ARC DOCUMENT SOLUTIONS, INC.
Form 10-K
March 06, 2019

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

(Mark One)
ý ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Fiscal Year Ended December 31, 2018
or
¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission File Number: 001-32407

ARC DOCUMENT SOLUTIONS, INC.
(Exact name of Registrant as specified in its Charter)

Delaware	20-1700361
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

12657 Alcosta Blvd, Suite 200
San Ramon, California 94583
(925) 949-5100
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

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	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 ý
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 ý
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 ý 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 ý No ¨

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

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

Large accelerated filer ¨ Accelerated filer ý Non-accelerated filer ¨ Smaller reporting company ý

Emerging growth company ¨

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

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

Based on the closing price of $1.77 of the registrant's Common Stock on the New York Stock Exchange on June 29, 2018 (the last business day of the registrant's most recently completed second fiscal quarter), the aggregate market value of the voting common equity held by non-affiliates of the registrant on that date was approximately $70,492,599.

As of February 21, 2019, there were 46,268,054 shares of the Registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive Proxy Statement on Form 14A for its May 1, 2019 Annual Meeting of Stockholders are incorporated by reference in this Annual Report on Form 10-K in Part III.

ARC DOCUMENT SOLUTIONS, INC.
ANNUAL REPORT ON FORM 10-K
For the Fiscal Year Ended December 31, 2018
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ARC DOCUMENT SOLUTIONS, INC.

2018 ANNUAL REPORT ON FORM 10-K

In this Annual Report on Form 10-K, "ARC Document Solutions," "ARC," "the Company," "we," "us," and "our" refer to AR Document Solutions, Inc., a Delaware corporation, and its consolidated subsidiaries, unless the context otherwise dictates.

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. When used in this Annual Report on Form 10-K, the words "believe," "expect," "anticipate," "estimate," "intend," "plan," "project," "target," "likely," "will," "would," "could," and variations of such words and similar ex as they relate to our management or to the Company are intended to identify forward-looking statements. These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those contemplated herein. We have described in Part I, Item 1A-"Risk Factors" a number of factors that could cause our actual results to differ from our projections or estimates. These factors and other risk factors described in this report are not necessarily all of the important factors that could cause actual results to differ materially from those expressed in any of our forward-looking statements. Other unknown or unpredictable factors also could harm our results. Consequently, there can be no assurance that the actual results or developments anticipated by us will be realized or, even if substantially realized, that they will have the expected consequences to, or effects on, us. Given these uncertainties, you are cautioned not to place undue reliance on such forward-looking statements.

Except where otherwise indicated, the statements made in this Annual Report on Form 10-K are made as of the date we filed this report with the Securities and Exchange Commission and should not be relied upon as of any subsequent date. All future written and verbal forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We undertake no obligation, and specifically disclaim any obligation, to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. You should, however, consult further disclosures we make in future filings of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, and any amendments thereto, as well as our proxy statements.

TRADEMARKS AND TRADE NAMES

We own or have rights to a number of trademarks, service marks, and trade names that we use in conjunction with the operation of our business, including the name and design mark "ARC Document Solutions," "ABACUS," "BUILDING INTELLIGENCE," "DATAPRINT," "METAPRINT" "PlanWell," "PlanWell PDS," "Riot Creative Imaging," "SKYSITE," ar various design marks associated therewith. In addition, we own or have rights to various trademarks, service marks, and trade names that we use regionally in conjunction with our operations. This report also includes trademarks, service marks and trade names of other companies.

PART I

Item 1. Business

Our Company

ARC Document Solutions, Inc. (“ARC Document Solutions,” “ARC,” “we,” “us,” or “our”) is a leading document solutions provider to design, engineering, construction, and facilities management professionals, while also providing document solutions to businesses of all types.

Our customers need us to manage the scale, complexity and workflow of their documents. We help them reduce their costs and increase their efficiency by improving their access and control over documents, and we offer a wide variety of ways to access, distribute, collaborate on, and store documents.

Our offerings include:

Managed Print Services (“MPS”) - An onsite service where we place, manage, and optimize print and imaging equipment in our customers' offices, job sites, and other facilities. MPS relieves our customers of the burden of owning and managing print devices and print networks, and shifts their costs to a “per-use” basis typically billed in a single consolidated invoice.

Offsite Services - We operate 178 offsite service centers in major metropolitan markets in the U.S. and internationally which provide local customers with high-volume, project-related printing of construction documents, offer our MPS customers flexibility and overflow capacity during peak workloads, and support our customers’ scanning needs in archive and information management services.

Archive and Information Management (“AIM”) -We store our customers' information and intellectual property in a cloud-based and searchable digital archive. We scan existing paper documents or import digital documents, organize them, and store them in our proprietary content management software.

Specialized Color Printing - Our production centers offer color printing, finishing, and assembly of graphic materials for regional and national retailers, franchises, marketing departments, theme parks, and cultural institutions.

Web-Based Document Management Applications - We develop and offer proprietary tools to our customers, such as SKYSITE®, Planwell® and Abacus™, that facilitate project collaboration, manage print networks, track equipment fleets, create and maintain project document archives, and other document and content management tasks.

Equipment and Supplies Sales - We sell equipment and supplies primarily to customers in the architectural, engineering, construction, and building owner/operator (AEC/O) industry and provide ancillary services such as equipment service and maintenance.

The combination of our services allows us to provide a comprehensive document management ecosystem where any document, anywhere in the enterprise, can be captured, stored, managed, accessed, and distributed anywhere in the world.

Our cloud-based services are hosted and administered by Amazon Web Services.

We believe we are the largest document solutions provider to the AEC/O market in North America, and the only national provider offering onsite, offsite and cloud-based document management solutions for regional, national and global customers. We offer comprehensive services across geographical boundaries and frequently bill under a single monthly invoice, consolidating purchasing, vendor relations, and administration for companies seeking a unified document management platform.

We serve our clients' onsite in their offices in approximately 10,500 locations, and offsite or virtually through a combination of 178 service centers globally, a variety of web-based applications and software, and a global network of service partners. We operate in major metropolitan markets across the U.S., with meaningful operations in China, Canada, and the United Kingdom.

Our origins lie in the reprographics, or “blueprinting,” industry and we still maintain robust reprographics operations. We believe that we are the largest reprographics company in the United States as measured by revenue, number of customers, and number of service centers.

Our base of more than 90,000 customers includes most of the largest design and construction-oriented firms in North America, and the world. Our legacy as the largest reprographics company in the U.S. has allowed us to leverage our relationships, domain expertise, and national presence as we have evolved into a technology-enabled document solutions company.

Our largest customers are served by a corporate sales force called Global Solutions. This sales force is focused on large regional and national customers. Our diverse customer base results in no individual customer accounting for more than 2% of our overall revenue.

We are a Delaware corporation operating under a single brand, “ARC,” in order to highlight the scope and scale of our business, and to generate synergies in our overall national marketing efforts to the consolidating AEC/O market. Our corporate name is “ARC Document Solutions, Inc.,” and our New York Stock Exchange ticker symbol is “ARC.” We conduct our operations through our wholly-owned subsidiary, ARC Document Solutions, LLC, a Texas limited liability company, and its affiliates.

Principal Products and Services

We report revenues from our service and product offerings under the following categories:

Construction Document and Information Management (CDIM), which consists of professional services to manage and distribute documents and information primarily related to construction projects. CDIM sales include software services such as SKYSITE®, our cloud-based project communication application, as well as providing document and information management services that are often technology-enabled. The bulk of our current revenue from CDIM comes from large-format and small-format printing services we provide in both black and white and in color.

The sale of services addresses a variety of customer needs including the provision of project communication tools, project information management, building information modeling, digital document distribution services, printing services, and others.

Managed Print Services (MPS), consists of placement, management, and optimization of print and imaging equipment in our customers' offices, job sites, and other facilities. MPS relieves our customers of the burden of owning and managing print devices and print networks, and shifts their costs to a “per-use” basis. MPS is supported by our proprietary technology, Abacus™, which allows our customers to capture, control, manage, print, and account for their documents. MPS Services revenue is derived from two sources: 1) an engagement with the customer to place primarily large-format equipment, that we own or lease, at a construction site or in our customers’ offices, and 2) an arrangement by which our customers outsource their printing function to us, including all office printing, copying, and reprographics printing. In both cases this is recurring, contracted revenue in which we are paid a single cost per unit of material used, often referred to as a “click charge.” MPS sales are driven by the ongoing print needs of our customers at their facilities.

Archiving and Information Management (AIM), combines software and professional services to facilitate the capture, management, access and retrieval of documents and information that have been produced in the past. AIM includes our SKYSITE® software to organize, search and retrieve documents, as well as the provision of services that include the capture and conversion of hardcopy and electronic documents, and their cloud-based storage and maintenance. AIM sales are driven by the need to leverage past intellectual property for present or future use, facilitate cost savings and efficiency improvements over current hardcopy and digital storage methods, as well as comply with regulatory and records retention requirements.

Equipment and Supplies, which consists of reselling printing, imaging, and related equipment to customers primarily to architectural, engineering and construction firms.

Each of our service offerings is enabled through a suite of supporting proprietary technology.

Operations

Our products and services are available from any of our 178 service centers around the world, and nearly all of our services can be made available in our customers’ offices. Our geographic presence is concentrated in the U.S., with additional service centers in Canada, China, India, and the United Kingdom. Our corporate headquarters are located in San Ramon, California.

Historically, our business grew through acquisitions to expand our share of the reprographics market and enhance our geographic footprint to serve our larger customers. Since our inception we have acquired more than 140 companies. As we have consolidated, diversified our service offerings, and optimized our operations during the past several years, we have had limited acquisition activity. Our origin as a company was in California, and our early acquisition activity was concentrated there. We still derive approximately 34% of our total revenue from California.

We currently employ approximately 20 engineers working from our corporate headquarters in San Ramon, California, who develop, maintain, and support our software. In addition, we operate a technology center in Kolkata, India, with approximately 190 employees who, in addition to supporting our San Ramon team, also support our research and development efforts. All of our production facilities are connected via a high-performance, dedicated, wide-area network, to facilitate data transmissions to and from our customers, our operating facilities and the cloud hosted by Amazon. We employ a combination of proprietary and industry-leading technologies to provide redundancy, backup and security of all data in our systems.

Historically, the majority of our revenue has been derived from customers engaged in the seasonal, non-residential construction market. While our traditional reprographics business, included in the CDIM revenue category, is still influenced by the non-residential seasonality and building cycles, our other CDIM offerings are less so. Color printing services are affected by retail marketing calendars, advertising campaigns, as well as the marketing needs of our architectural and real estate development clients.

Our software services are influenced primarily by the desire for document workflow improvements and our ability to market our technology-based solutions. MPS is driven by the generation of office documents and our customers' desire to improve business processes and reduce print-related costs. Equipment and Supplies Sales are driven by purchasing cycles of individual customers, as well as by new features and advancements by manufacturers.

As of December 31, 2018, the Company employed approximately 2,400 employees.

Our Customers and Markets

We serve both the enterprise and project content management needs of companies primarily within the AEC/O industry. Our customers include senior management teams, IT and procurement departments, project architects, engineers, general contractors, facilities managers, and others.

The mix of services demanded by the AEC/O industry continues to shift toward services provided at customer locations (represented primarily by our MPS revenues), and away from its historical emphasis on producing prints in our service centers (included in our CDIM revenue line). We believe the market forces of the recent recession and its aftermath are causing our customers in the construction industry to emphasize efficiency in their production and distribution of printed documents, to reduce their dependence on print as it relates to construction projects, and to improve access and control over all the documents related to their business. We also believe that consolidation in the AEC/O industry is contributing to this trend as companies seek to reduce costs, eliminate redundant business practices, and procure products and services from vendors who can centrally serve their business with a comprehensive offering.

We believe that these trends are advantageous to us for four reasons: first, we are well-positioned to provide our customers with web applications and cloud-based offerings to meet their demand for technology-enabled content management services; second, our diversification into services such as MPS and AIM allow us to capture long-term contracted revenue streams that are less exposed to the volatility and cyclicality of project-related printing; third, as our customers merge, consolidate, and grow larger, we believe ARC becomes a more compelling choice because of our extensive geographic reach and ability to act as a single-source supplier of document solutions; and fourth, our market-leading presence as a traditional reprographer in major metropolitan areas allows us to capture large-format printing and document management work associated with local building projects.

In addition to the AEC/O industry, we also provide document management and printing services to customers in the retail, technology, entertainment, and healthcare industries, among others. A significant portion of our non-AEC/O revenues are derived from supplying color printing services to customers with short-run, high quality, frequently updated promotional, advertising and marketing materials. We market these services under a separate brand known as Riot Creative Imaging. Likewise, our digital tools and services appeal to companies outside of the construction industry, but with similar document management needs, including manufacturers, airlines, and healthcare/hospital companies.

In general, we address customers based on size and geographic reach. Local markets tend to be highly fragmented with a wide variety of specialized, geographically differentiated business practices. We serve smaller customers in these markets with service offerings aligned with local market expectations. Larger regional, national and international customers often consolidate purchasing and the acquisition of services through a single corporate department, and seek centralized management of document solutions. We serve these customers through our corporate sales force called Global Solutions.

Competition

The level of competition varies in each of the areas in which we provide services. Further, we believe we are unique; that no other company provides the complete portfolio of services and products we provide. We compete with different firms in our different business lines that can provide a portion of our services. However, we do not know of any other firm that can provide a full suite of physical and digital content management services similar to our offering. We believe service levels, breadth of offering, terms and conditions, price, quality, responsiveness, and convenience to the customer are competitive elements in each of the industry segments in which we compete.

In addressing larger local and regional customers, there are several companies that provide MPS and reprographic print services, but in general these companies cannot provide or integrate software or technology that enables the digital management of documents and centralized cost control management that we provide. In our CDIM services businesses, local copy shops and self-serve franchises are often aggressive competitors for printing business, but rarely offer the breadth of document management and logistics services we do.

With regard to large national and international customers, there are no other document solutions companies in the U.S. with the national presence and global reach that we have established, but we often compete against equipment manufacturers and businesses who offer some of the same products and services we do. Related services are offered by large printing/multifunctional device manufacturers such as Xerox, Canon, Konica Minolta, Ricoh, and Sharp, but most offerings from these companies are focused on selling equipment as opposed to ARC's offering of comprehensive document management services for both project and enterprise documents. Further, our deep knowledge of the AEC/O industry document workflows, which are incorporated into our software, provides us an advantage against local printers and national equipment manufacturers.

We believe that we have a strong competitive position in the marketplace for the following reasons:

Strong domain expertise: We believe no other national vendor/service provider possesses the document management and technology expertise that we have in the AEC/O market. Construction professionals have highly specialized needs in document capture, short-term storage, management, fulfillment, distribution, and archival services. We believe our domain expertise is unmatched thanks to our legacy in reprographics and software development.

Customer relationships in AEC/O industry: Our relationships with our local customers frequently span generations, and we do business with nearly all of the top 100 companies in the U.S. construction industry. In addition, our Global Solutions sales force has established long-term contract relationships with 25 of the largest 100 AEC/O firms. We believe this provides a competitive advantage by leveraging our success through referrals.

Service center footprint: We possess an extensive national network of service centers creating a distribution and customer service solution that can cater to both large and small customers. We operate service centers in more than 130 cities in the U.S., and in 37 states. We also have a market presence in Canada and China, and operations in India and the U.K. We are not aware of any other provider of MPS that has as extensive a network to supplement its MPS services and provide overflow and remote document management and printing capabilities.

Equipment agnostic: We are not required to sell or use any particular brands of equipment, nor do we manufacture equipment. We are free to place the products best suited for the required task in our own service centers or in our customers' offices, regardless of manufacturer. Additionally, with respect to our MPS Services, as our customers' document management needs evolve over their respective contract terms, we have the ability to replace the equipment previously deployed to ensure that the equipment placed at our customers' sites is best suited for the required tasks. We believe that this, combined with the competitive market for printing and imaging products, provides us with an advantage relative to MPS providers owned by equipment manufacturers.

Capabilities in a wide variety of formats: Several equipment manufacturers who also market managed print services do not produce the full range of large- and small-format equipment demanded by the AEC/O, manufacturing, and building industries. In addition, we are not aware of any manufacturers that provide the breadth of services and technology related to large- and small-format document production that we possess.

Unique combination of Onsite, Offsite, and Cloud-based offerings: We believe we are the only national company that integrates (1) document production at customer sites (Onsite), (2) document production at company service centers (Offsite), and (3) digital management of documents in the cloud. We have proprietary technology built by our own development team that interacts with our production machines. We believe we are the only company that both develops document management software and manages the equipment that produces documents.

Suppliers and Vendors

We purchase or lease equipment for use in our production facilities and at our customers' sites. We also purchase paper, toner and other consumables for the operation of our and our customers' production equipment. As a high-volume purchaser, we believe we receive favorable prices as compared to other service providers, and price increases have been historically passed on to customers.

Our primary vendors of equipment, maintenance services, and reprographics supplies include Hewlett Packard, Canon Solutions America (Océ), and Xerox. Purchases from these vendors during 2018 comprised approximately 46% of our total purchases of inventory and supplies. Although there are a limited number of suppliers that could supply our inventory, we believe any shortfalls from existing suppliers could be filled by other suppliers on comparable terms.

Proprietary Rights

We rely on a combination of copyright, trademark and trade secret laws, license agreements, nondisclosure and non-competition agreements, reseller agreements, customer contracts, and technical measures to establish and protect our rights in our proprietary technology. We also rely on a variety of technologies that are licensed from third parties to perform key functions.

We have registered “ARC Document Solutions,” as well as our historical name and logo, “ARC American Reprographics Company,” as service marks in the U.S. with the United States Patent and Trademark Office (USPTO). We have registered “PlanWell”, “PlanWell PDS”, “Riot Creative Imaging”, “ABACUS” and "SKYSITE” as trademarks with the USPTO and in other countries. We do not own any other registered trademarks or service marks, or any patents, that are material to our business.

For a discussion of the risks associated with our proprietary rights, see Item 1A — "Risk Factors — Our failure to adequately protect the proprietary aspects of our technology, including SKYSITE, PlanWell, and Abacus, may cause us to lose market share."

Executive Officers of the Registrant

The following sets forth certain information regarding all of our executive officers as of February 28, 2019:

Name	Age	Position
Kumarakulasingam Suriyakumar	65	Chairman, President and Chief Executive Officer Director
Jorge Avalos	43	Chief Financial Officer
Rahul K. Roy	59	Chief Technology Officer
Dilantha Wijesuriya	57	Chief Operating Officer

Kumarakulasingam ("Suri") Suriyakumar has served as our President and Chief Executive Officer since June 1, 2007, and he served as the Company's President and Chief Operating Officer from 1991 until his appointment as Chief Executive Officer. On July 24, 2008, Mr. Suriyakumar was appointed Chairman of our Board of Directors. Mr. Suriyakumar served as an advisor of American Reprographics Holdings, LLC, from March 1998 until his appointment as a director of the Company in October 2004. Mr. Suriyakumar joined Micro Device, Inc. (our predecessor company) in 1989. He became the Vice President of Micro Device, Inc. in 1990. Prior to joining the Company, Mr. Suriyakumar was employed with Aitken Spence & Co. LTD, a highly diversified conglomerate and one of the five largest corporations in Sri Lanka.

Jorge Avalos was appointed Chief Financial Officer of the Company on February 1, 2015. Prior to his appointment to Chief Financial Officer, Mr. Avalos served as Chief Accounting Officer and Vice President of Finance of the Company, positions he held since April 14, 2011. Mr. Avalos joined the Company in June 2006 as the Company's Director of Finance, and became the Company's Corporate Controller in December 2006, and Vice President, Corporate Controller in December 2010. From March 2005 through June 2006, Mr. Avalos was employed with Vendare Media Group, an online network and social media company, as its Controller. From September 1998 through March 2005, Mr. Avalos was employed with PricewaterhouseCoopers LLP, a global professional services firm focusing on audit and assurance, tax and advisory services.

Rahul K. Roy joined Holdings as its Chief Technology Officer in September 2000. Prior to joining the Company, Mr. Roy was the founder, President and Chief Executive Officer of MirrorPlus Technologies, Inc., which developed software for the reprographics industry, from August 1993 until it was acquired by the Company in 1999. Mr. Roy also served as the Chief Operating Officer of InPrint, a provider of printing, software, duplication, packaging, assembly and distribution services to technology companies, from 1993 until it was acquired by the Company in 1999.

Dilantha ("Dilo") Wijesuriya joined Ford Graphics, a former division of the Company, in January 1991. He subsequently became president of that division in 2001, and became a Company regional operations head in 2004, which position he retained until his appointment as the Company's Senior Vice President, National Operations in August 2008. Mr. Wijesuriya was appointed Chief Operating Officer of the Company on February 25, 2011. Prior to his employment with the Company, Mr. Wijesuriya was a divisional manager with Aitken Spence & Co. LTD, a highly diversified conglomerate and one of the five largest corporations in Sri Lanka.

Available Information

ARC Document Solutions, Inc. uses its corporate website, www.e-arc.com, as a channel for routine distribution of important information, including news releases, analyst presentations and financial information. The information on our website is not incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the Securities and Exchange Commission. The company files with or furnishes to the SEC Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports, as well as proxy statements and annual reports to shareholders, and, from time to time, other documents. The reports and other documents filed with or furnished to the SEC are available to investors on or through our corporate website free of charge as soon as reasonably practicable after we electronically file them with or furnish them to the SEC. The SEC maintains an internet site located at http://www.sec.gov that contains reports, proxy and information statements and other information regarding issuers, such as ARC, that file electronically with the SEC. ARC's SEC filings and other documents pertaining to the conduct of its business can be found on the "Investors" page of its website. These documents are available in print to any shareholder who requests a copy by writing or by calling ARC Document Solutions.

Item 1A. Risk Factors

Our business faces significant risks. The following risk factors could adversely affect our results of operations and financial condition and the price of our common stock. We may encounter risks in addition to those described below. Additional risks and uncertainties not currently known to us or that we currently deem immaterial may also impair or adversely affect our results of operations and financial condition.

We are highly dependent on the architectural, engineering, construction and building owner/operator (AEC/O) industry and any decline in that industry could adversely affect our future revenue and profitability.

We estimate that customers in the AEC/O industry accounted for approximately 79% of our net sales in 2018; therefore, our results largely depend on the strength of that industry. Our historical operating results reflect the cyclical and variable nature of the AEC/O industry. We believe that the industry generally experiences downturns several months after a downturn in the general economy, and that there may be a similar delay in the recovery of the AEC/O industry following a recovery of the general economy. A downturn in the AEC/O industry would diminish demand for some of our products and services, and would therefore negatively affect our revenues and have a material adverse effect on our business, operating results and financial condition.

Adverse domestic and global economic conditions and disruption of financial and commercial real estate markets could have a material adverse effect on our business and results of operations.

A prolonged economic downturn may adversely affect the ability of our customers and suppliers to obtain financing and to perform their obligations under agreements with us. These restrictions could result in a decrease in, or cancellation of, existing business, could limit new business, and could negatively affect our ability to collect on our accounts receivable on a timely basis, if at all. These events may, in the aggregate, have a material adverse effect on our results of operations and financial condition.

Because a significant portion of our overall costs are fixed, our earnings are highly sensitive to changes in revenue.

Our network of service centers, equipment and related support activities involves substantial fixed costs which cannot be adjusted quickly to respond to declines in demand for our services. We estimate approximately 35% of our overall costs were fixed in 2018. As a consequence, our results of operations are subject to relatively high levels of volatility and our earnings could deteriorate rapidly in the face of declining revenues because our ability to reduce fixed costs in the short-term is limited. If we fail to manage our fixed costs appropriately, or to maintain adequate cash reserves to cover such costs, we may suffer material adverse effects on our results of operations and financial condition.

Impairment of goodwill may adversely affect future results of operations.

We have intangible assets, including goodwill and other identifiable acquired intangibles on our balance sheet due to prior acquisitions. Generally, we conduct an annual impairment assessment. Our 2018 assessment resulted in no goodwill impairment.

The results of our impairment analysis are as of a particular point in time. If our assumptions regarding future forecasted revenue or profitability of our reporting units are not achieved, we may be required to record additional goodwill impairment charges in future periods, if any such change constitutes a triggering event prior to the quarter in which we perform our annual goodwill impairment test.

Competition in our industry and innovation by our competitors may hinder our ability to execute our business strategy and adversely affect our profitability.

The markets for our products and services are highly competitive, with competition primarily at local and regional levels. We compete primarily based on the level and quality of customer service, technological leadership, and price. Our future success depends, in part, on our ability to continue to improve our service and product offerings, and develop and integrate new technology solutions. In addition, current and prospective customers may decide to perform certain services themselves instead of outsourcing these services to us. These competitive pressures could adversely affect our sales and consolidated results of operations.

We also face the possibility that competition will continue to increase, particularly if copy and printing or business services companies choose to compete in lines of business similar to ours. Many of these companies are substantially larger and have significantly greater financial resources than us, which could place us at a competitive disadvantage.

In addition, we could encounter competition in the future from large, well-capitalized companies such as equipment dealers and system integrators that can produce their own technology and leverage their existing distribution channels. Any such future competition could adversely affect our business and reduce our future revenue and profitability.

If we are unable to charge for our value-added services to offset declines in print volumes, our long-term revenue could decline.

Our customers value the ability to view and order prints over the internet and print to output devices in their own offices and other locations throughout the country and the world. In 2018, our CDIM sales, which consists of the management, distribution, and production of documents and information related to construction projects, including large-format construction drawings, black and white and color signage, specification documents, and marketing material represented approximately 53% of our total net sales, and our MPS represented approximately 32% of our total net sales. Both categories of revenue are generally derived from a charge per square foot of printed material. Future technology advances may further facilitate and improve our customers' ability to reduce print and the associated costs thereof. As technology continues to improve, this trend toward printing on an "as needed" basis could result in further decreased printing volumes and sales decline in the longer term. Failure to offset these declines in printing volumes by changing how we charge for our services and develop additional revenue sources could significantly affect our business and reduce our long term revenue, resulting in an adverse effect on our results of operations and financial condition.

We derive a significant percentage of net sales from within the State of California and our business could be disproportionately harmed by an economic downturn or natural disaster affecting California.

We derived approximately 34% of our net sales in 2018 from our operations in California. As a result, we are dependent to a large extent upon the AEC/O industry in California and, accordingly, are sensitive to economic factors affecting AEC/O activity in California, including general and local economic conditions, macroeconomic trends, political factors affecting commercial and residential real estate development and natural disasters (including drought, earthquakes and wildfires). Any adverse developments affecting California could have a disproportionately negative effect on our results of operations and financial condition.

Our growth strategy depends, in part, on our ability to successfully market and execute several different, but related, service offerings. Failure to do so could impede our future growth and adversely affect our competitive position.

As part of our growth strategy, we intend to continue to offer and grow a variety of service offerings that are relatively new to the company. Our efforts will be affected by our ability to acquire new customers for our new service offerings as well as sell the new service offerings to existing customers. If we fail to procure new customers, our growth may be adversely affected and we may incur operating losses as a result of a failure to realize revenue from investments made in new service offerings.

We are dependent upon our vendors to continue to supply us equipment, parts, supplies, and services at comparable terms and price levels as the business grows.

Our access to equipment, parts, supplies, and services depends upon our relationships with, and our ability to purchase these items on competitive terms from our principal vendors. These vendors are not required to use us to distribute their equipment and are generally free to change the prices and other terms at which they sell to us. In addition, we compete with the selling efforts of some of these vendors. Significant deterioration in relationships with, or in the financial condition of, these significant vendors could have an adverse effect on our ability to sell equipment as well as our ability to provide effective service and technical support. If one of these vendors terminates or significantly curtails its relationship with us, or if one of these vendors ceases operations, we would be forced to expand our relationships with our other existing vendors or seek out new relationships with previously unused vendors.

Our failure to adequately protect the proprietary aspects of our technology, including SKYSITE®, PlanWell®, and Abacus™ may cause us to lose market share.

Our success depends on our ability to protect and preserve the proprietary aspects of our technology products. We rely on a combination of copyright, trademark and trade secret protection, confidentiality agreements, license agreements, non-competition agreements, reseller agreements, customer contracts, and technical measures to establish and protect our rights in our proprietary technologies. These protections, however, may not be adequate to remedy harm we suffer due to misappropriation of our proprietary rights by third parties. In addition, the laws of certain countries may not protect our proprietary rights to the same extent as the laws of the United States and we may be unable to protect our proprietary technology adequately against unauthorized third-party copying or use, which could adversely affect our competitive position. It is also possible that our intellectual property rights could be challenged, invalidated or circumvented, allowing others to use our intellectual property to our competitive detriment. We also must ensure that all of our products comply with existing and newly enacted regulatory requirements in the countries in which they are sold. Furthermore, we may, from time to time, be subject to intellectual property litigation which can be expensive, a burden on management's time and our Company's resources, and the outcome of any such litigation may be uncertain.

Our computer hardware and software and telecommunications systems are susceptible to damage, breach or interruption.
The management of our business is aided by the uninterrupted operation of our computer and telecommunication systems. These systems are vulnerable to security breaches, natural disasters or other catastrophic events, computer viruses, or other interruptions or damage stemming from power outages, equipment failure or unintended usage by employees. In particular, our employees may have access or exposure to personally identifiable or otherwise confidential information and customer data and systems, the misuse of which could result in legal liability. In addition, we rely on information technology systems to process, transmit and store electronic information and to communicate among our locations around the world and with our clients, partners and consultants, including through cloud-based platforms often provided by third parties. The breadth and complexity of this infrastructure increases the potential risk of security breaches. Security breaches, including cyber-attacks or cyber-intrusions by computer hackers, foreign governments, cyber terrorists or others with grievances against the industry in which we operate or us in particular, may disable or damage the proper functioning of our networks and systems. It is possible that our security controls, or those of the third parties with whom we partner, over personal and other data may not prevent unauthorized access to, or destruction, loss, theft, misappropriation or release of personally identifiable or other proprietary, confidential, sensitive or valuable information of ours or others; this access could lead to potential unauthorized disclosure of confidential Company or client information that others could use to compete against us or for other disruptive, destructive or harmful purposes and outcomes. Any such disclosure or damage to our networks, or those of the third parties with whom we partner, and systems could subject us to third party claims against us and reputational harm. If these events occur, our ability to attract new clients may be impaired or we may be subjected to damages or penalties. In addition, system-wide or local failures of these information technology systems could have a material adverse effect on our business, financial condition, results of operations or cash flows.
In performing our document management services, we handle customers' confidential information. Our failure to protect our customers' confidential information against security breaches could damage our reputation, harm our business and adversely affect our results of operations.
Our document management services involve the handling of our customers' confidential information. Any compromise of security, accidental loss or theft of customer data in our possession could damage our reputation and expose us to risk of liability, which could harm our business and adversely affect our consolidated results of operation.
Added risks are associated with our international operations.
We have international operations in China, India, the United Kingdom, Canada, Hong Kong, United Arab Emirates, and Australia. Approximately 15% of our revenues for 2018 were derived from our international operations, with approximately 8% derived from China. Our future revenues, costs of operations and net income could be adversely affected by a number of factors related to our international operations, including changes in economic conditions from country to country, currency fluctuations, changes in a country's political condition, trade protection measures, licensing and other legal requirements and local tax issues.

A large percentage of our cash and cash equivalents are held outside of the United States, and we could be subject to repatriation delays and costs which could reduce our financial flexibility.

Approximately 46% of our cash and cash equivalents are currently held outside the United States. Repatriation of some of the funds could be subject to delay for local country approvals and could have potential adverse tax consequences. As a result of holding cash and cash equivalents outside of the U.S., our financial flexibility may be reduced.

Our business could suffer if we fail to attract, retain, and successfully integrate skilled personnel.
We believe that our ability to attract, retain, and successfully integrate qualified personnel is critical to our success. As we continue to place more emphasis on document management and storage technology, our need to hire and retain software and other technology focused personnel has and can be expected to continue to increase. Competition for such personnel, particularly in the San Francisco Bay Area, is intense. If we lose key personnel and/or are unable to

recruit qualified personnel, our ability to manage and grow our business will be adversely affected. In addition, the loss of the services of one or more members of our senior management team would disrupt our business and impede our ability to successfully execute our business strategy.

The market prices of our common stock may be volatile, which could cause the value of an investment in our stock to decline.

The market price of our common stock may fluctuate substantially due to a variety of factors, many of which are beyond our control. Between January 1, 2018 and December 31, 2018, the closing price of our common stock has fluctuated from a low of $1.64 to a high of $3.47 per share. Factors that may contribute to fluctuations in the market prices of our common stock include:

- failure to sustain an active, liquid trading market for our shares;

- changes in financial estimates or recommendations by securities analysts or failure to meet analysts' performance expectations;
- changes in market valuations of similar companies;
- changes in our capital structure, such as future issuances of securities or the incurrence of debt;
- sales of our capital stock by our directors or executive officers;
- the gain or loss of significant customers;
- actual or anticipated developments in our business or our competitors' businesses, such as announcements by us or our competitors of significant contracts, acquisitions or strategic alliances, or in the competitive landscape generally;
- litigation involving us, our industry or both;
- additions or departures of key personnel;
- investors' general perception of us;
- our stock repurchase program; and
- changes in general economic, industry and market conditions.

The stock markets in general have experienced substantial volatility that has often been unrelated to the operating performance of particular companies. These types of broad market fluctuations may adversely affect the trading price of our common stock.

In the past, stockholders have sometimes instituted securities class action litigation against companies following periods of volatility in the market price of their securities. Any similar litigation against us could result in substantial costs, divert management's attention as well as our other resources and could have a material adverse effect on our business, results of operations and financial condition.

Damage or disruption to our facilities, including our technology center, could impair our ability to effectively provide our services and may have a significant effect on our revenues, expenses and financial condition.

Our IT systems are an important part of our operations. We currently store customer data at servers hosted by Amazon and at our technology center located in Silicon Valley near known earthquake fault zones. Although we have redundant systems and offsite backup procedures in place, interruption in service, damage to or destruction of our technology center or a disruption of our data storage processes resulting from sustained process abnormalities, human error, acts of terrorism, violence, war or a natural disaster, such as fire, earthquake or flood, could result in delays, in reduced levels of customer service and have a material adverse effect on the markets in which we operate and on our business operations.

Although we currently maintain general property damage insurance, if we incur losses from uninsured events, we could incur significant expenses which would adversely affect our results of operations and financial condition.

Results of tax examinations may adversely affect our future results of operations.

We are subject to various tax examinations on an ongoing basis. Adverse results of tax examinations for income, payroll, value added, sales-based and other taxes may require future material tax payments if we are unable to sustain our position with the relevant jurisdiction. Where appropriate, we have made accruals for these matters which are reflected in our Consolidated Balance Sheets and Statements of Operations.

Changes in tax laws and interpretations could adversely affect our business.

We are subject to income and other taxes in the U.S. and in numerous foreign jurisdictions. Our domestic and foreign tax provisions are dependent on the jurisdictions in which profits are determined to be earned and taxed. Additionally, the amount of tax provision is subject to our interpretation of applicable tax laws in the jurisdictions in which we operate. A number of factors influence our effective tax rate, including changes in tax laws and treaties as well as the interpretation of existing laws and rules. Federal, state, and local governments and administrative bodies within the U.S., which represents a majority of our operations, and other foreign jurisdictions have implemented, or are considering, a variety of broad tax, trade, and other regulatory reforms that may impact us. For example, the Tax Cuts and Jobs Act (the “TCJA”) enacted on December 22, 2017 resulted in changes in our federal corporate tax rate, our deferred income taxes, and the taxation of foreign earnings. It is not currently possible to

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accurately determine the potential impact of proposed or future changes, but such changes could have a material impact on our business.

Our debt instruments impose certain restrictions on our ability to operate which in turn could negatively affect our ability to respond to business and market conditions and therefore could have an adverse effect on our business and results of operations.

As of December 31, 2018, we had $127.2 million in outstanding short and long-term borrowings under term loans, revolver, and capital leases, excluding trade payables. The terms of the agreements under which this indebtedness was incurred may limit or restrict, among other things, our ability to incur certain additional debt, make certain restricted payments, consummate certain asset sales, and enter into certain transactions with affiliates.

We are also required to maintain a total leverage ratio and fixed charge coverage ratio under our credit agreement. Our inability to meet these ratios could result in the acceleration of the repayment of the outstanding obligations under the Credit Agreement, the termination of the lenders' commitment to provide our revolving line of credit thereunder, the increase in our effective cost of funds or the cross-default of other credit arrangements. As a result, our ability to operate may be restricted and our ability to respond to business and market conditions may be limited, which could have an adverse effect on our business and operating results.

If the interest rates on our borrowings increase, our access to capital and net income could be adversely affected.

Our Credit Agreement and capital leases are variable-rate instruments which expose us to interest rate risks. If interest rates increase, debt service obligations and our interest expense will increase even though the amount borrowed remains the same. Our net income and cash flows, including cash available for servicing indebtedness, will correspondingly decrease.

An increase in interest rates may increase our future borrowing costs and restrict our access to capital. Additionally, current market conditions, the recovering global economy, and overall credit conditions could limit our availability of capital, which could cause increases in interest margin spreads over underlying indices, effectively increasing the cost of our borrowing. While some of our debt instruments have contractually negotiated spreads, any changes to these spreads in connection with renegotiation of our Credit Agreement or capital leases could adversely affect our results of operations.

We had previously entered into interest rate caps with a financial institution to effectively convert a portion of our floating rate debt to a fixed interest rate to manage our exposure to fluctuations in interest rates. However, those interest rate caps have expired.

We may be exposed to employment-related claims and costs and periodic litigation that could adversely affect our business and results of operations.

We are subject to a number of risks inherent to our status as an employer including without limitation:

- claims of misconduct or negligence on the part of our employees, discrimination or harassment claims against our employees, or claims by our employees of discrimination or harassment by our clients;
- claims relating to violations of wage, hour and other workplace regulations;
- claims relating to employee benefits, entitlements to employee benefits, or errors in the calculation or administration of such benefits; and
- possible claims relating to misuse of customer confidential information, misappropriation of assets or other similar claims.

If we experience significant incidents involving any of the above-described risk areas we could face substantial out-of-pocket losses, or fines. In addition, such claims may give rise to litigation, which may be time consuming, distracting and costly, and could have a material adverse effect on our business.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

At the end of 2018, we operated 178 service centers, of which 153 were in the United States, 10 were in Canada, 8 were in China, 2 were in London, England, 1 was in Hong Kong, 2 were in India, 1 was in Australia and 1 was in United Arab Emirates. We also occupied a technology center in Kolkata, India, as well as other facilities, including our executive offices located in San Ramon, California.

In total the Company occupied approximately 1.1 million square feet as of December 31, 2018.

We lease nearly all of our service centers, each of our administrative facilities and our technology centers. In addition to the facilities that are owned, our fixed assets are comprised primarily of machinery and equipment, vehicles, and computer equipment. We believe that our facilities are adequate and appropriate for the purposes for which they are currently used in our operations and are well maintained.

Item 3. Legal Proceedings

We are involved in various additional legal proceedings and other legal matters from time to time in the normal course of business. We do not believe that the outcome of any of these matters will have a material effect on our consolidated financial position, results of operations or cash flows.

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, par value $0.001, is listed on the New York Stock Exchange (“NYSE”) under the stock symbol “ARC”.

Holders

As of February 21, 2019, the approximate number of stockholders of record of our common stock was 214, and the closing price of our common stock was $2.52 per share as reported by the NYSE. Because many of the shares of our common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of beneficial owners represented by these stockholders of record.

Dividends

We have never declared or paid cash dividends on our common stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any cash dividends in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to compliance with Delaware corporate law, certain covenants under our debt instruments which restrict or limit our ability to declare or pay dividends, and will depend on our financial condition, results of operations, capital requirements, general business conditions, and other factors that our board of directors may deem relevant.

Securities Authorized for Issuance Under Equity Compensation Plans

Information regarding the securities authorized for issuance under our equity compensation plans can be found under Item 12 of this Annual Report on Form 10-K.

Item 6. Selected Financial Data

Not applicable.

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

Business Summary

ARC Document Solutions, Inc. (“ARC Document Solutions,” “ARC,” “we,” “us,” or “our”) is a leading document solutions provider to design, engineering, construction, and facilities management professionals, while also providing document solutions to businesses of all types.

Our customers need us to manage the scale, complexity and workflow of their documents. We help them reduce their costs and increase their efficiency by improving their access and control over documents, and we offer a wide variety of ways to access, distribute, collaborate on, and store documents.

Each of our service offerings is enabled through a suite of supporting proprietary technology and a wide variety of value-added services. We have categorized our service and product offerings to report distinct sales recognized from:

Construction Document and Information Management (CDIM), which consists of professional services and software services to manage and distribute documents and information primarily related to construction projects. CDIM sales include software services such as SKYSITE®, our cloud-based project communication application, as well as providing document and information management services that are often technology-enabled. The bulk of our current revenue from CDIM comes from large-format and small-format printing services we provide in both black and white and in color.

The sale of services addresses a variety of customer needs including the provision of project communication tools, project information management, building information modeling, digital document distribution services, printing services, and others.

Managed Print Services (MPS), consists of placement, management, and optimization of print and imaging equipment in our customers' offices, job sites, and other facilities. MPS relieves our customers of the burden of owning and managing print devices and print networks, and shifts their costs to a “per-use” basis. MPS is supported by our proprietary technology, Abacus™, which allows our customers to capture, control, manage, print, and account for their documents. MPS Services revenue is derived from two sources: 1) an engagement with the customer to place primarily large-format equipment, that we own or lease, at a construction site or in our customers' offices, and 2) an arrangement by which our customers outsource their printing function to us, including all office printing, copying, and reprographics printing. In both cases this is recurring, contracted revenue in which we are paid a single cost per unit of material used, often referred to as a "click charge." MPS sales are driven by the ongoing print needs of our customers at their facilities.

Archiving and Information Management (AIM), combines software and professional services to facilitate the capture, management, access and retrieval of documents and information that have been produced in the past. AIM includes our SKYSITE software to organize, search and retrieve documents, as well as the provision of services that include the capture and conversion of hardcopy and electronic documents, and their cloud-based storage and maintenance. AIM sales are driven by the need to leverage past intellectual property for present or future use, facilitate cost savings and efficiency improvements over current hardcopy and digital storage methods, as well as comply with regulatory and records retention requirements.

Equipment and Supplies, which consists of reselling printing, imaging, and related equipment to customers primarily to architectural, engineering and construction firms.

We have expanded our business beyond the services we traditionally provided to the architectural, engineering, construction, and building owner/operator (AEC/O) industry in the past and are currently focused on growing MPS, AIM and CDIM, as we believe the mix of services demanded by the AEC/O industry continues to shift toward document management at customer locations and in the cloud, and away from its historical emphasis on large-format construction drawings produced "offsite" in our service centers.

We deliver our services via the cloud, through a nationwide network of service centers, regionally-based technical specialists, locally-based sales executives, and a national/regional sales force known as Global Solutions.

Based on our analysis of our operating results, we estimate that sales to the AEC/O industry accounted for approximately 79% of our net sales for 2018, with the remaining 21% consisting of sales to businesses outside of construction.

Costs and Expenses

Our cost of sales consists primarily of materials (paper, toner and other consumables), labor, and "indirect costs" which consist primarily of equipment expenses related to our MPS contracts and our service center facilities. Facilities and equipment expenses include maintenance, repairs, rents, insurance, and depreciation. Paper is the largest component of our material cost; however, paper pricing typically does not significantly affect our operating margins due, in part, to our efforts to pass increased costs on to our customers. We closely monitor material cost as a percentage of net sales to measure volume and waste. We also track labor utilization, or net sales per employee, to measure productivity and determine staffing levels.

We maintain low levels of inventory. Historically, our capital expenditure requirements have varied due to the cost and availability of capital lease lines of credit. Our relationships with credit providers has provided attractive lease rates over the past two years, and as a result, we chose to lease rather than purchase equipment in a significant portion of our engagements.

Research and development costs consist mainly of the salaries, leased building space, and computer equipment that comprises our data storage and development centers in San Ramon, California and Kolkata, India. Such costs are primarily recorded to cost of sales.

Results of Operations

	Year Ended December 31,		2018 Versus 2017 Increase (decrease)	
(In millions, except percentages)	2018	2017 (1)	$	%
CDIM	$211.4	$205.1	$6.3	3.1 %
MPS	128.8	129.5	(0.7)	(0.5)%
AIM	13.1	12.8	0.4	2.9 %
Total services sales	$353.3	$347.3	$6.0	1.7 %
Equipment and Supplies Sales	47.5	47.3	0.2	0.5 %
Total net sales	$400.8	$394.6	$6.2	1.6 %
Gross profit	$130.9	$124.0	$6.8	5.5 %
Selling, general and administrative expenses	$109.1	$101.9	$7.2	7.1 %
Amortization of intangibles	$3.9	$4.3	$(0.4)	(9.6)%
Goodwill impairment	$—	$17.6	$(17.6)	(100.0)%
Loss on extinguishment and modification of debt	$—	$0.2	$(0.2)	(100.0)%
Interest expense, net	$5.9	$6.2	$(0.3)	(4.8)%
Income tax provision	$3.3	$15.2	$(11.9)	(78.3)%
Net income (loss) attributable to ARC	$8.9	$(21.5)	$30.4	(141.4)%
Adjusted net income attributable to ARC (2)	$8.5	$6.8	$1.7	25.0 %
Cash flows provided by operating activities	$55.0	$52.4	$2.6	5.0 %
EBITDA (2)	$51.0	$33.2	$17.7	53.4 %
Adjusted EBITDA (2)	$53.4	$54.0	$(0.6)	(1.2)%

(1) Column does not foot due to rounding.

(2) See "Non-GAAP Financial Measures" following "Results of Operations" for more information related to our Non-GAAP disclosures.

The following table provides information on the percentages of certain items of selected financial data as a percentage of net sales for the periods indicated:

	As Percentage of Net Sales Year Ended December 31,	
	2018 (1)	2017 (1)
Net Sales	100.0 %	100.0 %
Cost of sales	67.4	68.6
Gross profit	32.6	31.4
Selling, general and administrative expenses	27.2	25.8
Amortization of intangibles	1.0	1.1
Goodwill impairment	—	4.5
Income from operations	4.5	0.1
Loss on extinguishment and modification of debt	—	0.1
Interest expense, net	1.5	1.6
Income (loss) before income tax provision (benefit)	3.0	(1.5)
Income tax provision	0.8	3.9
Net income (loss)	2.2	(5.4)
Income attributable to the noncontrolling interest	—	—
Net income (loss) attributable to ARC	2.2 %	(5.5)%
EBITDA (2)	12.7 %	8.4 %
Adjusted EBITDA (2)	13.3 %	13.7 %

(1) Column does not foot due to rounding.
(2) See "Non-GAAP Financial Measures" following "Results of Operations" for more information related to our Non-GAAP disclosures.

Fiscal Year Ended December 31, 2018 Compared to Fiscal Year Ended December 31, 2017

Net Sales

Net sales in 2018 increased 1.6%, compared to 2017. The increase in net sales was due primarily to increases in our print-based service offerings.

CDIM. CDIM services in 2018 increased $6.3 million, or 3.1%, compared to 2017. The increase in sales of CDIM services was driven by an increase in project-related printing partially offset by the continued, but moderating, reduction in demand for printed construction drawings and related services being replaced by the ongoing adoption of technology. CDIM services represented 53% and 52% of total net sales for both 2018 and 2017, respectively.

MPS. MPS services in 2018 decreased $0.7 million or 0.5%, due to the decline in print volumes from existing customers. The decline in print volumes was driven in part by the continued optimization of our customers' in-house print environment partially offset by new customer acquisitions. Our MPS offering delivers value to our customers by optimizing their print infrastructure, which in turn, will lower their print volume over time. Sales reductions associated with a decline in print volume are typically offset by new customer acquisitions and expansion of MPS services within existing customers. Revenues from MPS services sales represented approximately 32% of total net sales for 2018, compared to approximately 33% during 2017.

The number of MPS accounts has grown to approximately 10,500 as of December 31, 2018, an increase of approximately 400 locations compared to December 31, 2017. While MPS is subject to temporary performance fluctuations based on the loss or acquisition of large clients, we believe there is an opportunity for MPS sales growth in the future due to the value that we bring to our customers and the desire to reduce printing costs in the AEC/O industry.

AIM. Year-over-year sales of AIM Services increased by $0.4 million, or 2.9%, in 2018, compared to 2017. The growth in AIM is due to our construction and facility customers desire to digitize their paper documents as well as their need to manage their content in our cloud and mobile platform. We are driving an expansion of our addressable market for AIM Services by targeting building owners and facilities managers that require on-demand legacy documents to operate their assets efficiently.

Equipment and Supplies Sales. Equipment and Supplies Sales increased by $0.2 million, or 0.5% in 2018, compared to 2017, primarily due to an increase in China equipment sales, partially offset by a decline in equipment sales in the U.S. Changes in Equipment and Supplies Sales are largely driven by the timing of replacements of aging equipment fleets for customers who prefer to own their equipment. Equipment and Supplies Sales represented approximately 12% of total net sales for both 2018 and 2017. Equipment and Supplies Sales derived from UNIS Document Solutions Co. Ltd ("UDS"), our Chinese business venture, were $25.6 million in 2018, as compared to $23.7 million in 2017. We do not anticipate growth in Equipment and Supplies Sales as we are placing more focus on growing MPS sales and converting sales contracts to MPS agreements.

Gross Profit

Gross profit and gross margin increased to $130.9 million, and 32.6%, in 2018, compared to $124.0 million, and 31.4%, in 2017, on a sales increase of $6.2 million.

The increase in our gross margins in 2018 was primarily driven by the increase in our net sales as compared to the same periods in 2017, which allowed us to better leverage the fixed portion of our overhead and labor costs, as well as the results of certain gross margin improvement initiatives we commenced in late 2017 and 2018.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased by $7.2 million or 7.1% in 2018 compared to 2017.

General and administrative expenses in 2018 increased $6.4 million or 10.9% compared to 2017. The increase in expenses was driven by increased healthcare costs, increased incentive bonus accruals due to the improved financial performance, as well as investments in corporate infrastructure during 2018 that helped fuel our sales growth.

Year-over-year sales and marketing expenses increased $0.8 million in 2018 compared to 2017. The increase was primarily due to investments in sales and marketing staff, training, and marketing initiatives that commenced the second half of 2017 and continued into 2018 to support our new technology-enabled offerings and to grow our print-based offerings. These increases were partially offset by an ongoing optimization of our sales organization, maintaining those investments that yielded positive results and discontinuing those investments that did not.

Amortization of Intangibles

Amortization of intangibles of $3.9 million in 2018 decreased compared to 2017, primarily due to the completed amortization of certain customer relationships related to historical acquisitions.

Goodwill impairment

No goodwill impairments were recorded in 2018. We recorded goodwill impairments of $17.6 million in 2017.

See Note 3, "Goodwill and other Intangibles" for further information regarding the process of assessing goodwill for impairment.

Loss on extinguishment and modification of debt

There was no loss on extinguishment and modification of debt for the year ended December 31, 2018.

Interest Expense, Net

Net interest expense totaled $5.9 million in 2018, compared to $6.2 million in 2017. The decrease for 2018 compared to 2017 was due to our continued pay down of our long-term debt, partially offset by rising interest rates, which affect our LIBOR rate loans under our Credit Agreement.

Income Taxes

We recorded an income tax provision of $3.3 million in relation to a pretax income of $12.1 million for 2018, which resulted in an effective income tax rate of 27.6%. Excluding the impact of valuation allowances and other discrete tax items, our effective income tax rate would have been 30.4%.

We recorded an income tax provision of $15.2 million in relation to a pretax loss of $6.1 million for 2017, which resulted in an effective income tax rate of negative 249.4%.

Our negative effective income tax rate, for the prior year, was primarily related to the Tax Cuts and Jobs Act (the "TCJA") enacted on December 22, 2017. The TCJA represents major tax reform legislation that, among other provisions, reduced the U.S. federal corporate tax rate from 35% to 21%. The income tax effects of the TCJA included $11.9 million of tax expense recorded to write-down our net deferred tax assets in the fourth quarter of 2017, the reporting period in which the TCJA became law. See Note 7 to the consolidated financial statements for further information on the financial statement impact of the TCJA.

Also impacting our effective income tax rate for 2017 was a portion of the goodwill impairment which cannot be deducted for income tax purposes until the related stock is disposed of. Excluding the impact of the TCJA, goodwill impairment, change in valuation allowance, and other discrete items, our 2017 effective income tax rate would have been 40.6%.

Noncontrolling Interest

Net income attributable to noncontrolling interest represents 35% of the income of UDS and its subsidiaries, which together comprise our Chinese joint-venture operations.

Net Income (Loss) Attributable to ARC

Net income attributable to ARC was $8.9 million in 2018, as compared to a net loss of $21.5 million in 2017. The change in net income attributable to ARC in 2018 versus the prior year is primarily due to the goodwill impairment charges recognized in the third quarter of 2017, and the additional income tax provision recorded in 2017 due to the adoption of the TCJA in 2017.

Non-GAAP Financial Measures.

EBITDA and related ratios presented in this report are supplemental measures of our performance that are not required by or presented in accordance with accounting principles generally accepted in the United States of America (“GAAP”). These measures are not measurements of our financial performance under GAAP and should not be considered as alternatives to net income, income from operations, or any other performance measures derived in accordance with GAAP or as an alternative to cash flows from operating, investing or financing activities as a measure of our liquidity.

EBITDA represents net income before interest, taxes, depreciation and amortization. EBITDA margin is a non-GAAP measure calculated by dividing EBITDA by net sales.

We have presented EBITDA and related ratios because we consider them important supplemental measures of our performance and liquidity. We believe investors may also find these measures meaningful, given how our management makes use of them. The following is a discussion of our use of these measures.

We use EBITDA to measure and compare the performance of our operating segments. Our operating segments’ financial performance includes all of the operating activities except debt and taxation which are managed at the corporate level for U.S. operating segments. We use EBITDA to compare the performance of our divisions and to measure performance for determining consolidated-level compensation. In addition, we use EBITDA to evaluate potential acquisitions and potential capital expenditures.

EBITDA and related ratios have limitations as analytical tools, and should not be considered in isolation, or as a substitute for analysis of our results as reported under GAAP. Some of these limitations are as follows:

- They do not reflect our cash expenditures, or future requirements for capital expenditures and contractual commitments;
- They do not reflect changes in, or cash requirements for, our working capital needs;
- They do not reflect the significant interest expense, or the cash requirements necessary, to service interest or principal payments on our debt;
- Although depreciation and amortization are non-cash charges, the assets being depreciated and amortized will often have to be replaced in the future, and EBITDA does not reflect any cash requirements for such replacements; and
- Other companies, including companies in our industry, may calculate these measures differently than we do, limiting their usefulness as comparative measures.

Because of these limitations, EBITDA and related ratios should not be considered as measures of discretionary cash available to us to invest in business growth or to reduce our indebtedness. We compensate for these limitations by relying primarily on our GAAP results and using EBITDA and related ratios only as supplements.

Our presentation of adjusted net income and adjusted EBITDA is an attempt to provide meaningful comparisons to our historical performance for our existing and future investors. The unprecedented changes in our end markets over the past several years have required us to take measures that are unique in our history and specific to individual circumstances. Comparisons inclusive of these actions make normal financial and other performance patterns difficult to discern under a strict GAAP presentation. Each non-GAAP presentation, however, is explained in detail in the reconciliation tables below. Specifically, we have presented adjusted net income attributable to ARC and adjusted earnings per share attributable to ARC shareholders for 2018 and 2017 to reflect the exclusion of loss on extinguishment and modification of debt, goodwill impairment, the impact of the adoption of the TCJA in 2017, changes in the valuation allowances related to certain deferred tax assets and other discrete tax items. This presentation facilitates a meaningful comparison of our operating results for 2018 and 2017.

We have presented adjusted EBITDA for 2018 and 2017 to exclude loss on extinguishment and modification of debt, goodwill impairment, and stock-based compensation expense. The adjustment of EBITDA for these items is consistent with the definition of adjusted EBITDA in our credit agreement; therefore, we believe this information is useful to investors in assessing our financial performance.

The following is a reconciliation of cash flows provided by operating activities to EBITDA:

	Year Ended December 31,	
(In thousands)	2018	2017
Cash flows provided by operating activities	$54,964	$52,370
Changes in operating assets and liabilities	(6,916)	(3,256)
Non-cash expenses, including goodwill impairment	(6,434)	(37,146)
Income tax provision	3,334	15,244
Interest expense, net	5,880	6,179
Loss (income) attributable to the noncontrolling interest	146	(156)
EBITDA	$50,974	$33,235

The following is a reconciliation of net income (loss) attributable to ARC Document Solutions, Inc. shareholders to EBITDA and Adjusted EBITDA:

	Year Ended December 31,	
(In thousands)	2018	2017
Net income (loss) attributable to ARC Document Solutions, Inc. shareholders	$8,873	$(21,511)
Interest expense, net	5,880	6,179
Income tax provision	3,334	15,244
Depreciation and amortization	32,887	33,323
EBITDA	50,974	33,235
Loss on extinguishment and modification of debt	—	230
Goodwill impairment	—	17,637
Stock-based compensation	2,445	2,947
Adjusted EBITDA	$53,419	$54,049

The following is a reconciliation of net income (loss) margin attributable to ARC to EBITDA margin and Adjusted EBITDA margin:

	Year Ended December 31,	
	2018	2017
Net income (loss) margin attributable to ARC	2.2 %	(5.5)%
Interest expense, net	1.5	1.6
Income tax provision	0.8	3.9
Depreciation and amortization	8.2	8.4
EBITDA margin	12.7	8.4
Loss on extinguishment and modification of debt	—	0.1
Goodwill impairment	—	4.5

Stock-based compensation	0.6	0.7
Adjusted EBITDA margin	13.3%	13.7 %

The following is a reconciliation of net income (loss) attributable to ARC Document Solutions, Inc. shareholders to Adjusted net income and Adjusted earnings per share attributable to ARC Document Solutions, Inc. shareholders:

	Year Ended December 31,	
	2018	2017
Net income (loss) attributable to ARC Document Solutions, Inc. shareholders	$8,873	$(21,511)
Loss on extinguishment and modification of debt	—	230
Goodwill impairment	—	17,637
Income tax benefit related to above items	—	(3,194)
Deferred tax impact due to new tax laws, valuation allowance and other discrete tax items	(341)	13,663
Adjusted net income attributable to ARC Document Solutions, Inc. shareholders	$8,532	$6,825
Actual:		
Earnings (loss) per share attributable to ARC Document Solutions, Inc. shareholders:		
Basic	$0.20	$(0.47)
Diluted	$0.20	$(0.47)
Weighted average common shares outstanding:		
Basic	44,918	45,669
Diluted	45,050	45,669
Adjusted:		
Earnings per share attributable to ARC Document Solutions, Inc. shareholders:		
Basic	$0.19	$0.15
Diluted	$0.19	$0.15
Weighted average common shares outstanding:		
Basic	44,918	45,669
Diluted	45,050	46,207

Liquidity and Capital Resources

Our principal sources of cash have been cash flows from operations and borrowings under our debt and lease agreements. Our recent historical uses of cash have been for ongoing operations, payment of principal and interest on outstanding debt obligations, capital expenditures and stock repurchases.

Total cash and cash equivalents as of December 31, 2018 was $29.4 million. Of this amount, $13.5 million was held in foreign countries, with $11.5 million held in China. Repatriation of some of our cash and cash equivalents in foreign countries could be subject to delay for local country approvals and could have potential adverse tax consequences. As a result of holding cash and cash equivalents outside of the U.S., our financial flexibility may be reduced.

Supplemental information pertaining to our historical sources and uses of cash is presented as follows and should be read in conjunction with our Consolidated Statements of Cash Flows and notes thereto included elsewhere in this report.

	Year Ended December 31,	
(In thousands)	2018	2017
Net cash provided by operating activities	$54,964	$52,370
Net cash used in investing activities	$(14,235)	$(8,362)
Net cash used in financing activities	$(38,700)	$(42,063)

Operating Activities

Cash flows from operations are primarily driven by sales and net profit generated from these sales, excluding non-cash charges.

The increase in cash flows from operations in 2018 was primarily a result of the timing of cash outlays related to accounts payable and accrued expenses and improved inventory management, partially offset by the timing of sales and collection of those sales. Days sales outstanding ("DSO") was 53 days as of both December 31, 2018 and December 31, 2017. We continue our focus on the timely collection of our accounts receivable.

Investing Activities

Net cash used in investing activities was primarily related to capital expenditures. We incurred capital expenditures totaling $14.9 million and $9.1 million, in 2018 and 2017, respectively. The increase in capital expenditures from 2017 to 2018 is driven by the timing of equipment purchases, and whether such equipment is leased or purchased with available cash, as well as the addition of leasehold improvements during 2018.

As we continue to foster our relationships with credit providers and obtain attractive lease rates, we have increasingly chosen to lease rather than purchase equipment.

Financing Activities

Net cash of $38.7 million used in financing activities in 2018 primarily relates to payments on our debt agreements and capital leases. We amended our Credit Agreement in the third quarter of 2017 resulting in a decrease in required quarterly principal payments on our term loan debt. In addition, the amendment increased the maximum aggregate principal amount of revolving loans from $30.0 million to $80.0 million, and resized the outstanding principal amount of the term loan under the agreement at $60.0 million, although the total principal amount outstanding remained unchanged at $110.0 million on the date of the amendment. Prior to the amendment, we paid down the principal of our term loan debt by making required quarterly payments in advance. Following the amendment, we continue to pay down the outstanding revolving loans under our Credit Agreement.

Our cash position, working capital, and debt obligations as of December 31, 2018 and 2017 are shown below and should be read in conjunction with our Consolidated Balance Sheets and notes thereto contained elsewhere in this report.

	December 31,	
(In Thousands)	2018	2017
Cash and cash equivalents	$29,433	$28,059
Working capital	$34,425	$39,583
Borrowings from credit agreement (1) (2)	$79,444	$99,243
Other debt obligations	47,748	45,174
Total debt obligations	$127,192	$144,417

(1) Net of deferred financing fees of $556 and $757 at December 31, 2018 and 2017, respectively.

(2) Includes $26.8 million of revolving loans outstanding under our Credit Agreement at December 31, 2018.

The decrease of $5.2 million in working capital in 2018 was primarily due to an increase in accrued payroll related expense that was driven by an increase in bonuses resulting from our improved financial performance. To manage our working capital, we chiefly focus on our DSO and monitor the aging of our accounts receivable, as receivables are the most significant element of our working capital.

We believe that our current cash and cash equivalents balance of $29.4 million, availability under our revolving credit facility, availability under our equipment lease lines, and cash flows provided by operations should be adequate to cover the next twelve months of working capital needs, debt service requirements consisting of scheduled principal and interest payments, and planned capital expenditures, to the extent such items are known or are reasonably determinable based on current business and market conditions. See "Debt Obligations" section for further information related to our revolving credit facility.

We generate the majority of our revenue from sales of services and products to the AEC/O industry. As a result, our operating results and financial condition can be significantly affected by economic factors that influence the AEC/O industry, such as non-residential and residential construction spending. Additionally, a general economic downturn may adversely affect the ability of our customers and suppliers to obtain financing for significant operations and purchases, and to perform their obligations under their agreements with us. We believe that credit constraints in the financial markets could result in a decrease in, or cancellation of, existing business, could limit new business, and

could negatively affect our ability to collect our accounts receivable on a timely basis.
While we have not been actively seeking growth through acquisition during the last three years, the executive team continues to selectively evaluate potential acquisitions.

Debt Obligations

Credit Agreement

On July 14, 2017, we amended our credit agreement which was originally entered into on November 20, 2014 with Wells Fargo Bank, National Association, as administrative agent and the lenders party thereto (the "Credit Agreement").

Prior to being amended, the Credit Agreement provided for the extension of term loans (“Term Loans”) in an aggregate principal amount of $175.0 million. In addition, prior to being amended, the Credit Agreement provided for the extension of revolving loans (“Revolving Loans”) in an aggregate principal amount not to exceed $30.0 million. The amendment increased the maximum aggregate principal amount of Revolving Loans under the agreement from $30 million to $80 million and reduced the outstanding principal amount of the Term Loan under the agreement to $60 million. Upon the execution of the amendment to the Credit Agreement, the total principal amount outstanding under the agreement remained unchanged at $110.0 million. As a result of the amendment to the Credit Agreement, the principal of the Term Loan amortizes at an annual rate of 7.5% during the first and second years following the date of the amendment and at an annual rate of 10% during the third, fourth and fifth years following the date of the amendment, with any remaining balance payable upon the maturity date. The amendment also extended the maturity date for both the Revolving Loans and the Term Loans until July 14, 2022. In November 2018, we reduced the $80 million Revolving Loan commitment by $15.0 million.

As of December 31, 2018, our borrowing availability of Revolving Loans under the Revolving Loan commitment was $36.1 million, after deducting outstanding letters of credit of $2.2 million and an outstanding Revolving Loan balance of $26.8 million.

Loans borrowed under the Credit Agreement bear interest, in the case of LIBOR rate loans, at a per annum rate equal to the applicable LIBOR rate, plus a margin ranging from 1.25% to 2.25%, based on the Company’s Total Leverage Ratio (as defined in the Credit Agreement). Loans borrowed under the Credit Agreement that are not LIBOR rate loans bear interest at a per annum rate equal to (i) the greatest of (A) the Federal Funds Rate plus 0.50%, (B) the one month LIBOR rate plus 1.00% per annum, and (C) the rate of interest announced, from time to time, by Wells Fargo Bank, National Association as its “prime rate,” plus (ii) a margin ranging from 0.25% to 1.25%, based on our Company’s Total Leverage Ratio. The amendment reduced the rate of interest payable on the loans borrowed under the Credit Agreement by 0.25%.

We pay certain recurring fees with respect to the Credit Agreement, including administration fees to the administrative agent.

Subject to certain exceptions, including in certain circumstances, reinvestment rights, the loans extended under the Credit Agreement are subject to customary mandatory prepayment provisions with respect to: the net proceeds from certain asset sales; the net proceeds from certain issuances or incurrences of debt (other than debt permitted to be incurred under the terms of the Credit Agreement); the net proceeds from certain issuances of equity securities; and net proceeds of certain insurance recoveries and condemnation events.

The Credit Agreement contains customary representations and warranties, subject to limitations and exceptions, and customary covenants restricting the ability (subject to various exceptions) of us and our subsidiaries to: incur additional indebtedness (including guarantee obligations); incur liens; sell certain property or assets; engage in mergers or other fundamental changes; consummate acquisitions; make investments; pay dividends, other distributions or repurchase equity interest of us or our subsidiaries; change the nature of their business; prepay or amend certain indebtedness; engage in certain transactions with affiliates; amend our organizational documents; or enter into certain restrictive agreements. In addition, the Credit Agreement contains financial covenants which requires us to maintain (i) at all times, a Total Leverage Ratio in an amount not to exceed 3.25 to 1.00; and (ii) a Fixed Charge Coverage Ratio (as defined in the Credit Agreement), as of the last day of each fiscal quarter, an amount not less than 1.15 to 1.00. We were in compliance with our covenants as of December 31, 2018, and are currently forecasted to remain in compliance with our covenants for the remainder of the term of the Credit Agreement.

The Credit Agreement contains customary events of default, including with respect to: nonpayment of principal, interest, fees or other amounts; failure to perform or observe covenants; material inaccuracy of a representation or warranty when made; cross-default to other material indebtedness; bankruptcy, insolvency and dissolution events;

inability to pay debts; monetary judgment defaults; actual or asserted invalidity or impairment of any definitive loan documentation, repudiation of guaranties or subordination terms; certain ERISA related events; or a change of control. The obligations of our subsidiary that is the borrower under the Credit Agreement are guaranteed by us and each of our other United States domestic subsidiaries of the Company. The Credit Agreement and any interest rate protection and other hedging arrangements provided by any lender party to the Credit Agreement or any affiliate of such a lender are secured on a first priority basis by a perfected security interest in substantially all of the borrower's, ours and each guarantor's assets (subject to certain exceptions).

Credit Agreement

The following table sets forth the outstanding balance, borrowing capacity and applicable interest rate under Credit Agreement.

	December 31, 2018		
	Balance	Available Borrowing Capacity	Interest Rate
	(Dollars in thousands)		
Term Loan	$53,250	$ —	4.11 %
Revolving Loans [1]	26,750	36,066	4.74 %
	$80,000	$ 36,066	

[1] Revolving Loan available borrowing capacity, net of $2.2 million of outstanding standby letters of credit as of December 31, 2018.

Capital Leases

As of December 31, 2018, we had $47.7 million of capital lease obligations outstanding, with a weighted average interest rate of 4.8% and maturities between 2018 and 2022.

Off-Balance Sheet Arrangements

As of December 31, 2018, we did not have any off-balance-sheet arrangements as defined in Item 303(a)(4)(ii) of Regulation S-K.

Critical Accounting Policies

Our management prepares financial statements in conformity with GAAP. When we prepare these financial statements, we are required to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, we evaluate our estimates and judgments, including those related to accounts receivable, inventories, deferred tax assets, goodwill and intangible assets and long-lived assets. We base our estimates and judgments on historical experience and on various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for our judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. To the extent that there are material differences between these estimates and actual results, our future financial statement presentation, financial condition, results of operations and cash flows will be affected. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Goodwill Impairment

In accordance with ASC 350, Intangibles - Goodwill and Other, we assess goodwill for impairment annually as of September 30, and more frequently if events and circumstances indicate that goodwill might be impaired. At September 30, 2018, the Company performed its assessment and determined that goodwill was not impaired.

At September 30, 2017, our goodwill impairment analysis showed one reporting unit with goodwill attributed to it had a carrying amount which exceeded its fair value. Our underperformance relative to our forecast in the third quarter of 2017 drove the decline in the fair value of the reporting unit. As a result, we recorded a pretax, non-cash charge for the three months ended September 30, 2017 to reduce the carrying value of goodwill by $17.6 million.

Goodwill impairment testing is performed at the reporting unit level. Goodwill is assigned to reporting units at the date the goodwill is initially recorded. Once goodwill has been assigned to reporting units, it no longer retains its association with a particular acquisition, and all of the activities within a reporting unit, whether acquired or internally generated, are available to support the value of the goodwill.

We determine the fair value of our reporting units using an income approach. Under the income approach, we determined fair value based on estimated discounted future cash flows of each reporting unit. Determining the fair value of a reporting unit is judgmental in nature and requires the use of significant estimates and assumptions, including revenue growth rates and EBITDA margins, discount rates and future market conditions, among others.

For our annual goodwill impairment test as of September 30, 2017, we elected to early-adopt ASU 2017-04 which simplifies subsequent goodwill measurement by eliminating step two from the goodwill impairment test. As a result, we compared the fair value of a reporting unit with its respective carrying value, and recognized an impairment charge for the amount by which the carrying amount exceeded the reporting unit's fair value.

The results of the latest annual goodwill impairment test, as of September 30, 2018, were as follows:

(Dollars in thousands)	Number of Reporting Units	Representing Goodwill of	
No goodwill balance	6	$	—
Fair value of reporting units exceeds their carrying values by more than 100%	2	121,051	
	8	$	121,051

Based upon a sensitivity analysis, a reduction of approximately 50 basis points of projected EBITDA in 2019 and beyond, assuming all other assumptions remain constant, would result in no further impairment of goodwill.
Based upon a separate sensitivity analysis, a 50 basis point increase to the weighted average cost of capital would result in no further impairment of goodwill.
Given the changing document and printing needs of our customers and the uncertainties regarding the effect on our business, there can be no assurance that the estimates and assumptions made for purposes of our goodwill impairment testing in 2018 will prove to be accurate predictions of the future. If our assumptions, including forecasted EBITDA of certain reporting units, are not achieved, we may be required to record additional goodwill impairment charges in future periods, whether in connection with our next annual impairment testing in the third quarter of 2019, or on an interim basis, if any such change constitutes a triggering event (as defined under ASC 350, Intangibles - Goodwill and Other) outside of the quarter when we regularly perform our annual goodwill impairment test. It is not possible at this time to determine if any such future impairment charge would result or, if it does, whether such charge would be material.

Revenue Recognition

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers (Topic 606). The guidance requires entities to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received in exchange for those goods or services. In addition, Topic 606 provides guidance on the recognition of costs related to obtaining and fulfilling customer contracts.

On January 1, 2018, we adopted Topic 606 using the modified retrospective method applied to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under Topic 606, while prior period amounts are not adjusted and continue to be reported in accordance with the Company's historical accounting. The adoption of Topic 606 did not result in an adjustment to retained earnings in our consolidated balance sheet as of January 1, 2018.

Revenue is recognized when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration that we are expected to be entitled to in exchange for those goods or services. We applied practical expedients related to unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which the Company recognizes revenue at the amount to which it has the right to invoice for services performed.

Construction Document and Information Management (CDIM) consists of professional services and software services to (i) re-produce and distribute large-format and small-format documents in either black & white or color ("Ordered Prints") and (ii) specialized graphic color printing. Substantially all the Company's revenue from CDIM comes from professional services to re-produce Ordered Prints. Sales of Ordered Prints are initiated through a customer order or quote and are governed by established terms and conditions agreed upon at the onset of the customer relationship. Revenue is recognized when the performance obligation under the terms of a contract with a customer are satisfied; generally, this occurs with the transfer of control of the re-produced Ordered Prints. Transfer of control occurs at a specific point-in-time, when the Ordered Prints are delivered to the customer's site or handed to the customer for walk in orders. Revenue is measured as the amount of consideration we expect to receive in exchange

for transferring goods or providing services. Taxes collected concurrent with revenue-producing activities are excluded from revenue.
Managed Print Services (MPS), consists of placement, management, and optimization of print and imaging equipment in customers' offices, job sites, and other facilities. MPS relieves our customers of the burden of purchasing print equipment and related supplies and maintaining print devices and print networks, and shifts their costs to a “per-use” basis. MPS is supported by our hosted proprietary technology, Abacus™, which allows customers to capture, control, manage, print, and account for their documents. MPS contracts include fixed rate per unit for each print produced (per-use), often referred to as a “click charge.” MPS sales are driven by the ongoing print needs of our customers at their facilities. MPS sales are governed by the mutually agreed upon written agreement which outlines our terms and conditions. In providing MPS on a per-use basis, we are providing a series of services that have the same pattern of transfer and are measured as each customer produces a print or per-use. Accordingly, the performance obligations are satisfied over-time on an output method as each print is produced (per-use) by the customer. For each month of service, the prints produced during the period equate to the consideration that we expect to receive from the invoice generated for this period. Taxes collected concurrent with revenue-producing activities are excluded from revenue.
Archiving and Information Management (AIM), combines software and professional services to facilitate the capture, management, access and retrieval of documents and information that have been produced in the past. AIM includes our hosted SKYSITE ® software to organize, search and retrieve documents, as well as the provision of services that include the capture and conversion of hardcopy and electronic documents into digital files (“Scanned Documents”), and their cloud-based storage and maintenance. Sales of AIM professional services, which represent substantially all revenue for AIM, are initiated through a customer order or proposal and are governed by established terms and conditions agreed upon at the onset of the customer relationship. Revenue is recognized when the performance obligation under the terms of a contract with a customer are satisfied; generally, this occurs with the transfer of control of the digital files. Transfer of control occurs at a specific point-in-time, when the Scanned Documents are delivered to the customer either through SKYSITE or through electronic media. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Taxes collected concurrent with revenue-producing activities are excluded from revenue.

Equipment and Supplies sales consist of reselling printing, imaging, and related equipment (“Goods”) to customers primarily in architectural, engineering and construction firms. Sales of Equipment and Supplies are initiated through a customer order and are governed by established terms and conditions agreed upon at the onset of the customer relationship. Revenue is recognized when the performance obligations under the terms of a contract with a customer are satisfied; generally, this occurs with the transfer of control of the Goods. Transfer of control occurs at a specific point-in-time, when the Goods are delivered to the customer’s site. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Taxes collected concurrent with revenue-producing activities are excluded from revenue. We have experienced minimal customer returns or refunds and does not offer a warranty on equipment that it is reselling.
Income Taxes
Deferred tax assets and liabilities reflect temporary differences between the amount of assets and liabilities for financial and tax reporting purposes. Such amounts are adjusted, as appropriate, to reflect changes in tax rates expected to be in effect when the temporary differences reverse. A valuation allowance is recorded to reduce our deferred tax assets to the amount that is more likely than not to be realized. Changes in tax laws or accounting standards and methods may affect recorded deferred taxes in future periods.

When establishing a valuation allowance, we consider future sources of taxable income such as future reversals of existing taxable temporary differences, future taxable income exclusive of reversing temporary differences and carryforwards and tax planning strategies. A tax planning strategy is an action that: is prudent and feasible; an enterprise ordinarily might not take, but would take to prevent an operating loss or tax credit carryforward from expiring unused; and would result in realization of deferred tax assets. In the event we determine that its deferred tax assets, more likely than not, will not be realized in the future, the valuation adjustment to the deferred tax assets will be charged to earnings in the period in which we make such a determination. We have a $2.2 million valuation allowance against certain deferred tax assets as of December 31, 2018.

In future quarters we will continue to evaluate our historical results for the preceding twelve quarters and our future projections to determine whether we will generate sufficient taxable income to utilize our deferred tax assets, and whether a valuation allowance is required.

We calculate our current and deferred tax provision based on estimates and assumptions that could differ from the actual results reflected in income tax returns filed in subsequent years. Adjustments based on filed returns are recorded when identified.

Income taxes have not been provided on certain undistributed earnings of foreign subsidiaries because such earnings are considered to be permanently reinvested.

The amount of taxable income or loss we report to the various tax jurisdictions is subject to ongoing audits by federal, state and foreign tax authorities. We estimate of the potential outcome of any uncertain tax issue is subject to management's assessment of relevant risks, facts, and circumstances existing at that time. We use a more-likely-than-not threshold for financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. We record a liability for the difference between the benefit recognized and measured and tax position taken or expected to be taken on its tax return. To the extent that our assessment of such tax positions changes, the change in estimate is recorded in the period in which the determination is made. We report tax-related interest and penalties as a component of income tax expense.

Our effective income tax rate differs from the statutory tax rate primarily due to the effect of the Tax Cuts and Jobs Act (the "TCJA") enacted on December 22, 2017, the valuation allowance on certain of the Company's deferred tax assets, state income taxes, stock-based compensation, goodwill and other identifiable intangibles, and other discrete items. See Note 7 "Income Taxes" for further information.

Recent Accounting Pronouncements

See Note 2, "Summary of Significant Accounting Policies" to our Consolidated Financial Statements for disclosure on recently adopted accounting pronouncements and those not yet adopted.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 8. Financial Statements and Supplementary Data

Our financial statements and the accompanying notes that are filed as part of this report are listed under "Part IV, Item 15. Financial Statements Schedules and Reports" and are set forth beginning on page F-1 immediately following the signature pages of this Annual Report on Form 10-K, except for our quarterly results of operations, which are included in Item 7 of this Annual Report on Form 10-K.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports under the Exchange Act are recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer we conducted an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) as of December 31, 2018. Based on that evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that as of December 31, 2018, our disclosure controls and procedures were effective.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) or 15(d)-15(f) of the Exchange Act). Under the supervision and with the participation of the Company's management,

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including our Chief Executive Officer and President and our Chief Financial Officer, the Company conducted an evaluation of the effectiveness of its internal control over financial reporting based upon the framework in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, the Company's management concluded that its internal control over financial reporting was effective as of December 31, 2018.

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

Changes in Internal Control Over Financial Reporting

There were no changes to internal control over financial reporting during the quarter ended December 31, 2018, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Our independent registered public accounting firm has issued an audit report on internal control over financial reporting, which appears below.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of ARC Document Solutions, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of ARC Document Solutions, Inc. and subsidiaries (the “Company”) as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2018, of the Company and our report dated March 6, 2019, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

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

/s/ DELOITTE & TOUCHE LLP

San Francisco, California
March 6, 2019

Item 9B. Other Information

On February 26, 2019, the Company entered into amendments to the Amended and Restated Executive Employment Agreements with each of Dilantha Wijesuriya, the Company's Chief Operating Officer, and Jorge Avalos, the Company's Chief Financial Officer. Under the amendment to Mr. Wijesuriya's employment agreement, his base salary is set at $470,000 per year and he is eligible to receive an annual long term equity incentive award of $100,000 per year, payable in the form of a stock option award under the Company's 2014 Stock Plan. Pursuant to the amendment to Mr. Avalos' employment agreement, his base salary is set at $370,000. The foregoing description of the amendments is qualified in its entirety by reference to the full text of the amendments, which are filed as Exhibits 10.40 and 10.41 to this Annual Report on Form 10-K.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Certain information regarding our executive officers is included in Part I, Item 1, of this Annual Report on Form 10-K under "Executive Officers of the Registrant." All other information regarding directors, executive officers and corporate governance required by this item is incorporated herein by reference to the applicable information in the proxy statement for our 2019 annual meeting of stockholders, which will be filed with the SEC within 120 days after our fiscal year end of December 31, 2018, and is set forth under "Nominees for Director," "Corporate Governance Profile," "Section 16(a) Beneficial Ownership Reporting Compliance," and in other applicable sections in the proxy statement.

Item 11. Executive Compensation

The information required by this item is incorporated herein by reference to the applicable information in the proxy statement for our 2019 annual meeting of stockholders and is set forth under "Executive Compensation."

The information in the section of the proxy statement for our 2019 annual meeting captioned "Compensation Committee Report" is incorporated by reference herein but shall be deemed furnished, not filed and shall not be deemed to be incorporated by reference into any filing we make under the Securities Act of 1933 or the Exchange Act.

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

The information required by this item is incorporated herein by reference to the applicable information in the proxy statement for our 2019 annual meeting of stockholders and is set forth under "Beneficial Ownership of Voting Securities" and "Equity Compensation Plan Information."

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

The information required by this item is incorporated herein by reference to the applicable information in the proxy statement for our 2019 annual meeting of stockholders and is set forth under "Certain Relationships and Related Transactions" and "Corporate Governance Profile."

Item 14. Principal Accountant Fees and Services

The information required by this item is incorporated herein by reference to the proxy statement for our 2019 annual meeting of stockholders and is set forth under "Auditor Fees."

PART IV
Item 15. Exhibits and Financial Statement Schedules.
(a) The following documents are filed as part of this Annual Report on Form 10-K:
(1) Financial Statements

Report of Independent Registered Public Accounting Firm
Consolidated Balance Sheets as of December 31, 2018 and 2017
Consolidated Statements of Operations for the years ended December 31, 2018 and 2017
Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2018 and 2017
Consolidated Statements of Equity for the years ended December 31, 2018 and 2017
Consolidated Statements of Cash Flows for the years ended December 31, 2018 and 2017
Notes to Consolidated Financial Statements
All other schedules have been omitted as the required information is not present or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the Consolidated Financial Statements and notes thereto.
(3) Exhibits
See Item 15(b) below.
(b) Exhibits
The following exhibits are filed herewith as part of this Annual Report on Form 10-K or are incorporated by reference to exhibits previously filed with the SEC:
Item 16 Form 10-K Summary.
Not applicable.

Index to Exhibits

Number	Description
3.1	Certificate of Ownership and Merger as filed with Secretary of State of the State of Delaware (incorporated by reference to Exhibit 3.1 to the Registrant's Form 8-K filed December 27, 2012).
3.2	Restated Certificate of Incorporation, filed March 13, 2013.
3.3	Second Amended and Restated Bylaws, (incorporated by reference to Exhibit 3.1 to the Registrant's Form 8-K filed on October 6, 2009).
4.1	Specimen Stock Certificate (incorporated by reference to Exhibit 4.1 to the Registrant's Form 10-K filed on March 9, 2011).
4.3	Registration Rights Agreement, dated December 1, 2010, among ARC Document Solutions, certain subsidiaries of ARC Document Solutions as guarantors thereto, and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative of the several initial purchasers (incorporated by reference to Exhibit 4.3 to the Registrant's Form 8-K filed on December 2, 2010)
10.1	ARC Document Solutions 2005 Stock Plan (incorporated by reference to Exhibit 10.7 to the Registrant's Registration Statement on Form S-1 A (Reg. No. 333-119788), as amended on January 13, 2005).^
10.2	Amendment No. 1 to ARC Document Solutions 2005 Stock Plan dated May 22, 2007 (incorporated by reference to Exhibit 10.63 to the Registrant's Form 10-Q filed on August 9, 2007).^
10.3	Amendment No. 2 to ARC Document Solutions 2005 Stock Plan dated May 2, 2008 (incorporated by reference to Exhibit 10.3 to the Registrant's Form 10-Q filed August 8, 2008). ^
10.4	Amendment No. 3 to ARC Document Solutions 2005 Stock Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Form 10-Q filed August 7, 2009). ^
10.5	Forms of Stock Option Agreements under the 2005 Stock Plan (incorporated by reference to Exhibit 10.8 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-119788), as filed on October 15, 2004).^
10.6	Forms of Restricted Stock Award Agreements under 2005 Stock Plan (incorporated by reference to Exhibit 10.27 to the Registrant's Registration Statement on Form S-1 A (Reg. No. 333-119788), as amended on December 6, 2004).^
10.7	Form of Restricted Stock Unit Award Agreement under 2005 Stock Plan (incorporated by reference to Exhibit 10.28 to the Registrant's Registration Statement on Form S-1 A (Reg. No. 333-119788), as amended on December 6, 2004).^

10.8	Form of Stock Appreciation Right Agreement under 2005 Stock Plan (incorporated by reference to Exhibit 10.29 to the Registrant’s Registration Statement on Form S-1 A (Reg. No. 333-119788), as amended on January 13, 2005).^

10.9	Form of ARC Document Solutions Stock Option Grant Notice - Non-employee Directors (Discretionary Non-statutory Stock Options) (incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K filed on December 16, 2005).^
10.10	Form of ARC Document Solutions Non-employee Directors Nonstatutory Stock Option Agreement (Discretionary Grants) (incorporated by reference to Exhibit 10.2 to the Registrant’s Form 8-K filed on December 16, 2005).^
10.11	Amended and Restated ARC Document Solutions 2005 Employee Stock Purchase Plan amended and restated as of July 30, 2009 (incorporated by reference to Exhibit 10.1 to the Registrant’s Form 10-Q filed on November 9, 2009).^
10.12	Lease Agreement, for the premises commonly known as 934 and 940 Venice Boulevard, Los Angeles, CA, dated November 19, 1997, by and between American Reprographics Company, L.L.C. (formerly Ford Graphics Group, L.L.C.) and Sumo Holdings LA, LLC (incorporated by reference to Exhibit 10.10 to the Registrant’s Registration Statement on Form S-1 (Reg. No. 333-119788), as filed on October 15, 2004).
10.13	Amendment to Lease for the premises commonly known as 934 and 940 Venice Boulevard, Los Angeles, CA, effective as of August 2, 2005, by and between Sumo Holdings LA, LLC, Landlord and American Reprographics Company, L.L.C. (formerly known as Ford Graphics Group, L.L.C.) Tenant (incorporated by reference to Exhibit 10.2 to the Registrant’s Form 10-Q filed on November 14, 2005
10.14	Lease Agreement for the premises commonly known as 345 Clinton Street, Costa Mesa, CA, dated September 23, 2003, by and between American Reprographics Company (dba Consolidated Reprographics) and Sumo Holdings Costa Mesa, LLC (incorporated by reference to Exhibit 10.16 to the Registrant’s Registration Statement on Form S-1 (Reg. No. 333-119788), as filed on October 15, 2004).
10.15	Lease Agreement for the premises commonly known as 616 Monterey Pass Road, Monterey Park, CA, by and dated November 19, 1997, between Dieterich-Post Company and American Reprographics Company, L.L.C. (as successor lessee) (incorporated by reference to Exhibit 10.26 to the Registrant’s Form 10-K filed on March 1, 2007).
10.16	Indemnification Agreement, dated April 10, 2000, among American Reprographics Company, L.L.C., American Reprographics Holdings, L.L.C., ARC Acquisition Co., L.L.C., Mr. Chandramohan, Mr. Suriyakumar, Micro Device, Inc., Dieterich-Post Company, ZS Ford L.P., and ZS Ford L.L.C. (incorporated by reference to Exhibit 10.19 to the Registrant’s Registration Statement on Form S-1 (Reg. No. 333-119788), as filed on October 15, 2004).
10.17	Form of Indemnification Agreement between ARC Document Solutions, Inc. and each of its Directors and Executive Officers (incorporated by reference to Exhibit 10.42 to the Registrant's Form 10-K filed on March 13, 2013).
10.18	Letter Amendment, dated March 13, 2014, by and between ARC Document Solutions, Inc. and Mr. Suriyakumar (incorporated by reference to Exhibit 10.47 to the Registrant's Form 10-K filed on March 14, 2014).^
10.19	Amended and Restated Employment Agreement, dated March 13, 2014, between ARC Document Solutions, Inc. and Mr. Kumarakulasingam (incorporated by reference to Exhibit 10.48 to the Registrant's Form 10-K filed on March 14, 2014).^

10.20	Executive Employment Agreement, dated May 1, 2014, by and between ARC Document Solutions, Inc. and John Toth (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on May 7, 2014).

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10.21	Executive Employment Agreement, dated May 1, 2014, by and between ARC Document Solutions, Inc. and Rahul K. Roy (incorporated by reference to Exhibit 10.2 to the Registrant's Form 8-K filed on May 7, 2014).^
10.22	Executive Employment Agreement, dated May 1, 2014, by and between ARC Document Solutions, Inc. and Dilantha Wijesuriya (incorporated by reference to Exhibit 10.3 to the Registrant's Form 8-K filed on May 7, 2014).^
10.23	Executive Employment Agreement, dated May 1, 2014, by and between ARC Document Solutions, Inc. and Jorge Avalos (incorporated by reference to Exhibit 10.4 to the Registrant's Form 8-K filed on May 7, 2014).^
10.24	ARC Document Solutions, Inc. 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on May 7, 2014).
10.25	Amendment No. 1 to ARC Document Solutions, Inc. 2014 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Form 8-K filed on May 7, 2014).
10.26	Amended and Restated Executive Employment Agreement dated May 17, 2014 by and between ARC Document Solutions, Inc. and Mr. Suriyakumar (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on May 19, 2014).^
10.27	Credit Agreement dated November 20, 2014, among ARC Document Solutions, LLC, Wells Fargo Bank, National Association, as administrative agent, and the lenders party thereto (incorporated by reference to Exhibit 10.1 to the Registrant’s Form 8-K filed on November 24, 2014).
10.28	Independent Consulting Agreement effective February 2, 2015, by and between ARC Document Solutions, Inc. and John Toth (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on January 30, 2015).
10.29	Amended and Restated Executive Employment Agreement, dated February 1, 2015, by and between ARC Document Solutions, Inc. and Jorge Avalos (incorporated by reference to Exhibit 10.2 to the Registrant's Form 8-K filed on January 30, 2015). ^
10.30	Amendment to Credit Agreement, dated June 4, 2015, among ARC Document Solutions, LLC, Wells Fargo Bank, National Association, as administrative agent and the financial institutions party thereto as lenders (incorporated by reference to Exhibit 99.1 to the Registrant's Form 8-K filed on June 5, 2015).
10.31	Amended and Restated Executive Employment Agreement, dated June 9, 2015, between ARC Document Solutions, Inc. and Jorge Avalos (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on June 16, 2015). ^
10.32	Amended and Restated Executive Employment Agreement, dated June 9, 2015, between ARC Document Solutions, Inc. and Rahul K. Roy (incorporated by reference to Exhibit 10.2 to the Registrant's Form 8-K filed on June 16, 2015). ^
10.33	Amended and Restated Executive Employment Agreement, dated June 9, 2015, between ARC Document Solutions, Inc. and Dilantha Wijesuriya (incorporated by reference to Exhibit 10.3 to the Registrant's Form 8-K filed on June 16, 2015). ^
10.34	

Amendment Letter, dated as of February 5, 2016, by and among ARC Document Solutions, LLC, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent (incorporated by reference to Exhibit 99.1 to the Registrant's Form 8-K filed on February 9, 2016).

10.35	Amendment dated May 9, 2016 to Amended and Restated Executive Employment Agreement, dated June 9, 2015, between ARC Document Solutions, Inc. and Rahul K. Roy (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on May 3, 2016).^
10.36	Amendment to Credit Agreement, dated June 24, 2016, among ARC Documents Solutions, LLC, Wells Fargo Bank, National Association, as administrative agent, and the lenders party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on June 24, 2016).
10.37	Amendment to Credit Agreement, dated July 14, 2017, among ARC Document Solutions, LLC, Wells Fargo Bank, National Association, as administrative agent, and the financial institutions party thereto as lenders (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on July 18, 2017).
10.38	Amended and Restated Executive Employment Agreement, dated February 22, 2018 between ARC Document Solutions, Inc. and Kumarakulasingam Suriyakumar (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K files on February 23, 2018).
10.39	Amendment to the ARC Document Solutions, Inc. 2014 Stock Incentive Plan, dated May 1, 2018 (incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed on May 1, 2018).
10.40	Amendment No 1 to the Amended and Restated Executive Employment Agreement, dated February 13, 2019, between ARC Document Solutions, Inc. and Jorge Avalos.*
10.41	Amendment No 1 to the Amended and Restated Executive Employment Agreement, dated February 13, 2019, between ARC Document Solutions, Inc. and Dilantha Wijesuriya.*
21.1	List of Subsidiaries.*
23.1	Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm.*
31.1	Certification of Principal Executive Officer pursuant to Rules 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
31.2	Certification of Principal Financial Officer pursuant to Rules 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.*
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.*
101.INS	XBRL Instance Document *
101.SCH	XBRL Taxonomy Extension Schema *
101.CAL	XBRL Taxonomy Extension Calculation Linkbase *
101.DEF	XBRL Taxonomy Extension Definition Linkbase *

101.LAB	XBRL Taxonomy Extension Label Linkbase *
101.PRE	XBRL Taxonomy Extension Presentation Linkbase *

*Filed herewith
^Indicates management contract or compensatory plan or agreement

SIGNATURES

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

ARC DOCUMENT SOLUTIONS, INC.

By: /s/ KUMARAKULASINGAM SURIYAKUMAR
Chairman, President and Chief Executive Officer

Date: March 6, 2019

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

Signature	Title	Date
/s/ KUMARAKULASINGAM SURIYAKUMAR Kumarakulasingam Suriyakumar	Chairman, President and Chief Executive Officer and Director (Principal Executive Officer)	March 6, 2019
/s/ JORGE AVALOS Jorge Avalos	Chief Financial Officer (Principal Financial Officer)	March 6, 2019
/s/ BRADFORD L. BROOKS Bradford L. Brooks	Director	March 6, 2019
/s/ CHERYL COOK Cheryl Cook	Director	March 6, 2019
/s/ THOMAS J. FORMOLO Thomas J. Formolo	Director	March 6, 2019
/s/ JOHN G. FREELAND John G. Freeland	Director	March 6, 2019
/s/ DEWITT KERRY MCCLUGGAGE Dewitt Kerry McCluggage	Director	March 6, 2019
/s/ MARK W. MEALY Mark W. Mealy	Director	March 6, 2019

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of ARC Document Solutions, Inc.:

Opinion on the Financial Statements

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

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 6, 2019 expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP

San Francisco, California

March 6, 2019

We have served as the Company's auditor since 2009.

ARC DOCUMENT SOLUTIONS, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except per share data)

	December 31, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 29,433	$ 28,059
Accounts receivable, net of allowances for accounts receivable of $2,016 and $2,341	58,035	57,011
Inventories, net	16,768	19,937
Prepaid expenses	4,937	4,208
Other current assets	6,202	5,266
Total current assets	115,375	114,481
Property and equipment, net of accumulated depreciation of $199,480 and $198,693	70,668	64,245
Goodwill	121,051	121,051
Other intangible assets, net	5,126	9,068
Deferred income taxes	24,946	28,029
Other assets	2,550	2,551
Total assets	$ 339,716	$ 339,425
Liabilities and Equity		
Current liabilities:		
Accounts payable	$ 24,218	$ 24,289
Accrued payroll and payroll-related expenses	17,029	12,617
Accrued expenses	17,571	17,201
Current portion of long-term debt and capital leases	22,132	20,791
Total current liabilities	80,950	74,898
Long-term debt and capital leases	105,060	123,626
Other long-term liabilities	6,404	3,290
Total liabilities	192,414	201,814
Commitments and contingencies (Note 6)		
Stockholders' equity:		
ARC Document Solutions, Inc. stockholders' equity:		
Preferred stock, $0.001 par value, 25,000 shares authorized; 0 shares issued and outstanding	—	—
Common stock, $0.001 par value, 150,000 shares authorized; 48,492 and 47,913 shares issued and 45,818 and 45,266 shares outstanding	48	48
Additional paid-in capital	123,525	120,953
Retained earnings	29,397	20,524
Accumulated other comprehensive loss	(3,351)	(1,998)
	149,619	139,527
Less cost of common stock in treasury, 2,674 and 2,647 shares	9,350	9,290
Total ARC Document Solutions, Inc. stockholders' equity	140,269	130,237
Noncontrolling interest	7,033	7,374
Total equity	147,302	137,611
Total liabilities and equity	$ 339,716	$ 339,425

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

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ARC DOCUMENT SOLUTIONS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)

	Year Ended December 31,	
	2018	2017
Service sales	$353,300	$347,326
Equipment and supplies sales	47,484	47,253
Total net sales	400,784	394,579
Cost of sales	269,934	270,556
Gross profit	130,850	124,023
Selling, general and administrative expenses	109,122	101,889
Amortization of intangible assets	3,868	4,280
Goodwill impairment	—	17,637
Income from operations	17,860	217
Other income, net	(81)	(81)
Loss on extinguishment and modification of debt	—	230
Interest expense, net	5,880	6,179
Income (loss) before income tax provision	12,061	(6,111)
Income tax provision	3,334	15,244
Net income (loss)	8,727	(21,355)
Loss (income) attributable to noncontrolling interest	146	(156)
Net income (loss) attributable to ARC Document Solutions, Inc. shareholders	$8,873	$(21,511)
Earnings (loss) per share attributable to ARC Document Solutions, Inc. shareholders:		
Basic	$0.20	$(0.47)
Diluted	$0.20	$(0.47)
Weighted average common shares outstanding:		
Basic	44,918	45,669
Diluted	45,050	45,669

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

ARC DOCUMENT SOLUTIONS, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)

	Year Ended December 31,	
	2018	2017
Net income (loss)	$8,727	$(21,355)
Other comprehensive (loss) income, net of tax		
Foreign currency translation adjustments, net of tax	(1,548)	1,906
Fair value adjustment of derivatives, net of tax	—	202
Other comprehensive (loss) income, net of tax	(1,548)	2,108
Comprehensive income (loss)	7,179	(19,247)
Comprehensive (loss) income attributable to noncontrolling interest	(341)	469
Comprehensive income (loss) attributable to ARC Document Solutions, Inc. shareholders	$7,520	$(19,716)

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

ARC DOCUMENT SOLUTIONS, INC.
CONSOLIDATED STATEMENTS OF EQUITY
(In thousands, except per share data)

	ARC Document Solutions, Inc. Shareholders							
	Common Stock				Accumulated			
	Shares	Par Value	Additional Paid-in Capital	Retained Earnings	Other Comprehensive Loss	Common Stock in Treasury	Noncontrolling Interest	Total
Balance at December 31, 2016	47,428	$ 47	$ 117,749	$ 41,822	$ (3,793)	$ (5,909)	$ 6,905	$ 156,821
Stock-based compensation	404	1	2,946					2,947
Modified retrospective adjustment resulting from the adoption of ASC 2016-09			29	213				242
Issuance of common stock under Employee Stock Purchase Plan	47		133					133
Stock options exercised	34		96					96
Treasury shares						(3,381)		(3,381)
Comprehensive (loss) income				(21,511)	1,795		469	(19,247)
Balance at December 31, 2017	47,913	$ 48	$ 120,953	$ 20,524	$ (1,998)	$ (9,290)	$ 7,374	$ 137,611
Stock-based compensation	503		2,445					2,445
Issuance of common stock under Employee Stock Purchase Plan	76		127					127
Treasury shares						(60)		(60)
Comprehensive income (loss)				8,873	(1,353)		(341)	7,179
Balance at December 31, 2018	48,492	$ 48	$ 123,525	$ 29,397	$ (3,351)	$ (9,350)	$ 7,033	$ 147,302

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

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ARC DOCUMENT SOLUTIONS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31, 2018	2017
Cash flows from operating activities		
Net income (loss)	$8,727	$(21,355)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Allowance for accounts receivable	1,083	1,249
Depreciation	29,019	29,043
Amortization of intangible assets	3,868	4,280
Amortization of deferred financing costs	232	306
Goodwill impairment	—	17,637
Stock-based compensation	2,445	2,947
Deferred income taxes	3,128	13,802
Deferred tax valuation allowance	(140)	1,031
Loss on extinguishment and modification of debt	—	230
Other non-cash items, net	(314)	(56)
Changes in operating assets and liabilities:		
Accounts receivable	(2,767)	2,158
Inventory	2,737	(1,339)
Prepaid expenses and other assets	(1,814)	(556)
Accounts payable and accrued expenses	8,760	2,993
Net cash provided by operating activities	54,964	52,370
Cash flows from investing activities		
Capital expenditures	(14,930)	(9,106)
Other	695	744
Net cash used in investing activities	(14,235)	(8,362)
Cash flows from financing activities		
Proceeds from stock option exercises	—	96
Proceeds from issuance of common stock under Employee Stock Purchase Plan	127	133
Share repurchases	(60)	(3,381)
Contingent consideration on prior acquisitions	(236)	(275)
Early extinguishment of long-term debt	—	(14,150)
Payments on long-term debt agreements and capital leases	(23,031)	(65,516)
Borrowings under revolving credit facilities	16,875	63,100
Payments under revolving credit facilities	(32,375)	(21,800)
Payment of deferred financing costs	—	(270)
Net cash used in financing activities	(38,700)	(42,063)
Effect of foreign currency translation on cash balances	(655)	875
Net change in cash and cash equivalents	1,374	2,820
Cash and cash equivalents at beginning of period	28,059	25,239
Cash and cash equivalents at end of period	$29,433	$28,059
Supplemental disclosure of cash flow information:		
Cash paid for interest	$5,437	$5,574
Income taxes paid, net	$713	$56
Noncash financing activities:		

Capital lease obligations incurred	$21,531	$25,192
Contingent liabilities in connection with the acquisition of businesses	$—	$27

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

ARC DOCUMENT SOLUTIONS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except per share data or where otherwise noted)

1. DESCRIPTION OF BUSINESS AND BASIS OF PRESENTATION

ARC Document Solutions, Inc. (“ARC Document Solutions,” “ARC” or the “Company”) is a leading document solutions provider to architectural, engineering, construction, and facilities management professionals, while also providing document solutions to businesses of all types. ARC offers a variety of services including: Construction Document Information Management ("CDIM"), Managed Print Services ("MPS"), and Archive and Information Management ("AIM"). In addition, ARC also sells Equipment and Supplies. The Company conducts its operations through its wholly-owned operating subsidiary, ARC Document Solutions, LLC, a Texas limited liability company, and its affiliates.

Basis of Presentation

The accompanying Consolidated Financial Statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (“GAAP”) requires management to make estimates and assumptions that affect the amounts reported in the Consolidated Financial Statements and accompanying notes. The Company evaluates its estimates and assumptions on an ongoing basis and relies on historical experience and various other factors that it believes to be reasonable under the circumstances to determine such estimates. Actual results could differ from those estimates and such differences may be material to the Consolidated Financial Statements.

Risk and Uncertainties

The Company generates the majority of its revenue from sales of services and products to customers in the architectural, engineering, construction and building owner/operator (AEC/O) industry. As a result, the Company’s operating results and financial condition can be significantly affected by economic factors that influence the AEC/O industry, such as non-residential construction spending, GDP growth, interest rates, unemployment rates, and office vacancy rates. Reduced activity (relative to historic levels) in the AEC/O industry would diminish demand for some of ARC’s services and products, and would therefore negatively affect revenues and have a material adverse effect on its business, operating results and financial condition.

As part of the Company’s growth strategy, ARC intends to continue to offer and grow a variety of service offerings, some of which are relatively new to the Company. The success of the Company’s efforts will be affected by its ability to acquire new customers for the Company’s new service offerings, as well as to sell the new service offerings to existing customers. The Company’s inability to successfully market and execute these relatively new service offerings could significantly affect its business and reduce its long term revenue, resulting in an adverse effect on its results of operations and financial condition.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Cash Equivalents

Cash equivalents include demand deposits and short-term investments with a maturity of three months or less when purchased.

The Company maintains its cash deposits at numerous banks located throughout the United States, Canada, India, Australia, United Arab Emirates, the United Kingdom and China, which at times, may exceed federally insured limits. UDS, the Company’s joint venture in China, held $11.5 million and $11.9 million of the Company’s cash and cash equivalents as of December 31, 2018 and 2017, respectively. The Company has not experienced any losses in such accounts and believes it is not exposed to any significant risk on cash and cash equivalents.

Concentrations of Credit Risk and Significant Vendors

Concentrations of credit risk with respect to trade receivables are limited due to a large, diverse customer base. No individual customer represented more than 2% of net sales during 2018 and 2017.

The Company has geographic concentration risk as sales in California, as a percent of total sales, were approximately 34% for 2018 and 2017.

The Company contracts with various suppliers. Although there are a limited number of suppliers that could supply the Company’s inventory, management believes any shortfalls from existing suppliers would be absorbed from other suppliers on comparable terms. However, a change in suppliers could cause a delay in sales and adversely affect results.

Purchases from the Company’s three largest vendors during 2018 and 2017 comprised approximately 46% and 46% respectively, of the Company’s total purchases of inventory and supplies.

Allowance for Doubtful Accounts

The Company performs periodic credit evaluations of the financial condition of its customers, monitors collections and payments from customers, and generally does not require collateral. The Company provides for the possible inability to collect accounts receivable by recording an allowance for doubtful accounts. The Company writes off an account when it is considered uncollectible. The Company estimates the allowance for doubtful accounts based on historical experience, aging of accounts receivable, and information regarding the credit worthiness of its customers. Additionally, the Company provides an allowance for returns and discounts based on historical experience. The allowance for doubtful accounts activity was as follows:

	Balance at Beginning of Period	Charges to Cost and Expenses	Deductions (1)	Balance at End of Period
Year ended December 31, 2018				
Allowance for accounts receivable	$ 2,341	$ 1,083	$ (1,408)	$ 2,016
Year ended December 31, 2017				
Allowance for accounts receivable	$ 2,060	$ 1,249	$ (968)	$ 2,341

(1) Deductions represent uncollectible accounts written-off net of recoveries.

Inventories

Inventories are valued at the lower of cost (determined on a first-in, first-out basis; or average cost) or net realizable value. Inventories primarily consist of reprographics materials for use and resale, and equipment for resale. On an ongoing basis, inventories are reviewed and adjusted for estimated obsolescence or unmarketable inventories to reflect the lower of cost or net realizable value. Charges to increase inventory reserves are recorded as an increase in cost of sales. As of December 31, 2018 and 2017, the reserves for inventory obsolescence was $0.9 million.

Income Taxes

Deferred tax assets and liabilities reflect temporary differences between the amount of assets and liabilities for financial and tax reporting purposes. Such amounts are adjusted, as appropriate, to reflect changes in tax rates expected to be in effect when the temporary differences reverse. A valuation allowance is recorded to reduce the Company's deferred tax assets to the amount that is more likely than not to be realized. Changes in tax laws or accounting standards and methods may affect recorded deferred taxes in future periods.

When establishing a valuation allowance, the Company considers future sources of taxable income such as future reversals of existing taxable temporary differences, future taxable income exclusive of reversing temporary differences and carryforwards and tax planning strategies. A tax planning strategy is an action that: is prudent and feasible; an enterprise ordinarily might not take, but would take to prevent an operating loss or tax credit carryforward from expiring unused; and would result in realization of deferred tax assets. In the event the Company determines that its deferred tax assets, more likely than not, will not be realized in the future, the valuation adjustment to the deferred tax assets will be charged to earnings in the period in which the Company makes such a determination. The Company has a $2.2 million valuation allowance against certain deferred tax assets as of December 31, 2018.

In future quarters the Company will continue to evaluate its historical results for the preceding twelve quarters and its future projections to determine whether the Company will generate sufficient taxable income to utilize its deferred tax assets, and whether a valuation allowance is required.

The Company calculates its current and deferred tax provision based on estimates and assumptions that could differ from the actual results reflected in income tax returns filed in subsequent years. Adjustments based on filed returns are recorded when identified.

Income taxes have not been provided on certain undistributed earnings of foreign subsidiaries because such earnings are considered to be permanently reinvested.

The amount of taxable income or loss the Company reports to the various tax jurisdictions is subject to ongoing audits by federal, state and foreign tax authorities. The Company's estimate of the potential outcome of any uncertain tax issue is subject to management’s assessment of relevant risks, facts, and circumstances existing at that time. The Company uses a more-likely-than-not threshold for financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return.

The Company records a liability for the difference between the benefit recognized and measured and tax position taken or expected to be taken on its tax return. To the extent that the Company's assessment of such tax positions changes, the change in estimate is recorded in the period in which the determination is made. The Company reports tax-related interest and penalties as a component of income tax expense.

The Company’s 2017 effective income tax rate differs from the statutory tax rate primarily due to the effect of the Tax Cuts and Jobs Act (the "TCJA") enacted on December 22, 2017, the valuation allowance on certain of the Company’s deferred tax assets, state income taxes, stock-based compensation, goodwill and other identifiable intangibles, and other discrete items. See Note 7 “Income Taxes” for further information.

Property and Equipment

Property and equipment are stated at cost and are depreciated using the straight-line method over their estimated useful lives, as follows:

Buildings	10-20 years
Leasehold improvements	10-20 years or lease term, if shorter
Machinery and equipment	3-7 years
Furniture and fixtures	3-7 years

Assets acquired under capital lease arrangements are included in machinery and equipment, are recorded at the present value of the minimum lease payments, and are depreciated using the straight-line method over the life of the asset or term of the lease, whichever is shorter. Expenses for repairs and maintenance are charged to expense as incurred, while renewals and betterments are capitalized. Gains or losses on the sale or disposal of property and equipment are reflected in operating income.

The Company accounts for software costs developed for internal use in accordance with ASC 350-40, Intangibles – Goodwill and Other, which requires companies to capitalize certain qualifying costs incurred during the application development stage of the related software development project. The primary use of this software is for internal use and, accordingly, such capitalized software development costs are depreciated on a straight-line basis over the economic lives of the related products not to exceed three years. The Company’s machinery and equipment (see Note 4 “Property and Equipment”) includes $1.3 million and $1.7 million of capitalized software development costs as of December 31, 2018 and 2017, net of accumulated amortization of $20.0 million and $18.9 million as of December 31, 2018 and 2017, respectively. Depreciation expense includes the amortization of capitalized software development costs which amounted to $1.1 million and $0.8 million, during the years ended December 31, 2018 and 2017, respectively.

Impairment of Long-Lived Assets

The Company periodically assesses potential impairments of its long-lived assets in accordance with the provisions of ASC 360, Accounting for the Impairment or Disposal of Long-lived Assets. An impairment review is performed whenever events or changes in circumstances indicate that the carrying value of the assets may not be recoverable. The Company groups its assets at the lowest level for which identifiable cash flows are largely independent of the cash flows of the other assets and liabilities. The Company has determined that the lowest level for which identifiable cash flows are available is the regional level, which is the operating segment level.

Factors considered by the Company include, but are not limited to, significant underperformance relative to historical or projected operating results; significant changes in the manner of use of the acquired assets or the strategy for the overall business; and significant negative industry or economic trends. When the carrying value of a long-lived asset may not be recoverable based upon the existence of one or more of the above indicators of impairment, the Company estimates the future undiscounted cash flows expected to result from the use of the asset and its eventual disposition. If the sum of the expected future undiscounted cash flows and eventual disposition is less than the carrying amount of the asset, the Company recognizes an impairment loss. An impairment loss is reflected as the amount by which the carrying amount of the asset exceeds the fair value of the asset, based on the fair value if available, or discounted cash flows, if fair value is not available. The Company had no long-lived asset impairments in 2018 or 2017.

Goodwill and Other Intangible Assets

In accordance with ASC 350, Intangibles - Goodwill and Other, the Company assesses goodwill for impairment annually as of September 30, and more frequently if events and circumstances indicate that goodwill might be impaired.

Goodwill impairment testing is performed at the reporting unit level. Goodwill is assigned to reporting units at the date the goodwill is initially recorded. Once goodwill has been assigned to reporting units, it no longer retains its association with a particular acquisition, and all of the activities within a reporting unit, whether acquired or internally generated, are available to support the value of the goodwill.

Traditionally, goodwill impairment testing is a two-step process. Step one involves comparing the fair value of the reporting units to its carrying amount. If the carrying amount of a reporting unit is greater than zero and its fair value is greater than its carrying amount, there is no impairment. If the reporting unit’s carrying amount is greater than the fair value, the second step must be completed to measure the amount of impairment, if any. Step two involves calculating an implied fair value of goodwill.

For its annual goodwill impairment test as of September 30, 2017, the Company elected to early-adopt ASU 2017-04 which simplifies subsequent goodwill measurement by eliminating step two from the goodwill impairment test.

The Company determines the fair value of its reporting units using an income approach. Under the income approach, the Company determined fair value based on estimated discounted future cash flows of each reporting unit.

Determining the fair value of a reporting unit is judgmental in nature and requires the use of significant estimates and assumptions, including revenue growth rates and EBITDA margins, discount rates and future market conditions, among others.

Other intangible assets that have finite lives are amortized over their useful lives. Customer relationships are amortized using the accelerated method, based on customer attrition rates, over their estimated useful lives of 13 (weighted average) years.

Deferred Financing Costs

Direct costs incurred in connection with debt agreements are recorded as incurred and amortized based on the effective interest method for the Company's borrowings under its credit agreement ("Credit Agreement"). At December 31, 2018 and 2017, the Company had deferred financing costs of $0.6 million and $0.8 million, respectively, net of accumulated amortization of $0.3 million and $0.1 million, respectively.

Fair Values of Financial Instruments

The following methods and assumptions were used by the Company in estimating the fair value of its financial instruments for disclosure purposes:

Cash equivalents: Cash equivalents are time deposits with maturity of three months or less when purchased, which are highly liquid and readily convertible to cash. Cash equivalents reported in the Company’s Consolidated Balance Sheet were $7.3 million and $8.5 million as of December 31, 2018 and 2017, respectively, and are carried at cost and approximate fair value due to the relatively short period to maturity of these instruments.

Short- and long-term debt and capital leases: The carrying amount of the Company’s capital leases reported in the Consolidated Balance Sheets approximates fair value based on the Company’s current incremental borrowing rate for similar types of borrowing arrangements. The carrying amount reported in the Company’s Consolidated Balance Sheet as of December 31, 2018 for borrowings under its Credit Agreement is $80.0 million, excluding unamortized deferred financing fees. The Company has determined, utilizing observable market quotes, that the fair value of borrowings under its Credit Agreement is $80.0 million as of December 31, 2018.

Insurance Liability

The Company maintains a high deductible insurance policy for a significant portion of its risks and associated liabilities with respect to workers’ compensation. The Company’s deductible is $250 thousand per individual. The accrued liabilities associated with this program are based on the Company’s estimate of the ultimate costs to settle known claims, as well as claims incurred but not yet reported to the Company, as of the balance sheet date. The Company’s estimated liability is not discounted and is based upon an actuarial report obtained from a third party. The actuarial report uses information provided by the Company’s insurance brokers and insurers, combined with the

Company's judgments regarding a number of assumptions and factors, including the frequency and severity of claims, claims development history, case jurisdiction, applicable legislation, and the Company's claims settlement practices. The Company is self-insured for healthcare benefits provided to certain employees in the United States, with a stop-loss at $250 thousand per individual. Liabilities associated with the risks that are retained by the Company are estimated, in part, by considering historical claims experience, demographic factors, severity factors and other actuarial assumptions. The Company's results could be materially affected by claims and other expenses related to such plans if future occurrences and claims differ from these assumptions and historical trends. Other employees are covered by other offered healthcare benefits.

Commitments and Contingencies

In the normal course of business, the Company estimates potential future loss accruals related to legal, workers' compensation, healthcare, tax and other contingencies. These accruals require management's judgment on the outcome of various events based on the best available information. However, due to changes in facts and circumstances, the ultimate outcomes could differ from management's estimates.

Revenue Recognition

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers (Topic 606). The guidance requires entities to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received in exchange for those goods or services. In addition, Topic 606 provides guidance on the recognition of costs related to obtaining and fulfilling customer contracts.

On January 1, 2018, the Company adopted Topic 606 using the modified retrospective method applied to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under Topic 606, while prior period amounts are not adjusted and continue to be reported in accordance with the Company's historical accounting. The adoption of Topic 606 did not result in an adjustment to retained earnings in the Company's consolidated balance sheet as of January 1, 2018.

Revenue is recognized when control of the promised goods or services is transferred to the Company's customers, in an amount that reflects the consideration that the Company is expected to be entitled to in exchange for those goods or services. The Company applied practical expedients related to unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which the Company recognizes revenue at the amount to which it has the right to invoice for services performed.

Net sales of the Company's principal services and products were as follows:

	Year Ended December 31,	
	2018	2017
Service Sales		
CDIM	$211,389	$205,083
MPS	128,775	129,479
AIM	13,136	12,764
Total services sales	353,300	347,326
Equipment and Supplies Sales	47,484	47,253
Total net sales	$400,784	$394,579

Construction Document and Information Management (CDIM) consists of professional services and software services to (i) re-produce and distribute large-format and small-format documents in either black & white or color ("Ordered Prints") and (ii) specialized graphic color printing. Substantially all the Company's revenue from CDIM comes from professional services to re-produce Ordered Prints. Sales of Ordered Prints are initiated through a customer order or quote and are governed by established terms and conditions agreed upon at the onset of the customer relationship. Revenue is recognized when the performance obligation under the terms of a contract with a customer are satisfied; generally, this occurs with the transfer of control of the re-produced Ordered Prints. Transfer of control occurs at a specific point-in-time, when the Ordered Prints are delivered to the customer's site or handed to the customer for walk in orders. Revenue is measured as the amount of consideration the Company expects to receive in

exchange for transferring goods or providing services. Taxes collected concurrent with revenue-producing activities are excluded from revenue.
Managed Print Services (MPS), consists of placement, management, and optimization of print and imaging equipment in customers' offices, job sites, and other facilities. MPS relieves the Company’s customers of the burden of purchasing print equipment and related supplies and maintaining print devices and print networks, and shifts their costs to a “per-use” basis. MPS is supported

by the Company's hosted proprietary technology, Abacus™, which allows customers to capture, control, manage, print, and account for their documents. MPS contracts include a fixed rate per unit for each print produced (per-use), often referred to as a “click charge.” MPS sales are driven by the ongoing print needs of the Company’s customers at their facilities. MPS sales are governed by the mutually agreed upon written agreement which outlines the Company’s terms and conditions. In providing MPS on a per-use basis, the Company is providing a series of services that have the same pattern of transfer and are measured as each customer produces a print or per-use. Accordingly, the performance obligations are satisfied over-time on an output method as each print is produced (per-use) by the customer. For each month of service, the prints produced during the period equate to the consideration that the Company expects to receive from the invoice generated for this period. Taxes collected concurrent with revenue-producing activities are excluded from revenue.

Archiving and Information Management (AIM), combines software and professional services to facilitate the capture, management, access and retrieval of documents and information that have been produced in the past. AIM includes the Company's hosted SKYSITE ® software to organize, search and retrieve documents, as well as the provision of services that include the capture and conversion of hardcopy and electronic documents into digital files (“Scanned Documents”), and their cloud-based storage and maintenance. Sales of AIM professional services, which represent substantially all revenue for AIM, are initiated through a customer order or proposal and are governed by established terms and conditions agreed upon at the onset of the customer relationship. Revenue is recognized when the performance obligation under the terms of a contract with a customer are satisfied; generally, this occurs with the transfer of control of the digital files. Transfer of control occurs at a specific point-in-time, when the Scanned Documents are delivered to the customer either through SKYSITE or through electronic media. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring goods or providing services. Taxes collected concurrent with revenue-producing activities are excluded from revenue.

Equipment and Supplies sales consist of reselling printing, imaging, and related equipment (“Goods”) to customers primarily in architectural, engineering and construction firms. Sales of Equipment and Supplies are initiated through a customer order and are governed by established terms and conditions agreed upon at the onset of the customer relationship. Revenue is recognized when the performance obligations under the terms of a contract with a customer are satisfied; generally, this occurs with the transfer of control of the Goods. Transfer of control occurs at a specific point-in-time, when the Goods are delivered to the customer’s site. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Taxes collected concurrent with revenue-producing activities are excluded from revenue. The Company has experienced minimal customer returns or refunds and does not offer a warranty on equipment that it is reselling.

The Company has established contractual pricing for certain large national customer accounts (“Global Solutions”). These contracts generally establish uniform pricing at all operating segments for Global Solutions. Revenues earned from the Company’s Global Solutions are recognized in the same manner as non-Global Solutions revenues.

Included in revenues are fees charged to customers for shipping, handling, and delivery services. Such revenues amounted to $11.1 million and $10.7 million for 2018 and 2017, respectively.

Revenues from hosted software licensing activities are recognized ratably over the term of the license. Revenues from software licensing activities comprise less than 2% of the Company’s consolidated revenues during the years ended December 31, 2018 and 2017.

Management provides for returns, discounts and allowances based on historic experience and adjusts such allowances as considered necessary.

Comprehensive Income (Loss)

The Company’s comprehensive income (loss) includes foreign currency translation adjustments, net of taxes.

Asset and liability accounts of international operations are translated into the Company’s functional currency, U.S. dollars, at current rates. Revenues and expenses are translated at the average currency rate for the fiscal year.

Segment and Geographic Reporting

The provisions of ASC 280, Segment Reporting, require public companies to report financial and descriptive information about their reportable operating segments. The Company identifies operating segments based on the various business activities that earn revenue and incur expense and whose operating results are reviewed by the Company's Chief Executive Officer, who is the Company's chief operating decision maker. Because its operating segments have similar products and services, classes of customers, production processes, distribution methods and economic characteristics, the Company operates as a single reportable segment.

The Company recognizes revenues in geographic areas based on the location to which the product was shipped or services have been rendered. See table below for revenues and property and equipment, net, attributable to the Company's U.S. operations and foreign operations.

	Year Ended December 31,					
	2018			2017		
	U.S.	Foreign Countries	Total	U.S.	Foreign Countries	Total
Revenues from external customers	$340,650	$ 60,134	$400,784	$339,250	$ 55,329	$394,579
Property and equipment, net	$64,878	$ 5,790	$70,668	$58,287	$ 5,958	$64,245

Advertising and Shipping and Handling Costs

Advertising costs are expensed as incurred and approximated $2.1 million and $1.7 million during 2018 and 2017, respectively. Shipping and handling costs incurred by the Company are included in cost of sales.

Stock-Based Compensation

The Company applies the Black-Scholes valuation model in determining the fair value of share-based payments to employees, which is then amortized on a straight-line basis over the requisite service period.

Total stock-based compensation for 2018 and 2017, was $2.4 million and $2.9 million, respectively, and was recorded in selling, general, and administrative expenses, consistent with the classification of the underlying salaries. In accordance with ASC 718, Income Taxes, any excess tax benefit resulting from stock-based compensation, in the Consolidated Statements of Cash Flows, are classified along with other income tax cash flows as an operating activity.

The weighted average fair value at the grant date for options issued in 2018 and 2017, was $1.21 and $2.57, respectively. The fair value of each option grant was estimated on the date of grant using the Black-Scholes option-pricing model using the following weighted average assumptions for 2018 and 2017:

	Year Ended December 31,	
	2018	2017
Weighted average assumptions used:		
Risk free interest rate	2.74%	2.11%
Expected volatility	53.0%	54.9%
Expected dividend yield	— %	— %

Using historical exercise data as a basis, the Company determined that the expected term for stock options issued in 2018 and 2017, was 6.6 years and 6.5 years, respectively.

For fiscal years 2018 and 2017, expected stock price volatility is based on the Company's historical volatility for a period equal to the expected term. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant with an equivalent remaining term. The Company has not paid dividends in the past and does not currently plan to pay dividends in the near future. The Company accounts for forfeitures of share-based awards when they occur.

As of December 31, 2018, total unrecognized stock-based compensation expense related to nonvested stock-based compensation was approximately $2.6 million, which is expected to be recognized over a weighted average period of approximately 1.8 years.

For additional information, see Note 8 "Employee Stock Purchase Plan and Stock Plan."

Research and Development Expenses

Research and development activities relate to costs associated with the design and testing of new technology or enhancements and maintenance to existing technology. Such costs are expensed as incurred are primarily recorded to cost of sales. In total, research and development amounted to $8.4 million and $6.9 million, during 2018 and 2017, respectively.

Noncontrolling Interest

The Company accounted for its investment in UNIS Document Solutions Co. Ltd., (“UDS”) under the purchase method of accounting, in accordance with ASC 805, Business Combinations. UDS has been consolidated in the Company’s financial statements from the date of acquisition. Noncontrolling interest, which represents the 35 percent non-controlling interest in UDS, is reflected on the Company’s Consolidated Financial Statements.

Sales Taxes

The Company bills sales taxes, as applicable, to its customers. The Company acts as an agent and bills, collects, and remits the sales tax to the proper government jurisdiction. The sales taxes are accounted for on a net basis, and therefore are not included as part of the Company’s revenue.

Earnings Per Share

The Company accounts for earnings per share in accordance with ASC 260, Earnings Per Share. Basic earnings per share is computed by dividing net income attributable to ARC by the weighted-average number of common shares outstanding for the period. Diluted earnings per common share is computed similarly to basic earnings per share except that the denominator is increased to include the number of additional common shares that would have been outstanding if common shares subject to outstanding options and acquisition rights had been issued and if the additional common shares were dilutive. Common share equivalents are excluded from the computation if their effect is anti-dilutive. There were 5.1 million and 5.3 million common shares excluded from the calculation of diluted net income (loss) attributable to ARC per common share as their effect would have been anti-dilutive for 2018 and 2017, respectively. The Company’s common share equivalents consist of stock options issued under the Company’s Stock Plan.

Basic and diluted weighted average common shares outstanding were calculated as follows for 2018 and 2017:

	Year Ended December 31,	
	2018	2017
Weighted average common shares outstanding during the period — basic	44,918	45,669
Effect of dilutive stock options	132	—
Weighted average common shares outstanding during the period — diluted	45,050	45,669

Recent Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued Accounting Standards Codification (“ASC”) 842 (“ASC 842”), Leases. The new guidance replaces the existing guidance in ASC 840, Leases. ASC 842 requires a dual approach for lessee accounting under which a lessee will account for leases as finance leases or operating leases, and is to be applied using a modified retrospective approach. Both finance leases and operating leases will result in the lessee recognizing a right-of-use (ROU) asset and a corresponding lease liability. For finance leases the lessee will recognize interest expense and amortization of the ROU asset and for operating leases the lessee will recognize a straight-line total lease expense. In addition, ASC 842 changes the definition of a lease, which may result in changes to the classification of certain service contracts with customers to lease arrangements. ASC 842 is effective for the Company January 1, 2019.

In July, 2018, the FASB issued ASU 2018-11, Leases (Topic 842): Targeted Improvements, which provides entities the option to use the effective date as the date of initial application on transition to the new guidance. The Company plans to elect this transition method, and as a result, the Company will not adjust comparative information for prior periods. In addition, the Company will elect certain additional practical expedients permitted by the new guidance allowing the Company to carry forward historical accounting related to lease identification and classification for existing leases upon adoption, and to keep leases with an initial term of 12 months or less off of the consolidated balance sheet.

While the Company is finalizing its assessment of the impacts that the adoption of ASC 842 will have on its consolidated financial statements, the Company has concluded that certain of its MPS contracts will be accounted for as operating leases upon adoption of ASC 842. As a result, the Company will be required to classify certain MPS revenue as lease revenue, and will include the additional disclosures required of lessors under ASC 842. The Company will elect the practical expedient to not separate certain lease and nonlease components. The Company expects the pattern of revenue recognition for its MPS revenue will remain substantially unchanged.

The most significant impact of the adoption of ASC 842 to the Company relates to its accounting for facility leases for its service centers and office space, which are currently classified as operating leases. The Company expects the accounting for capital leases related to its machinery and equipment will remain substantially unchanged under the new standard. The Company estimates that the approximate amount of additional ROU assets and liabilities that will be recognized in its consolidated balance sheet upon adoption will be between $50 million to $55 million. The Company does not believe adoption of this ASU will have a significant impact to its consolidated statements of operations, equity, or cash flows.

3. GOODWILL AND OTHER INTANGIBLES

Goodwill

In accordance with ASC 350, Intangibles - Goodwill and Other, the Company assesses goodwill for impairment annually as of September 30, and more frequently if events and circumstances indicate that goodwill might be impaired. At September 30, 2018, the Company performed its assessment and determined that goodwill was not impaired.

Goodwill impairment testing is performed at the reporting unit level. Goodwill is assigned to reporting units at the date the goodwill is initially recorded. Once goodwill has been assigned to reporting units, it no longer retains its association with a particular acquisition, and all of the activities within a reporting unit, whether acquired or internally generated, are available to support the value of the goodwill.

For its annual goodwill impairment test as of September 30, 2017, the Company elected to early-adopt ASU 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment, which simplifies subsequent goodwill measurement by eliminating step two from the goodwill impairment test. As a result, the Company compared the fair value of a reporting unit with its respective carrying value, and recognized an impairment charge for the amount by which the carrying amount exceeded the reporting unit’s fair value.

At September 30, 2017, the Company's goodwill impairment analysis showed one reporting unit with goodwill attributed to it had a carrying amount which exceeded its fair value. The underperformance of the Company relative to its forecast in the third quarter of 2017 drove the decline in the fair value of the reporting unit. As a result, the Company recorded a pretax, non-cash charge for the three months ended September 30, 2017 to reduce the carrying value of goodwill by $17.6 million.

Given the changing document and printing needs of the Company’s customers, and the uncertainties regarding the effect on the Company’s business, there can be no assurance that the estimates and assumptions made for purposes of the Company’s goodwill impairment test in 2017 will prove to be accurate predictions of the future. If the Company’s assumptions, including forecasted EBITDA of certain reporting units, are not achieved, the Company may be required to record additional goodwill impairment charges in future periods, whether in connection with the Company’s next annual impairment testing in the third quarter of 2018, or on an interim basis, if any such change constitutes a triggering event (as defined under ASC 350, Intangibles-Goodwill and Other) outside of the quarter when the Company regularly performs its annual goodwill impairment test. It is not possible at this time to determine if any such future impairment charge would result or, if it does, whether such charge would be material.

The changes in the carrying amount of goodwill from January 1, 2017 through December 31, 2018 are summarized as follows:

	Gross Goodwill	Accumulated Impairment Loss	Net Carrying Amount
January 1, 2017	$405,558	$ 266,870	$138,688
Goodwill impairment	—	17,637	(17,637)
December 31, 2017	405,558	284,507	121,051
Goodwill impairment	—	—	—

December 31, 2018	$405,558	$ 284,507	$121,051

Long-lived and Other Intangible Assets

The Company periodically assesses potential impairments of its long-lived assets in accordance with the provisions of ASC 360, Accounting for the Impairment or Disposal of Long-lived Assets. An impairment review is performed whenever events or changes in circumstances indicate that the carrying value of the assets may not be recoverable. The Company groups its assets at the lowest level for which identifiable cash flows are largely independent of the cash flows of the other assets and liabilities. The Company has determined that the lowest level for which identifiable cash flows are available is the regional level, which is the operating segment level.

Factors considered by the Company include, but are not limited to, significant underperformance relative to historical or projected operating results; significant changes in the manner of use of the acquired assets or the strategy for the overall business; and significant negative industry or economic trends. When the carrying value of a long-lived asset may not be recoverable based upon the existence of one or more of the above indicators of impairment, the Company estimates the future undiscounted cash flows expected to result from the use of the asset and its eventual disposition. If the sum of the expected future undiscounted cash flows and eventual disposition is less than the carrying amount of the asset, the Company recognizes an impairment loss. An impairment loss is reflected as the amount by which the carrying amount of the asset exceeds the fair value of the asset, based on the fair value if available, or discounted cash flows, if fair value is not available. The Company assessed potential impairments of its long lived assets as of September 30, 2018 and concluded that there was no impairment.
The following table sets forth the Company's other intangible assets resulting from business acquisitions as of December 31, 2018 and 2017 which continue to be amortized:

	December 31, 2018			December 31, 2017		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortizable other intangible assets						
Customer relationships	$99,136	$ 94,345	$ 4,791	$99,486	$ 90,805	$ 8,681
Trade names and trademarks	20,259	19,924	335	20,297	19,910	387
	$119,395	$ 114,269	$ 5,126	$119,783	$ 110,715	$ 9,068

Estimated future amortization expense of other intangible assets for each of the next five fiscal years and thereafter are as follows:

2019	$3,131
2020	1,519
2021	171
2022	97
2023	42
Thereafter	166
	$5,126

4. PROPERTY AND EQUIPMENT
Property and equipment consist of the following:

	December 31,	
	2018	2017
Machinery and equipment	$248,546	$245,172
Buildings and leasehold improvements	18,819	15,512
Furniture and fixtures	2,783	2,254
	270,148	262,938
Less accumulated depreciation	(199,480)	(198,693)
	$70,668	$64,245

Depreciation expense was $29.0 million and $29.0 million for 2018 and 2017, respectively.

5. LONG-TERM DEBT

Long-term debt consists of the following:

	December 31,	
	2018	2017
Term Loan maturing 2022 net of deferred financing fees of $556 and $757; 4.11% and 3.12% interest rate at December 31, 2018 and 2017	$52,694	$56,993
Revolving Loans; 4.74% and 3.64% interest rate at December 31, 2018 and 2017	26,750	42,250
Various capital leases; weighted average interest rate of 4.8% and 5.0% at December 31, 2018 and 2017; principal and interest payable monthly through December 2023	47,737	45,157
Various other notes payable with a weighted average interest rate of 10.7% at December 31, 2018 and 2017; principal and interest payable monthly through November 2019	11	17
	127,192	144,417
Less current portion	(22,132)	(20,791)
	$105,060	$123,626

Credit Agreement

On July 14, 2017, the Company amended its Credit Agreement which was originally entered into on November 20, 2014 with Wells Fargo Bank, National Association, as administrative agent and the lenders party thereto.

Prior to being amended, the Credit Agreement provided for the extension of term loans (“Term Loans”) in an aggregate principal amount of $175.0 million. In addition, prior to being amended, the Credit Agreement provided for the extension of revolving loans (“Revolving Loans”) in an aggregate principal amount not to exceed $30.0 million. The amendment increased the maximum aggregate principal amount of Revolving Loans under the agreement from $30 million to $80 million and reduced the outstanding principal amount of the Term Loan under the agreement to $60 million. Upon the execution of the amendment to the Credit Agreement, the total principal amount outstanding under the agreement remained unchanged at $110.0 million. As a result of the amendment to the Credit Agreement, the principal of the Term Loan amortizes at an annual rate of 7.5% during the first and second years following the date of the amendment and at an annual rate of 10% during the third, fourth and fifth years following the date of the amendment, with any remaining balance payable upon the maturity date. The amendment also extended the maturity date for both the Revolving Loans and the Term Loans until July 14, 2022. In November 2018, the Company reduced the $80 million Revolving Loan commitment by $15.0 million.

As of December 31, 2018, the Company's borrowing availability of Revolving Loans under the Revolving Loan commitment was $36.1 million, after deducting outstanding letters of credit of $2.2 million and outstanding Revolving Loans of $26.8 million.

Loans borrowed under the Credit Agreement bear interest, in the case of LIBOR rate loans, at a per annum rate equal to the applicable LIBOR rate, plus a margin ranging from 1.25% to 2.25%, based on the Company’s Total Leverage Ratio (as defined in the Credit Agreement). Loans borrowed under the Credit Agreement that are not LIBOR rate loans bear interest at a per annum rate equal to (i) the greatest of (A) the Federal Funds Rate plus 0.50%, (B) the one month LIBOR rate plus 1.00% per annum, and (C) the rate of interest announced, from time to time, by Wells Fargo Bank, National Association as its “prime rate,” plus (ii) a margin ranging from 0.25% to 1.25%, based on the Company’s Total Leverage Ratio. The amendment reduced the rate of interest payable on the loans borrowed under the Credit Agreement by 0.25%.

The Company pays certain recurring fees with respect to the credit facility, including administration fees to the administrative agent.

Subject to certain exceptions, including in certain circumstances, reinvestment rights, the loans extended under the Credit Agreement are subject to customary mandatory prepayment provisions with respect to: the net proceeds from certain asset sales; the net proceeds from certain issuances or incurrences of debt (other than debt permitted to be incurred under the terms of the Credit Agreement); the net proceeds from certain issuances of equity securities; and net proceeds of certain insurance recoveries and condemnation events of the Company.

The Credit Agreement contains customary representations and warranties, subject to limitations and exceptions, and customary covenants restricting the ability (subject to various exceptions) of the Company and its subsidiaries to: incur additional indebtedness (including guarantee obligations); incur liens; sell certain property or assets; engage in mergers or other fundamental changes; consummate acquisitions; make investments; pay dividends, other distributions or repurchase equity interest of the Company or its subsidiaries; change the nature of their business; prepay or amend certain indebtedness; engage in certain transactions with affiliates; amend their organizational documents; or enter into certain restrictive agreements. In addition, the Credit Agreement contains financial covenants which requires the Company to maintain (i) at all times, a Total Leverage Ratio in an amount not to

exceed 3.25 to 1.00; and (ii) a Fixed Charge Coverage Ratio (as defined in the Credit Agreement), as of the last day of each fiscal quarter, an amount not less than 1.15 to 1.00.
The Credit Agreement contains customary events of default, including with respect to: nonpayment of principal, interest, fees or other amounts; failure to perform or observe covenants; material inaccuracy of a representation or warranty when made; cross-default to other material indebtedness; bankruptcy, insolvency and dissolution events; inability to pay debts; monetary judgment defaults; actual or asserted invalidity or impairment of any definitive loan documentation, repudiation of guaranties or subordination terms; certain ERISA related events; or a change of control.
The obligations of the Company's subsidiary that is the borrower under the Credit Agreement are guaranteed by the Company and each other United States domestic subsidiary of the Company. The Credit Agreement and any interest rate protection and other hedging arrangements provided by any lender party to the Credit facility or any affiliate of such a lender are secured on a first priority basis by a perfected security interest in substantially all of the borrower's, the Company's and each guarantor's assets (subject to certain exceptions).
Minimum future maturities of long-term debt, excludes deferred financing fees, and capital lease obligations as of December 31, 2018 are as follows:

	Long-Term Debt	Capital Lease Obligations
Year ending December 31:		
2019	$ 5,260	$ 16,872
2020	6,001	13,817
2021	6,000	10,141
2022	62,750	5,274
2023	—	1,633
Thereafter	—	—
	$ 80,011	$ 47,737

6. COMMITMENTS AND CONTINGENCIES
The Company leases machinery, equipment, and office and operational facilities under non-cancelable operating lease agreements. Certain lease agreements for the Company's facilities generally contain renewal options and provide for annual increases in rent based on the local Consumer Price Index. The following is a schedule of the Company's future minimum lease payments as of December 31, 2018:

	Third Party	Related Party	Total
Year ending December 31:			
2019	$15,841	$514	$16,355
2020	12,442	514	12,956
2021	9,616	514	10,130
2022	7,996	514	8,510
2023	6,540	514	7,054
Thereafter	16,650	—	16,650
	$69,085	$2,570	$71,655

Total rent expense under operating leases, including month-to-month rentals, amounted to $21.8 million and $22.1 million during 2018 and 2017, respectively. Under certain lease agreements, the Company is responsible for other costs such as property taxes, insurance, maintenance, and utilities.
The Company leased several of its facilities under lease agreements with entities owned by certain of its current and former executive officers which expire through December 2023. The rental payments on these facilities amounted to $0.5 million during 2018 and 2017.

The Company has entered into indemnification agreements with each director and named executive officer which provide indemnification under certain circumstances for acts and omissions which may not be covered by any directors' and officers' liability insurance. The indemnification agreements may require the Company, among other things, to indemnify its officers and directors against certain liabilities that may arise by reason of their status or service as officers and directors (other than liabilities arising from willful misconduct of a culpable nature), to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified, and to obtain officers' and directors' insurance if available on reasonable terms. There have been no events to date which would require the Company to indemnify its officers or directors.

The Company is involved in various additional legal proceedings and other legal matters from time to time in the normal course of business. The Company does not believe that the outcome of any of these matters will have a material effect on its consolidated financial position, results of operations or cash flows.

7. INCOME TAXES

In December 2017, the Tax Cuts and Jobs Act (the "TCJA") was enacted. The TCJA includes a number of changes to existing U.S. tax laws that impact the Company. This includes a reduction to the federal corporate tax rate from 35 percent to 21 percent for the tax years beginning after December 31, 2017. The TCJA also provides for a one-time transition tax on certain foreign earnings as well as changes beginning in 2018 regarding the deductibility of interest expense, additional limitations on executive compensation, meals and entertainment expenses and the inclusion of certain foreign earnings in U.S. taxable income.

The Company recognized $11.9 million of tax expense in the fourth quarter of 2017 primarily due to the reduction in its net U.S. deferred tax assets for the 14 percentage points decrease in the U.S. federal statutory rate. In accordance with Staff Accounting Bulletin No. 118, which provides guidance on accounting for the impact of the TCJA, in effect allowing an entity to use a methodology similar to the measurement period in a business combination. The Company completed its accounting for the tax effects of the TCJA. Additionally, further guidance from the Internal Revenue Service ("IRS"), SEC, or the FASB could result in changes to the Company's accounting for the tax effects of the TCJA in its 2018 tax year and future tax years.

The following table includes the consolidated income tax provision for federal, state, and foreign income taxes related to the Company's total earnings before taxes for 2018 and 2017:

	Year Ended December 31,	
	2018	2017
Current:		
Federal	$(89)	$(170)
State	65	139
Foreign	370	438
	346	407
Deferred:		
Federal	2,331	15,669
State	560	(751)
Foreign	97	(81)
	2,988	14,837
Income tax provision	$3,334	$15,244

The Company's foreign earnings before taxes were $1.2 million and $1.0 million for 2018 and 2017, respectively. The consolidated deferred tax assets and liabilities consist of the following:

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	December 31, 2018	2017
Deferred tax assets:		
Financial statement accruals not currently deductible	$2,332	$1,602
Deferred rent expense	1,563	766
Accrued vacation	873	848
Deferred revenue, net	24	185
Fixed assets	3,624	4,113
Goodwill and other identifiable intangibles	9,917	12,848
Stock-based compensation	5,022	4,545
Federal tax net operating loss carryforward	16,353	17,258
State tax net operating loss carryforward, net	5,791	5,951
Foreign tax net operating loss carryforward	691	616
Tax Credits, net	1,770	1,785
Gross deferred tax assets	47,960	50,517
Less: valuation allowance	(2,203)	(2,366)
Net deferred tax assets	$45,757	$48,151
Deferred tax liabilities:		
Goodwill	$(20,811)	$(19,972)
Outside basis in foreign entities	—	(150)
Net deferred tax assets	$24,946	$28,029

A reconciliation of the statutory federal income tax rate to the Company's effective tax rate is as follows:

	Year Ended December 31, 2018	2017
Statutory federal income tax rate	21 %	35 %
State taxes, net of federal benefit	5	—
Foreign taxes	2	(4)
Valuation allowance	(1)	(17)
Non-deductible expenses and other	1	(5)
Section 162(m) limitation	1	(1)
Tax Cuts and Jobs Act enacted on December 22, 2017	—	(195)
Discrete items for federal, state and foreign taxes	(2)	(4)
Global Intangible Low Taxed Income	1	—
Non-deductible portion of goodwill impairment	—	(58)
Effective income tax rate	28 %	(249)%

In accordance with ASC 740-10, Income Taxes, the Company evaluates the need for deferred tax asset valuation allowances based on a more likely than not standard. The ability to realize deferred tax assets depends on the ability to generate sufficient taxable income within the carryback or carryforward periods provided for in the tax law for each applicable tax jurisdiction. The Company considers the following possible sources of taxable income when assessing the realization of deferred tax assets:

•Future reversals of existing taxable temporary differences;
•Future taxable income exclusive of reversing temporary differences and carryforwards;
•Taxable income in prior carryback years; and
•Tax-planning strategies.

The assessment regarding whether a valuation allowance is required or should be adjusted also considers all available positive and negative evidence factors, including but not limited to:

•Nature, frequency, and severity of recent losses;
•Duration of statutory carryforward periods;
•Historical experience with tax attributes expiring unused; and
•Near- and medium-term financial outlook.

The Company utilizes a rolling three years of actual and current year anticipated results as the primary measure of cumulative income/losses in recent years, as adjusted for permanent differences. The evaluation of deferred tax assets requires judgment in assessing the likely future tax consequences of events that have been recognized in the Company's financial statements or tax returns and future profitability. The Company's accounting for deferred tax consequences represents its best estimate of those future events. Changes in the Company's current estimates, due to unanticipated events or otherwise, could have a material effect on its financial condition and results of operations. The Company has a $2.2 million valuation allowance against certain deferred tax assets as of December 31, 2018.

Based on the Company’s current assessment, the remaining net deferred tax assets as of December 31, 2018 are considered more likely than not to be realized. The valuation allowance of $2.2 million may be increased or reduced as conditions change or if the Company is unable to implement certain available tax planning strategies. The realization of the Company’s net deferred tax assets ultimately depends on future taxable income, reversals of existing taxable temporary differences or through a loss carry back. The Company has income tax receivables of $0.1 million as of December 31, 2018 included in other current assets in its consolidated balance sheet primarily related to income tax refunds for prior years.
As of December 31, 2018, the Company had approximately $77.9 million of consolidated federal, $92.5 million of state and $4.1 million of foreign net operating loss carryforwards available to offset future taxable income, respectively. The federal net operating loss carryforward will begin to expire in varying amounts between 2031 and 2037. The state net operating loss carryforwards expire in varying amounts between 2018 and 2037. The foreign net operating loss carryforwards begin to expire in varying amounts beginning in 2022.

The Company has a deferred tax asset of approximately $2.4 million related to certain stock-based compensation with a strike price of $8.20 that is pending to expire in the second quarter of 2019. Upon expiration, if unexercised, the Company will record deferred tax expense of approximately $2.4 million, which will be treated as a discrete item.

The Company has elected to treat its annual Global Intangible Low Taxed Income (GILTI), if any, as a period cost. Additionally, the Company will treat the tax effect of this under the tax law ordering methodology with respect to the utilization of federal net operating losses caused by the GILTI inclusion.

The Company or one of its subsidiaries files income tax returns in the U.S. federal jurisdiction, and various states and foreign jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years before 2012.
There were no unrecognized tax benefits as of and for the years ended December 31, 2018 or 2017.

8. EMPLOYEE STOCK PURCHASE PLAN AND STOCK PLAN

Employee Stock Purchase Plan

Under the Company’s Employee Stock Purchase Plan (the “ESPP”) eligible employees may purchase up to a calendar year maximum per eligible employee of the lesser of (i) 2,500 shares of common stock, or (ii) a number of shares of common stock having an aggregate fair market value of $25 thousand as determined on the date of purchase at 85% of the fair market value of such shares of common stock on the applicable purchase date. The compensation expense in connection with the ESPP in 2018 and 2017, was $22 thousand and $30 thousand, respectively.

Employees purchased the following shares in the periods presented:

Year Ended December 31,

	2018	2017
Shares purchased	77	47
Average price per share	$ 1.67	$ 2.83

Stock Plan

The Company's Stock Plan provides for the grant of incentive and non-statutory stock options, stock appreciation rights, restricted stock, restricted stock units, stock bonuses and other forms of awards granted or denominated in the Company's common stock or units of the Company's common stock, as well as cash bonus awards to employees, directors and consultants of the Company. The Company's Stock Plan authorizes the Company to issue up to 3.5 million shares of common stock. At December 31, 2018, 3.1 million shares remain available for issuance under the Stock Plan.

Stock options granted under the Company's Stock Plan generally expire no later than ten years from the date of grant. Options generally vest and become fully exercisable over a period of three to four years from date of award, except that options granted to non-employee directors may vest over a shorter time period. The exercise price of options must be equal to at least 100% of the fair market value of the Company’s common stock on the date of grant. The Company allows for cashless exercises of vested outstanding options.

During 2018 and 2017, the Company granted options to acquire a total of 686 thousand shares and 526 thousand shares, respectively, of the Company's common stock to certain key employees with an exercise price equal to the fair market value of the Company’s common stock on the date of grant. The granted stock options vest annually over three to four years from the grant date and expire 10 years after the date of grant.

The following is a further breakdown of the stock option activity under the Stock Plan:

	Shares	Weighted Average Exercise Price	Weighted Average Contractual Life (In years)	Aggregate Intrinsic Value (In thousands)
Outstanding at December 31, 2016	4,301	$ 5.44		
Granted	526	$ 4.67		
Exercised	(34)	$ 2.82		
Forfeited/Cancelled	(58)	$ 6.21		
Outstanding at December 31, 2017	4,735	$ 5.44		
Granted	686	$ 2.21		
Exercised	—	$ —		
Forfeited/Cancelled	(164)	$ 6.23		
Outstanding at December 31, 2018	5,257	$ 4.95	5.02	$ —
Vested or expected to vest at December 31, 2018	5,257	$ 4.95	5.02	$ —
Exercisable at December 31, 2018	4,066	$ 5.46	3.99	$ —

The aggregate intrinsic value in the table above represents the total pretax intrinsic value (the difference between the closing stock price on December 31, 2018 and the exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all the option holders exercised their options on December 31, 2018. This amount changes based on the fair market value of the common stock. Total intrinsic value of options exercised during the year ended 2017 was $63 thousand.

A summary of the Company’s non-vested stock options as of December 31, 2018, and changes during the year then ended is as follows:

Non-vested Options	Shares	Weighted Average Grant Date Fair Market Value
Non-vested at December 31, 2017	1,044	$ 2.77
Granted	686	$ 1.21
Vested	(488)	$ 3.14
Forfeited/Cancelled	(51)	$ 1.96
Non-vested at December 31, 2018	1,191	$ 1.76

The following table summarizes certain information concerning outstanding options at December 31, 2018:

Range of Exercise Price	Options Outstanding at December 31, 2018
$2.21 – $2.70	1,979
$3.65 – $4.82	968
$5.37 – $7.19	979
$8.20 – $9.09	1,331
$2.21 – $9.09	5,257

Restricted Stock

The Stock Plan provides for automatic grants of restricted stock awards to non-employee directors of the Company, as of each annual meeting of the Company’s stockholders having a then fair market value equal to $60 thousand.

In 2018, the Company granted 325 thousand shares of restricted stock to certain key employees at a price per share equal to the closing price of the Company's common stock on the date the restricted stock was granted. The granted stock options and restricted stock vest annually over three years from the grant date. In addition, the Company granted approximately 28 thousand shares of restricted stock to each of the Company's six non-employee members of its board of directors at a price per share equal to the closing price of the Company's common stock on the date the restricted stock was granted. Additionally, the Company granted approximately 13 thousand shares of restricted stock to an non-employee member of its board of directors that joined during the fourth quarter of 2018. The restricted stock vests on the one-year anniversary of the grant date.

In 2017, the Company granted 306 thousand shares of restricted stock to certain key employees at a price per share equal to the closing price of the Company's common stock on the date the restricted stock was granted. The granted stock options and restricted stock vest annually over three years from the grant date. In addition, the Company granted approximately 16 thousand shares of restricted stock to each of the Company's six non-employee members of its board of directors at a price per share equal to the closing price of the Company's common stock on the date the restricted stock was granted. The restricted stock vests on the one-year anniversary of the grant date.

A summary of the Company’s non-vested restricted stock as of December 31, 2018, and changes during the year then ended is as follows:

Non-vested Restricted Stock	Shares	Weighted Average Grant Date Fair Market Value
Non-vested at December 31, 2017	583	$ 4.99
Granted	503	$ 2.40
Vested	(335)	$ 4.75
Forfeited/Cancelled	—	$ —
Non-vested at December 31, 2018	751	$ 3.37

The total fair value of restricted stock awards vested during the years ended December 31, 2018 and 2017 was $0.8 million and $1.0 million, respectively.

9. RETIREMENT PLANS

The Company sponsors a 401(k) Plan, which covers substantially all employees of the Company who have attained age 21. Under the Company’s 401(k) Plan, eligible employees may contribute up to 75% of their annual eligible compensation (or in the case of highly compensated employees, up to 6% of their annual eligible compensation), subject to contribution limitations imposed by the Internal Revenue Service. The Company matches 20% of an employee’s contributions, up to a total of 4% of that employee’s compensation. An independent third party administers the Company’s 401(k) Plan. The Company's total expense under these plans amounted to $0.4 million annually during 2018 and 2017.

10. FAIR VALUE MEASUREMENTS

In accordance with ASC 820, Fair Value Measurement, the Company has categorized its assets and liabilities that are measured at fair value into a three-level fair value hierarchy as set forth below. If the inputs used to measure fair value fall within different levels of the hierarchy, the categorization is based on the lowest level input that is significant to the fair value measurement. The

three levels of the hierarchy are defined as follows:
Level 1-inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
Level 2-inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
Level 3-inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The following table summarizes the bases used to measure certain assets and liabilities at fair value on a nonrecurring basis in the consolidated financial statements as of and for the year ended December 31, 2018 and 2017:

	Significant Other Unobservable Inputs			
	December 31, 2018		December 31, 2017	
	Level 3	Total Losses	Level 3	Total Losses
Nonrecurring Fair Value Measure				
Goodwill	$121,051	$ —	$121,051	$ 17,637

In accordance with ASC 350, goodwill was written down to its implied fair value of $121.1 million as of September 30, 2017, resulting in an impairment charge of $17.6 million during 2017. See Note 3, “Goodwill and Other Intangibles” for further information regarding the process of determining the implied fair value of goodwill and change in goodwill.