|---|
| Rock Hill, South Carolina | 200,000 | Manufacturing and warehouse |
| Wilsonville, Oregon | 88,300 | Research and development |
| Rock Hill, South Carolina | 80,000 | Headquarters, research and development and sales |
| Littleton, Colorado | 70,000 | Production and research and development and sales |
| Andover, Massachusetts | 57,600 | Manufacturing and research and development |
| Tulsa, Oklahoma | 44,000 | On-demand parts services |
| Sao Paulo, Brazil | 37,000 | On-demand parts services and sales |
| Lawrenceburg, Tennessee | 36,000 | On-demand parts services |
| Riom, France | 33,300 | Manufacturing and research and development and sales |
| Turin, Italy | 32,300 | On-demand parts services |
| Seoul, Korea | 30,900 | Research and development and sales |
| Barberton, Ohio | 30,500 | Manufacturing and research and development and sales |
| Seattle, Washington | 29,400 | On-demand parts services |
| Leuven, Belgium | 28,400 | On-demand parts services and research and development |
| Herndon, Virginia | 27,000 | Manufacturing and research and development and sales |
| Tel Aviv, Israel | 26,000 | Manufacturing, warehouse, research and development and sales |
| Burbank, California | 23,000 | On-demand parts services and sales |
| Moorpark, California | 22,500 | Manufacturing and research and development and sales |
| Golden, Colorado | 22,400 | Production and research and development and sales |
| High Wycombe, United Kingdom | 22,300 | On-demand parts services |
| Cary, North Carolina | 21,800 | Research and development and sales |
| Le Mans, France | 21,200 | On-demand parts services |
| Shanghai, China | 21,000 | On-demand parts services and sales |
| Budel, Netherlands | 19,900 | On-demand parts services |
| Langhorne, Pennsylvania | 18,800 | On-demand parts services |
| Wuxi, China | 18,300 | On-demand parts services and sales |
| Tel Aviv, Israel | 16,600 | Research and development and sales |

| | | |
|---|---|---|
| Marly, Switzerland | 15,300 | Production and research and development and sales |
| Hemel Hempstead, United Kingdom | 12,400 | General and corporate |
| Valencia, California | 11,000 | Research and development |
| Atlanta, Georgia | 10,900 | On-demand parts services |

## Item 3. Legal Proceedings

For information relating to legal proceedings, see Note 22 to the Consolidated Financial Statements.

## Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Our common stock is listed on the New York Stock Exchange ("NYSE") under the trading symbol "DDD." The following table sets forth, for the periods indicated, the range of high and low prices of our common stock, $0.001 par value, as quoted on the NYSE.

| Year | Period | High | Low |
|---|---|---|---|
| 2014 | Q1 | $ 97.28 | $ 54.63 |
| | Q2 | 61.03 | 43.35 |
| | Q3 | 69.56 | 46.05 |
| | Q4 | 46.15 | 27.46 |
| 2015 | Q1 | $ 33.97 | $ 26.29 |
| | Q2 | 32.88 | 19.43 |
| | Q3 | 19.68 | 10.85 |
| | Q4 | 13.93 | 8.44 |

As of March 7, 2016, our outstanding common stock was held by approximately 967 stockholders of record. This figure does not reflect the beneficial ownership of shares held in the nominee name.

Dividends

We do not currently pay, and have not paid, any dividends on our common stock, and we currently intend to retain any future earnings for use in our business. Any future determination as to the declaration of dividends on our common stock will be made at the discretion of the Board of Directors and will depend on our earnings, operating and financial condition, capital requirements and other factors deemed relevant by the Board of Directors, including the applicable requirements of the Delaware General Corporation Law, which provides that dividends are payable only out of surplus or current net profits.

The payment of dividends on our common stock may be restricted by the provisions of credit agreements or other financing documents that we may enter into or the terms of securities that we may issue from time to time. Currently, no such agreements or documents limit our declaration of dividends or payments of dividends, other than our $150 million five-year revolving, unsecured credit facility with PNC, which limits the amount of cash dividends that we may pay in any one fiscal year to $30.0 million.

Issuance of Unregistered Securities and Issuer Purchases of Equity Securities

We did not repurchase any of our equity securities during the year ended 2015, except for unvested restricted stock awards repurchased or forfeited pursuant to our 2004 and 2015 Incentive Stock Plans. See Note 14 to the Consolidated Financial Statements. For information regarding the securities authorized for issuance under our equity compensation plans, see “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters – Equity Compensation Plans” under Part III, Item 12 of this Form 10-K. Also see Note 14 to the Consolidated Financial Statements.

Issuer purchases of equity securities

| | (a) Total number of shares (or units) purchased | | (b) Average price paid per share (or unit) | | (c) Total number of shares (or units) purchased as part of publically announced plans or programs | (d) Maximum number (or approximate dollar value) of shares (or units) that may yet be purchased under the plans or programs |
|---|---|---|---|---|---|---|
| October 1, 2015 - October 31, 2015 | — | | $ — | | — | $ — |
| November 1, 2015 - November 30, 2015 | 20,123 | (a) | 9.01 | (a) | — | — |
| December 1, 2015 - December 31, 2015 | — | | — | | — | — |
| Total | 20,123 | | $ 9.01 | | — | $ — |

(a) Reflects shares of common stock surrendered to the Company for payment of tax withholding obligations in connection with the vesting of restricted stock. The average price paid reflects the average market value of shares withheld for tax purposes.

Stock Performance Graph

The graph below shows, for the five years ended December 31, 2015, the cumulative total return on an investment of $100 assumed to have been made on December 31, 2010 in our common stock. For purposes of the graph, cumulative total return assumes the reinvestment of all dividends. The graph compares such return with those of comparable investments assumed to have been made on the same date in (a) the NYSE Composite Index, (b) the S&P 500 Information Technology Index, and (c) the S&P Mid-Cap 400 Index, which are published market indices with which we are sometimes compared.

Although total return for the assumed investment assumes the reinvestment of all dividends on December 31 of the year in which such dividends were paid, we paid no cash dividends on our common stock during the periods presented.

Our common stock is listed on the NYSE (trading symbol: DDD).

COMPARISON OF 5-YEAR CUMULATIVE TOTAL RETURN*

* $100 invested on 12/31/10 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

| | 12/10 | 12/11 | 12/12 | 12/13 | 12/14 | 12/15 |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 3D Systems Corporation | $ 100 | $ 91 | $ 339 | $ 885 | $ 313 | $ 83 |
| NYSE Composite Index | 100 | 96 | 112 | 142 | 151 | 145 |
| S&P 500 Information Technology Index | 100 | 102 | 118 | 151 | 181 | 192 |
| S&P 500 Mid-Cap 400 Index | 100 | 98 | 116 | 155 | 170 | 166 |

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Item 6. Selected Financial Data

The selected consolidated financial data set forth below for the five years ended December 31, 2015 have been derived from our historical Consolidated Financial Statements. You should read this information together with Management's Discussion and Analysis of Financial Condition and Results of Operations, the notes to the selected consolidated financial data and the Consolidated Financial Statements and the notes thereto for December 31, 2015 and prior years included in this Form 10-K.

| | Year ended December 31, | | | | |
|---|---|---|---|---|---|
| (in thousands, except per share amounts) | 2015 | 2014 | 2013 | 2012 | 2011 |
| Consolidated Statement of Operations and Other Comprehensive Income (Loss) Data: | | | | | |
| Consolidated Revenue: | | | | | |
| Products | $ 257,379 | $ 283,339 | $ 227,627 | $ 126,798 | $ 66,665 |
| Materials | 150,740 | 158,859 | 128,405 | 103,182 | 70,641 |
| Services | 258,044 | 211,454 | 157,368 | 123,653 | 93,117 |
| Total | 666,163 | 653,652 | 513,400 | 353,633 | 230,423 |
| Gross profit | 291,809 | 317,434 | 267,594 | 181,196 | 109,028 |
| Impairment of goodwill and other intangible assets (a) | 537,179 | — | — | — | — |
| Income (loss) from operations | (641,924) | 26,315 | 80,861 | 60,571 | 34,902 |
| Net income (loss) (b) | (663,925) | 11,946 | 44,119 | 38,941 | 35,420 |
| Net income (loss) available to common stockholders | (655,492) | 11,637 | 44,107 | 38,941 | 35,420 |
| Net income (loss) available to common stockholders per share: | | | | | |
| Basic and diluted | $ (5.85) | $ 0.11 | $ 0.45 | $ 0.48 | $ 0.47 |
| | | | | | |
| Consolidated Balance Sheet Data: | | | | | |
| Working capital | $ 286,996 | $ 432,864 | $ 416,399 | $ 212,285 | $ 202,357 |
| Total assets (a) (b) | 893,275 | 1,530,310 | 1,097,856 | 677,442 | 462,974 |
| Current portion of debt and capitalized lease obligations | 529 | 684 | 187 | 174 | 163 |
| Long term debt and capitalized lease obligations, less current portion (c) | 8,187 | 8,905 | 18,693 | 87,974 | 138,716 |
| Total stockholders' equity | 654,646 | 1,294,125 | 933,792 | 480,333 | 254,788 |
| | | | | | |
| Other Data: | | | | | |
| Depreciation and amortization | $ 83,069 | $ 55,188 | $ 30,444 | $ 21,229 | $ 11,093 |
| Interest expense | 2,011 | 1,227 | 3,425 | 12,468 | 2,090 |
| Capital expenditures (d) | 22,399 | 22,727 | 6,972 | 3,224 | 2,870 |

[a] For further discussion of goodwill and other intangible assets impairment, see Notes 2, 6 and 7 to the Consolidated Financial Statements.

[b] In 2015, based upon our recent results of operations and expectation of profitability in future years, we concluded that it is not more likely than not that our deferred tax assets will be realized in certain jurisdictions, including the US and certain foreign jurisdictions, and as such, we recorded a $107.3 million valuation allowance against our deferred tax assets. See Note 20 to the Consolidated Financial Statements.

[c] In 2011, we issued $152.0 million of 5.50% senior convertible notes. All outstanding notes were converted in the third quarter of 2014.

[d] Excludes capital lease additions.

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

The following discussion and analysis should be read together with the selected consolidated financial data and our Consolidated Financial Statements and notes thereto set forth in this Form 10-K. Certain statements contained in this discussion may constitute forward looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements involve a number of risks, uncertainties and other factors that could cause actual results to differ materially from those reflected in any forward-looking statements, as discussed more fully in this Form 10-K. See "Forward-Looking Statements" and "Risk Factors" in Part I, Item 1A.

The forward-looking information set forth in this Form 10-K is provided as of the date of this filing, and, except as required by law, we undertake no duty to update that information.

Overview

We provide comprehensive 3D products and services, including 3D printers, print materials, on-demand parts services and digital design and manufacturing tools. Our ecosystem supports advanced applications from the product design shop to the factory floor to the operating room. Our precision healthcare capabilities include simulation, Virtual Surgical Planning and printing of medical and dental devices as well as patient-specific surgical instruments. We enable professionals and companies to optimize their designs, transform their workflows, bring innovative products to market and drive new business models.

Growth strategy

We are pursuing a growth strategy that focuses on strategic initiatives related to profitable growth opportunities in professional and industrial applications. We anticipate the ongoing expansion of 3D printing from the design and prototyping lab to the factory floor, and as the originator and a shaper of future 3D solutions, we plan to continue to invest in advanced developments to enhance and accelerate manufacturing applications, including the development of systems and materials which we believe are critical to driving growth.

We have launched new 3D printers with increased speeds and capabilities and larger build areas as well as introduced print materials with improved strength, temperature, durability and elasticity, developments that we believe are well suited for advanced and demanding professional and industrial applications, including manufacturing of end-use parts. We have also strengthened our software portfolio to help enhance our customers' workflows from design to manufacturing.

We view direct metal 3D printing as a significant growth opportunity and continue to strengthen our capabilities and product offering in metals. We have a team that is focused on advancing our direct metal printing products and services. In addition to our existing portfolio of direct metal printers, we recently launched the new ProX DMP 320 system, designed for high precision, high throughput direct metal printing, with models that are optimized for printing with titanium, stainless steel or nickel super alloy.

We believe healthcare applications will also help drive our growth and profitability. We offer a comprehensive range of products and services that provide solutions from the training room to the operating room. We continue to expand our healthcare focused operations in the U.S. and Europe in support of growth in precision healthcare applications.

We expect to be able to support growth by prioritizing our resources to focus on professional and industrial opportunities and leveraging our technology, domain expertise and strong customer and partner relationships. As with any growth strategy, there can be no assurance that we will succeed in accomplishing our strategic initiatives.

Recent Developments

In December 2015, we announced the end-of-life of the Cube, our $999 consumer 3D printer. The end-of-life of the Cube and related shift away from consumer products reflects management's plans to focus our resources and strategic initiatives on near-term opportunities and profitability.

In January 2016, we launched the ProX DMP 320 printer, designed for high precision, high throughput direct metal printing, with models that are optimized for printing with titanium, stainless steel or nickel super alloy.

Summary of 2015 Financial Results

We earn revenues from the sale of products, materials and services. Total consolidated revenue for the year ended December 31, 2015 increased by 1.9%, or $12.5 million, to $666.2 million, compared to $653.7 million for the year ended December 31, 2014 and $513.4 million for the year ended December 31, 2013. These results primarily reflect an increase in services revenue, partially offset by lower sales of 3D printers and materials and an unfavorable impact of foreign currency translation, as further discussed below.

As of December 31, 2015 and 2014, our backlog was $38.4 million and $46.5 million, respectively. The decrease reflects our shift away from consumer and retail products and processing of printer orders. Production and delivery of our printers is generally not characterized by long lead times; backlog is more dependent on timing of customers' requested deliveries. In addition, on-demand parts services lead time and backlog depends on whether orders are for rapid prototyping or longer-range production runs. As of December 31, 2015 and 2014, backlog included $13.0 million and $13.4 million of on-demand parts services orders, respectively.

We calculate organically generated revenue by comparing this year's total revenue for the period, excluding the revenue recognized from all acquired businesses that we have owned for less than 12 months, to last year's total revenue for the period. Once we have owned a business for one year, the revenue is included in organically generated revenue. For the quarter and full year ended December 31, 2015, organically generated revenue decreased 11.1% and 11.7%, respectively, compared to an increase in organically generated revenue of 7.2% and 13.3%, respectively, for the quarter and full year ended December 31, 2014. The decrease in organic revenue in 2015 primarily reflects the lower sales of 3D printers and materials as well as the unfavorable impact of foreign currency translation.

Healthcare revenue includes sales of products, materials, and services for health-related applications, including simulation, training and planning, and printing of surgical instruments and medical and dental devices. For the quarter ended December 31, 2015, healthcare revenue decreased by 2.2%, or $1.0 million, to $41.8 million, and made up 22.8% of total revenue, compared to $42.8 million, or 22.8% of total revenue for the quarter ended December 31, 2014. For the full year ended December 31, 2015, healthcare revenue increased by 9.1%, or $11.8 million, to $141.1 million, and made up 21.2% of total revenue, compared to $129.3 million, or 19.8% of total revenue, for the full year ended December 31, 2014. Healthcare related revenue growth for the year was driven by our broader range of products and services that resulted from acquisitions and expansion by customers utilizing 3D printing in the manufacturing of medical and dental parts.

Consumer revenue includes sales of our desktop Cube® series 3D printers and their related print materials, Sense 3D scanners and other products and services related to consumer products and retail channels. For the quarter ended December 31, 2015, consumer revenue decreased by 26.2%, or $3.9 million, to $11.1 million, and made up 6.0% of total revenue, compared to $15.0 million, or 8.0% of total revenue for the quarter ended December 31, 2014. For the full year ended December 31, 2015, consumer revenue increased 6.0%, or $2.7 million, to $46.5 million, and made up 7.0% of total revenue, compared to $43.8 million, or 6.7% of total revenue, for the full year ended December 31,

2014. In December 2015, we announced the end-of-life of our $999 consumer 3D printer, Cube, and our shift away from consumer and retail products and services.

Gross profit for the year ended December 31, 2015 decreased by 8.1%, or $25.6 million, to $291.8 million, compared to $317.4 million for the year ended December 31, 2014, reflecting a decrease in products and materials revenue, coupled with cash and non-cash charges of $27.4 million related to the end-of-life of the Cube 3D printer and our shift away from consumer products.

Gross profit margin for the years ended December 31, 2015 and 2014 was 43.8%, and 48.6%, respectively, reflecting a decrease in products margins, which was driven by cash and non-cash charges related to the end-of-life of the Cube 3D printer and our shift away from consumer products, which more than offset higher materials and services margins.

Operating expenses for the year ended December 31, 2015 increased by 220.7%, or $642.6 million, to $933.7 million, compared to $291.1 million for the year ended December 31, 2014. These results reflect goodwill and other intangible asset impairment charges of $443.7 million and $93.5 million, respectively, arising from our annual impairment testing process, which uses a cash flow model that factors in business and market conditions, including slower sustained growth of products and services revenue. See Note 2 to the Consolidated Financial Statements for further discussion of our annual goodwill impairment testing. Excluding the goodwill and other intangible assets impairment charges, operating expenses increased $105.4 million on higher selling, general and administrative expenses primarily due to costs related to acquisitions, including amortization expense and higher compensation and travel expenses, in addition to a $17.4 million increase in research and development expenses related to our portfolio expansion and development of new products.

Our operating loss for the year ended December 31, 2015 was $641.9 million, compared to operating income of $26.3 million for the year ended December 31, 2014, reflecting goodwill and other intangible assets impairment charges, higher operating expenses as described in more detail below, and lower gross profit.

For the year ended December 31, 2015, we used $3.1 million of cash in operations, which is described in further detail below. We used $120.9 million to fund our strategic investing activities for year ended December 31, 2015, including acquisition costs and capital expenditures related to infrastructure and on-demand parts expansion. Financing activities for the year ended December 31, 2015 used $2.2 million of cash, described in further detail below. In total, our unrestricted cash balance at December 31, 2015 and 2014, was $155.6 million and $284.9 million, respectively.

Results of Operations for 2015, 2014 and 2013

Revenue by class of product and service

2015 compared to 2014

Table 1 below sets forth revenue and percentage of revenue by class of product and service for 2015 compared to 2014.

Table 1