

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2017

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number: 000-23999

Manhattan Associates, Inc.

(Exact name of registrant as specified in its charter)

Georgia

(State or other jurisdiction of
incorporation or organization+)

2300 Windy Ridge Parkway, Tenth Floor
Atlanta, Georgia

(Address of principal executive offices)

58-2373424
(I.R.S. Employer
Identification No.)

30339
(Zip Code)

Registrant's telephone number, including area code: (770) 955-7070

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

Title of each class

Name of each exchange on which registered

Common Stock, \$.01 par value per share

The Nasdaq Stock Market LLC

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

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

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

Note – Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Exchange Act from their obligations under those Sections.

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K 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, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
Emerging Growth Company	<input type="checkbox"/>		

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 Act). Yes No

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant as of June 30, 2017 was \$3,312,602,640, which was calculated based upon a closing sales price of \$48.06 per share of the Common Stock as reported by the Nasdaq Global Select Market on the same day. As of January 31, 2018, the Registrant had outstanding 67,970,364 shares of Common Stock.

DOCUMENTS INCORPORATED BY REFERENCE

The Registrant's definitive Proxy Statement for the Annual Meeting of Shareholders to be held May 17, 2018 is incorporated by reference in Part III of this Form 10-K to the extent stated herein.

MANHATTAN ASSOCIATES, INC.
Annual Report on Form 10-K
For the Fiscal Year Ended December 31, 2017
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Forward-Looking Statements

Certain statements contained in this filing are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, including but not limited to statements related to expectations about global macroeconomic trends and industry developments, plans for future business development activities, anticipated costs of revenues, product mix and service revenues, research and development and selling, general and administrative activities, and liquidity and capital needs and resources. When used in this Annual Report, the words “may,” “expect,” “forecast,” “anticipate,” “intend,” “plan,” “believe,” “could,” “seek,” “project,” “estimate,” and similar expressions are generally intended to identify forward-looking statements. Undue reliance should not be placed on these forward-looking statements, which reflect opinions only as of the date of this Annual Report. Such forward-looking statements are subject to risks, uncertainties, and other factors that could cause actual results to differ materially from future results expressed or implied by such forward-looking statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and that actual results may differ materially from those contemplated by such forward-looking statements.

Some of the factors that could cause actual results to differ materially from the results discussed in forward-looking statements include:

- The operational and financial effects of our business transition to cloud subscription-based solutions;
- economic, political and market conditions;
- our ability to attract and retain highly skilled employees;
- competition;
- our dependence on a single line of business;
- our dependence on generating revenue from software licenses and cloud subscriptions to drive business;
- undetected errors or “bugs” in our software;
- the risk of defects, delays or interruptions in our cloud subscription services;
- possible compromises of our data protection and IT security measures;
- risks associated with large system implementations;
- possible liability to customers if our products fail;
- the requirement to maintain high quality professional service capabilities;
- the risks of international operations, including foreign currency exchange risk;
- the possibility that research and developments investments may not yield sufficient returns;
- the long sales cycle associated with our products;
- the difficulty of predicting operating results;
- the need to continually improve our technology;
- risks associated with managing growth;
- reliance on third party and open source software;
- the need for our products to interoperate with other systems;
- the need to protect our intellectual property, and our exposure to intellectual property claims of others;
- economic conditions and regulatory changes caused by the United Kingdom’s likely exit from the European Union; and
- other risks described under the heading “Risk Factors” in Part I, Item 1A of this Annual Report.

We undertake no obligation to update or revise forward-looking statements to reflect changed assumptions, the occurrence of unanticipated events or changes in future operating results.

Item 1. Business**Overview**

Manhattan Associates was founded in 1990 in Manhattan Beach, California and incorporated in Georgia in 1998. References in this filing to the “Company,” “Manhattan,” “Manhattan Associates,” “we,” “our” and “us” refer to Manhattan Associates, Inc., our predecessors, and our wholly-owned and consolidated subsidiaries. Our principal executive offices are located at 2300 Windy Ridge Parkway, Tenth Floor, Atlanta, Georgia 30339, and our telephone number is 770-955-7070.

We develop, sell, deploy, service and maintain software solutions designed to manage supply chains, inventory and omnichannel operations for retailers, wholesalers, manufacturers, logistics providers and other organizations. Our customers include many of the world’s premier and most profitable brands.

Specifically, Manhattan Associates develops supply chain commerce solutions that help our customers in three distinct areas of their business:

- **Supply Chain** - Manhattan Associates provides companies the tools needed to manage distribution and optimize transportation costs throughout their entire commercial network. Manhattan provides shippers the most comprehensive transportation management solutions in the market. This includes services and software to help them move freight via the most cost-effective means possible while also meeting service-level expectations. Likewise, Manhattan’s Warehouse Management solutions are widely regarded as industry-leading systems designed to optimize productivity and throughput in distribution centers and warehouses around the world.
- **Omnichannel** - Meeting ever-evolving consumer expectations of service, inventory availability and delivery convenience is a challenge every merchant must meet head on. Manhattan’s Omnichannel solutions provide an operating platform for both the direct and brick and mortar business. Comprising Order Management, Point of Sale, and Customer Engagement as its core applications, Manhattan Omnichannel provides solutions for CRM / contact center agents; end-to-end process enablement of store associates, and enterprise-wide inventory availability determination and order fulfillment optimization.
- **Inventory** - Manhattan solutions provide distributors of any finished goods (apparel, food, auto parts, pharmaceuticals, etc.) the ability to forecast demand, determine when, where and how much inventory is needed and translate this into a profitable inventory buying plan. Through the use of advanced science and sophisticated analytics, customer service level is maximized with the minimum necessary inventory investment. Industry changes driven by omni-channel retail, pharmaceutical regulations and other trends make this an area of particular need for many retailers and wholesale distributors.

Manhattan Associates’ Software Solution Portfolios

Our portfolio of solutions takes a platform-based approach to key areas. This approach employs a holistic technology approach that provides customers with three major benefits:

- **Cross-Functional Business Solutions** - By virtue of shared data, taxonomy and interfaces, platform solutions enable the organization to tackle business challenges that might otherwise be too technically daunting to achieve. For example, the ability to manage a buy online, pickup in store process at scale requires best in class capability within Order Management and Point of Sale / Store Systems. By building our solutions on a set of common, microservice based components, we eliminate data and process redundancy and deliver end-to-end process support for the modern merchant.
- **Lower Total Cost of Ownership** - A single set of tools to administrate security, resource management, system configuration and integration across all three functional disciplines allows for economies of scale within IT departments. The use of standard technologies, development tools and languages also ensures needed technical skills are readily available in the marketplace. Furthermore, we also offer cloud-based / subscription-based access to the certain of our applications, thusly lowering initial and ongoing complexity of ownership.
- **The Power of Shared Components** - When an organization has multiple disparate systems, there are frequently costly, inefficient and redundant capabilities found across the enterprise. Examples include yard management, parcel shipping and inventory visibility. The consequences of duplicate systems range from the simple confusion brought on by different naming conventions to the expensive and complex data becoming out of sync, resulting in missed appointments, chargebacks and other issues.

Supply Chain Solutions

As previously described, Supply Chain solutions are focused on the distribution and transportation operations of the enterprise. There are three main components of Manhattan’s Supply Chain Solutions:

- **Distribution Management** - These applications comprise Manhattan’s Warehouse Management Solutions (WMS) commonly used to manage the complexity of the modern distribution center. WMS manages the flow of goods and information across the distribution center. The complete distribution management suite not only includes capabilities focused on execution within the distribution center, but also on the management of personnel, performance and the overall distribution center layout. All of these solutions come together to provide the customer the most productive workforce with an operation that can scale to meet the highest demands during peak season, yet can still operate effectively and profitably throughout the course of the year.
- **Transportation Management** - Organizations today face a complex transportation environment with ever-changing demands driven by macro-economic trends and governmental regulations. Manhattan’s Transportation Management Solutions (TMS) are designed to help shippers navigate their way through these demands while meeting customer service expectations at the lowest possible freight costs. TMS components include procurement and modeling tools to setup a network that can be successful, along with planning, execution and settlement tools to manage day-to-day transportation requirements. Manhattan Carrier is a suite of solutions built specifically to help motor carriers optimize load assignments, minimize fuel costs, manage drivers’ hours of service and accommodate demand fluctuations.
- **Visibility** - Crucial to effective supply chain management is visibility into the movement of goods between locations in the supply chain and outside the enterprise’s realm of control. Manhattan provides best in class visibility and event management tools that not only provide alerts to when events occur in the global supply chain, but also when they don’t occur (such as missing a vessel overseas) that can have a cascading effect on production lines, freight and most importantly, customer commitments.

Omnichannel Solutions

As omni-channel retail has placed new demands on organizations, it has also created new software solution needs. These range from the ability to leverage inventory across the entire network to meet any demand, to providing store associates and call center representatives the means to take advantage of the available inventory.

- **Omnichannel HQ** - There is a wide range of new capabilities that must be leveraged at a corporate or ‘central’ level in retail today in order to enable best in class customer service, full inventory visibility, direct to client distribution and seamless fulfillment operations. The goal is to enable an omnichannel commerce platform that can be tapped into by any selling system—webstore, ERP, point-of-sale, call center, mobile app, etc. in order to more cost-effectively fulfill orders and inventory demand. Manhattan’s Enterprise Inventory builds out a complete inventory availability picture that can be updated in near-real time with feeds from the warehouse, the store and the network. Enterprise Order Management merges this inventory availability data with demand feeds from across the organization to match supply with demand in a way that satisfies customer delivery expectations while also striving to maximize profitability. Lastly, Manhattan offers a unique “customer engagement” solution that enables telephone or web-based service center employees access to this inventory picture as well as a complete customer sales and interaction history to better and more profitably satisfy shopper needs, regardless of whether it is an exchange, a return or a new order.
- **Omnichannel Store** - As the consumer enters the store with more information than ever, it is now vital to equip the sales associate with relevant information and capabilities to satisfy that shopper’s every demand. Store solutions include Point of Sale, available on mobile and fixed stations, to process purchase transactions and Clienteling to provide the associate with a complete picture of the shopper’s purchase history. Manhattan brings all of these solutions together on a single mobile platform to enable retailers to offer unparalleled service and convenience for the shopper.

Another important part of Local solutions is Store Inventory and Fulfillment. Most retailers are now looking to leverage store inventory to fulfill ecommerce demand (driving greater sales revenue with less inventory). In order to achieve this, solutions that can accurately maintain inventory integrity and enable productive, reliable fulfillment are required.

Inventory Solutions

The ability to accurately forecast demand and project inventory needs is heightened by omnichannel retail requirements that change traditional approaches to inventory management. Manhattan’s Inventory solutions address which products should be carried and the quantity that will be needed at each location by date.

- **Inventory Optimization** - This set of applications includes sophisticated demand forecasting capabilities that can address the particularly challenging slow-moving and intermittent products that frequently result in excess inventory due to unpredictability. Also included is the Replenishment module that can evaluate inventory needs across all locations and channels. This module can even suggest transferring inventory between locations (warehouses or stores) or ‘protect’ merchandise at a store from online sales in order to save it for walk-in traffic.
- **Planning** - Manhattan’s Planning solutions provide merchants the tools they need to create channel-, store- or region-specific assortments. These tools offer channel-specific metrics and methodologies that optimize the planning process and maximize retailer revenues.

Manhattan SCALE™

SCALE is our portfolio of logistics execution solutions built on Microsoft's .NET® platform. Purpose built for rapid development and a value-based total cost of ownership, it is targeted toward companies with execution-focused supply chain needs that require speed-to-value, resource-light system configuration and maintenance, and the ability to quickly scale their logistics operations up or down in response to market fluctuations or business requirement changes. SCALE combines the features of Trading Partner Management, Yard Management, Optimization, Warehouse Management and Transportation Execution.

Because SCALE leverages a common platform, solutions share common data elements and each user can access all applications through a single sign-on. Users also can set up "dashboards" that enable easy access to real-time information most relevant to their jobs. SCALE's ease of deployment, operation and support make it a popular choice for organizations operating in countries with emerging and developing economies, and where technical support resources are limited.

Technology Platform

Our solutions can be deployed on Linux, IBM System i, Microsoft's .NET computing platforms, as well as on all of the major public cloud infrastructures. Because omnichannel and supply chain solutions necessarily interact with other business operation systems, our solutions are designed to interoperate with software from other providers as well as with a company's existing legacy systems. This interfacing and open system capability enables customers to continue using existing computer resources and to choose among a wide variety of existing and emerging computer hardware and peripheral technologies. We provide a framework to facilitate rapid and reliable integration to any Enterprise Resource Planning (ERP) or host business system (including certified integration to both SAP and Microsoft Dynamics AX). We also offer certain solutions in either on-premise software or cloud computing models so that customers can select the option that best meets their requirements for control, flexibility, cost of ownership, and time-to-deployment.

Manhattan Active™ Solutions

As market conditions have evolved toward software-as-a-service models, Manhattan has introduced its "Manhattan Active" solution suite. Manhattan Active products are designed specifically to deliver seamlessly connected, always current experiences. Like all Manhattan software, the solutions can be run on any type of device – mobile, tablet, or desktop. Manhattan Active solutions are sold directly in multi-year cloud subscription arrangements, typically for a period of three to more years, providing clients with regular software updates during the contract period to ensure access to the latest product features and benefiting Manhattan with a highly predictable and regular revenue stream.

Maintenance

We offer a comprehensive program that provides our customers with software upgrades for additional or improved functionality and technological advances incorporating emerging supply chain and industry advances. Over the past three years, our annual renewal rate of customers subscribing to comprehensive support and enhancements has been greater than 90%. We are able to remotely access customer systems to perform diagnostics, provide online assistance, and facilitate software upgrades. We offer 24-hour customer support 365 days in the year, plus software upgrades for an annual fee that is paid in advance and is based on the solutions the customer has and the service level required. Software upgrades are provided under this program on a when-and-if- available basis.

Professional Services

We advise and assist our customers in planning and implementing our solutions through our global Professional Services Organization. To ensure successful long-term customer relationships, consultants assist customers with the initial deployment of our systems, the conversion and transfer of the customer's historical data onto our systems, and ongoing training, education, and system upgrades. We believe our Professional Services teams enable customers to implement our solutions knowledgeably and in the appropriate amount of time, help customers achieve expected results from system investments, continuously identify new opportunities for supply chain advancements and meaningfully add to our industry-specific knowledge base to improve future implementations and product innovations.

Substantially all of our customers utilize some portion of our Professional Services to implement and support our software solutions. Professional Services typically are rendered under time and materials contracts, with services billed by the hour. Professional Services sometimes are rendered under fixed-fee contracts, with payments due on specific dates or milestones. We believe that increased sales of our solutions will drive higher demand for our Professional Services.

Our Professional Services team delivers deep supply chain and enterprise commerce domain expertise to our customers through industry-specific "best-practices" protocols and processes developed through the collective knowledge we have gained from 28 years

of implementing our supply chain solutions worldwide. We also extensively train our consulting personnel on enterprise commerce operations and on our solutions.

Business consultants, systems analysts, and technical personnel assist customers in all phases of implementing our systems, including planning and design, customer-specific module configuration, on-site implementation or conversion from existing systems, and integration with customer systems such as Enterprise Resource Planning (ERP), web- and mobile-based commerce platforms, and Material Handling Equipment (MHE) systems. At times, third-party consultants, such as those from major systems integrators, assist our customers with certain implementations.

Training and Change Management Services

We offer training and change management services for new and existing users, enabling our customers to align systems, people and processes. Services provided by Manhattan training experts cover a wide range of support from the intended design to the front-line of the customer's business, including critical end-user adoption with hands-on, live training in a virtualized Manhattan software environment. These programs are provided at fixed fees per-person, per-class. In addition, computer-based training programs can be purchased for a fixed fee for use at client sites. Customers can also pursue certification at the Associate or Professional level through our certification programs for Omni-channel, Supply Chain or Inventory.

Manhattan Training and Change Management Services are offered under six categories: Role-Based Training Paths, Comprehensive Training Programs, Change Management Services, Individual Product Training Courses, End-User Enablement and Knowledge Resources.

Hardware Sales

As a convenience for our customers, we resell a variety of hardware developed and manufactured by others, including (but are not limited to) computer hardware, radio frequency terminal networks, RFID chip readers, bar code printers and scanners, and other peripherals. We resell all third-party hardware products and related maintenance pursuant to agreements with manufacturers or through distributor-authorized reseller agreements pursuant to which we are entitled to purchase hardware products and services at discount prices and to receive technical support in connection with product installations and any subsequent product malfunctions. We do not maintain hardware inventory as we generally purchase hardware from vendors only after receiving related customer orders.

Strategy

Our objective is to extend our position as the leading global commerce solutions provider for organizations intent on creating and sustaining market advantages through technology-enabled commerce solutions. Our solutions help global distributors, wholesalers, retailers, logistics providers and manufacturers successfully manage accelerating and fluctuating market demands, as well as master the increasing complexity and volatility of their local and global supply chains. We believe our solutions are advanced, highly functional and highly scalable. They are designed to enable organizations to: create customer experiences consistent with their brand values; improve relationships with suppliers, customers and logistics providers; leverage investments across supply chain functions; effectively generate revenue and manage costs; and meet dynamically changing customer requirements. We believe our solutions are uniquely positioned to holistically optimize the way companies bring together omnichannel, supply chain and inventory management:

Develop and Enhance Software Solutions. We intend to continue to focus our research and development resources on enhancing our Supply Chain, Omnichannel Commerce and Inventory Solutions. We offer what we believe to be the broadest and most richly-featured software portfolio in the marketplace. To continuously expand functionality and value, we plan to continue to provide enhancements to existing solutions and to introduce new solutions to address evolving industry standards and market needs. We identify these opportunities through our Product Management, Professional Services, Customer Support and Account Management organizations, through interactions such as ongoing customer consulting engagements and implementations, sessions with our solution user groups, association with leading industry analyst and market research firms, and participation on industry standards and research committees. Our solutions address needs in various vertical markets, including retail, consumer goods, food and grocery, logistics service providers, industrial and wholesale, high technology and electronics, life sciences and government. We intend to continue to enhance our solutions to meet the dynamic requirements of these and new vertical markets as business opportunities dictate.

Expand International Presence. Our solutions offer significant benefits to customers in markets outside the United States, and for organizations with global operations. We have offices in Australia, Chile, China, France, Germany, India, Japan, the Netherlands, Singapore, and the United Kingdom, as well as representatives in Mexico and reseller partnerships in Latin America, Eastern Europe, the Middle East, South Africa, and Asia. Our Europe, Middle East, and Africa (EMEA) operations support sales, implementation services, and customer support functions for customers in Europe as well as a number of customers across the Middle East, concentrated in countries we consider politically and economically stable. Our Asia Pacific (APAC) operations service emerging opportunities in China, Southeast Asia, and India, as well as more established markets in Japan, Australia and New Zealand. Our

international strategy includes leveraging the strength of our relationships with current U.S. and Europe-based customers that also have significant international operations.

Strategic Alliances and Indirect Sales Channels. We currently sell our products primarily through our direct sales personnel, and through partnership agreements with a select number of organizations in emerging markets where we do not currently have a direct sales presence. We have worked on joint projects and joint sales initiatives with industry-leading consultants and software systems implementers, including most of the large consulting firms specializing in our targeted industries, to supplement our direct sales force and professional services organization. We expand our indirect sales channels through reseller agreements, marketing agreements, and agreements with third-party logistics providers. These alliances extend our market coverage and provide us with new business leads and access to trained implementation personnel.

Acquire or Invest in Complementary Businesses. We continuously evaluate strategic acquisition opportunities of technologies, solutions, and businesses that are consistent with our platform-based strategy and enable us to enhance and expand our offerings. Preferred acquisition targets are those that would be complementary to our existing solutions and technologies, expand our geographic presence and distribution channels, extend our presence into additional vertical markets with challenges and requirements similar to those we currently serve, and further solidify our leadership position within the primary components of supply chain planning and execution.

Sales and Marketing

We employ multi-disciplinary sales teams that consist of professionals with industry experience in sales and technical sales support. To date, we have generated the majority of our software license and cloud subscription revenue through our direct sales force. We plan to continue to invest in our sales, services, and marketing organizations within the Americas, EMEA, and APAC, and to pursue strategic marketing partnerships. We conduct comprehensive global marketing programs that include advertising, prospect profiling and targeting, lead generation, public relations, analyst relations, trade show attendance and sponsorships, supply chain conference hosting, online marketing, joint promotion programs with vendors and consultants, and ongoing customer communication programs.

Our sales cycle typically begins with the generation of a sales lead — through in-house marketing efforts, advertising, targeted promotions, web inquiries, trade show presence, speaking engagements, hosted seminars, or other means of referral — or the receipt of a request for proposal from a prospective customer. Leads are qualified and opportunities are closed through a process that includes telephone-based assessments of requirements; responses to requests for proposals, presentations and product demonstrations, site visits and/or reference calls with organizations already using our supply chain solutions, and contract negotiations. Sales cycles vary substantially from opportunity to opportunity, but typically require nine to twelve months.

In addition to new customer sales, we continue to leverage our existing customer base to drive revenue from system upgrades, sales of additional licenses of purchased solutions, and sales of new or add-on solutions. To efficiently penetrate emerging global markets, we leverage indirect sales channels, including sales through reseller agreements, marketing agreements, and agreements with third-party logistics providers. To extend our market coverage, generate new business leads, and provide access to trained implementation personnel, we leverage strategic alliances with systems integrators skilled at implementing our solutions. Business referrals and leads are positively influenced by systems integrators, which include most of the large consulting firms and other systems consulting firms specializing in our targeted industries.

Our Manhattan Value Partner (Manhattan MVP™) and Manhattan GeoPartner™ programs foster joint sales and marketing with other organizations. Manhattan Value Partners are proven software and hardware providers, trusted third-party integrators and consultants who bring added value to customer engagements through vertical industry knowledge or technical specialization. Manhattan MVPs support and complement our supply chain solutions so we can provide customers with a comprehensive approach that is suited to their business requirements. This collaborative program is designed to benefit both Manhattan and our partners through tailored joint marketing, sales and, in some cases, co-development efforts. Among others, Manhattan MVPs include IBM, Deloitte, Kurt Salmon part of Accenture Strategy, Microsoft, Cap Gemini, HP, Zebra, Oracle and Intel. Manhattan GeoPartners represent a select group of companies that sell and implement our solutions in specific geographies around the world, each providing valuable localized expertise to meet customer needs in areas such as Western Europe, Eastern Europe, Russia, the Middle East, Latin America, Africa, and the Asia Pacific region.

Customers

To date, our customers have been suppliers, manufacturers, distributors, retailers, and logistics providers in a variety of industries. Our top five customers (new or pre-existing) in the aggregate accounted for 9%, 12%, and 8% of total revenue for the years ended December 31, 2017, 2016 and 2015, respectively. No single customer accounted for more than 10% of our total revenue in 2017, 2016 and 2015.

Product Development

We focus our development efforts on new product innovation and on adding new functionality to existing solutions; integrating our various solution offerings; enhancing the operability of our solutions across our platform and across distributed and alternative hardware platforms, operating systems, and database systems. We believe that our future success depends, in part, on our ability to continue to enhance existing solutions, to respond to dynamically changing customer requirements, and to develop new or enhanced solutions that incorporate new technological developments and emerging supply chain and industry standards. To that end, development frequently focuses on base system enhancements and incorporating new user requirements and features into our solutions. As a result, we deliver packaged, highly configurable solutions with increasingly rich functionality rather than custom-developed software. We also deliver interface toolkits for many major ERP systems to enhance communication and improve data flows between our core solutions and our clients' host systems.

We leverage internal and external scientific advisors to inform our solution strategies and research and development approaches with the most advanced thinking on supply chain opportunities, challenges, and technologies. Our internal research team is comprised of Ph.D.-credentialed math and science experts who work on creating and solving algorithms and other constructs that advance the optimization capabilities and other aspects of our solutions. We also regularly communicate with and are advised by experts from leading educational institutions known for their supply chain disciplines, and practitioners from organizations deploying supply chain technology in innovative and market-advancing ways. Together, our research team and external advisors inform both the practical business approaches and the mathematical and scientific inventiveness of our solutions.

We conduct most research and development internally in the U.S. and India to retain domain knowledge and to promote programming continuity standards. However, we may periodically outsource some projects that can be performed separately and/or that require special skills. We also use third-party translation companies to localize our application software into various languages such as, but not limited to, Chinese, French, Japanese, and Spanish.

Our research and development expenses for the years ended December 31, 2017, 2016 and 2015 were \$57.7 million, \$54.7 million, and \$53.9 million, respectively. We intend to continue to invest significantly in product development.

Competition

Our solutions are solely focused on enterprise commerce capabilities. Our solutions help global distributors, wholesalers, retailers, logistics providers and manufacturers successfully manage accelerating and fluctuating market demands, as well as master the increasing complexity and volatility of their local and global supply chains. Our solutions are designed to enable organizations to: create customer experiences consistent with their brand values; improve relationships with suppliers, customers and logistics providers; leverage investments across supply chain functions; effectively generate revenue and manage costs; and meet dynamically changing customer requirements characterized by rapid technological change in an intensely competitive environment. The principal competitive factors affecting the markets for our solutions include: industry expertise; company and solution reputation; company viability; compliance with industry standards; solution architecture; solution functionality and features; integration experience, particularly with ERP providers and material handling equipment providers; ease and speed of implementation; proven return on investment; historical and current solution quality and performance; total cost of ownership; solution price; and ongoing solution support structure. We believe we compete favorably with respect to each of these factors.

Our competitors are diverse and offer a variety of solutions directed at various aspects of enterprise commerce. Existing competitors include:

- Corporate information technology departments of current or potential customers capable of internally developing solutions;
- ERP vendors, including Oracle, SAP, and Infor, among others;
- Supply chain execution and planning vendors, including JDA Software Group, Inc. (JDA), HighJump Software Inc., SAS Institute Inc., and the Sterling Commerce division of IBM, among others;
- Point of sale vendors, including Aptos, Inc., Salesforce.com, Oracle, among others; and
- Smaller independent companies that have developed or are attempting to develop supply chain execution solutions and/or planning solutions that apply in specific countries and/or globally.

We anticipate increased competition from ERP and supply chain management (SCM) applications vendors and from business application software vendors that may broaden their solution offerings by internally developing or by acquiring or partnering with independent developers of supply chain planning and execution software. Some of these ERP and other potential competitors have longer operating histories; significantly more financial, technical, marketing and other resources; greater name recognition; broader solutions; and larger installed bases of customers than us. To the extent that ERP and SCM vendors or other large competitors develop or acquire systems with functionality comparable or superior to ours, their larger customer bases, long-standing customer relationships, and ability to offer broader solutions outside the scope of supply chain could create significant competitive advantage

for them. It also is possible that new competitors or alliances among current and/or new competitors could emerge to win significant market share. Increased competition could result in price reductions, fewer customer orders, reduced earnings and margins and loss of market share. In turn, this could have a material adverse effect on our business, results of operations, cash flow, and financial condition.

We believe we have established meaningful competitive differentiation through our supply chain and omnichannel commerce expertise; our platform-based solution approach; our track record of continuous supply chain commerce innovation and investment; our strong and endorsing customer relationships; our significant success in deploying and supporting supply chain, inventory and omnichannel solutions for market-leading companies; our success in helping our clients address the enterprise impacts of digital commerce; and our ability to out-execute others in identifying sales opportunities and demonstrating expertise throughout the sales cycle. However, to further our market success, we must continue to respond promptly and effectively to economic consumption models such as cloud subscription versus perpetual license, technological change and competitors' innovations. Consequently, we cannot assure that we will not be required to make substantial additional investments in research, development, marketing, sales and customer service efforts in order to meet any competitive threat, or that we will be able to compete successfully in the future.

International Operations: Segments

We have three reportable segments based on geographic location: the Americas; Europe, Middle East and Africa ("EMEA"); and Asia Pacific ("APAC"). For further information on our segments, see Note 7 to our Consolidated Financial Statements. Our international revenue was approximately \$168.3 million, \$144.8 million, and \$131.3 million for the years ended December 31, 2017, 2016 and 2015, respectively, which represents approximately 28%, 24%, and 24% of our total revenue for the years ended December 31, 2017, 2016 and 2015, respectively. International revenue includes all revenue derived from sales to customers outside the United States. At December 31, 2017 we employed approximately 1,490 employees in our international operations.

Proprietary Rights

We rely on a combination of copyright, patent, trade secret, trademark, and trade dress laws, confidentiality procedures, and contractual provisions to protect our proprietary rights in our products, processes and technology. We have registered trademarks for Manhattan Associates and the Manhattan Associates logo, as well as a number of our products and features. Generally, we enter into confidentiality and assignment-of-rights agreements with our employees, consultants, customers and potential customers and limit access to, and distribution of, our proprietary information. We license our proprietary products to our customers under license agreements that we believe contain appropriate use and other restrictions in order to try to best protect our ownership of our products and our proprietary rights in them, and to protect our revenue potential from our products. However, despite our efforts to safeguard and maintain our proprietary rights, we cannot ensure that we will successfully deter misappropriation, unintended disclosure or independent third-party development of our technology or our proprietary rights or information. Policing unauthorized use of our products is difficult, and, while we are unable to determine the extent to which piracy of our software solutions exists, as is the case with any software company, piracy could become a problem. Further, to the extent that we enter into transactions in countries where intellectual property laws are not well developed or are poorly enforced, our efforts to protect our proprietary rights may be ineffective. Whether we seek to enforce our proprietary rights in the U.S. or abroad, our efforts, including litigation to enforce our rights, can result in substantial costs and diversion of resources, and such efforts, or our failure to succeed in such efforts, could have a material adverse effect on our business, financial condition, results of operations or cash flows, regardless of the final outcome.

As the number of supply chain management solutions available in the marketplace increases and solution functionality continues to overlap, supply chain software may increasingly become subject to claims of infringement or other misappropriation of intellectual property. Third parties may assert infringement or misappropriation claims against us relating to our products, processes or technology. Such claims, whether or not they have merit, generally are time-consuming and may result in costly litigation, divert management's attention or cause product shipment delays or require us to enter into royalty or licensing arrangements. Defense of infringement or other misappropriation claims, entering into royalty or licensing agreements, the unavailability of such agreements, or adverse determinations in proprietary rights litigation could have a material adverse effect on our business, results of operations, cash flow and financial condition.

Employees

At December 31, 2017, we employed approximately 2,790 employees worldwide, of which 1,310 are based in the Americas, 220 in EMEA, and 1,260 in APAC (including India).

Available Information

We file annual, quarterly and current reports and other information with the Securities and Exchange Commission (the "SEC" or the "Commission"). These materials can be inspected and copied at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Copies of these materials may also be obtained by mail at prescribed rates from the SEC's Public Reference

Room at the above address. Information about the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

On our website, www.manh.com, we provide free of charge our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and any amendments thereto, as soon as reasonably practicable after they have been electronically filed or furnished to the SEC. Information contained on our website is not part of this Form 10-K or our other filings with the SEC.

Additionally, our code of business conduct and ethics and the charters of the Audit, Compensation, and Nomination and Governance Committees of the Board of Directors are available on our website.

Item 1A. Risk Factors

You should consider the following and other risk factors in evaluating our business or an investment in our common stock. The occurrence of adverse events described in the following risk factors or other adverse events not described in the following risk factors could have a material adverse effect on our business, results of operations, cash flow and financial condition, and could cause the trading price of our common stock to decline.

We now offer certain of our solutions as cloud subscriptions, which will adversely affect our revenue and earnings in the transition period and make predicting our revenue, earnings and cash flow more difficult. We began offering more of our solutions under a cloud subscription option in 2017, in addition to our perpetual license option. Under a cloud subscription, customers pay a periodic fee for the right to use our software within a cloud-based environment that we provide and manage over a specified period of time. We believe that over time a growing number of our customers will elect to purchase our solutions as cloud subscriptions rather than under an on-premise perpetual license.

Until we have fully transitioned to a stable mix of cloud subscription and on-premise perpetual license arrangements, we expect our combined license and cloud subscription revenue will decrease due to the difference in revenue recognition for a cloud subscription (for which revenue is recognized ratably over the term of the subscription arrangement) and a perpetual license (for which revenue is generally recognized upon purchase) and that our maintenance revenue (which comprises a significant portion of our revenue) may also decrease due to software enhancement and support being included in the cloud subscription offering.

Our revenue, earnings and cash flow are based on the mix of revenue between cloud subscription and perpetual license revenue including timing, number and size of deals. If a greater percentage of our customers purchase our solutions as cloud subscriptions in any period, our revenue, earnings and cash flow will likely fall below expectations for that period, which could cause our stock price to decline.

Economic, political and market conditions can adversely affect our business, results of operations, cash flow and financial condition, including our revenue growth and profitability, which in turn could adversely affect our stock price. Our business is influenced by a range of factors that are beyond our control and that we have no comparative advantage in forecasting. These include:

- general economic and business conditions;
- overall demand for enterprise software and services;
- governmental policy, budgetary constraints or shifts in government spending priorities;
- general geo-political developments; and
- currency exchange rate fluctuations.

Macroeconomic developments like the continued slow pace of economic recovery in the United States and Europe and in parts of Asia and South America could negatively affect our business, operating results, financial condition and outlook, which, in turn, could adversely affect our stock price. Any general weakening of, and related declining corporate confidence in, the global economy or the curtailment in government or corporate spending could cause current or potential customers to reduce or eliminate their information technology budgets and spending, which could cause customers to delay, decrease or cancel purchases of our products and services or cause customers not to pay us or to delay paying us for previously purchased products and services.

In addition, political unrest and the related potential impact on global stability, terrorist attacks and the potential for other hostilities in various parts of the world, potential public health crises and natural disasters continue to contribute to a climate of economic and political uncertainty that could adversely affect our results of operations and financial condition, including our revenue growth and profitability.

Our inability to attract, integrate, and retain management and other personnel could adversely impact our business, results of operations, cash flow, and financial condition. Our success greatly depends on the continued service of our executives, as well as our other key senior management, technical personnel, and sales personnel. Our success will depend on the ability of our executive officers to work together as a team. The loss of any of our senior management or other key professional services, research and development, sales and marketing personnel—particularly if they are lost to competitors—could impair our ability to grow our business. We do not maintain key man life insurance on any of our executive officers.

Our future success will depend in large part upon our ability to attract, retain, and motivate highly skilled employees. We face significant competition for individuals with the skills required to perform the services we offer, and thus we may encounter increased compensation costs that are not offset by increased revenue. In the broader technology industry in which we compete for talented hires, there is substantial and continuous competition for engineers with high levels of experience in designing, developing and managing software, as well as competition for sales executives and operations personnel. We cannot guarantee that we will be able to attract and retain sufficient numbers of these highly skilled employees or motivate them. Because of the complexity of the supply chain market, we may experience a significant time lag between the date on which technical and sales personnel are hired and the time at which these persons become fully productive.

We may not be able to continue to successfully compete with other companies. We compete in markets that are intensely competitive and are expected to become more competitive as current competitors expand their product offerings. Our current competitors come from many segments of the software industry and offer a variety of solutions directed at various aspects of the extended supply chain, as well as the enterprise as a whole. We face competition for product sales from:

- corporate information technology departments of current or potential customers capable of internally developing solutions;
- ERP vendors, including Oracle, SAP, and Infor, among others;
- supply chain execution and planning vendors, including JDA Software Group, Inc. (JDA), HighJump Software Inc., SAS Institute Inc., and the Sterling Commerce division of IBM, among others;
- Point of sale vendors, including Aptos, Inc., Salesforce.com, Oracle, among others; and
- smaller independent companies that have developed or are attempting to develop supply chain execution solutions and/or supply chain planning solutions that apply in specific countries and/or globally.

We anticipate facing increased competition from ERP and supply chain management (SCM) applications vendors and business application software vendors that may broaden their solution offerings by internally developing or by acquiring or partnering with independent developers of supply chain planning and execution software. Some of these ERP and other potential competitors have longer operating histories, significantly more financial, technical, marketing, and other resources, greater name recognition, broader solutions, and larger installed bases of customers than do we. To the extent that ERP and SCM vendors or other large competitors develop or acquire systems with functionality comparable or superior to ours, their larger customer bases, long-standing customer relationships, and ability to offer broader solutions outside the scope of supply chain could create significant competitive advantage for them. It also is possible that new competitors or alliances among current and/or new competitors could emerge to win significant market share. Increased competition could result in price reductions, fewer customer orders, reduced earnings and margins, and loss of market share. In turn, this could have a material adverse effect on our business, results of operations, cash flow, and financial condition.

We believe the domain expertise required to continuously innovate supply chain technology in our target markets, effectively and efficiently implement solutions, identify and attract sales opportunities, and compete successfully in the sales cycle provides us with a competitive advantage and is a significant barrier to market entry. However, in order to be successful in the future, we must continue to respond promptly and effectively to technological change and competitors' innovations, and consequently we cannot assure you that we will not be required to make substantial additional investments in connection with our research, development, marketing, sales, and customer service efforts in order to meet any competitive threat, or that we will be able to compete successfully in the future. Some of our competitors have significant resources at their disposal, and the degree to which we will compete with their new innovative products in the marketplace is undetermined.

Our pricing models may need to be modified due to price competition. The competitive markets in which we operate may oblige us to reduce our prices in order to contend with the pricing models of our competitors. If our competitors discount certain products or services, we may have to lower prices on certain products or services in order to attract or retain customers. Any such price modifications would likely reduce margins and could adversely affect our business, results of operations, cash flow, and financial condition.

Our operating results are substantially dependent on one line of business. We continue to derive our revenues from sales of our supply chain commerce solutions software and related services and hardware. Any factor adversely affecting the markets for supply chain solutions could have an adverse effect on our business, results of operations, cash flow, and financial condition.

Accordingly, our future operating results will depend on the demand for our supply chain commerce products and related services and hardware by our customers, including new and enhanced releases that we subsequently introduce. We cannot guarantee that the market will continue to demand our current products or we will be successful in marketing any new or enhanced products. If our competitors release new products that are superior to our products in performance or price, demand for our products may decline. A decline in demand for our products as a result of competition, technological change, or other factors would reduce our total revenues and harm our ability to maintain profitability.

Our future revenue is dependent on continuing sales from software licenses and cloud subscriptions, which in turn drive sales of post-contract support and professional services. We are dependent on our new customers as well as our large installed customer base to purchase additional software licenses, cloud subscriptions, post-contract support, and professional services from us. Our post-contract support agreements are generally for a one-year term and our professional services agreements generally only cover a particular engagement. In future periods customers may not license additional products, and in turn may not renew post-contract support agreements or purchase additional professional services from us. If our customers decide not to license or purchase these products and services from us, or if they reduce the scope of their post-contract support or hosting or professional services agreements, our revenue could decrease significantly, and that could have a material adverse effect on our business, results of operations, cash flow and financial condition.

In addition, many of our customers are using older versions of our products for which we are no longer developing any further upgrades or enhancements. While we intend to migrate our customers who are using these versions to newer versions or products, there can be no assurance that these customers will do so. If customers using older versions of our products decide not to license our current software products, or decide to discontinue the use of our products and associated post-contract support services, our revenue could decrease and our operating results could be materially adversely affected.

Our software may contain undetected errors or “bugs” causing harm to our reputation, which could adversely impact our business, results of operations, cash flow, and financial condition. Software products as complex as those we offer might contain undetected errors or failures when we first introduce them or when we release new versions. Despite testing, we cannot ensure errors will not be found in new products or product enhancements after commercial release. Any errors could cause substantial harm to our reputation, result in additional unplanned expenses to remedy any defects, delay the introduction of new products, result in the loss of existing or potential customers, or cause a loss in revenue. Further, such errors could subject us to customer claims for significant damages, and we cannot guarantee courts would enforce the provisions in our customer agreements limiting our damage liability. In turn, this could materially affect our business, results of operations, cash flow, and financial condition.

If we encounter defects, delays or interruptions in our cloud subscription services, the demand for these services could diminish, and we could incur significant liability. We currently utilize data center hosting facilities, which are managed by third-parties, to provide cloud-based solutions and hosting services to our customers. If the data center facilities fail or encounter any damage, it could result in interruptions in services to our customers. This could result in unanticipated downtime for our customers, and in turn, our reputation and business could be adversely affected. In addition, if our customers use our cloud-based arrangements in unanticipated ways, this could cause an interruption in service for other customers attempting to access their data.

If any defects, delays or interruption in our cloud-based solutions occurs, customers could elect to cancel their service, delay or withhold payment to us, not purchase from us in the future or make claims against us, which could adversely affect our business and reputation.

If our data protection or other security measures are compromised and, as a result, our data, our customers’ data or our IT systems are accessed improperly, made unavailable, or improperly modified, our products and services may be perceived as vulnerable, possibly damaging our brand and reputation, disrupting the IT services we provide to our customers, and causing our customers to stop using our products and services, all of which could reduce our revenue and earnings, increase our expenses and expose us to legal claims and regulatory actions. Our products and services can store, retrieve, manipulate and manage our customers’ information and data as well as our own. We have a reputation for secure and reliable software products and services and invest time and resources in protecting the integrity and security of our products, services and internal and external data that we manage.

Nevertheless, we encounter attempts by third parties to penetrate or bypass our data protection and other security measures and gain unauthorized access to our networks, systems and data or compromise our customers’ confidential information or data. Unauthorized third parties also could improperly access or modify data as a result of employee or supplier error or malfeasance and third parties may attempt to fraudulently induce employees or customers into disclosing sensitive information such as user names, passwords or other information.

These risks are persistent and likely will increase as we continue to grow our cloud offerings and services and store and process increasingly large amounts of our customers’ confidential information and data. We also may acquire companies, products, services and technologies and inherit such risks when we integrate these acquisitions within Manhattan.

If a cyber-attack or other security incident were to occur, we could suffer damage to our brand and reputation, which could reduce our revenue and earnings, increase our expenses to address and fix the incidents and expose us to legal claims and regulatory actions.

Further, as regulatory focus on privacy issues continues to increase and become more complex, these potential risks to our business will intensify. Changes in laws or regulations associated with the enhanced protection of certain types of sensitive data could greatly increase our cost of providing our products and services.

Delays in implementing our products could adversely impact our business, results of operations, cash flow, and financial condition. Due to the size and complexity of most of our software implementations, our implementation cycle can be lengthy and may result in delays. Our products may require modification or customization and must integrate with many existing computer systems and software programs of our customers. This can be time-consuming and expensive for customers and can result in implementation and deployment delays of our products. Additional delays could result if we fail to attract, train, and retain services personnel, or if our alliance companies fail to commit sufficient resources towards implementing our software. These delays and resulting customer dissatisfaction could limit our future sales opportunities, impact revenue, and harm our reputation.

Our liability to clients may be substantial if our systems fail, which could adversely impact our business, results of operations, cash flow, and financial condition. Our products are often critical to the operations of our customers' businesses and provide benefits that may be difficult to quantify. If our products fail to function as required—which, as described in more detail above, could be due to software bugs, cloud hosting service failures, security breaches, faulty implementations or other reasons—we may be subject to claims for substantial damages. Courts may not enforce provisions in our contracts that would limit our liability or otherwise protect us from liability for damages. Defending a lawsuit, regardless of its merit, could be costly and divert management's time and attention. Although we maintain general liability insurance and error and omissions coverage, these coverages may not continue to be available on reasonable terms or in sufficient amounts to cover claims against us. In addition, our insurer may disclaim coverage as to any future claim. If claims exceeding the available insurance coverage are successfully asserted against us, or our insurer imposes premium increases or large deductibles or co-insurance requirements on us, then our business, results of operations, cash flow, and financial condition could be adversely affected.

Our ability to sell our software is highly dependent on the quality of our services offerings, and our failure to offer high quality services could adversely impact our business, results of operations, cash flow, and financial condition. Most of our customers rely to some extent on our professional services to aid in the implementation of our software solutions. Once our software has been installed and deployed, our customers may depend on us to provide them with ongoing support and resolution of issues relating to our software. Therefore, a high level of service is critical for the continued marketing and sale of our solutions. If we or our partners do not efficiently and effectively install and deploy our software products, or succeed in helping our customers quickly resolve post-deployment issues, our ability to sell software products to these customers would be adversely affected and our reputation in the marketplace with potential customers could suffer.

Our international operations have many associated risks. We continue to strategically manage our presence in international markets, and these efforts require significant management attention and financial resources. We may not be able to successfully penetrate international markets, or, if we do, there can be no assurance that we will grow our business in these markets at the same rate as in North America. Because of these inherent complexities and challenges, lack of success in international markets could adversely affect our business, results of operations, cash flow, and financial condition.

We have international offices in Americas: the United States and Chile; in Europe: the United Kingdom, the Netherlands, France and Germany; and in Asia: China, Japan, Singapore, and India; and Australia. We have committed resources to maintaining and further expanding, where appropriate, our sales offices and sales and support channels in key international markets. However, our efforts may not be successful. International sales are subject to many risks and difficulties, including those arising from the following: building and maintaining a competitive presence in new markets; staffing and managing foreign operations; managing international systems integrators; complying with a variety of foreign laws; producing localized versions of our products; import and export restrictions and tariffs; enforcing contracts and collecting accounts receivable; unexpected changes in regulatory requirements; reduced protection for intellectual property rights in some countries; potential adverse tax treatment; less stringent adherence to ethical and legal standards by prospective customers in some countries; language and cultural barriers; currency fluctuations; political and economic instability abroad; and seasonal fluctuations.

Our operating results may include foreign currency gains and losses. Due to our international operations, we conduct a portion of our business in currencies other than the United States dollar. Our revenues, expenses, operating profit and net income are affected when the dollar weakens or strengthens in relation to other currencies. In addition, we have a large development center in Bangalore, India, that does not have a natural in-market revenue hedge to mitigate currency risk to our operating expense in India. Fluctuations in the value of other currencies, particularly the Indian rupee, could materially impact our revenues, expenses, operating profit and net income.

Our research and development activities may not generate significant returns. Our product development activities are costly, and recovering our investment in product development may take a significant amount of time, if it occurs at all. We anticipate continuing to make significant investments in software research and development and related product opportunities because we

believe that we must continue to allocate a significant amount of resources to our research and development activities in order to compete successfully. We cannot estimate with any certainty when we will, if ever, receive significant revenues from these investments.

We may encounter long sales cycles, particularly with our larger customers, which could have an adverse effect on the amount, timing, and predictability of our revenue, adversely affecting our business, results of operations, cash flow, and financial condition. Our products have lengthy sales cycles, which typically extend from nine to twelve months and may take up to several years. Potential and existing customers, particularly larger enterprise customers, often commit significant resources to an evaluation of available solutions and services and require us to expend substantial time and resources in connection with our sales efforts. The length of our sales cycles also varies depending on the type of customer to which we are selling, the product being sold, and customer requirements. We may incur substantial sales and marketing expenses and expend significant management effort during this time, regardless of whether we make a sale. Many of the key risks relating to sales processes are beyond our control, including: our customers' budgetary and scheduling constraints; the timing of our customers' budget cycles and approval processes; our customers' willingness to replace their currently deployed software solutions; and general economic conditions.

As a result of these lengthy and uncertain sales cycles of our products and services, it is difficult for us to predict when customers may purchase products or services from us, thereby affecting when we can recognize the associated revenue, and our operating results may vary significantly and may be adversely affected. The length of our sales cycle makes us susceptible to having pending transactions delayed or terminated by our customers if they decide to delay or withdraw funding for IT projects. Our customers may decide to delay or withdraw funding for IT projects for various reasons, including, but not limited to, global economic cycles and capital market fluctuations.

Our operating results are difficult to predict and could cause our stock price to fall. Our quarterly revenue and operating results are difficult to predict and can fluctuate significantly from quarter to quarter. If our quarterly revenue or operating results fall below the expectations of investors or public market analysts, the price of our common stock could fall substantially. Our quarterly revenue is difficult to forecast for several reasons, including the following: global macro-economic disruptions; credit and equity market disruptions, which can significantly impact capital availability and spend timing of customers or potential customers; the varying sales cycle for our products and services from customer to customer, including multiple levels of authorization required by some customers; the varying demand for our products; customers' budgeting and purchasing cycles; potential deferral of license revenue well after entering into a license agreement due to extended payment terms, including, although infrequent, payment terms in a contract extending beyond twelve months, significant software modifications, future software functionality deliverables not on a stand-alone basis, or other negotiated terms that preclude software revenue recognition under U.S. general accepted accounting principles; delays in our implementations at customer sites; timing of hiring new services employees and the rate at which these employees become productive; timing of introduction of new products; development and performance of our distribution channels; and timing of any acquisitions and related costs.

As a result of these and other factors, our license revenue is difficult to predict. Because our revenue from services is largely correlated to our license revenue, a decline in license revenue could also cause a decline in our services revenue in the same quarter or in subsequent quarters. In addition, an increase or decrease in hardware sales, which provide us with lower gross margins than sales of software licenses or services, may cause variations in our quarterly operating results.

Most of our expenses, including employee compensation and rent, are relatively fixed. In addition, our expense levels are based, in part, on our expectations regarding future revenue increases. As a result, any shortfall in revenue in relation to our expectations could cause significant changes in our operating results from quarter to quarter and could result in quarterly losses. As a result of these factors, we believe that period-to-period comparisons of our revenue levels and operating results are not necessarily meaningful. Historical growth rates and historical quarterly revenue and operating results may not be a good indicator of future operating results and reliance on historical results should not be used to predict our future performance.

Our technology must be advanced if we are to remain competitive. The market for our products is characterized by rapid technological change, frequent new product introductions and enhancements, changes in customer demands, and evolving industry standards. Our existing products could be rendered obsolete if we fail to continue to advance our technology. We have also found that the technological life cycles of our products are difficult to estimate, partially because of changing demands of other participants in the supply chain. We believe that our future success will depend in large part upon our ability to continue to enhance our current product line while we concurrently develop and introduce new products that keep pace with competitive and technological developments. These developments require us to continue to make substantial product development investments. Although we are presently developing a number of product enhancements to our product sets, we cannot assure you that these enhancements will be completed on a timely basis or gain customer acceptance.

Our failure to manage the growth of our operations may adversely affect our business, results of operations, cash flow, and financial condition. We plan to continue to increase the scope of our operations domestically and internationally. This growth may place a significant strain on our management systems and resources. We may further expand domestically or internationally through internal growth or through acquisitions of related companies and technologies. If we fail to maintain continuity in our executive officers; develop the management skills of our managers and supervisors; attract, retain, train, and motivate our employees; improve

our operational, financial, and management controls; and maintain adequate reporting systems and procedures and our management and information control systems, our business, results of operations, and cash flow could be negatively impacted.

We incorporate third-party software in our solutions, the failure or unavailability of which could adversely affect our ability to sell, support, and service our products. We incorporate and include third-party software into and with certain of our products and solutions and expect to continue to do so. The operation of our products could be impaired if there are defects in that third-party software. It may be difficult for us to correct any defects in third-party software because the development and maintenance of the software is not within our control. Such defects could adversely affect our business.

In addition, there can be no assurance that these third parties will continue to make their software available to us on acceptable terms, or at all; not make their products available to our competitors on more favorable terms; invest the appropriate levels of resources in their products and services to maintain and enhance the capabilities of their software; or remain in business. Any impairment in our relationship with these third parties or our ability to license or otherwise use their software could have a material adverse effect on our business, results of operations, cash flow, and financial condition.

The use of open source software in our products may expose us to additional risks and harm our intellectual property, which could adversely impact our business, results of operations, cash flow, and financial condition. Some of our products use or incorporate software that is subject to one or more open source licenses. Open source software is typically freely accessible, usable and modifiable. Certain open source software licenses require a user who intends to distribute the open source software as a component of the user's software to disclose publicly part or all of the source code to the user's software. In addition, certain open source software licenses require the user of such software to make any derivative works of the open source code available to others on unfavorable terms or at no cost. This can subject previously proprietary software to open source license terms.

While we monitor the use of all open source software in our products, processes, and technology and try to ensure that no open source software is used in such a way as to require us to disclose the source code to the related product or solution, such use could inadvertently occur. Additionally, if a third-party software provider has incorporated open source software into software we license from them for use in our products and solutions, we could, under certain circumstances, be required to disclose the source code to our products and solutions. This could harm our intellectual property position and have a material adverse effect on our business, results of operations, cash flow, and financial condition.

If we are unable to develop software applications that interoperate with computing platforms developed by others, our business, results of operations, cash flow, and financial condition may be adversely affected. We develop software applications that interoperate with operating systems, database platforms, and hardware devices developed by others, which we refer to collectively as computing platforms. If the developers of these computing platforms do not cooperate with us or we are unable to devote the necessary resources so that our applications interoperate with those computing platforms, our software development efforts may be delayed and our business and results of operations may be adversely affected. When new or updated versions of these computing platforms are introduced, it is often necessary for us to develop updated versions of our software applications so that they interoperate properly with these computing platforms. We may not accomplish these development efforts quickly or cost-effectively, and it is difficult to predict what the relative growth rates of adoption of these computing platforms will be. These development efforts require substantial investment, the devotion of substantial employee resources, and the cooperation of the developers of the computing platforms. For some computing platforms, we must obtain some proprietary application program interfaces from the owner in order to develop software applications that interoperate with the computing platforms. Computing platform providers have no obligation to assist in these development efforts. If they do not provide us with assistance or the necessary proprietary application program interfaces on a timely basis, we may experience delays or be unable to expand our software applications into other areas.

The computing platforms we use may not continue to be available to us on commercially reasonable terms. Any loss of the right to use any of these systems could result in delays in the provision of our products and services, and our results of operations may be adversely affected. Defects in computing platforms could result in errors or failure of our products, which could harm our business.

Our liability for intellectual property claims can be costly and result in the loss of significant rights, which could adversely impact our business, results of operations, cash flow, and financial condition. It is possible that third parties will claim that we have infringed their current or future products, inventions, or other intellectual property. We expect that supply chain software developers like us will increasingly be subject to infringement claims as the number of products grows. Any claims, with or without merit, could be time-consuming, result in costly litigation, cause product shipment delays, or require us to pay monetary damages or to enter into royalty or licensing agreements, any of which could negatively impact our operating results. There are no assurances that these royalty or licensing agreements, if required, would be available on terms acceptable to us, if at all. We also may be required to indemnify our customers for damages they suffer as a result of such infringement. There are no assurances that legal action claiming patent infringement will not be commenced against us, or that we would prevail in litigation given the complex technical issues and inherent uncertainties in patent litigation. If a patent claim against us were successful and we could not obtain a license on acceptable terms or license a substitute technology or redesign the product or feature to avoid infringement, we may be prevented from

distributing our software or required to incur significant expense and delay in developing non-infringing software. Any of these events could seriously harm our business, results of operations, cash flow, and financial condition.

We may have exposure to additional tax liabilities. As a multinational corporation, we are subject to income taxes in the U.S. and various foreign jurisdictions. Significant judgment is required in determining our global provision for income taxes and other tax liabilities. In the ordinary course of a global business, there are many intercompany transactions and calculations where the ultimate tax determination is uncertain. Our income tax returns are routinely subject to audits by tax authorities. Although we regularly assess the likelihood of adverse outcomes resulting from these examinations to determine our tax estimates, a final determination of tax audits or tax disputes could have an adverse effect on our financial condition, results of operations and cash flows. Also, the earnings of our foreign subsidiaries are considered to be indefinitely reinvested. If our plans change in the future or if we elect to repatriate the unremitted earnings of our foreign subsidiaries in the form of dividends or otherwise, we could be subject to additional local withholding taxes which may result in a higher effective tax rate.

In addition, the United States government enacted tax reform and other governments are considering adopting tax reform measures that could impact future effective tax rates favorably or unfavorably affected by changes in tax rates, changes in the valuation of our deferred tax assets or liabilities, or changes in tax laws or their interpretation. Such changes could have a material adverse impact on our financial results.

We are also subject to non-income taxes, such as payroll, sales, use, value-added, net worth, property and goods and services taxes in the U.S. and various foreign jurisdictions. We are regularly under audit by tax authorities with respect to these non-income taxes and may have exposure to additional non-income tax liabilities, which could have an adverse effect on our results of operations, financial condition and cash flows.

Fluctuations in our hardware sales may adversely impact our business, results of operations, cash flow, and financial condition. A portion of our revenue in any period is from the resale of a variety of third-party hardware products to purchasers of our software. However, our customers may purchase these hardware products directly from manufacturers or distributors rather than from us. We view sales of hardware as non-strategic. We perform this service to our customers seeking a single source for their supply chain needs. Hardware sales are difficult to forecast and fluctuate from quarter to quarter, leading to unusual comparisons of total revenue and fluctuations in profits. If we are unable to maintain or grow our hardware revenue, our business, results of operations, cash flow, and financial condition may be adversely affected.

Our growth is dependent upon the successful development of our direct and indirect sales channel mix. We believe that our future growth also will depend on further developing and maintaining a successful direct sales force and strategic relationships with systems integrators and other technology companies. We invest significant resources to maintain and develop our sales channels. Our investment could adversely affect our operating results if these efforts do not generate license and service revenue necessary to offset the investment. Also, our inability to partner with other technology companies and qualified systems integrators could adversely affect our results of operations. Because lower unit prices are typically charged on sales made through indirect channels, a disproportionate increase in indirect sales could reduce our average selling prices and result in lower gross margins. In addition, sales of our products through indirect channels typically do not generate consulting services revenue for us at the same levels as direct sales, as the third-party systems integrators generally provide these services. Similarly, indirect sales typically do not generate the same levels of direct contact between our associates and those of our customer, and we may have more difficulty accurately forecasting sales, evaluating customer satisfaction, and recognizing emerging customer requirements. In addition, these systems integrators and third-party software providers may develop, acquire, or market products competitive with our products.

Our strategy of marketing our products directly to customers and indirectly through systems integrators and other technology companies may result in distribution channel conflicts. Our direct sales efforts may compete with those of our indirect channels and, to the extent different systems integrators target the same customers, systems integrators may also come into conflict with each other. Any channel conflicts that develop may have a material adverse effect on our relationships with systems integrators or harm our ability to attract new systems integrators.

Our employee retention and hiring may be hindered by immigration restrictions, which could adversely impact our business, results of operations, cash flow, and financial condition. Foreign nationals who are not U.S. citizens or permanent residents constitute a significant part of our professional U.S. workforce. Our ability to hire and retain these workers, and their ability to remain and work in the U.S. are impacted by laws and regulations as well as by processing procedures of various government agencies. Changes in laws, regulations, or procedures may adversely affect our ability to hire or retain such workers and may affect our costs of doing business and/or our ability to deliver services.

Our failure to adequately protect our proprietary rights could adversely impact our business, results of operations, cash flow, and financial condition. Our success and ability to compete is dependent in part upon our proprietary technology. There are no assurances that we will be able to protect our proprietary rights against unauthorized disclosure or third-party copying or use. We rely on a combination of copyright, patent, trademark, and trade secret laws, as well as confidentiality agreements, licensing arrangements, and contractual commitments, to establish and protect our proprietary rights. Despite our efforts to protect our proprietary rights, existing copyright, patent, trademark, and trade secret laws afford only limited protection. In addition, the laws of certain foreign

countries do not protect our rights to the same extent as do the laws of the United States. Attempts may be made to copy or reverse engineer aspects of our products or to obtain and use information that we regard as proprietary. Any infringement of our proprietary rights could negatively impact our future operating results. Furthermore, policing the unauthorized use of our products is difficult, and litigation may be necessary in the future to enforce our intellectual property rights, to protect our trade secrets, or to determine the validity and scope of the proprietary rights of others. Litigation could result in substantial costs and diversion of resources. In turn, our business, results of operations, cash flow, and financial condition could be materially adversely affected.

Mergers or other strategic transactions involving our competitors could weaken our competitive position or reduce our revenue. Our competitors have been consolidating, which may make them more formidable competitors to us. Competing with stronger companies may cause us to experience pricing pressure and loss of market share, either of which could have a material adverse effect on our business, results of operations, cash flow, and financial condition. Our competitors may establish or strengthen their cooperative relationships with vendors, systems integrators, third-party consulting firms, or other parties. Established companies may not only develop their own products but may also acquire or partner with our current competitors. If any of these events occur, our revenue and profitability could significantly decline.

Our business, results of operations, cash flow, and financial condition may be adversely affected if we cannot integrate acquired companies or manage joint ventures. We may from time to time acquire companies with complementary products and services. These acquisitions will expose us to increased risks and costs, including those arising from the following: assimilating new operations and personnel; diverting financial and management resources from existing operations; and integrating acquired technologies. We may not be able to generate sufficient revenue from any of these acquisitions to offset the associated acquisition costs.

We will also be required to maintain uniform standards of quality and service, controls, procedures, and policies. Our failure to achieve any of these standards may hurt relationships with customers, employees, and new management personnel. In addition, future acquisitions may result in additional issuances of stock that could be dilutive to our shareholders.

Many acquisition candidates have significant intangible assets, and an acquisition of these businesses would likely result in significant amounts of goodwill and other intangible assets. Goodwill and certain other intangible assets are not amortized to income, but are subject to at least annual impairment reviews. If the acquisitions do not perform as planned, future charges to income arising from such impairment reviews could be significant. Likewise, future quarterly and annual earnings could be significantly adversely affected. In addition, these acquisitions could involve acquisition-related charges, such as one-time acquired research and development charges.

We may also evaluate joint venture relationships with complementary businesses. Any joint venture we enter into would involve many of the same risks posed by acquisitions, particularly the following: risks associated with the diversion of resources; the inability to generate sufficient revenue; the management of relationships with third parties; and potential additional expenses.

Our business may require additional capital. We may require additional capital to finance our growth or to fund acquisitions or investments in complementary businesses, technologies or product lines. Our capital requirements may be impacted by many factors, including: demand for our products; the timing of and extent to which we invest in new technology; the timing of and extent to which we acquire other companies; the level and timing of revenue; the expenses of sales and marketing and new product development; the success and related expense of increasing our brand awareness; the cost of facilities to accommodate a growing workforce; the extent to which competitors are successful in developing new products and increasing their market share; and the costs involved in maintaining and enforcing intellectual property rights.

To the extent that our resources are insufficient to fund our future activities, we may need to raise additional funds through public or private financing. However, additional funding, if needed, may not be available on terms attractive to us, or at all. In addition, since we have historically financed our growth through cash flow from operations and available cash, our relative inexperience in accessing the credit or capital markets may impair our ability to do so if the need arises. Our inability to raise capital when needed could have a material adverse effect on our business, results of operations, cash flow and financial condition. If additional funds are raised through the issuance of equity securities, the percentage ownership of our company held by our current shareholders would be diluted.

Fires or other catastrophic events at our principal facilities could cripple our business. Fires, natural disasters or other catastrophic events, particularly those effecting our Atlanta headquarters or India research and development center, may cause damage or disruption to our operations, and thus could have a strong negative effect on us. Our business operations are subject to interruption by natural disasters, fire, power shortages, pandemics and other events beyond our control. Although we maintain crisis management and disaster response plans, such events could make it difficult or impossible for us to deliver our services to our customers.

Our ability to maintain and develop our brand is critical for our continued success. The brand identity we have developed has significantly contributed to the continued success of our business. Our ability to maintain and develop our brand is critical in expanding our base of customers, partners and employees. Our brand will depend largely on our ability to remain a technology leader

and continue to provide high-quality innovative products, services, and features. Significant investments may be required in order to maintain and develop our brand. However, the investments may later be proven to be unsuccessful. If we fail to maintain and develop our brand, or if we incur excessive expenses in our efforts to do so, our business, operating results and financial condition may be materially and adversely affected.

Adverse litigation results could affect our business. From time to time, we may be involved in litigation relating to claims arising out of our ordinary course of business, and occasionally legal proceeding not in the ordinary course. Litigation can be lengthy, expensive and disruptive to our operations, and can divert our management’s attention away from running our core business. The results of any litigation also cannot be predicted with certainty. An adverse decision could result in monetary damages or injunctive relief that could affect our business, operating results or financial condition. Additional information regarding legal matters in which we are involved can be found in Note 5 of the Notes to our Consolidated Financial Statements.

Our stock price has been highly volatile. The trading price of our common stock has fluctuated significantly since our initial public offering in April 1998. In addition, the trading price of our common stock could be subject to wide fluctuations in response to various factors, including: global macro-economic contraction impacting demand for supply chain solutions; quarterly variations in operating results; announcements of technological innovations or new products by us or our competitors; developments with respect to patents or proprietary rights; changes in financial estimates by securities analysts; and mergers, acquisitions, and combinations involving our competitors or us.

Our articles of incorporation and bylaws and Georgia law may inhibit a takeover of our company. Our basic corporate documents and Georgia law contain provisions that might enable our management to resist a takeover of our company. These provisions might discourage, delay, or prevent a change in the control of our company or a change in our management. These provisions could also discourage proxy contests and make it more difficult for you and other shareholders to elect directors and take other corporate actions. The existence of these provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock.

Economic conditions and regulatory changes caused by the United Kingdom’s likely exit from the European Union could adversely affect our business. In June 2016, the United Kingdom (the “U.K.”) held a referendum in which voters approved an exit from the European Union (“E.U.”), commonly referred to as Brexit. On March 29, 2017, the UK notified the E.U. of its intention to withdraw pursuant to Article 50 of the Lisbon Treaty.. The terms of the withdrawal are subject to a negotiation period that could last at least two years from the withdrawal notification date. Brexit has caused, and may continue to result in, significant volatility in global stock market and currency exchange rate fluctuations, which have resulted in the strengthening of the U.S. dollar relative to other foreign currencies in which we conduct business. The likely withdrawal of the U.K. from the E.U. may also create global economic uncertainty, which may cause our customers to closely monitor their costs and reduce their spending budgets. This could adversely affect our business, financial condition, operating results and cash flows. Our EMEA operations represented approximately 14% and 11% of our total revenue for the year ended December 31, 2017 and 2016, respectively.

Changes in, or interpretation of, accounting principles could result in unfavorable accounting changes. Our Consolidated Financial Statements are prepared in conformity with U.S. generally accepted accounting principles and accompanying accounting pronouncements, implementation guidelines, and interpretations. These rules are subject to interpretation by the SEC and various bodies formed to interpret and create appropriate accounting principles. Changes in these rules or their interpretation could significantly change our reported results and may even retroactively affect previously reported transactions. Our accounting principles that may be affected by changes in accounting principles include, but are not limited to revenue recognition and leases. We are continuing to evaluate the impact that the adoption of these standards will have on our Consolidated Financial Statements. Changes resulting from these new accounting standards or the adoption of other new or revised accounting principles may result in materially different financial results and may require that we make changes to our systems, processes and controls. For further detail, please see new accounting pronouncements discussion in Note 1 to the Consolidated Financial Statements.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

Our principal administrative, sales, marketing, support, and research and development facility is located in approximately 221,000 square feet of modern office space in Atlanta, Georgia. Substantially all of this space is leased to us through September 30, 2025. We have additional offices under multi-year agreements in New Jersey. We also occupy facilities outside of the United States under multi-year agreements in the United Kingdom, the Netherlands, France, Chile, China, Japan, Singapore, India, and Australia. We also occupy an office under a short-term agreement in Germany. We believe our office space is adequate to meet our immediate needs; however, we may expand into additional facilities in the future.

Item 3. Legal Proceedings

From time to time, we may be a party to legal proceedings arising in the ordinary course of business, and we could be a party to legal proceedings not in the ordinary course of business. The Company is not currently a party to any legal proceeding the result of which it believes could have a material adverse impact upon its business, financial position, results of operations, or cash flows.

Many of our installations involve products that are critical to the operations of our clients' businesses. Any failure in our products could result in a claim for substantial damages against us, regardless of our responsibility for such failure. Although we attempt to contractually limit our liability for damages arising from product failures or negligent acts or omissions, there can be no assurance that the limitations of liability set forth in our contracts will be enforceable in all instances.

Item 4. Mine Safety Disclosures

Not applicable.

PART II**Item 5. Market for Registrant's Common Equity, Related Shareholder Matters, and Issuer Purchases of Equity Securities****Market for Common Stock**

Our common stock is traded on the Nasdaq Global Select Market under the symbol "MANH". The following table sets forth the high and low closing sales prices of the common stock as reported by the Nasdaq Global Select Market for the periods indicated:

Fiscal Period	High Price	Low Price
2017		
First Quarter	\$ 55.23	\$ 47.69
Second Quarter	50.67	45.19
Third Quarter	47.70	40.92
Fourth Quarter	50.06	41.07
2016		
First Quarter	\$ 64.68	\$ 45.82
Second Quarter	68.16	55.40
Third Quarter	67.29	57.62
Fourth Quarter	59.01	49.97

On January 30, 2018, the last reported sales price of our common stock on the Nasdaq Global Select Market was \$52.90 per share. The number of registered shareholders of record of our common stock as of January 30, 2018 was approximately 13. The number of record holders does not include persons who held our common stock in nominee or "street name" accounts through brokers.

We do not intend to declare or pay cash dividends in the foreseeable future. Our management anticipates that all earnings and other cash resources, if any, will be retained for investment in our business.

Equity Compensation Plan Information

The following table provides information regarding our current equity compensation plans as of December 31, 2017:

Plan Category	Number of securities to be issued upon exercise of outstanding rights	Weighted-average exercise price of outstanding rights	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plans approved by security holders	1,036,635	\$0.00	10,525,434
Equity compensation plans not approved by security holders	-	-	-
Total	1,036,635	\$0.00	10,525,434

Additional information regarding our equity compensation plans can be found in Note 2 of the Notes to our Consolidated Financial Statements.

Purchase of Equity Securities

The following table provides information regarding our common stock repurchases under our publicly-announced share repurchase program and shares withheld for taxes due upon vesting of restricted stock for the quarter ended December 31, 2017. All repurchases related to the share repurchase program were made on the open market.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
October 1 - October 31, 2017	31,480	\$44.67	31,480	\$48,593,698
November 1 - November 30, 2017	740,105	42.27	740,105	17,311,376
December 1 - December 31, 2017	384,502	44.90	384,502	46,752
Total	1,156,087		1,156,087	

During the year ended December 31, 2017, we repurchased a total of 2,695,295 shares at an average price per share of \$46.34 under our publicly-announced share repurchase program. In February 2018, our Board of Directors authorized the Company to repurchase up to an aggregate of \$50 million of the Company's common stock.

Item 6. Selected Financial Data

You should read the following selected consolidated financial data in conjunction with our Consolidated Financial Statements and related Notes thereto and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Form 10-K. The statement of income and cash flow data for the years ended December 31, 2017, 2016 and 2015, and the balance sheet data as of December 31, 2017 and 2016, are derived from, and are qualified by reference to, the audited financial statements included elsewhere in this Form 10-K. The statement of income and cash flow data for the years ended December 31, 2014 and 2013 and the balance sheet data as of December 31, 2015, 2014, and 2013 are derived from audited financial statements not included herein. Historical results are not necessarily indicative of results to be expected in the future.

Certain line items in prior period financial statements have been reclassified to conform to the current period presentation in the consolidated statements of income due to our business transition to cloud subscriptions. These reclassifications include: all revenue line items; cost of license; cost of cloud subscriptions, maintenance and services; and cost of hardware. Such reclassifications did not affect total revenues, operating income or net income.

	Year Ended December 31,				
	2013	2014	2015	2016	2017
	(in thousands, except per share data)				
Statement of Income Data:					
Software license	\$ 59,615	\$ 68,461	\$ 73,998	\$ 79,213	\$ 72,313
Cloud subscriptions	\$ 2,801	\$ 3,122	\$ 4,617	\$ 5,783	\$ 9,595
Total revenue	\$ 414,518	\$ 492,104	\$ 556,371	\$ 604,557	\$ 594,599
Operating income	\$ 101,287	\$ 127,124	\$ 161,446	\$ 194,307	\$ 185,645
Net income	\$ 67,296	\$ 82,000	\$ 103,475	\$ 124,234	\$ 116,481
Earnings per diluted share	\$ 0.86	\$ 1.08	\$ 1.40	\$ 1.72	\$ 1.68

	December 31,				
	2013	2014	2015	2016	2017
	(in thousands)				
Balance Sheet Data:					
Cash, cash equivalents and investments	\$ 132,956	\$ 124,438	\$ 128,760	\$ 95,615	\$ 125,522
Total assets	\$ 297,828	\$ 318,170	\$ 337,913	\$ 297,140	\$ 314,995
Debt	\$ -	\$ -	\$ -	\$ -	\$ -
Shareholders' equity	\$ 181,586	\$ 182,023	\$ 195,492	\$ 169,366	\$ 174,956

	Year Ended December 31,				
	2013	2014	2015	2016	2017
	(in thousands)				
Statement of Cash Flow Data:					
Operating cash flow	\$ 89,387	\$ 94,162	\$ 120,153	\$ 139,346	\$ 164,066

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

All statements, trend analyses, and other information contained in the following discussion relative to markets for our products and trends in revenue, gross margins, and anticipated expense levels, as well as other statements including words such as "anticipate," "believe," "plan," "estimate," "expect," and "intend" and other similar expressions constitute forward-looking statements. These forward-looking statements are subject to business and economic risks and uncertainties, including those discussed under the caption "Risk Factors" in Item 1A of this Form 10-K, and our actual results of operations may differ materially from those contained in the forward-looking statements.

Business Overview

We develop, sell, deploy, service and maintain software solutions designed to manage supply chains, inventory and omnichannel operations for retailers, wholesalers, manufacturers, logistics providers and other organizations. Our customers include many of the world's most premier and profitable brands.

Our business model is singularly focused on the development and implementation of complex commerce enablement software solutions that are designed to optimize supply chains, and retail store operations including point of sale effectiveness and efficiency for our customers. In the second quarter of 2017, we accelerated our business transition to cloud subscriptions with the release of our Manhattan Active™ Solutions. Due to our transition to cloud subscriptions, we believe separate disclosures of our software license, cloud subscriptions, maintenance and services revenue is meaningful to investors and provide an important measure of our business performance. Certain line items in prior period financial statements have been reclassified to conform to the current period presentation in the consolidated statements of income. These reclassifications include: all revenue line items; cost of license; cost of cloud subscriptions, maintenance and services; and cost of hardware. Such reclassifications did not affect total revenues, operating income or net income.

We have five principal sources of revenue:

- licenses of our software;
- cloud subscriptions, including software as a service ("SaaS") and hosting of software;
- customer support services and software enhancements (collectively, "maintenance");

- professional services, including solutions planning and implementation, related consulting, customer training, and reimbursements from customers for out-of-pocket expenses (collectively, “services”); and
- hardware sales.

In 2017, we generated \$594.6 million in total revenue, with a revenue mix of: license revenue 12%; cloud subscriptions 2%; maintenance 24%; services revenue 55%; and hardware 7%.

The Company has three geographic reportable segments: the Americas, EMEA, and APAC. Geographic revenue is based on the location of the sale. Our international revenue was approximately \$168.3 million, \$144.8 million and \$131.3 million for the years ended December 31, 2017, 2016 and 2015, respectively, which represents approximately 28%, 24% and 24% of our total revenue for the years ended December 31, 2017, 2016 and 2015, respectively. International revenue includes all revenue derived from sales to customers outside the United States. At December 31, 2017, we employed approximately 2,790 employees worldwide, of which 1,310 employees are based in the Americas, 220 employees in EMEA, and 1,260 employees in APAC (including India). We have offices in Australia, Chile, China, France, Germany, India, Japan, the Netherlands, Singapore, and the United Kingdom, as well as representatives in Mexico and reseller partnerships in Latin America, Eastern Europe, the Middle East, South Africa, and Asia.

Future Expectations

Our transition to a cloud subscription model and shifting industry dynamics and economic uncertainty in retail negatively impacted our revenue and earnings growth in fiscal 2017. We expect that, going forward, these factors, and macroeconomic conditions as a whole, may continue to impact revenue and earnings growth. The pace at which the market for our products transitions from perpetual, on-premises installation to cloud subscriptions, which result in revenue recognition spread out over the subscription period rather than up front, and the lead times for developing new business, which can be long for our products, can cause uncertainty for our future expectations, particularly with respect to our ability to accurately forecast bookings and revenues from quarter to quarter and over the longer term.

As we move into 2018, we have set five strategic goals:

- 1) Focus on our customer success and driving sustainable growth;
- 2) Continue to aggressively invest in innovation to expand our products and total addressable market;
- 3) Continue to develop and grow our cloud operations and cloud subscription revenue;
- 4) Expand our Manhattan Active Omni/Point-of-Sale/Customer Engagement Business; and
- 5) Expand our global sales and marketing teams.

Cloud Subscription

Historically, our software licenses were sold as perpetual licenses, under which customers own the software license and revenue is recognized at the time of sale. In 2017, we released Manhattan Active™ Solutions, accelerating our business transition to cloud subscriptions. Under a cloud subscription, customers pay a periodic fee for the right to use our software within a cloud-based environment that we provide and manage over a specified period of time. As part of our subscription program, we allow our existing customers to convert their maintenance contracts to cloud subscription contracts. While it is early in our transition, a few customers converted their maintenance contracts to subscriptions in 2017, and we expect there will be continued opportunities to convert existing maintenance contracts to cloud subscription contracts in 2018 and beyond.

With the launch of Manhattan Active Solutions, the transition to a cloud subscription model has had, and will continue to have, an adverse impact on revenue, earnings and cash flow relative to periods in which we primarily sold perpetual licenses. This effect will continue until a stable, recurring mix of perpetual license to cloud subscription revenues develops.

Global Economic Trends and Industry Factors

Global macro-economic trends, technology spending, and supply chain management market growth are important barometers for our business. In 2017, approximately 72% of our total revenue was generated in the United States, 14% in EMEA, and the remaining balance in APAC, Canada, and Latin America. In addition, Gartner Inc., an information technology research and advisory company, estimates that nearly 80% of every supply chain software solutions dollar invested is spent in North America and Western Europe; consequently, the health of the U.S. and the Western European economies has a meaningful impact on our financial results.

We sell technology-based solutions with total pricing, including software and services, in many cases exceeding \$1.0 million. Our software often is a part of our customers' and prospects' much larger capital commitment associated with facilities expansion and business improvement. We believe that, given the lingering uncertainty in the global macro environment primarily in the retail industry, the current sales cycles for large license sales and cloud subscriptions of \$1.0 million or greater in our target markets have been extended. The current business climate within the United States and geographic regions in which we operate continues to affect customers' and prospects' decisions regarding timing of strategic capital expenditures. Delays with respect to such decisions can have a material adverse impact on our business, and may further intensify competition in our already highly competitive markets.

In January 2018, the International Monetary Fund (IMF) provided a World Economic Outlook (WEO) update. The WEO update noted "the pickup in growth has been broad based, with notable upside surprises in Europe and Asia. Global growth forecasts for 2018 and 2019 have been revised upward by 0.2 percentage points to 3.9 percent. The revision reflects increased global growth momentum and the expected impact of the recently approved U.S. tax policy changes."

The WEO update projected that advanced economies, which represent our primary revenue markets, would grow at about 2.3 percent in 2018 and 2.2 percent in 2019, while the emerging and developing economies would grow at about 4.9 percent in 2018 and 5.0 percent in 2019.

While we are encouraged by our 2017 and 2016 results, we, along with many of our customers, still remain cautious regarding the pace of global economic growth. We believe global economic volatility likely will continue to shape customers' and prospects' enterprise software buying decisions, making it challenging to forecast sales cycles for our products and the timing of large enterprise software license and cloud subscription sales.

Revenue

License and Cloud Subscriptions Revenue: License and cloud subscriptions revenue, leading indicators of our business performance, are primarily derived from software license and cloud subscription fees customers pay for supply chain solutions. In 2017, license revenue totaled \$72.3 million, or 12% of total revenue, with gross margins of 92.4%. For the year ended December 31, 2017, Americas, EMEA, and APAC recognized \$44.1 million, \$22.9 million, and \$5.3 million in license revenue, respectively. During the past years, the overall trend has been steady for our large license sales, however during 2017, we introduced Manhattan Active Solutions, our cloud-based solutions, and began to see our customer's transition from perpetual software licenses to cloud based services solutions. We recognized license revenue of \$1.0 million or greater on 13, 18 and 21 new contracts for 2017, 2016 and 2015, respectively. In 2017, cloud subscriptions revenue totaled \$9.6 million. For the year ended December 31, 2017, Americas and EMEA recognized \$9.3 million and \$0.3 million in cloud subscriptions revenue, respectively. Cloud subscriptions revenue is recognized ratably over the term of the agreement, typically 36 to 60 months. For the year ended December 31, 2017, the percentage mix of new to existing customers for the combination of license and cloud subscriptions revenue was approximately 40/60.

License and cloud subscriptions revenue growth is influenced by the strength of general economic and business conditions and the competitive position of our software products. These revenues generally have long sales cycles. In addition, the timing of the closing of a few large license transactions can have a material impact on our license revenues, operating profit, operating margins and earnings per share. For example, \$1.1 million of revenue in 2017 equates to approximately one cent of diluted earnings per share impact.

Our software solutions are focused on core supply chain commerce operations (Warehouse Management, Transportation Management, Labor Management), Inventory optimization and Omnichannel operations (e-commerce, retail store operations and point of sale), which are intensely competitive markets characterized by rapid technological change. We are a market leader in the supply chain management software solutions market as defined by industry analysts such as ARC Advisory Group and Gartner. Our goal is to extend our position as a leading global supply chain solutions provider by growing our license and cloud subscriptions revenues faster than our competitors through investment in innovation. We expect to continue to face increased competition from Enterprise Resource Planning (ERP) and Supply Chain Management applications vendors and business application software vendors that may broaden their solution offerings by internally developing, or by acquiring or partnering with independent developers of supply chain planning and execution software. Increased competition could result in price reductions, fewer customer orders, reduced gross margins, and loss of market share.

Maintenance revenue: Our maintenance revenue totaled \$143.0 million, or 24% of total revenue. The Americas, EMEA and APAC recognized \$116.4 million, \$18.7 million, and \$7.9 million, respectively, in maintenance revenue for the year ended December 31, 2017. For maintenance, we offer a comprehensive 24 hours per day, 365 days per year program that provides our customers with software upgrades, when and if available, which include additional or improved functionality and technological advances incorporating emerging supply chain and industry initiatives. The growth of maintenance revenues is influenced by: (1) new license revenue growth; (2) annual renewal of support contracts; (3) increase in customers through acquisitions; (4) fluctuations in currency rates, and (5) conversion of maintenance contracts to cloud subscription contracts. Substantially all of our customers renew their annual support contracts. Over the last three years, our annual revenue renewal rate of customers subscribing to comprehensive

support and enhancements has been greater than 90%. Maintenance revenue is generally paid in advance and recognized ratably over the term of the agreement, typically twelve months. Maintenance renewal revenue is recognized over the renewal period and recognition is not initiated until payment is received from the customer.

Services revenue: In 2017, our services revenue totaled \$326.5 million, or 55% of total revenue. The Americas, EMEA, and APAC recognized \$264.2 million, \$43.4 million, and \$18.9 million, respectively, in services revenue for the year ended December 31, 2017. Our consolidated operating margin profile may be lower than those of various other technology companies due to our large services revenue mix as a percentage of total revenue. While we believe our services margins are very strong, they do lower our overall operating margin profile as services margins are inherently lower than license revenue margins.

At December 31, 2017, our professional services totaled approximately 1,750 employees, accounting for 63% of our total employees worldwide. Our professional services organization provides our customers with expertise and assistance in planning and implementing our solutions. To ensure a successful product implementation, consultants assist customers with the initial installation of a system, the conversion and transfer of the customer's historical data onto our system, and ongoing training, education, and system upgrades. We believe our professional services organization enable customers to implement our software rapidly, ensure the customer's success with our solution, strengthen our customer relationships, and add to our industry-specific knowledge base for use in future implementations and product innovations.

Although our professional services are optional, the majority of our customers use at least some portion of these services for their planning, implementation, or related needs. Professional services are typically rendered under time and materials-based contracts with services typically billed on an hourly basis. Professional services are sometimes rendered under fixed-fee based contracts with payments due on specific dates or milestones.

Services revenue growth is contingent upon license revenue, cloud subscriptions and customer upgrade cycles, which is influenced by the strength of general economic and business conditions and the competitive position of our software products. In addition, our professional services business has competitive exposure to offshore providers and other consulting companies. All of these factors potentially create the risk of pricing pressure, fewer customer orders, reduced gross margins, and loss of market share.

Service revenue also includes reimbursements from customers for out-of-pocket expenses. The total amount of expense reimbursement recorded to service revenue was \$17.9 million for 2017.

Hardware: Our hardware totaled \$43.2 million in 2017 representing 7% of total revenue with gross margins of 25.4%. In conjunction with the licensing of our software, and as a convenience for our customers, we resell a variety of hardware products developed and manufactured by third parties. These products include computer hardware, radio frequency terminal networks, RFID chip readers, bar code printers and scanners, and other peripherals. We resell all third-party hardware products and related maintenance pursuant to agreements with manufacturers or through distributor-authorized reseller agreements pursuant to which we are entitled to purchase hardware products and services at discount prices. We generally purchase hardware from our vendors only after receiving an order from a customer. As a result, we do not maintain hardware inventory.

Product Development

We continue to invest significantly in research and development (R&D) to provide leading solutions that help global retailers, manufacturers, wholesalers, distributors and logistics providers successfully manage accelerating and fluctuating demands as well as the increasing complexity and volatility of their local and global supply chains, retail store operations and point of sale. Our research and development expenses for the years ended December 31, 2017, 2016 and 2015 were \$57.7 million, \$54.7 million, and \$53.9 million, respectively. At December 31, 2017, our R&D organization totaled approximately 700 employees, located in the U.S. and India.

We expect to continue to focus our R&D resources on the development and enhancement of our core supply chain, inventory optimization, omni-channel and point of sale software solutions. We offer what we believe to be the broadest solution portfolio in the supply chain solutions marketplace, to address all aspects of inventory optimization, transportation management, distribution management, planning, and omni-channel operations including order management, store inventory & fulfillment, call center and point of sale.

We also plan to continue to enhance our existing solutions and to introduce new solutions to address evolving industry standards and market needs. We identify opportunities to further enhance our solutions and to develop and provide new solutions through our customer support organization, as well as through ongoing customer consulting engagements and implementations, interactions with our user groups, association with leading industry analysts and market research firms, and participation on industry standards and research committees. Our solutions address the needs of customers in various vertical markets, including retail, consumer goods, food and grocery logistics service providers, industrial and wholesale, high technology and electronics, life sciences, and government.

Cash Flow and Financial Condition

For 2017, we generated cash flow from operating activities of \$164.1 million and have generated a cumulative total of \$423.6 million for the three years ended December 31, 2017. Our cash at December 31, 2017 totaled \$125.5 million, with no debt on our balance sheet. We currently have no credit facilities. During the past three years, our primary uses of cash have been funding investment in R&D and operations to drive earnings growth and repurchases of common stock.

During 2017, we repurchased approximately \$124.9 million of Manhattan Associates' outstanding common stock under the share repurchase program approved by our Board of Directors throughout the year.

In 2018, our priorities for use of cash will be in continued investment in product development and growth of the business. We will continue to evaluate acquisition opportunities that are complementary to our product footprint and technology direction. We will also continue to weigh our share repurchase options against cash for acquisitions and investing in the business. We do not anticipate any borrowing requirements in 2018 for general corporate purposes.

Full Year 2017 Financial Summary

- Diluted earnings per share for the twelve months ended December 31, 2017 was \$1.68, compared to \$1.72 for the twelve months ended December 31, 2016;
- Consolidated revenue for the twelve months ended December 31, 2017 was \$594.6 million, compared to \$604.6 million for the twelve months ended December 31, 2016. License revenue was \$72.3 million for the twelve months ended December 31, 2017, compared to \$79.2 million for the twelve months ended December 31, 2016. Cloud subscription revenue was \$9.6 million for the twelve months ended December 31, 2017 compared to \$5.8 million for the twelve months ended December 31, 2016;
- Operating income was \$185.6 million for the twelve months ended December 31, 2017, compared to \$194.3 million for the twelve months ended December 31, 2016;
- Operating margins for 2017 were 31.2% compared to operating margins of 32.1% in 2016;
- Cash flow from operations totaled \$164.1 million for the full year 2017 compared to \$139.3 million in 2016;
- Cash on hand at December 31, 2017 was \$125.5 million compared to \$95.6 million at December 31, 2016;
- During the twelve months ended December 31, 2017, the Company repurchased approximately 2.7 million shares of Manhattan Associates common stock, reducing common shares outstanding by 4%, under the share repurchase program authorized by our Board of Directors, for a total investment of \$124.9 million; and
- In February 2018, our Board of Directors authorized the Company to repurchase up to an aggregate of \$50 million of the Company's common stock.

Results of Operations

The following table summarizes selected Statement of Income data for the years ended December 31, 2017, 2016 and 2015. With our transition to and growth in cloud subscriptions, we believe separate disclosures of our software license, cloud subscriptions, maintenance and services revenue is meaningful to investors and provides an important measure of our business performance. Certain line items in prior period financial statements have been reclassified to conform to the current period presentation in the consolidated statements of income, including: all revenue line items; cost of license; cost of cloud subscriptions, maintenance and services; and cost of hardware. Such reclassifications did not affect total revenues, operating income or net income.

Year Ended December 31,

	2017	2016 (in thousands)	2015	% Change vs. Prior Year	
				2017	2016
Revenue:					
Software license	\$ 72,313	\$ 79,213	\$ 73,998	-9%	7%
Cloud subscriptions	9,595	5,783	4,617	66%	25%
Maintenance	142,998	133,848	123,454	7%	8%
Services	326,502	351,785	324,787	-7%	8%
Hardware	43,191	33,928	29,515	27%	15%
Total revenue	594,599	604,557	556,371	-2%	9%
Costs and expenses:					
Cost of license	5,483	6,818	7,180	-20%	-5%
Cost of cloud subscriptions, maintenance and services	208,045	219,635	207,048	-5%	6%
Cost of hardware	32,205	23,426	21,200	37%	11%
Research and development	57,704	54,736	53,859	5%	2%
Sales and marketing	47,482	48,223	48,615	-2%	-1%
General and administrative	46,054	48,322	49,259	-5%	-2%
Depreciation and amortization	9,060	9,090	7,764	0%	17%
Restructuring charges	2,921	-	-	100%	NA
Total costs and expenses	408,954	410,250	394,925	0%	4%
Income from operations	\$ 185,645	\$ 194,307	\$ 161,446	-4%	20%
Operating margin	31.2%	32.1%	29.0%		

The Company has three geographic reportable segments: the Americas, EMEA, and APAC. Geographic revenue information is based on the location of sale. The revenues represented below are from external customers only. The geographical-based expenses include costs of personnel, direct sales, and marketing expenses, and general and administrative costs to support the business. There are certain corporate expenses included in the Americas segment that are not charged to the other segments including research and development, certain marketing and general and administrative costs that support the global organization, and the amortization of acquired developed technology. Included in the Americas costs are all research and development costs, including the costs associated with the Company's India operations. During 2017, 2016, or 2015, we derived the majority of our revenues from sales to customers within our Americas segment. The following table summarizes revenue and operating profit by segment:

	Year Ended December 31,				
	2017	2016	2015	% Change vs. Prior Year	
	(in thousands)			2017	2016
Revenue:					
Software license					
Americas	\$ 44,145	\$ 65,351	\$ 60,690	-32%	8%
EMEA	22,875	9,187	9,566	149%	-4%
APAC	5,293	4,675	3,742	13%	25%
Total software license	72,313	79,213	73,998	-9%	7%
Cloud subscriptions					
Americas	9,273	5,783	4,617	60%	25%
EMEA	322	-	-	100%	N/A
APAC	-	-	-	N/A	N/A
Total services	9,595	5,783	4,617	66%	25%
Maintenance					
Americas	116,426	111,592	102,323	4%	9%
EMEA	18,710	15,117	14,960	24%	1%
APAC	7,862	7,139	6,171	10%	16%
Total services	142,998	133,848	123,454	7%	8%
Services					
Americas	264,186	296,983	267,434	-11%	11%
EMEA	43,431	41,969	45,516	3%	-8%
APAC	18,885	12,833	11,837	47%	8%
Total services	326,502	351,785	324,787	-7%	8%
Hardware					
Americas	43,119	33,875	29,412	27%	15%
EMEA	11	9	34	22%	-74%
APAC	61	44	69	39%	-36%
Total hardware	43,191	33,928	29,515	27%	15%
Total Revenue					
Americas	477,149	513,584	464,476	-7%	11%
EMEA	85,349	66,282	70,076	29%	-5%
APAC	32,101	24,691	21,819	30%	13%
Total revenue	\$ 594,599	\$ 604,557	\$ 556,371	-2%	9%
Operating income:					
Americas	\$ 136,693	\$ 164,947	\$ 133,823	-17%	23%
EMEA	35,829	22,060	22,310	62%	-1%
APAC	13,123	7,300	5,313	80%	37%
Total operating income	\$ 185,645	\$ 194,307	\$ 161,446	-4%	20%

The consolidated results of our operations for the years ended December 31, 2017, 2016 and 2015 are discussed below.

Revenue

Our revenue consists of fees generated from the licensing, cloud subscriptions, maintenance, fees from professional services, and hardware sales.

	Year Ended December 31,								
				% Change vs. Prior Year		% of Total Revenue			
	2017	2016	2015	2017	2016	2017	2016	2015	
	(in thousands)								
Software license	\$ 72,313	\$ 79,213	\$ 73,998	-9%	7%	12%	13%	13%	
Cloud subscriptions	9,595	5,783	4,617	66%	25%	2%	1%	1%	
Maintenance	142,998	133,848	123,454	7%	8%	24%	22%	22%	
Services	326,502	351,785	324,787	-7%	8%	55%	58%	58%	
Hardware	43,191	33,928	29,515	27%	15%	7%	6%	5%	
Total revenue	<u>\$ 594,599</u>	<u>\$ 604,557</u>	<u>\$ 556,371</u>	<u>-2%</u>	<u>9%</u>	<u>100%</u>	<u>100%</u>	<u>100%</u>	

License revenue

Year 2017 compared with year 2016

License revenue decreased \$6.9 million or 9%, to \$72.3 million in 2017 compared to 2016. The decrease was influenced by our business transition to cloud subscriptions as traditional perpetual license deals converted to cloud deals based on customer demand. We completed thirteen and eighteen large new deals greater than \$1.0 million in 2017 and 2016, respectively. License revenue for the Americas segment decreased \$21.2 million, and license revenue for the EMEA and APAC segments increased \$13.7 million and \$0.6 million, respectively, in 2017 over 2016.

The license sales percentage mix across our product suite in 2017 was approximately 73% warehouse management solutions and 27% non-warehouse management solutions. Our warehouse management solutions increased \$4.3 million, or 9%, in 2017 compared to 2016, and non-warehouse management solutions decreased \$11.2 million, or 36%, in 2017 over 2016.

Year 2016 compared with year 2015

License revenue increased \$5.2 million, or 7%, to \$79.2 million in 2016 compared to 2015. We completed eighteen and twenty-one large new deals greater than \$1.0 million in 2016 and 2015, respectively. Our Americas and APAC license revenue increased \$4.7 million and \$0.9 million, respectively, while EMEA license revenue decreased \$0.4 million over 2015.

The license sales percentage mix across our product suite in 2016 was approximately 61% warehouse management solutions and 39% non-warehouse management solutions. Our warehouse management solutions decreased \$1.8 million, or 4%, in 2016 compared to 2015, and non-warehouse management solutions increased \$7.0 million, or 29%, in 2016 over 2015.

Cloud Subscriptions Revenue

Year 2017 compared with year 2016

In 2017, we released Manhattan Active™ Solutions accelerating our business transition to cloud subscriptions. As a result, cloud subscriptions revenue increased \$3.8 million, or 66%, to \$9.6 million in 2017 compared to 2016 as customers began to purchase our SaaS offerings rather than a traditional perpetual license. Our customers increasingly prefer cloud-based solutions, including existing customers that are migrating from on-premise to cloud-based offerings. Cloud subscriptions revenue for the Americas segment increased \$3.5 million. In 2017, the EMEA segment began recognizing cloud subscription revenue for the first time totaling \$0.3 million.

Maintenance revenue

Year 2017 compared with year 2016

Maintenance revenue increased \$9.1 million, or 7%, in 2017 compared to 2016 primarily due to an increase in the first-year maintenance revenue; combined with our annual renewal rate of customers subscribing to maintenance of greater than 90%; and

increases in the maintenance renewal prices. The Americas, EMEA and APAC segment increased \$4.8 million, \$3.6 million and \$0.7 million, respectively, compared to 2016.

Year 2016 compared with year 2015

Maintenance revenue increased \$10.4 million, or 8%, in 2016 compared to 2015 due to an increase in the first-year maintenance revenue; combined with our annual renewal rate of customers subscribing to maintenance of greater than 90%; and increases in the maintenance renewal prices. The Americas, EMEA and APAC segment increased \$9.3 million, \$0.2 million and \$1.0 million, respectively, compared to 2015.

Services revenue

Year 2017 compared with year 2016

Services revenue decreased \$25.3 million, or 7%, in 2017 compared to 2016. The Americas segment decreased \$32.8 million, and the EMEA and APAC segments increased \$1.5 million and \$6.1 million, respectively, compared to 2016. The decline in services revenue in the America's was primarily due lower America's license revenue, some retail customers delaying project implementations and upgrades, combined with our Services teams operating at high efficiency improving the speed of implementations. The increase in services revenue in the EMEA and APAC segment is primarily due to a combination of license deals signed and customer-specific initiatives in conjunction with customer upgrade activity.

Year 2016 compared with year 2015

Services revenue increased \$27.0 million, or 8%, in 2016 compared to 2015. The Americas and APAC segments increased \$29.5 million and \$1.0 million, respectively, and the EMEA segment decreased \$3.5 million, compared to 2015. The increase in services revenue is primarily due to a combination of license deals signed and customer-specific initiatives in conjunction with customer upgrade activity.

Service revenue includes reimbursements for professional service travel expenses that are required to be classified as revenue. Reimbursement by customers for out-of-pocket expenses were approximately \$17.9 million, \$18.3 million and \$20.2 million for 2017, 2016 and 2015, respectively.

Hardware

Sales of hardware increased \$9.3 million, or 27% in 2017 compared to 2016. Sales of hardware increased \$4.5 million, or 15% in 2016 compared to 2015. The majority of hardware sales are derived from our Americas segment. Sales of hardware are largely dependent upon customer-specific desires, which fluctuate.

Cost of Revenue

	Year Ended December 31,				
	2017	2016	2015	% Change vs. Prior Year	
	(in thousands)			2017	2016
Cost of software license	\$ 5,483	\$ 6,818	\$ 7,180	-20%	-5%
Cost of cloud subscriptions, maintenance and services	208,045	219,635	207,048	-5%	6%
Cost of hardware	32,205	23,426	21,200	37%	11%
Total cost of revenue	<u>\$ 245,733</u>	<u>\$ 249,879</u>	<u>\$ 235,428</u>	<u>-2%</u>	<u>6%</u>

Cost of License

Cost of license consists of the costs associated with software reproduction; media, packaging and delivery; documentation, and other related costs; and royalties on third-party software sold with or as part of our products. In 2017, cost of license decreased by \$1.3 million, or 20% compared to 2016 principally due to a \$1.4 million decrease in cost of third-party software license fees. In 2016, cost of license decreased slightly by \$0.4 million, or 5% compared to 2015.

Cost of Cloud Subscriptions, Maintenance and Services

Year 2017 compared with year 2016

Cost of cloud subscriptions, maintenance and services consists primarily of salaries and other personnel-related expenses of employees dedicated to cloud subscriptions; maintenance services; and professional and technical services as well as hosting fees. The \$11.6 million, or 5%, decrease in 2017 compared to 2016 was principally due to a \$7.1 million decrease in performance-based compensation expense and a \$4.5 million decrease in compensation and other personnel-related expense resulting from decreased headcount in professional services.

Year 2016 compared with year 2015

The \$12.6 million, or 6% increase in the cost of cloud subscriptions, maintenance and services in 2016 compared to 2015 was principally due to a \$15.5 million increase in compensation and other personnel-related expense resulting from increased headcount in professional services, offset by a \$3.3 million decrease in performance-based compensation expense.

Cost of cloud subscriptions, maintenance and services includes professional services billed travel expenses reimbursed by customers of approximately \$17.6 million, \$18.2 million, and \$19.9 million, respectively.

Cost of Hardware

In 2017, cost of hardware increased \$8.8 million to \$32.2 million from \$23.4 million in 2016 on increased sales of hardware. In 2016, cost of hardware increased \$2.2 million to \$23.4 million from \$21.2 million in 2015 on increased sales of hardware.

Operating Expenses

	Year Ended December 31,			% Change vs. Prior Year	
	2017	2016	2015	2017	2016
		(in thousands)			
Research and development	\$ 57,704	\$ 54,736	\$ 53,859	5%	2%
Sales and marketing	47,482	48,223	48,615	-2%	-1%
General and administrative	46,054	48,322	49,259	-5%	-2%
Depreciation and amortization	9,060	9,090	7,764	0%	17%
Restructuring charge	2,921	-	-	100%	N/A
Operating expenses	<u>\$ 163,221</u>	<u>\$ 160,371</u>	<u>\$ 159,497</u>	<u>2%</u>	<u>1%</u>

Research and Development

Our principal research and development (R&D) activities during 2017, 2016 and 2015 focused on the expansion and integration of new products and releases, while expanding the product footprint of our software solution suites in Supply Chain, Inventory Optimization and Omni-Channel including cloud-based solutions, point-of-sale and tablet retailing.

For the years ended December 31, 2017, 2016 and 2015, we did not capitalize any R&D costs because the costs incurred following the attainment of technological feasibility for the related software product through the date of general release were insignificant.

Year 2017 compared with year 2016

R&D expenses primarily consist of salaries and other personnel-related costs for personnel involved in our research and development activities. Research and development expenses in 2017 increased by \$3.0 million, or 5%, compared to 2016. This increase is primarily due to a \$3.5 million increase in compensation and other personnel-related expenses resulting from increased headcount to support R&D activities.

Year 2016 compared with year 2015

Research and development expenses in 2016 increased by \$0.9 million, or 2%, compared to 2015. This increase is primarily due to a \$2.1 million increase in compensation and other personnel-related expenses. The personnel and other R&D operating expenses were offset by a \$1.8 million decrease in performance-based compensation expense.

Sales and Marketing

Year 2017 compared with year 2016

Sales and marketing expenses include salaries, commissions, travel and other personnel-related costs and the costs of our marketing and alliance programs and related activities. Sales and marketing expenses decreased by \$0.7 million, or 2%, in 2017 compared to 2016, primarily due to a \$1.4 million decrease in compensation and other personnel-related expenses and a \$0.5 million decrease in performance-based compensation expense offset by a \$1.6 million increase in marketing related expenses.

Year 2016 compared with year 2015

Sales and marketing expenses decreased by \$0.4 million, or 1%, in 2016 compared to 2015.

General and Administrative

Year 2017 compared with year 2016

General and administrative expenses consist primarily of salaries and other personnel-related costs of executive, financial, human resources, information technology, and administrative personnel, as well as facilities, legal, insurance, accounting, and other administrative expenses. General and administrative expenses decreased \$2.3 million, or 5%, in 2017 primarily attributable to a \$1.3 million decrease in performance-based compensation expense and a \$1.3 million decrease in compensation and other personnel-related expenses.

Year 2016 compared with year 2015

General and administrative expenses decreased \$0.9 million, or 2%, in 2016 primarily attributable to a \$1.0 million decrease in performance-based compensation expense.

Depreciation and Amortization

Depreciation expense amounted to \$7.7 million, \$7.5 million, and \$6.4 million in 2017, 2016 and 2015, respectively. Amortization of intangibles was immaterial in 2017, 2016 and 2015. We have recorded goodwill and other acquisition-related intangible assets as part of the purchase accounting associated with various acquisitions.

Restructuring Charge

In May 2017, the Company eliminated about 100 positions due primarily to U.S. retail sector headwinds, aligning services capacity with demand. The Company recorded a restructuring charge of approximately \$2.9 million pretax (\$1.8 million after-tax or \$0.03 per fully diluted share). The charge primarily consists of employee severance, employee transition cost and outplacement services. The charge is classified in "Restructuring charge" in the Company's Consolidated Statements of Income.

Operating Income

Operating income for the year ended December 31, 2017 decreased \$8.7 million to \$185.6 million, compared to \$194.3 million for the year ended December 31, 2016. Operating margins were 31.2% for 2017 versus 32.1% for 2016. Operating income and margin decreased primarily due to: (1) increased cloud subscription revenue mix to perpetual license, (2) services revenue decline, (3) the restructuring charge, partially offset by (4) increased maintenance revenue and (5) lower performance-based compensation during the year ended December 31, 2017. Operating income was also disadvantaged from unfavorable foreign currency translation effect of \$1.8 million for the year ended December 31, 2017, primarily due to the strengthening of the British Pound Sterling and Indian Rupee versus the U.S dollar during the year. In 2017, operating income in the Americas segment decreased by \$28.3 million on increased cloud subscription revenue mix to perpetual license and lower services revenue, and increased by \$13.8 million and \$5.8 million in the EMEA and APAC segments, respectively.

Operating income for the year ended December 31, 2016 increased \$32.9 million to \$194.3 million, compared to \$161.4 million for the year ended December 31, 2015. Operating margins were 32.1% for 2016 versus 29.0% for 2015. Operating income and margin increased primarily due to strong revenue growth and expense discipline during the year ended December 31, 2016. The foreign currency translation effect for the year ended December 31, 2016 is immaterial. In 2016, operating income in the Americas and APAC segments increased by \$31.1 million and \$2.0 million, respectively, and decreased in the EMEA segment by \$0.2 million.

Other Income and Income Taxes

	Year Ended December 31,				
				% Change vs. Prior Year	
	2017	2016	2015	2017	2016
Other income, net	\$ (812)	\$ 1,800	\$ 1,395	-145%	29%
Income tax provision	68,352	71,873	59,366	-5%	21%

Other Income, net

Other income, net primarily includes interest income, foreign currency gains and losses, and other non-operating expenses. Interest income was \$1.2 million, \$1.2 million and \$1.3 million for the year ended December 31, 2017, 2016 and 2015. The weighted-average interest rate earned on cash and investments was approximately 1% for the years ended December 31, 2017, 2016 and 2015. We recorded net foreign currency losses of \$1.8 million and \$0.1 million in 2017 and 2015, respectively, and a net foreign currency gain of \$0.6 million in 2016. The foreign currency gains and losses mainly resulted from gains or losses on intercompany transactions denominated in foreign currencies with subsidiaries due to the fluctuation of the U.S. dollar relative to other foreign currencies, primarily the British Pound sterling and Indian Rupee.

Income Tax Provision

Our effective income tax rates were 37.0%, 36.6%, and 36.5% in 2017, 2016 and 2015, respectively. Our effective income tax rate takes into account the source of taxable income, domestically by state and internationally by country, and available income tax credits.

The effective tax rate in 2017 increased from 2016 primarily due to the enactment of the Tax Cut and Jobs Act in December 2017, which resulted in a net one-time provisional estimated tax expense of approximately \$2.8 million in 2017, partially offset by the implementation impact of ASU 2016-09, Improvements to Employee Share-Based Payment Accounting in 2017.

In December 2017, the Company recorded a provisional estimate of \$3.3 million for the one-time deemed repatriation transition tax on unrepatriated foreign earnings. The provisional amount is based on information currently available, including estimated tax earnings and profits from foreign investments. The Company continues to gather and analyze information, including historical adjustments to earnings and profits of foreign subsidiaries, in order to complete the accounting for the effects of the estimated transition tax. The Company also recorded a provisional write-down to deferred tax assets of \$0.7 million related to changes in section 162(m), Internal Revenue Code of 1986, regarding deductions for excessive employee compensation. The Company continues to gather and analyze information, including the definition of an employee contract for stock grants not vested as of the enactment date of the Act. It is the intention of the Company to complete the necessary analysis within the measurement period.

Due to the implementation of ASU 2016-09, the income tax provision for the year ended December 31, 2017 included excess tax benefits of \$1.9 million on vesting of restricted stock, which would have been recorded as additional paid-in-capital under the previous guidance.

Liquidity and Capital Resources

During 2017, 2016 and 2015, we funded our business through cash generated from operations. Our cash and investments as of December 31, 2017 included \$69.9 million held in the U.S. and \$55.6 million held by our foreign subsidiaries. We believe that our cash balances in the U.S. are sufficient to fund our U.S. operations, and we do not intend to repatriate foreign funds to the U.S. In the future, if we elect to repatriate the unremitted earnings of our foreign subsidiaries, we would no longer be subject to additional U.S. income taxes due to the enactment of the Tax Cut and Jobs Act in December 2017, but could be subject to additional local withholding taxes.

Our cash flow from operating activities totaled \$164.1 million, \$139.3 million, and \$120.2 million in 2017, 2016 and 2015, respectively. Typical factors affecting our cash provided by operating activities include our level of revenue and earnings for the period, the timing and amount of employee bonus payments and income tax payments, and the timing of cash collections from our customers which is our primary source of operating cash flow. Cash flow from operating activities for 2017 increased \$24.8 million compared to 2016 primarily attributable to the timing of cash collections. Cash flow from operating activities for 2016 increased \$19.1 million compared to 2015 primarily attributable to higher revenue and net earnings. Days sales outstanding was 59, 63 and 63 at December 31, 2017, 2016 and 2015, respectively, reflecting solid cash collections.

Our investing activities used cash of approximately \$5.8 million and \$13.5 million in 2017 and 2015, respectively. In 2016, the cash flow from investing activities totaled \$3.4 million. The use of cash for investing activities for the year ended December 31, 2017 was for capital expenditures of \$6.2 million to support company growth and net maturities of \$0.4 million in investments. The cash flow from investing activities for the year ended December 31, 2016 was primarily attributable to net maturities of investments of \$10.2 million offset by capital expenditures of \$6.8 million. The use of cash for investing activities for the year ended December 31, 2015 was for capital expenditures of \$11.5 million and net purchases of \$2.0 million in investments.

Our financing activities used cash of approximately \$131.7 million, \$162.7 million, and \$102.3 million in 2017, 2016 and 2015, respectively. The principal use of cash for financing activities for the year ended December 31, 2017 was to purchase approximately \$131.7 million of our common stock, including \$6.8 million for shares withheld for taxes due upon vesting of restricted stock. The principal use of cash for financing activities for the year ended December 31, 2016 was to purchase approximately \$167.9 million of our common stock, including \$9.5 million for shares withheld for taxes due upon vesting of restricted stock, partially offset by a \$5.2 million excess tax benefit related to the exercise of stock options and vesting of restricted stock awards. The principal use of cash for financing activities for the year ended December 31, 2015 was to purchase approximately \$112.1 million of our common stock, including \$10.5 million for shares withheld for taxes due upon vesting of restricted stock, partially offset by proceeds generated from options exercised of \$0.7 million and a \$9.1 million excess tax benefit related to the exercise of stock options and vesting of restricted stock awards. In February 2018, our Board of Directors authorized the Company to repurchase up to an aggregate of \$50 million of the Company's common stock.

Periodically, opportunities may arise to grow our business through the acquisition of complementary products, and technologies. Any material acquisition could result in a decrease to our working capital depending on the amount, timing, and nature of the consideration to be paid. We believe that our existing cash and investments will be sufficient to meet our working capital and capital expenditure needs at least for the next twelve months, although there can be no assurance that this will be the case. In 2018, we anticipate that our priorities for use of cash will be similar to prior years, with our first priority being continued investment in product development and profitably growing our business to extend our market leadership. We will continue to evaluate acquisition opportunities that are complementary to our product footprint and technology direction. We will also continue to weigh our share repurchase options against cash for acquisitions and investing in the business. At this time, we do not anticipate any borrowing requirements in 2018 for general corporate purposes.

New Accounting Pronouncements Adopted in Fiscal Year 2017

Stock Compensation

During the three months ended March 31, 2017, we adopted Accounting Standards Update (ASU) 2016-09, Compensation – Stock Compensation: Improvements to Employee Share-Based Payment Accounting, to improve the accounting for employee share-based payments. Under the new guidance, all excess tax benefits and certain tax deficiencies are recorded as income tax expense or benefit in the income statement rather than recorded in additional paid-in capital. The additional paid-in capital pools are eliminated. This new guidance must be applied on a prospective basis. As a result, the excess tax benefits of \$1.9 million for the year ended December 31, 2017 are recorded in our provision for income taxes rather than additional paid-in capital. As required by the ASU, excess tax benefits recognized on share-based compensation expense are classified as an operating activity on the statement of cash flows rather than as a financing activity, and we have applied this provision on a prospective basis.

The ASU also allows the Company to repurchase more of an employee's shares than it previously could for tax withholding purposes without triggering liability accounting and to make a policy election to account for forfeitures as they occur. We have elected to account for forfeitures as they occur, rather than estimate expected forfeitures over the course of a vesting period. As a result, the net cumulative-effect of this election was recognized as a \$1.8 million increase to additional paid-in capital, a \$0.5 million increase to deferred tax assets and a \$1.3 million decrease to retained earnings as of January 1, 2017.

In May 2017, the FASB issued ASU 2017-09, Compensation – Stock Compensation: Scope of Modification Accounting to clarify when changes to the terms or conditions of a share-based payment award must be accounted for as modifications. Entities should apply the modification accounting guidance if the fair value, vesting conditions or classification of the award changes. The new guidance is effective for all entities for annual periods, and interim periods within those annual periods, beginning after December 15, 2017 on a prospective basis to an award modified on or after the adoption date. Early adoption is permitted. We early adopted this guidance during the three months ended June 2017, and the adoption did not impact our financial statements.

Goodwill Impairment

In January 2017, the FASB issued ASU 2017-04, Intangibles - Goodwill and Other (Topic 350) that simplifies the test for goodwill impairment by eliminating step two from the goodwill impairment test. Under the new guidance, an entity should recognize an impairment charge for the amount based on the excess of a reporting unit's carrying amount over its fair value. The impairment charge will be limited to the amount of goodwill allocated to that reporting unit. For public companies, the guidance is effective for annual

and interim impairment tests performed in periods beginning after December 15, 2019 on a prospective basis, and earlier adoption is permitted for goodwill impairment tests performed on testing dates after January 1, 2017. We early adopted this guidance during the three months ended March 2017, and the adoption did not impact our financial statements.

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

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows – Classification of Certain Cash Receipts and Cash Payments (Topic 230) that clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flows. Prior to the issuance, there were certain issues where diversity in practice in how certain cash receipts and cash payments were presented and classified in the statement of cash flows. This guidance addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. For public companies, the guidance is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted. We early adopted this guidance during the three months ended June 30, 2017, and the adoption did not impact our financial statements.

New Accounting Pronouncements Not Yet Adopted as of Fiscal Year 2017

Revenue Recognition

In May 2014, the FASB issued ASU 2014-09, Revenue Recognition – Revenue from Contracts with Customers (Topic 606), which will replace substantially all current revenue recognition guidance once it becomes effective. The new standard provides accounting guidance for all revenue arising from contracts with customers and affects all entities that enter into contracts to provide goods or services to their customers unless the contracts are in the scope of other standards. The new standard is less prescriptive and may require software entities to use more judgment and estimates in the revenue recognition process than are required under existing revenue guidance.

In March 2016, the FASB issued ASU 2016-08, Revenue from Contracts with Customers (Topic 606) – Principal versus Agent Considerations, which clarifies the implementation guidance for principal versus agent considerations in ASU 2014-09. In April 2016, the FASB issued ASU 2016-10, Revenue from Contracts with Customers (Topic 606) – Identifying Performance Obligations and Licensing, which amends the guidance in ASU 2014-09 related to identifying performance obligations and accounting for licenses of intellectual property. In May 2016, the FASB issued ASU 2016-12, Revenue from Contracts with Customers (Topic 606) – Narrow-Scope Improvements and Practical Expedients, which clarifies the following aspects in ASU 2014-09: collectability, presentation of sales taxes and other similar taxes collected from customers, noncash considerations, contract modifications at transition, completed contracts at transition, and technical correction. In December 2016, the FASB issued ASU 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers, which provides thirteen technical corrections and improvements to the new revenue standard. We must adopt ASU 2016-08, ASU 2016-10, ASU 2016-12, and ASU 2016-20 with ASU 2014-09, which is effective for annual and interim periods beginning after December 15, 2017.

The new revenue standard may be applied using either of the following transition methods: (1) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (2) a modified retrospective approach with the cumulative effect of initially adopting the standard recognized at the date of adoption (which includes additional footnote disclosures).

We adopted the standard as of January 1, 2018 and elected to use the modified retrospective method. Historical hardware sales prior to the adoption of ASC 606 were recorded on a gross basis, as we were the principal in the transaction in accordance with ASC 605-45. Under the new standard, we are an agent in the transaction as we do not physically control the hardware which we sell, accordingly, we recognize our hardware revenue net of related cost which reduces both hardware revenue and cost of sales as compared to our accounting prior to 2018. Based on expected renewals of maintenance and multi-year cloud subscriptions, a portion of our commissions expense is deferred and amortized over time as the corresponding services are transferred to the customer under the new standard. As a result, the net cumulative-effect of the adoption is estimated to increase retained earnings by approximately \$1.5 million to \$2.4 million as of January 1, 2018, net of the effect of income taxes. We have not identified other significant differences related to the pattern of revenue recognition or presentation of revenue compared to our historical accounting. We continue to finalize our analysis of the adoption during the first quarter of 2018.

Leases

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. Under the new guidance, a lessee will be required to recognize assets and liabilities for leases with lease terms of more than 12 months. Consistent with current GAAP, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a finance or operating lease. However, unlike current GAAP—which requires only capital leases to be recognized on the balance sheet—the new ASU will require both types of leases to be

recognized on the balance sheet. The ASU also will require disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. These disclosures include qualitative and quantitative requirements, providing additional information about the amounts recorded in the financial statements. Our leasing activity is primarily related to office space. For public companies, this guidance is effective for annual periods beginning after December 15, 2018, and interim periods within those annual periods, but may be adopted earlier. We are expecting to adopt the standard in the first quarter of 2019 on a modified prospective basis and currently evaluating the impact that the adoption of this standard will have on our Consolidated Financial Statements. The adoption will increase our total assets and liabilities.

Off-Balance Sheet Arrangements and Aggregate Contractual Obligations

Our principal commitments as of December 31, 2017 consist of obligations under operating leases. We expect to fulfill all of the following commitments from our working capital. We have no off-balance sheet arrangements within the meaning of SEC rules.

Lease Commitments

We lease our facilities and some of our equipment under noncancelable operating lease arrangements that expire at various dates through 2025. Rent expense for these leases aggregated \$7.1 million, \$6.8 million, and \$6.3 million during 2017, 2016 and 2015, respectively.

The following table summarizes our contractual commitments as of December 31, 2017 (in thousands):

	Total	2018	2019	2020	2021	2022	Thereafter
Operating Lease Obligations	\$ 43,229	\$ 7,308	\$ 5,865	\$ 5,360	\$ 5,277	\$ 5,056	\$ 14,363

Indemnities

Our customer contracts generally contain infringement indemnity provisions. Under those provisions, we generally agree, subject to certain exceptions, to indemnify, defend, and hold harmless the customer in connection with third party claims against the customer alleging that the customer's use of our software products in compliance with their license infringe the third party's patent, copyright, or other intellectual property rights. Conditions to our obligations generally include that we are provided the right to control the defense of the claims and, in general, to control settlement negotiations. Those provisions generally provide also that, if the customer is prevented from using our software because of a third party infringement claim, our sole obligation (in addition to the indemnification, defense, and hold harmless obligation referred to above) is to, at our expense, (i) procure for the customer the right to continue to use the software, (ii) to replace or modify the product so that its use by the customer does not infringe, or, if either of the foregoing are not reasonably feasible, to terminate the customer contract and provide a refund of the unamortized portion of the customer's license fee (based on a five year amortization period). Our customer contracts sometimes also require us to indemnify, defend, and hold harmless the customer in connection with death, personal injury, or property damage claims made by third parties with respect to actions of our personnel or contractors. The indemnity obligations contained in our customer contracts generally have no specified expiration date and no specified monetary limitation on liability. We have not previously incurred costs to settle claims or pay awards under these indemnification obligations. We account for these indemnity obligations in accordance with FASB guidance on accounting for contingencies, and record a liability for these obligations when a loss is probable and reasonably estimable. We have not recorded any liabilities for these contracts as of December 31, 2017.

Warranties

In general, in our customer contracts we warrant to our customers that our software products will perform in all material respects in accordance with our standard published specifications in effect at the time of delivery of the licensed products to the customer for six months after first use of the licensed products, but no more than 24 months after execution of the license agreement. Additionally, we warrant to our customers that our services will be performed consistent with generally accepted industry standards or specific service levels through completion of the agreed upon services. If necessary, we would provide for the estimated cost of product and service warranties based on specific warranty claims and claim history. However, we have not incurred significant recurring expense under our product or service warranties. As a result, we believe the estimated fair value of these agreements is nominal. Accordingly, we have no liabilities recorded for these agreements as of December 31, 2017.

Application of Critical Accounting Policies and Estimates

The SEC defines "critical accounting policies" as those that require application of management's most difficult, subjective, or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods.

Our Consolidated Financial Statements are prepared in accordance with U.S. generally accepted accounting principles (GAAP). The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions in certain circumstances that affect amounts reported in the accompanying consolidated financial statements and related footnotes. We believe that estimates, judgments, and assumptions upon which we rely are reasonable based on information available to us at the time that these estimates, judgments, and assumptions are made. To the extent there are material differences between those estimates, judgments, or assumptions and actual results, our financial statements will be affected. The accounting policies that reflect our more significant estimates, judgments, and assumptions are: Revenue Recognition and Accounting for Income Taxes.

Revenue Recognition

The Company's revenue consists of fees from software licensing; cloud subscriptions; customer support services and software enhancements (collectively, "maintenance"); fees from implementation and training services, and reimbursements of out-of-pocket expenses in connection with our services (collectively, "services") and sales of hardware ("hardware").

The Company recognizes license revenue when the following criteria are met: (1) a signed contract is obtained covering all elements of the arrangement, (2) delivery of the product has occurred, (3) the license fee is fixed or determinable, and (4) collection is probable. Revenue recognition for software with multiple-element arrangements requires recognition of revenue using the "residual method" when (a) there is vendor-specific objective evidence (VSOE) of the fair values of all undelivered elements in a multiple-element arrangement that is not accounted for using long-term contract accounting, (b) VSOE of fair value does not exist for one or more of the delivered elements in the arrangement, and (c) all other applicable revenue-recognition criteria for software revenue recognition are satisfied. For those contracts that contain significant customization or modifications, license revenue is recognized using contract accounting.

Cloud subscriptions includes software as a service ("SaaS") and arrangements which provide customers with the right to use our software within a cloud-based environment that we provide and manage, where the customer does not have the right to take possession of the software without significant penalties. SaaS and hosting revenues are recognized over the term of the related arrangements. For hosting arrangements, where perpetual licenses are also sold, the initial non-cancellable hosting period generally results in the arrangements being accounted for as service agreements, accordingly, amounts billed for the licenses are recognized over the customer relationship period.

Payment terms for the Company's software licenses vary. Each contract is evaluated individually to determine whether the fees in the contract are fixed or determinable and whether collectability is probable. Judgment is required in assessing the probability of collection, which is generally based on evaluation of customer-specific information, historical collection experience, and economic market conditions. If market conditions decline, or if the financial conditions of customers deteriorate, the Company may be unable to determine that collectability is probable, and the Company could be required to defer the recognition of revenue until the Company receives customer payments. The Company has an established history of collecting under the terms of its software license contracts without providing refunds or concessions to its customers. Therefore, the Company has determined that the presence of payment terms that extend beyond contract execution in a particular contract do not preclude the conclusion that the fees in the contract are fixed or determinable. Although infrequent, when payment terms in a contract extend beyond our standard terms or twelve months, the Company has determined that such fees are not fixed or determinable and recognizes revenue as payments become due provided that all other conditions for revenue recognition have been met.

The Company allocates revenue to maintenance and any other undelivered elements of the arrangement based on VSOE of fair value of each element, and such amounts are deferred until the applicable delivery criteria and other revenue recognition criteria have been met. The balance of the revenue, net of any discounts inherent in the arrangement, is recognized at the outset of the arrangement using the residual method as the product licenses are delivered. If the Company cannot objectively determine the fair value of each undelivered element based on the VSOE of fair value, the Company defers revenue recognition until all elements are delivered, all services have been performed, or until fair value can be objectively determined. The Company must apply judgment in determining all elements of the arrangement and in determining the VSOE of fair value for each element, considering the price charged for each product on a stand-alone basis or applicable renewal rates. For arrangements that include future software functionality deliverables, the Company accounts for these deliverables as a separate element of the arrangement. Because the Company does not sell these deliverables on a standalone basis, the Company is not able to establish VSOE of fair value of these deliverables. As a result, the Company defers all revenue under the arrangement until the future functionality has been delivered to the customer.

The Company's services revenue consists of fees generated from implementation and training services (collectively "professional services"), and reimbursements of out-of-pocket expenses in connection with our services. Professional services include system planning, design, configuration, testing, and other software implementation support, and are not typically essential to the functionality of the software. Fees from professional services performed by the Company are separately priced and are generally billed on an hourly basis, and revenue is recognized as the services are performed. In certain situations, professional services are rendered under agreements in which billings are limited to contractual maximums or based upon a fixed fee for portions of or all of the engagement. Revenue related to fixed-fee-based contracts is recognized on a proportional performance basis based on the hours incurred on discrete projects within

an overall services arrangement. The Company has determined that output measures, or services delivered, approximate the input measures associated with fixed-fee services arrangements. Project losses are provided for in their entirety in the period in which they become known. Revenue related to maintenance is generally paid in advance and recognized ratably over the term of the agreement, typically twelve months.

In accordance with the other presentation matters within the Revenue Recognition Topic of the ASC, the Company recognizes amounts associated with reimbursements from customers for out-of-pocket expenses as revenue. Such amounts have been included in services revenue in the Condensed Consolidated Statements of Income. The total amount of expense reimbursement recorded to revenue was \$17.9 million, \$18.3 million, and \$20.2 million for 2017, 2016 and 2015, respectively.

Hardware revenue is generated from the resale of a variety of hardware products, developed and manufactured by third parties, that are integrated with and complementary to the Company's software solutions. As part of a complete solution, the Company's customers periodically purchase hardware from the Company for use with the software licenses purchased from the Company. These products include computer hardware, radio frequency terminal networks, radio frequency identification (RFID) chip readers, bar code printers and scanners, and other peripherals. Hardware revenue is recognized upon shipment to the customer when title passes. The Company generally purchases hardware from the Company's vendors only after receiving an order from a customer. As a result, the Company generally does not maintain hardware inventory.

Accounting for Income Taxes

We provide for the effect of income taxes on our financial position and results of operations in accordance with the Income Taxes Topic of the ASC. Under this accounting pronouncement, income tax expense is recognized for the amount of income taxes payable or refundable for the current year and for the change in net deferred tax assets or liabilities resulting from events that are recorded for financial reporting purposes in a different reporting period than recorded in the tax return. Management must make significant assumptions, judgments, and estimates to determine our current provision for income taxes and also our deferred tax assets and liabilities and any valuation allowance to be recorded against our net deferred tax asset.

Our judgments, assumptions, and estimates relative to the current provision for income tax take into account current tax laws, our interpretation of current tax laws, allowable deductions, projected tax credits, and possible outcomes of current and future audits conducted by foreign and domestic tax authorities. We do not recognize a tax benefit unless we conclude that it is more likely than not that the benefit will be sustained on audit by the taxing authority based solely on the technical merits of the associated tax position. If the recognition threshold is met, we recognize a tax benefit measured at the largest amount of the tax benefit that, in our judgment, is greater than 50 percent likely to be realized. Changes in tax law or our interpretation of tax laws and the resolution of current and future tax audits could significantly impact the amounts provided for income taxes in our financial position and results of operations. Our assumptions, judgments, and estimates relative to the value of our net deferred tax asset take into account predictions of the amount and category of future taxable income. Actual operating results and the underlying amount and category of income in future years could render our current assumptions, judgments, and estimates of recoverable net deferred taxes inaccurate, thus materially impacting our financial position and results of operations.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Foreign Business

Our international business is subject to risks typical of an international business, including, but not limited to differing economic conditions, changes in political climate, differing tax structures, other regulations and restrictions, and foreign exchange rate volatility. Our international operations currently include business activity out of offices in the United Kingdom, the Netherlands, France, Germany, Australia, Chile, China, Japan, Singapore, and India. When the U.S. dollar strengthens against a foreign currency, the value of our sales and expenses in that currency converted to U.S. dollars decreases. When the U.S. dollar weakens, the value of our sales and expenses in that currency converted to U.S. dollars increases. We recognized foreign exchange losses of \$1.8 million and \$0.1 million in 2017 and 2015, respectively, and a foreign exchange gain of \$0.6 million in 2016. Foreign exchange rate transaction gains and losses are classified in "Other income (loss), net" in our Consolidated Statements of Income. A fluctuation of 10% in the period end exchange rates at December 31, 2017 relative to the U.S. dollar would result in a change of approximately \$0.4 million in the reported foreign currency loss. A fluctuation of 10% in the period end exchange rates at December 31, 2016 relative to the U.S. dollar would result in a change of approximately \$0.3 million in the reported foreign currency gain.

Interest Rates

We currently invest our cash and cash equivalents in a variety of financial instruments, including taxable floating rate obligations in money market funds and certificate of deposits of less than three months when purchased. These investments are mainly denominated in U.S. dollars. Cash balances in foreign currencies overseas, except for India, are derived from business operations. India operations are funded by the U.S. At December 31, 2017, our cash and cash equivalents balances totaled \$125.5 million, of which all is highly liquid. Our cash equivalents balance at December 31, 2017 was \$35.1 million.

Investments in both fixed rate and floating rate interest-earning instruments carry interest rate risk. Fixed rate securities may have their fair market value adversely impacted due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectations due to changes in interest rates, or we may suffer losses in principal if forced to sell securities that have seen a decline in market value due to changes in interest rates. The weighted-average interest rate of return on cash equivalents was approximately 1% for the years ended December 31, 2017 and 2016. The fair value of cash equivalents held at December 31, 2017 and 2016 was \$35.1 million and \$44.2 million, respectively. Based on the average cash equivalents outstanding during 2017 and 2016, increases or decreases in the rates of return of 25 basis points would result in increases or decreases to interest income of approximately \$0.3 million for both years from the reported interest income.

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MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management of Manhattan Associates, Inc. is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is a process designed under the supervision of the Company's principal executive and principal financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

The Company's internal control over financial reporting includes policies and procedures that pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets; provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of management and the directors of the Company; and 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.

As of the end of the Company's 2017 fiscal year, management conducted an assessment of the Company's internal control over financial reporting based on the framework established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (COSO). Based on this assessment, management has determined that the Company's internal control over financial reporting as of December 31, 2017 was effective.

Ernst & Young LLP, the independent registered public accounting firm that audited the Company's financial statements for the year ended December 31, 2017, has audited the Company's internal control over financial reporting as of December 31, 2017 and has issued a report regarding the Company's internal control over financial reporting appearing on page 42, which expresses an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2017.

/s/ Eddie Capel

Eddie Capel
President and Chief Executive Officer

February 9, 2018

/s/ Dennis B. Story

Dennis B. Story
Executive Vice President, Chief Financial Officer, and
Treasurer

February 9, 2018

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

**The Board of Directors and Shareholders
Manhattan Associates, Inc. and Subsidiaries**

Opinion on Internal Control over Financial Reporting

We have audited Manhattan Associates, Inc. and subsidiaries' internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework)(the COSO criteria). In our opinion, Manhattan Associates, Inc. and subsidiaries (the Company), maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, cash flows and shareholders' equity for each of the three years in the period ended December 31, 2017, and the related notes and financial statement schedule listed in the Index at Item 15(a) and our report dated February 9, 2018 expressed an unqualified opinion thereon.

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 Annual 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, and 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 audits provide 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/ Ernst & Young LLP

Atlanta, Georgia
February 9, 2018

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
ON THE CONSOLIDATED FINANCIAL STATEMENTS**

**The Board of Directors and Shareholders
Manhattan Associates, Inc. and Subsidiaries**

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Manhattan Associates, Inc. and subsidiaries (the Company) as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, cash flows, and shareholders' equity for each of the three years in the period ended December 31, 2017, and the related notes and financial statement schedule listed in the Index at Item 15(a) (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 at December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have 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, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 9, 2018 expressed an unqualified opinion thereon.

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/ Ernst & Young LLP

We have served as the Company's auditor since 2002
Atlanta, Georgia
February 9, 2018

MANHATTAN ASSOCIATES, INC. AND SUBSIDIARIES
Consolidated Statements of Income
(in thousands, except per share amounts)

	Year Ended December 31,		
	2017	2016	2015
Revenue:			
Software license	\$ 72,313	\$ 79,213	\$ 73,998
Cloud subscriptions	9,596	5,783	4,617
Maintenance	142,998	133,848	123,454
Services	326,502	351,785	324,787
Hardware	43,190	33,928	29,515
Total revenue	<u>594,599</u>	<u>604,557</u>	<u>556,371</u>
Costs and expenses:			
Cost of license	5,483	6,818	7,180
Cost of cloud subscriptions, maintenance and services	208,045	219,635	207,048
Cost of hardware	32,205	23,426	21,200
Research and development	57,704	54,736	53,859
Sales and marketing	47,482	48,223	48,615
General and administrative	46,054	48,322	49,259
Depreciation and amortization	9,060	9,090	7,764
Restructuring charge	2,921	-	-
Total costs and expenses	<u>408,954</u>	<u>410,250</u>	<u>394,925</u>
Operating income	185,645	194,307	161,446
Interest income	1,174	1,161	1,331
Other (loss) income, net	(1,986)	639	64
Income before income taxes	184,833	196,107	162,841
Income tax provision	68,352	71,873	59,366
Net income	<u>\$ 116,481</u>	<u>\$ 124,234</u>	<u>\$ 103,475</u>
Basic earnings per share	<u>\$ 1.68</u>	<u>\$ 1.73</u>	<u>\$ 1.41</u>
Diluted earnings per share	<u>\$ 1.68</u>	<u>\$ 1.72</u>	<u>\$ 1.40</u>
Weighted average number of shares:			
Basic	69,175	71,674	73,443
Diluted	69,424	72,060	74,038

The accompanying notes are an integral part of these Consolidated Statements of Income.

MANHATTAN ASSOCIATES, INC. AND SUBSIDIARIES
Consolidated Statements of Comprehensive Income
(in thousands)

	Year Ended December 31,		
	2017	2016	2015
Net income	\$ 116,481	\$ 124,234	\$ 103,475
Foreign currency translation adjustment	4,055	(3,588)	(2,283)
Comprehensive income	<u>\$ 120,536</u>	<u>\$ 120,646</u>	<u>\$ 101,192</u>

The accompanying notes are an integral part of these Consolidated Statements of Comprehensive Income.

MANHATTAN ASSOCIATES, INC. AND SUBSIDIARIES
Consolidated Balance Sheets
(in thousands, except share and per share data)

	December 31,	
	2017	2016
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 125,522	\$ 95,615
Accounts receivable, net of allowance of \$2,692 and \$3,595 in 2017 and 2016, respectively	92,231	100,285
Prepaid expenses	9,151	10,181
Other current assets	1,169	937
Total current assets	228,073	207,018
Property and equipment, net	15,493	17,424
Goodwill, net	62,248	62,228
Deferred income taxes	1,877	2,867
Other assets	7,304	7,603
Total assets	\$ 314,995	\$ 297,140
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 14,028	\$ 12,052
Accrued compensation and benefits	15,826	20,700
Accrued and other liabilities	12,105	12,510
Deferred revenue	75,068	63,457
Income taxes payable	7,228	8,924
Total current liabilities	124,255	117,643
Deferred rent, long-term	2,136	2,932
Deferred income taxes	69	53
Other non-current liabilities	13,579	7,146
Commitments and contingencies (Note 5)		
Shareholders' equity:		
Preferred stock, no par value; 20,000,000 shares authorized, no shares issued or outstanding in 2017 and 2016	-	-
Common stock, \$.01 par value; 200,000,000 shares authorized; 67,776,138 and 70,233,955 shares issued and outstanding at December 31, 2017 and December 31, 2016, respectively	678	702
Retained earnings	186,117	184,558
Accumulated other comprehensive loss	(11,839)	(15,894)
Total shareholders' equity	174,956	169,366
Total liabilities and shareholders' equity	\$ 314,995	\$ 297,140

The accompanying notes are an integral part of these Consolidated Balance Sheets.

MANHATTAN ASSOCIATES, INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,		
	2017	2016	2015
Operating activities:			
Net income	\$ 116,481	\$ 124,234	\$ 103,475
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	9,060	9,090	7,764
Equity-based compensation	16,229	15,934	14,528
Loss (gain) on disposal of equipment	152	30	(30)
Tax benefit of stock awards exercised/vested	-	5,209	9,170
Excess tax benefits from equity-based compensation	-	(5,214)	(9,147)
Deferred income taxes	1,574	1,797	1,532
Unrealized foreign currency loss (gain)	196	(393)	49
Changes in operating assets and liabilities:			
Accounts receivable, net	10,139	(4,358)	(12,223)
Other assets	661	299	(1,427)
Accounts payable, accrued and other liabilities	(5,354)	(9,261)	(1,592)
Income taxes	1,876	6,129	(2,271)
Deferred revenue	13,052	(4,150)	10,325
Net cash provided by operating activities	<u>164,066</u>	<u>139,346</u>	<u>120,153</u>
Investing activities:			
Purchases of property and equipment	(6,199)	(6,843)	(11,492)
Purchases of short-term investments	(12,873)	-	(15,385)
Maturities of short-term investments	13,302	10,201	13,334
Net cash (used in) provided by investing activities	<u>(5,770)</u>	<u>3,358</u>	<u>(13,543)</u>
Financing activities:			
Purchase of common stock	(131,707)	(167,933)	(112,138)
Proceeds from issuance of common stock from options exercised	-	18	717
Excess tax benefits from equity-based compensation	-	5,214	9,147
Net cash used in financing activities	<u>(131,707)</u>	<u>(162,701)</u>	<u>(102,274)</u>
Foreign currency impact on cash	<u>3,318</u>	<u>(2,804)</u>	<u>(1,628)</u>
Net change in cash and cash equivalents	29,907	(22,801)	2,708
Cash and cash equivalents at beginning of period	95,615	118,416	115,708
Cash and cash equivalents at end of period	<u>\$ 125,522</u>	<u>\$ 95,615</u>	<u>\$ 118,416</u>
Supplemental disclosures of cash flow information:			
Cash paid for taxes	<u>\$ 64,910</u>	<u>\$ 58,684</u>	<u>\$ 50,902</u>

The accompanying notes are an integral part of these Consolidated Statements of Cash Flows.

MANHATTAN ASSOCIATES, INC. AND SUBSIDIARIES
Consolidated Statements of Shareholders' Equity
(in thousands, except share data)

	Common Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
	Shares	Amount				
Balance, December 31, 2014	74,104,064	\$ 741	\$ -	\$ 191,305	\$ (10,023)	\$ 182,023
Repurchase of common stock	(1,947,432)	(19)	(24,409)	(87,710)	-	(112,138)
Stock option exercises	150,154	2	715	-	-	717
Restricted stock shares/units issuance	459,597	4	(4)	-	-	-
Equity-based compensation	-	-	14,528	-	-	14,528
Tax effects of equity-based compensation	-	-	9,170	-	-	9,170
Foreign currency translation adjustment	-	-	-	-	(2,283)	(2,283)
Net income	-	-	-	103,475	-	103,475
Balance, December 31, 2015	72,766,383	728	-	207,070	(12,306)	195,492
Repurchase of common stock	(2,988,627)	(30)	(21,157)	(146,746)	-	(167,933)
Stock option exercises	3,610	-	18	-	-	18
Restricted stock units issuance	452,589	4	(4)	-	-	-
Equity-based compensation	-	-	15,934	-	-	15,934
Tax effects of equity-based compensation	-	-	5,209	-	-	5,209
Foreign currency translation adjustment	-	-	-	-	(3,588)	(3,588)
Net income	-	-	-	124,234	-	124,234
Balance, December 31, 2016	70,233,955	702	-	184,558	(15,894)	169,366
Repurchase of common stock	(2,829,850)	(28)	(18,050)	(113,629)	-	(131,707)
Restricted stock units issuance	372,033	4	(4)	-	-	-
Equity-based compensation	-	-	16,229	-	-	16,229
Adjustment due to adoption of ASC 2016-09, Compensation - Stock Compensation: Improvements to Employee Share-Based Payment Accounting	-	-	1,825	(1,293)	-	532
Foreign currency translation adjustment	-	-	-	-	4,055	4,055
Net income	-	-	-	116,481	-	116,481
Balance, December 31, 2017	<u>67,776,138</u>	<u>\$ 678</u>	<u>\$ -</u>	<u>\$ 186,117</u>	<u>\$ (11,839)</u>	<u>\$ 174,956</u>

The accompanying notes are an integral part of these Consolidated Statements of Shareholders' Equity.

MANHATTAN ASSOCIATES, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2017, 2016 and 2015

1. Organization, Consolidation and Summary of Significant Accounting Policies

Organization and Business

Manhattan Associates, Inc. (“Manhattan” or the “Company”) is a developer and provider of supply chain commerce solutions that help organizations optimize the effectiveness, efficiency, and strategic advantages of their supply chains. The Company’s solutions consist of software, services, and hardware, which coordinate people, workflows, assets, events, and tasks holistically across the functions linked in a supply chain from planning through execution. These solutions also help coordinate the actions, data exchange, and communication of participants in supply chain ecosystems, such as manufacturers, suppliers, distributors, trading partners, transportation providers, channels (such as catalogers, store retailers, and Web outlets), and consumers.

The Company’s operations are in North and South America (Americas), Europe (EMEA), and the Asia/Pacific (APAC) region. The Americas operation are conducted through the Parent Company, Manhattan Associates, Inc., and its wholly-owned subsidiary, Manhattan Associates Chile Spa. The European operations are conducted through the Company’s wholly-owned subsidiaries, Manhattan Associates Limited, Manhattan Associates Europe B.V., Manhattan France SARL, and Manhattan Associates GmbH, in the United Kingdom, the Netherlands, France, and Germany, respectively. The Company’s Asia/Pacific operations are conducted through its wholly-owned subsidiaries, Manhattan Associates Pty Ltd., Manhattan Associates KK, Manhattan Associates Software (Shanghai), Co. Ltd., Manhattan Associates Software Pte Ltd., and Manhattan Associates (India) Development Centre Private Limited in Australia, Japan, China, Singapore, and India, respectively. The Company occasionally sells its products and services in other countries, such as countries in Latin America, Eastern Europe, Middle East, and Asia, through its direct sales channel as well as various reseller channels.

Risks Associated with Single Business Line, Technological Advances, and Foreign Operations

The Company currently derives a substantial portion of its revenues from sales of its software and related services and hardware. The markets for supply chain commerce solutions are highly competitive, subject to rapid technological change, changing customer needs, frequent new product introductions, and evolving industry standards that may render existing products and services obsolete. As a result, the Company’s position in these markets could be eroded rapidly by unforeseen changes in customer requirements for application features, functions, and technologies. The Company’s growth and future operating results will depend, in part, upon its ability to enhance existing applications and develop and introduce new applications that meet changing customer requirements that respond to competitive products and that achieve market acceptance. Any factor adversely affecting the markets for supply chain commerce solutions could have an adverse effect on the Company’s business, financial condition, results of operations and operating cash flows.

The Company’s international business is subject to risks typical of an international business, including, but not limited to, differing economic conditions, changes in political climate, differing tax structures, other regulations and restrictions, and foreign exchange rate volatility. The Company recognized foreign exchange losses of \$1.8 million and \$0.1 million in 2017 and 2015, respectively, and a foreign exchange gain of \$0.6 million in 2016. Foreign exchange rate transaction gains and losses are classified in “Other (loss) income, net” on the Consolidated Statements of Income.

In addition, we have a large development center in Bangalore, India, that does not have a natural in-market revenue hedge to mitigate currency risk to our operating expense in India. Fluctuations in the value of other currencies, particularly the Indian rupee, could significantly affect our revenues, expenses, operating profit and net income.

Principles of Consolidation and Foreign Currency Translation

The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

The financial statements of foreign subsidiaries have been translated into United States dollars in accordance with the foreign currency matters topic in the Financial Accounting Standards Board’s (“FASB”) Accounting Standards Codification (the “Codification”). Revenues and expenses from international operations were denominated in the respective local currencies and translated using the average monthly exchange rates for the year. All balance sheet accounts have been translated using the exchange rates in effect at the balance sheet date and the effect of changes in exchange rates from year to year are disclosed as a separate component of shareholders’ equity and comprehensive income.

Reclassifications

Certain line items in prior period financial statements have been reclassified to conform to the current period presentation in the consolidated statements of income due to our business transition to cloud subscriptions. We believe separate disclosures of our software license, cloud subscriptions, maintenance and service revenue is meaningful to investors and provide an important measure of our business performance. Certain line items in prior period financial statements have been reclassified to conform to the current period presentation in the consolidated statements of income, including: all revenue line items; cost of license; cost of cloud subscriptions, maintenance and services; and cost of hardware. Such reclassifications did not affect total revenues, operating income or net income.

New Accounting Pronouncements Adopted in Fiscal Year 2017

Stock Compensation

During the three months ended March 31, 2017, we adopted Accounting Standards Update (ASU) 2016-09, Compensation – Stock Compensation: Improvements to Employee Share-Based Payment Accounting, to improve the accounting for employee share-based payments. Under the new guidance, all excess tax benefits and certain tax deficiencies are recorded as income tax expense or benefit in the income statement rather than recorded in additional paid-in capital. The additional paid-in capital pools are eliminated. This new guidance must be applied on a prospective basis. As a result, the excess tax benefits of \$1.9 million for the year ended December 31, 2017 are recorded in our provision for income taxes rather than additional paid-in capital. As required by the ASU, excess tax benefits recognized on share-based compensation expense are classified as an operating activity on the statement of cash flows rather than as a financing activity, and we have applied this provision on a prospective basis.

The ASU also allows the Company to repurchase more of an employee's shares than it previously could for tax withholding purposes without triggering liability accounting and to make a policy election to account for forfeitures as they occur. We have elected to account for forfeitures as they occur, rather than estimate expected forfeitures over the course of a vesting period. As a result, the net cumulative-effect of this election was recognized as a \$1.8 million increase to additional paid-in capital, a \$0.5 million increase to deferred tax assets and a \$1.3 million decrease to retained earnings as of January 1, 2017.

In May 2017, the FASB issued ASU 2017-09, Compensation – Stock Compensation: Scope of Modification Accounting to clarify when changes to the terms or conditions of a share-based payment award must be accounted for as modifications. Entities should apply the modification accounting guidance if the fair value, vesting conditions or classification of the award changes. The new guidance is effective for all entities for annual periods, and interim periods within those annual periods, beginning after December 15, 2017 on a prospective basis to an award modified on or after the adoption date. Early adoption is permitted. We early adopted this guidance during the three months ended June 2017, and the adoption did not impact our financial statements.

Goodwill Impairment

In January 2017, the FASB issued ASU 2017-04, Intangibles - Goodwill and Other (Topic 350) that simplifies the test for goodwill impairment by eliminating step two from the goodwill impairment test. Under the new guidance, an entity should recognize an impairment charge for the amount based on the excess of a reporting unit's carrying amount over its fair value. The impairment charge will be limited to the amount of goodwill allocated to that reporting unit. For public companies, the guidance is effective for annual and interim impairment tests performed in periods beginning after December 15, 2019 on a prospective basis, and earlier adoption is permitted for goodwill impairment tests performed on testing dates after January 1, 2017. We early adopted this guidance during the three months ended March 2017, and the adoption did not impact our financial statements.

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

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows – Classification of Certain Cash Receipts and Cash Payments (Topic 230) that clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flows. Prior to the issuance, there were certain issues where diversity in practice in how certain cash receipts and cash payments were presented and classified in the statement of cash flows. This guidance addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. For public companies, the guidance is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted. We early adopted this guidance during the three months ended June 30, 2017, and the adoption did not impact our financial statements.

New Accounting Pronouncements Not Yet Adopted as of Fiscal Year 2017

Revenue Recognition

In May 2014, the FASB issued ASU 2014-09, Revenue Recognition – Revenue from Contracts with Customers (Topic 606), which will replace substantially all current revenue recognition guidance once it becomes effective. The new standard provides accounting guidance for all revenue arising from contracts with customers and affects all entities that enter into contracts to provide goods or services to their customers unless the contracts are in the scope of other standards. The new standard is less prescriptive and may require software entities to use more judgment and estimates in the revenue recognition process than are required under existing revenue guidance.

In March 2016, the FASB issued ASU 2016-08, Revenue from Contracts with Customers (Topic 606) – Principal versus Agent Considerations, which clarifies the implementation guidance for principal versus agent considerations in ASU 2014-09. In April 2016, the FASB issued ASU 2016-10, Revenue from Contracts with Customers (Topic 606) – Identifying Performance Obligations and Licensing, which amends the guidance in ASU 2014-09 related to identifying performance obligations and accounting for licenses of intellectual property. In May 2016, the FASB issued ASU 2016-12, Revenue from Contracts with Customers (Topic 606) – Narrow-Scope Improvements and Practical Expedients, which clarifies the following aspects in ASU 2014-09: collectability, presentation of sales taxes and other similar taxes collected from customers, noncash considerations, contract modifications at transition, completed contracts at transition, and technical correction. In December 2016, the FASB issued ASU 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers, which provides thirteen technical corrections and improvements to the new revenue standard. We must adopt ASU 2016-08, ASU 2016-10, ASU 2016-12, and ASU 2016-20 with ASU 2014-09, which is effective for annual and interim periods beginning after December 15, 2017.

The new revenue standard may be applied using either of the following transition methods: (1) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (2) a modified retrospective approach with the cumulative effect of initially adopting the standard recognized at the date of adoption (which includes additional footnote disclosures).

We adopted the standard as of January 1, 2018 and elected to use the modified retrospective method. Historical hardware sales prior to the adoption of ASC606 were recorded on a gross basis, as we were the principal in the transaction in accordance with ASC 605-45. Under the new standard, we are an agent in the transaction as we do not physically control the hardware which we sell, accordingly, we recognize our hardware revenue net of related cost which reduces both hardware revenue and cost of sales as compared to our accounting prior to 2018. Based on expected renewals of maintenance and multi-year cloud subscriptions, a portion of our commissions expense is deferred and amortized over time as the corresponding services are transferred to the customer under the new standard. As a result, the net cumulative-effect of the adoption is estimated to increase retained earnings by approximately \$1.5 million to \$2.4 million as of January 1, 2018, net of the effect of income taxes. We have not identified other significant differences related to the pattern of revenue recognition or presentation of revenue compared to our historical accounting. We continue to finalize our analysis of the adoption during the first quarter of 2018.

Leases

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. Under the new guidance, a lessee will be required to recognize assets and liabilities for leases with lease terms of more than 12 months. Consistent with current GAAP, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a finance or operating lease. However, unlike current GAAP—which requires only capital leases to be recognized on the balance sheet—the new ASU will require both types of leases to be recognized on the balance sheet. The ASU also will require disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. These disclosures include qualitative and quantitative requirements, providing additional information about the amounts recorded in the financial statements. Our leasing activity is primarily related to office space. For public companies, this guidance is effective for annual periods beginning after December 15, 2018, and interim periods within those annual periods, but may be adopted earlier. We are expecting to adopt the standard in the first quarter of 2019 on a modified prospective basis and currently evaluating the impact that the adoption of this standard will have on our Consolidated Financial Statements. The adoption will increase our total assets and liabilities.

Summary of Significant Accounting Policies

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of three months or less to be cash or cash equivalents.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash and cash equivalents and accounts receivable. The Company maintains cash and cash equivalents with various financial institutions. Amounts held are above the federally insured limit.

The Company's sales are primarily to companies located in the United States, Europe and Asia. The Company performs periodic credit evaluations of its customers' financial condition and does not require collateral. Accounts receivable are due principally from large U.S., European and Asia Pacific companies under stated contract terms. Accounts receivable, net as of December 31, 2017 for the Americas, EMEA, and APAC companies were \$71.8 million, \$16.1 million, and \$4.3 million, respectively. Accounts receivable, net as of December 31, 2016 for the Americas, EMEA, and APAC companies were \$81.5 million, \$15.0 million, and \$3.8 million, respectively. The Company's top five customers in aggregate accounted for 9%, 12%, and 8% of total revenue recognized for each of the years ended December 31, 2017, 2016 and 2015, respectively. No single customer accounted for more than 10% of revenue for the years ended December 31, 2017, 2016 and 2015 or for more than 10% of accounts receivable as of December 31, 2017 and 2016.

Fair Value Measurement

The Company measures its investments based on a fair value hierarchy disclosure framework that prioritizes and ranks the level of market price observability used in measuring assets and liabilities at fair value. Market price observability is affected by a number of factors, including the type of asset or liability and their characteristics. This hierarchy prioritizes the inputs into three broad levels as follows:

- Level 1—Quoted prices in active markets for identical instruments.
- Level 2—Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets.
- Level 3—Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

At December 31, 2017, the Company's cash and cash equivalents balances were \$90.4 million and \$35.1 million, respectively. Cash equivalents consist of highly liquid money market funds and certificates of deposit. At December 31, 2017, the Company has \$24.6 million in certificates of deposit in India, which are included in cash equivalents. At December 31, 2017, the Company has \$10.5 million in money market funds, which are classified as Level 1 and are included in cash and cash equivalents on the Consolidated Balance Sheet. The Company had no investments at December 31, 2017 and 2016.

The carrying values of cash and cash equivalents, accounts receivable, and accounts payable included in the accompanying Consolidated Balance Sheets approximate their fair values principally due to the short-term maturities of these instruments.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Significant estimates include the allowance for doubtful accounts, which is based upon an evaluation of historical amounts written-off, the customers' ability to pay, and general economic conditions; self-insurance accruals; impairment testing of goodwill; and the Company's effective income tax rate (including the impact of unrecognized tax benefits) and deferred tax assets, which are based upon the Company's expectations of future taxable income, allowable deductions, and projected tax credits. Actual results will differ from these estimates.

Revenue Recognition

The Company's revenue consists of fees from software licensing; cloud subscriptions; customer support services and software enhancements (collectively, "maintenance"); fees from implementation and training services, and reimbursements of out-pocket expenses in connection with our services (collectively, "services") and sales of hardware ("hardware").

The Company recognizes license revenue when the following criteria are met: (1) a signed contract is obtained covering all elements of the arrangement, (2) delivery of the product has occurred, (3) the license fee is fixed or determinable, and (4) collection is probable. Revenue recognition for software with multiple-element arrangements requires recognition of revenue using the "residual method" when (a) there is vendor-specific objective evidence (VSOE) of the fair values of all undelivered elements in a multiple-

element arrangement that is not accounted for using long-term contract accounting, (b) VSOE of fair value does not exist for one or more of the delivered elements in the arrangement, and (c) all other applicable revenue-recognition criteria for software revenue recognition are satisfied. For those contracts that contain significant customization or modifications, license revenue is recognized using contract accounting.

Cloud subscriptions includes software as a service (“SaaS”) and arrangements which provide customers with the right to use our software within a cloud-based environment that we provide and manage, where the customer does not have the right to take possession of the software without significant penalties. SaaS and hosting revenues are recognized over the term of the related arrangements. For hosting arrangements, where perpetual licenses are also sold, the initial non-cancellable hosting period generally results in the arrangements being accounted for as service agreements, accordingly, amounts billed for the licenses are recognized over the customer relationship period.

Payment terms for the Company’s software licenses vary. Each contract is evaluated individually to determine whether the fees in the contract are fixed or determinable and whether collectability is probable. Judgment is required in assessing the probability of collection, which is generally based on evaluation of customer-specific information, historical collection experience, and economic market conditions. If market conditions decline, or if the financial conditions of customers deteriorate, the Company may be unable to determine that collectability is probable, and the Company could be required to defer the recognition of revenue until the Company receives customer payments. The Company has an established history of collecting under the terms of its software license contracts without providing refunds or concessions to its customers. Therefore, the Company has determined that the presence of payment terms that extend beyond contract execution in a particular contract do not preclude the conclusion that the fees in the contract are fixed or determinable. Although infrequent, when payment terms in a contract extend beyond our standard terms or twelve months, the Company has determined that such fees are not fixed or determinable and recognizes revenue as payments become due provided that all other conditions for revenue recognition have been met.

The Company’s Maintenance revenue consists of fees for a comprehensive 24 hours per day, 365 days per year program that provides customers with software upgrades, when and if available, which include additional or improved functionality and technological advances incorporating emerging supply chain and industry initiatives. Revenue related to maintenance is generally paid in advance and recognized ratably over the term of the agreement, typically twelve months.

The Company allocates revenue to maintenance and any other undelivered elements of the arrangement based on VSOE of fair value of each element, and such amounts are deferred until the applicable delivery criteria and other revenue recognition criteria have been met. The balance of the revenue, net of any discounts inherent in the arrangement, is recognized at the outset of the arrangement using the residual method as the product licenses are delivered. If the Company cannot objectively determine the fair value of each undelivered element based on the VSOE of fair value, the Company defers revenue recognition until all elements are delivered, all services have been performed, or until fair value can be objectively determined. The Company must apply judgment in determining all elements of the arrangement and in determining the VSOE of fair value for each element, considering the price charged for each product on a stand-alone basis or applicable renewal rates. For arrangements that include future software functionality deliverables, the Company accounts for these deliverables as a separate element of the arrangement. Because the Company does not sell these deliverables on a standalone basis, the Company is not able to establish VSOE of fair value of these deliverables. As a result, the Company defers all revenue under the arrangement until the future functionality has been delivered to the customer.

The Company’s services revenue consists of fees generated from implementation and training services (collectively “professional services”), and reimbursements of out-pocket expenses in connection with our services. Professional services include system planning, design, configuration, testing, and other software implementation support, and are not typically essential to the functionality of the software. Fees from professional services performed by the Company are separately priced and are generally billed on an hourly basis, and revenue is recognized as the services are performed. In certain situations, professional services are rendered under agreements in which billings are limited to contractual maximums or based upon a fixed fee for portions of or all of the engagement. Revenue related to fixed-fee-based contracts is recognized on a proportional performance basis based on the hours incurred on discrete projects within an overall services arrangement. The Company has determined that output measures, or services delivered, approximate the input measures associated with fixed-fee services arrangements. Project losses are provided for in their entirety in the period in which they become known. The total amount of expense reimbursement recorded to revenue was \$17.9 million, \$18.3 million, and \$20.2 million for 2017, 2016 and 2015, respectively.

Hardware revenue is generated from the resale of a variety of hardware products, developed and manufactured by third parties, that are integrated with and complementary to the Company’s software solutions. As part of a complete solution, the Company’s customers periodically purchase hardware from the Company for use with the software licenses purchased from the Company. These products include computer hardware, radio frequency terminal networks, radio frequency identification (RFID) chip readers, bar code printers and scanners, and other peripherals. Hardware revenue is recognized upon shipment to the customer when title passes. The Company generally purchases hardware from the Company’s vendors only after receiving an order from a customer. As a result, the Company generally does not maintain hardware inventory.

Deferred Revenue

Deferred revenue represents amounts collected prior to having completed performance of professional services, maintenance, and significant remaining obligations under license agreements. Deferred revenue also represents amounts billed or collected for cloud subscriptions that are generally billed annually in advance.

Returns and Allowances

The Company has not experienced significant returns or warranty claims to date and, as a result, has not recorded a provision for the cost of returns and product warranty claims at December 31, 2017 or 2016.

The Company records an allowance for doubtful accounts based on the historical experience of write-offs and a detailed assessment of accounts receivable. Additions to the allowance for doubtful accounts generally represent a sales allowance on services revenue, which are recorded to operations as a reduction to services revenue. The total amounts charged to operations were \$1.6 million, \$4.9 million, and \$7.1 million for 2017, 2016 and 2015, respectively. In estimating the allowance for doubtful accounts, management considers the age of the accounts receivable, the Company's historical write-offs, and the creditworthiness of the customer, among other factors. Should any of these factors change, the estimates made by management will also change accordingly, which could affect the level of the Company's future allowances. Uncollectible accounts are written off when it is determined that the specific balance is not collectible.

Property and Equipment

Property and equipment is recorded at cost and consists of furniture, computers, other office equipment, and leasehold improvements. The Company depreciates the cost of furniture, computers, and other office equipment on a straight-line basis over their estimated useful lives (five years for office equipment, seven years for furniture and fixtures). Leasehold improvements are depreciated over the lesser of their useful lives or the term of the lease. Depreciation expense for property and equipment for the years ended December 31, 2017, 2016 and 2015 was approximately \$7.7 million, \$7.5 million, and \$6.4 million, respectively, and was included in "Depreciation and amortization" in the Consolidated Statements of Income.

Property and equipment, at cost, consist of the following (in thousands):

	December 31,	
	2017	2016
Office equipment	\$ 39,644	\$ 36,217
Furniture and fixtures	4,662	4,698
Leasehold improvement	18,494	18,453
Property and equipment, gross	62,800	59,368
Less accumulated depreciation	(47,307)	(41,944)
Property and equipment, net	\$ 15,493	\$ 17,424

Software Development Costs

Research and development expenses are charged to expense as incurred. For the years ended December 31, 2017, 2016 and 2015, the Company did not capitalize any internal research and development costs because the costs incurred between the attainment of technological feasibility for the related software product through the date when the product was available for general release to customers have been insignificant.

The Company determines the amount of development costs capitalizable under the provisions of FASB Codification accounting for costs of computer software to be sold, leased, or marketed. Under this guidance, computer software development costs are charged to R&D expense until technological feasibility is established, after which remaining software production costs are capitalized. The Company has defined technological feasibility as the point in time at which the Company has a detailed program design or a working model of the related product, depending on the type of development efforts, and high-risk development issues have been resolved through end-to-end system testing.

Impairment of Long-Lived Assets

The Company reviews the values assigned to long-lived assets, including property and certain intangible assets, to determine whether events and circumstances have occurred which indicate that the remaining estimated useful lives may warrant revision or that the remaining balances may not be recoverable. In such reviews, undiscounted cash flows associated with these assets are compared

with their carrying value to determine if a write-down to fair value is required. During 2017, 2016 and 2015, the Company did not recognize any impairment charges associated with its long-lived or intangible assets.

The evaluation of asset impairment requires management to make assumptions about future cash flows over the life of the asset being evaluated. These assumptions require significant judgment, and actual results may differ from assumed and estimated amounts.

Goodwill and Impairment of Goodwill

Goodwill

Goodwill represents the excess of purchase price over fair value of net identified tangible and intangible assets and liabilities acquired. The Company does not amortize goodwill, but instead tests goodwill for impairment on at least an annual basis. Goodwill was \$62.2 million at the end of each of the years ended December 31, 2017 and 2016.

Impairment of Goodwill

The Company evaluates the carrying value of goodwill annually as of December 31 and between annual evaluations if events occur or circumstances change that would more likely than not reduce the fair value of the reporting unit below its carrying amount. Such circumstances could include, but are not limited to, (1) a significant adverse change in legal factors or in business climate, (2) unanticipated competition, or (3) an adverse action or assessment by a regulator.

The Company applied the simplified goodwill impairment test for the fiscal year ended December 31, 2017, that permits companies to perform a qualitative assessment based on economic, industry and company-specific factors as the initial step in the annual goodwill impairment test for all or selected reporting units. Based on the results of the qualitative assessment, companies are only required to perform Step 1 of the annual impairment test for a reporting unit if the company concludes that it is not more likely than not that the unit's fair value is less than its carrying amount. To the extent the Company concludes it is more likely than not that a reporting unit's estimated fair value is less than its carrying amount, the two-step approach is applied. The first step would require a comparison of each reporting unit's fair value to the respective carrying value. If the carrying value exceeds the fair value, a second step is performed to measure the amount of impairment loss, if any. The Company did not identify any macroeconomic or industry conditions as of December 31, 2017, that would indicate the fair value of the reporting units were more likely than not to be less than their respective carrying values. If circumstances change or events occur to indicate it is more likely than not that the fair value of any reporting units have fallen below their carrying value, the Company would record an impairment charge based on that difference. The Company performed its periodic review of its goodwill for impairment as of December 31, 2017 and 2016, and did not identify any impairment as a result of the review.

Guarantees and Indemnities

The Company accounts for guarantees in accordance with the guarantee accounting topic in the FASB Codification. Our customer contracts generally contain infringement indemnity provisions. Under those provisions, we generally agree, subject to certain exceptions, to indemnify, defend, and hold harmless the customer in connection with third party claims against the customer alleging that the customer's use of our software products in compliance with their license infringe the third party's patent, copyright, or other intellectual property rights. Conditions to our obligations generally include that we are provided the right to control the defense of the claims and, in general, to control settlement negotiations. Those provisions generally provide also that, if the customer is prevented from using our software because of a third party infringement claim, our sole obligation (in addition to the indemnification, defense, and hold harmless obligation referred to above) is to, at our expense, (i) procure for the customer the right to continue to use the software, (ii) to replace or modify the product so that its use by the customer does not infringe, or, if either of the foregoing are not reasonably feasible, to terminate the customer contract and provide a refund of the unamortized portion of the customer's license fee (based on a five year amortization period). Our customer contracts sometimes also require us to indemnify, defend, and hold harmless the customer in connection with death, personal injury, or property damage claims made by third parties with respect to actions of our personnel or contractors. The indemnity obligations contained in our customer contracts generally have no specified expiration date and no specified monetary limitation on liability. We have not previously incurred costs to settle claims or pay awards under these indemnification obligations. We account for these indemnity obligations in accordance with FASB guidance on accounting for contingencies, and record a liability for these obligations when a loss is probable and reasonably estimable. We have not recorded any liabilities for these contracts as of December 31, 2017, or 2016.

In general, in our customer contracts, the Company warrants to its customers that its software products will perform in all material respects in accordance with the standard published specifications in effect at the time of delivery of the licensed products to the customer for six months after first use of the licensed products, but no more than 24 months after execution of the license agreement. Additionally, the Company warrants to its customers that services will be performed consistent with generally accepted industry standards or specific service levels through completion of the agreed upon services. If necessary, the Company will provide for the

estimated cost of product and service warranties based on specific warranty claims and claim history. However, the Company has not incurred significant recurring expense under product or service warranties. As a result, the Company believes the estimated fair value of these agreements is nominal. Accordingly, the Company has no liabilities recorded for these agreements as of December 31, 2017 and 2016.

Segment Information

The Company has three reportable segments: Americas, EMEA, and APAC as defined by FASB Codification topic for segment reporting. See Note 7 for discussion of the Company's reportable segments.

Basic and Diluted Net Income Per Share

Basic net income per share is computed using net income divided by the weighted average number of shares of common stock outstanding ("Weighted Shares") for the period presented.

Diluted net income per share is computed using net income divided by Weighted Shares and the treasury stock method effect of common equivalent shares ("CESs") outstanding for each period presented. The following is a reconciliation of the shares used in the computation of net income per share for the years ended December 31, 2017, 2016 and 2015 (in thousands, except per share data):

	Year Ended December 31,		
	2017	2016	2015
	(in thousands, except per share data)		
Net income	\$ 116,481	\$ 124,234	\$ 103,475
Earnings per share:			
Basic	\$ 1.68	\$ 1.73	\$ 1.41
Effect of CESs	-	(0.01)	(0.01)
Diluted	<u>\$ 1.68</u>	<u>\$ 1.72</u>	<u>\$ 1.40</u>
Weighted average number of shares:			
Basic	69,175	71,674	73,443
Effect of CESs	249	386	595
Diluted	<u>69,424</u>	<u>72,060</u>	<u>74,038</u>

The number of anti-dilutive CESs in 2017, 2016 and 2015 was immaterial. See Note 2 for further information on those securities.

Accumulated Other Comprehensive Income

Comprehensive income includes net income and foreign currency translation adjustments that are excluded from net income and reflected in shareholders' equity. The entire accumulated other comprehensive income balance as of December 31, 2017 and 2016 represents foreign currency translation adjustments.

Accounting for Income Taxes

We provide for the effect of income taxes on our financial position and results of operations in accordance with the Income Taxes Topic of the ASC. Under this accounting pronouncement, income tax expense is recognized for the amount of income taxes payable or refundable for the current year and for the change in net deferred tax assets or liabilities resulting from events that are recorded for financial reporting purposes in a different reporting period than recorded in the tax return. Management must make significant assumptions, judgments, and estimates to determine our current provision for income taxes and also our deferred tax assets and liabilities and any valuation allowance to be recorded against our net deferred tax asset.

Our judgments, assumptions, and estimates relative to the current provision for income tax take into account current tax laws, our interpretation of current tax laws, allowable deductions, projected tax credits, and possible outcomes of current and future audits conducted by foreign and domestic tax authorities. We do not recognize a tax benefit unless we conclude that it is more likely than not that the benefit will be sustained on audit by the taxing authority based solely on the technical merits of the associated tax position. If the recognition threshold is met, we recognize a tax benefit measured at the largest amount of the tax benefit that, in our judgment, is greater than 50 percent likely to be realized. Changes in tax law or our interpretation of tax laws and the resolution of current and future tax audits could significantly impact the amounts provided for income taxes in our financial position and results of operations. Our assumptions, judgments, and estimates relative to the value of our net deferred tax asset take into account predictions of the

amount and category of future taxable income. Actual operating results and the underlying amount and category of income in future years could render our current assumptions, judgments, and estimates of recoverable net deferred taxes inaccurate, thus materially impacting our financial position and results of operations.

Equity-Based Compensation

The Company accounts for equity-based compensation in accordance with ASC 718, *Compensation – Stock Compensation*. See Note 2 for further information.

2. Equity-Based Compensation

Equity Based Compensation Plans

In May 2007, the Manhattan Associates, Inc. 2007 Stock Incentive Plan (the “2007 Plan”) was approved by the shareholders of the Company and subsequently amended in May 2009 and May 2011. The 2007 Plan provides for the grant of stock options, restricted stock, restricted stock units, and stock appreciation rights. Vesting conditions can be service-based or performance-based, or a combination of both.

As amended, a maximum of 30,000,000 shares are available for grant under the 2007 Plan. Each stock option or stock appreciation right granted is counted against the maximum share limitation as one share, and each share of restricted stock or restricted stock unit granted (including those that are service based or performance based) counts against the maximum share limitation as two shares. Options and stock appreciation rights cannot have a term exceeding seven years. As of December 31, 2017, there were 10,525,434 shares available for issuance under the amended 2007 Plan. The 2007 Plan is administered by the Compensation Committee of the Board of Directors. The committee has the authority to interpret the provisions thereof.

The restricted stock awards contain vesting provisions that are 50% service based and 50% performance based for employee awards and 100% service based for non-employee members of the Board of Directors (“Outside Directors”). The employee awards have a four year vesting period, with the performance portion tied to annual revenue and earnings per share targets. The awards to Outside Directors have a one year vesting period. The Company recognizes compensation cost for service-based restricted awards with graded vesting on a straight-line basis over the entire vesting period, with the amount of compensation cost recognized at any date at least equal to the portion of the grant-date value of the award that is vested at that date. For its performance-based restricted stock awards with graded vesting, the Company recognizes compensation cost on an accelerated basis applying straight-line expensing for each separately vesting portion of each award.

In January 2012, in order to simplify equity grant administration, the Company changed its practice of granting restricted stock in favor of granting restricted stock *units*, or RSUs, which convert to the Company’s common stock upon vesting. There is no material difference between the grant of restricted stock and the grant of RSUs to either the Company or the recipients receiving the grants; however, in contrast to the granting of restricted stock, no stock will actually be issued under the granting of RSUs until the units vest. Currently, the Company does not grant stock options.

Restricted Stock Unit Awards

A summary of changes in unvested units of restricted stock for the year ended December 31, 2017 are as follows:

	Number of Units	Grant Date Fair Value
Outstanding at January 1, 2017	1,029,230	\$45.38
Granted	460,185	49.01
Vested	(396,678)	37.55
Forfeited	(56,102)	50.90
Outstanding at December 31, 2017	<u>1,036,635</u>	<u>\$46.69</u>

The Company recorded equity-based compensation related to restricted stock and RSUs (collectively “restricted stock awards”) of \$16.2 million, \$15.9 million, and \$14.5 million during the years ended December 31, 2017, 2016 and 2015, respectively. The total fair value of restricted stock awards vested during the years ended December 31, 2017, 2016 and 2015, based on market value at the vesting dates was \$18.8 million, \$26.0 million, and \$31.2 million, respectively. The weighted average grant-date fair value of RSUs granted during fiscal year 2017, 2016 and 2015 was \$49.01, \$55.35 and \$51.99, respectively. As of December 31, 2017, unrecognized compensation cost related to unvested RSU totaled \$26.1 million and is expected to be recognized over a weighted average period of approximately 2.3 years. In January 2017, we elected to recognize forfeitures of equity-based payments as they occur.

Included in the RSU grants for the year ended December 31, 2017 are 166,866 units that have performance-based vesting criteria. As noted above, the performance criteria are tied to the Company's 2017 financial performance. As of December 31, 2017, the associated equity-based compensation expense has been recognized for the portion of the award attributable to the 2017 performance criteria.

3. Income Taxes

The Company is subject to future federal, state, and foreign income taxes and has recorded net deferred tax assets on the Consolidated Balance Sheets at December 31, 2017 and 2016. Deferred tax assets and liabilities are determined based on the difference between the financial accounting and tax bases of assets and liabilities. Significant components of the Company's deferred tax assets and liabilities as of December 31, 2017 and 2016 are as follows (in thousands):

	December 31,	
	2017	2016
Deferred tax assets:		
Accounts receivable	\$ 618	\$ 1,034
Accrued liabilities	2,571	5,747
Equity-based compensation	3,732	5,535
Capitalized costs	595	861
Accrued sales taxes	257	439
Deferred rent	336	939
State tax credits	5,870	4,650
Foreign subsidiary net operating losses	278	212
Valuation allowance	(4,084)	(4,031)
Other	297	805
	<u>10,470</u>	<u>16,191</u>
Deferred tax liabilities:		
Intangible assets	7,480	11,056
Depreciation	1,182	2,321
	<u>8,662</u>	<u>13,377</u>
Net deferred tax assets	<u>\$ 1,808</u>	<u>\$ 2,814</u>

The components of income from domestic and foreign operations before income tax expense for the years ended December 31, 2017, 2016 and 2015 are as follows (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Domestic	\$ 177,314	\$ 186,234	\$ 152,040
Foreign	7,519	9,873	10,801
Total	<u>\$ 184,833</u>	<u>\$ 196,107</u>	<u>\$ 162,841</u>

The components of the income tax provision for the years ended December 31, 2017, 2016 and 2015 are as follows (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Current:			
Federal	\$ 53,998	\$ 56,053	\$ 47,195
State	6,595	8,204	6,308
Foreign	6,185	5,819	4,331
	<u>66,778</u>	<u>70,076</u>	<u>57,834</u>
Deferred:			
Federal	1,590	2,086	1,252
State	35	(268)	(300)
Foreign	(51)	(21)	580
	<u>1,574</u>	<u>1,797</u>	<u>1,532</u>
Total	<u>\$ 68,352</u>	<u>\$ 71,873</u>	<u>\$ 59,366</u>

The Company did not have the income tax benefits related to the exercise of stock options for the year ended December 31, 2017 as the remaining outstanding stock options were exercised in 2016. The income tax benefits related to the exercise of stock options were approximately \$0.1 million and \$2.7 million for the years ended December 31, 2016 and 2015, respectively.

As a result of losses in foreign locations, the Company has net operating loss carry-forwards (“NOLs”) of approximately \$1.2 million available to offset future income. Approximately \$1.0 million of the NOLs expire in 2018 to 2026 and the remainder does not expire. The Company has established a valuation allowance for substantially all of these NOLs because the ability to utilize them is not more likely than not.

The Company has tax credit carry-forwards of approximately \$7.4 million available to offset future state tax. These tax credit carry-forwards expire in 2018 to 2027. These credits represent a deferred tax asset of \$5.9 million after consideration of the federal benefit of state tax deductions. A valuation allowance of \$3.2 million has been established for these credits because the ability to use them is not more likely than not.

At December 31, 2017 the Company had approximately \$49.9 million of undistributed earnings and profits. The Company recorded a provisional estimated transition tax of about \$3.3 million in the fourth quarter as a result of the Tax Cuts and Jobs Act, enacted in December 2017. The undistributed earnings and profits are considered previously taxed income and would not be subject to U.S. income taxes upon repatriation of those earnings, in the form of dividends. The undistributed earnings and profits are considered to be permanently reinvested, accordingly no provision for local withholdings taxes have been provided, however, upon repatriation of those earnings, in the form of dividends, the Company could be subject to additional local withholding taxes.

The following is a summary of the items that cause recorded income taxes to differ from taxes computed using the statutory federal income tax rate for the years ended December 31, 2017, 2016 and 2015:

	Year Ended December 31,		
	2017	2016	2015
Statutory federal income tax rate	35.0 %	35.0%	35.0%
Effect of:			
State income tax, net of federal benefit	2.3	2.7	2.5
State credit carryforwards	(0.1)	(0.2)	(0.3)
U.S. federal R&D tax credit	(0.8)	(0.7)	(0.7)
Tax Reform	1.5	-	-
Excess benefit of equity compensation	(1.0)	-	-
Foreign operations	(0.1)	(0.2)	(0.4)
Tax contingencies	-	0.6	0.5
Other permanent differences	0.3	(0.5)	(0.1)
Change in valuation allowance	(0.1)	(0.1)	-
Income taxes	<u>37.0 %</u>	<u>36.6%</u>	<u>36.5%</u>

On December 22, 2017, the United States enacted tax reform legislation commonly known as the Tax Cuts and Jobs Act ('the Act'), resulting in significant modifications to existing law. The Company follows the guidance in SEC Staff Accounting Bulletin 118 ('SAB 118'), which provides additional clarification regarding the application of ASC Topic 740 in situation where the Company does not have the necessary information available, prepared, or analyzed in reasonable detail to complete the accounting for certain income tax effects of the Act for the reporting period in which the Act was enacted. SAB 118 provides for a measurement period beginning in the reporting period that includes the Act's enactment date and ending when the Company has obtained, prepared, and analyzed the information needed in order to complete the accounting requirements but in no circumstances should the measurement period extend beyond one year from the enactment date.

In December 2017, the Company recorded a provisional estimate of \$3.3 million for the one-time deemed repatriation transition tax on unrepatriated foreign earnings. The provisional amount is based on information currently available, including estimated tax earnings and profits from foreign investments. The Company continues to gather and analyze information, including historical adjustments to earnings and profits of foreign subsidiaries, in order to complete the accounting for the effects of the estimated transition tax. The Company also recorded a provisional write-down to deferred tax assets of \$0.7 million related to changes in section 162(m), Internal Revenue Code of 1986, regarding deductions for excessive employee compensation. The Company continues to gather and analyze information, including the definition of an employee contract for stock grants not vested as of the enactment date of the Act. It is the intention of the Company to complete the necessary analysis within the measurement period.

The Act provides for the global intangible low-taxed income ('GILTI') provision which requires the Company in its U.S. income tax return, to include foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. The FASB Staff provided additional guidance to address the accounting for the effects of the provisions related to the taxation of GILTI, noting that companies should make an accounting policy election to recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to include the tax expense in the year it is incurred. The Company has not completed its analysis of the effects of the GILTI provisions and will further consider the accounting policy election within the measurement period.

The Company continues to gather and analyze information related to the state and local impact of tax reform, including the state and local tax impact of the transition tax. The Company intends to complete the necessary analysis within the measurement period.

Accounting for the remaining income tax effects of the Act which impact our tax provision has been completed as of the current year and included in the Company's financial statements as of December 31, 2017. As a result of the Act, the Company recorded a one-time tax benefit of \$1.2 million, from the remeasurement of deferred tax assets and liabilities from 35% to 21%.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows for the years ended December 31, 2017, 2016 and 2015 (in thousands):

	December 31,		
	2017	2016	2015
Unrecognized tax benefits at January 1,	\$ (6,938)	\$ (5,789)	\$ (4,455)
Gross amount of increases in unrecognized tax benefits as a result of tax positions taken during a prior period	(789)	(756)	(1,687)
Gross amount of decreases in unrecognized tax benefits as a result of tax positions taken during a prior period	145	270	292
Gross amount of increases in unrecognized tax benefits as a result of tax positions taken during the current period	-	(791)	-
Reductions to unrecognized tax benefits as a result of a lapse of the applicable statute of limitations	163	128	61
Unrecognized tax benefits at December 31,	<u>\$ (7,419)</u>	<u>\$ (6,938)</u>	<u>\$ (5,789)</u>

The Company's unrecognized tax benefits totaled \$7.4 million and \$6.9 million as of December 31, 2017 and 2016, respectively. Included in these amounts are unrecognized tax benefits totaling \$5.6 million and \$5.1 million as of December 31, 2017 and 2016, respectively, which, if recognized, would affect the effective tax rate.

The Company recognizes potential accrued interest and penalties related to unrecognized tax benefits within its global operations in income tax expense. For the years ended December 31, 2017, 2016 and 2015, the Company recognized \$0.3 million, \$0.3 million, and \$0.2 million, respectively, of expense for the potential payment of interest and penalties. Accrued interest and penalties were \$1.7 million and \$1.5 million for the years ended December 31, 2017 and 2016. The Company conducts business globally and, as a result, files income tax returns in the United State federal jurisdiction and in many state and foreign jurisdictions. The Company is generally no longer subject to U.S. federal, state, and local, or non-US income tax examinations for the years before 2012. Due to the expiration

of statutes of limitations in multiple jurisdictions globally during 2018, the Company anticipates it is reasonably possible that unrecognized tax benefits may decrease by \$0.9 million.

4. Shareholders' Equity

During 2017, 2016 and 2015, the Company purchased 2,695,295, 2,821,488, and 1,721,457 shares of the Company's common stock for \$124.9 million, \$158.4 million, and \$101.6 million, respectively, through open market transactions as part of a publicly-announced share repurchase program. In February 2018, our Board of Directors authorized the Company to repurchase up to an aggregate of \$50 million of the Company's common stock.

5. Commitments and Contingencies

Leases

Rents charged to expense were \$7.1 million, \$6.8 million, and \$6.3 million for the years ended December 31, 2017, 2016 and 2015, respectively. In 2014, the Company amended its Atlanta headquarters lease to obtain additional space and extend the lease term. As part of such lease agreement, the Company will receive reimbursement of \$1.3 million from the landlord in 2018 for leasehold improvements. The entire cash rent obligation is being amortized to expense on a straight line basis over the lease term.

Aggregate future minimum lease payments under noncancellable operating leases as of December 31, 2017 are as follows (in thousands):

Year Ending December 31,	
2018	\$ 7,308
2019	5,865
2020	5,360
2021	5,277
2022	5,056
Thereafter	14,363
Total minimum payments required	\$ 43,229

There are no future minimum lease payments under capital leases as of December 31, 2017.

Legal and Other Matters

From time to time, the Company may be involved in litigation relating to claims arising out of its ordinary course of business, and occasionally legal proceeding not in the ordinary course. Many of the Company's installations involve products that are critical to the operations of its clients' businesses. Any failure in a Company product could result in a claim for substantial damages against the Company, regardless of the Company's responsibility for such failure. Although the Company attempts to limit contractually its liability for damages arising from product failures or negligent acts or omissions, there can be no assurance that the limitations of liability set forth in its contracts will be enforceable in all instances. The Company is not currently a party to any ordinary course legal proceeding or other legal proceedings the result of which it believes is likely to have a material adverse impact upon its business, financial position, results of operations, or cash flows. The Company expenses legal costs associated with loss contingencies as such legal costs are incurred.

6. Employee Benefit Plan

The Company sponsors the Manhattan Associates 401(k) Plan and Trust (the "401(k) Plan"), a qualified profit sharing plan with a 401(k) feature covering substantially all employees of the Company. Under the 401(k) Plan's deferred compensation arrangement, eligible employees who elect to participate in the 401(k) Plan may contribute up to 60% of eligible compensation up to \$18,000, as defined, to the 401(k) Plan. The Internal Revenue Service sets the eligible compensation limit at \$270,000 for 2017. Since 2012, the Company has provided a 50% matching contribution up to 6% of eligible compensation being contributed after the participant's first year of employment. During the years ended December 31, 2017, 2016 and 2015, the Company made matching contributions to the 401(k) Plan of \$4.1 million, \$4.0 million, and \$4.0 million, respectively.

7. Segment Reporting

The Company manages the business by three geographic reportable segments: the Americas, EMEA, and APAC. All segments derive revenue from the sale and implementation of the Company's supply chain execution and planning solutions. The individual products sold by the segments are similar in nature and are all designed to help companies manage the effectiveness and efficiency of their supply chain. The Company uses the same accounting policies for each reportable segment. The chief executive officer and chief financial officer evaluate performance based on revenue and operating results for each segment.

The Americas segment charges royalty fees to the other segments based on software licenses sold by those reportable segments. The royalties, which totaled \$7.0 million, \$3.5 million, and \$3.3 million in 2017, 2016 and 2015, respectively, are included in cost of revenue for each segment with a corresponding reduction in America's cost of revenue. The revenues represented below are from external customers only. The geographical-based costs consist of costs of professional services personnel, direct sales and marketing expenses, cost of infrastructure to support the employees and customer base, billing and financial systems, management and general and administrative support. There are certain corporate expenses included in the Americas segment that are not charged to the other segments, including research and development, certain marketing and general and administrative costs that support the global organization, and the amortization of acquired developed technology. Included in the Americas' costs are all research and development costs including the costs associated with the Company's India operations.

Amortization expense on intangible assets in 2017, 2016 and 2015 was immaterial.

In accordance with the segment reporting topic of the FASB Codification, the Company has included a summary of financial information by reportable segment. The following table presents the revenues, expenses, and operating income by reportable segment for the years ended December 31, 2017, 2016 and 2015 (in thousands):

	Year Ended December 31,							
	2017				2016			
	Americas	EMEA	APAC	Consolidated	Americas	EMEA	APAC	Consolidated
Revenue:								
Software license	\$ 44,145	\$ 22,875	\$ 5,293	\$ 72,313	\$ 65,351	\$ 9,187	\$ 4,675	\$ 79,213
Cloud subscriptions	9,274	322	-	9,596	5,783	-	-	5,783
Maintenance	116,426	18,710	7,862	142,998	111,592	15,117	7,139	133,848
Services	264,186	43,431	18,885	326,502	296,983	41,969	12,833	351,785
Hardware	43,118	11	61	43,190	33,875	9	44	33,928
Total revenue	477,149	85,349	32,101	594,599	513,584	66,282	24,691	604,557
Costs and Expenses:								
Cost of revenue	195,152	36,124	14,457	245,733	206,687	30,711	12,481	249,879
Operating expenses	134,167	12,761	4,312	151,240	133,637	12,983	4,661	151,281
Depreciation and amortization	8,324	527	209	9,060	8,313	528	249	9,090
Restructuring charge	2,813	108	-	2,921	-	-	-	-
Total costs and expenses	340,456	49,520	18,978	408,954	348,637	44,222	17,391	410,250
Operating income	\$ 136,693	\$ 35,829	\$ 13,123	\$ 185,645	\$ 164,947	\$ 22,060	\$ 7,300	\$ 194,307

	Year Ended December 31, 2015			
	Americas	EMEA	APAC	Consolidated
Revenue:				
Software license	\$ 60,690	\$ 9,566	\$ 3,742	\$ 73,998
Cloud subscriptions	4,617	-	-	4,617
Maintenance	102,323	14,960	6,171	123,454
Services	267,434	45,516	11,837	324,787
Hardware	29,412	34	69	29,515
Total revenue	464,476	70,076	21,819	556,371
Costs and Expenses:				
Cost of revenue	190,190	33,483	11,755	235,428
Operating expenses	133,511	13,781	4,441	151,733
Depreciation and amortization	6,952	502	310	7,764
Restructuring charge	-	-	-	-
Total costs and expenses	330,653	47,766	16,506	394,925
Operating income	\$ 133,823	\$ 22,310	\$ 5,313	\$ 161,446

The following table presents the goodwill, long-lived assets, and total assets by reportable segment as of December 31, 2017 and 2016 (in thousands):

	As of December 31, 2017				As of December 31, 2016			
	Americas	EMEA	APAC	Consolidated	Americas	EMEA	APAC	Consolidated
Goodwill, net	\$ 54,766	\$ 5,519	\$ 1,963	\$ 62,248	\$ 54,766	\$ 5,499	\$ 1,963	\$ 62,228
Long lived assets	19,424	2,846	527	22,797	22,488	1,923	616	25,027
Total assets	271,704	32,308	10,983	314,995	260,478	27,688	8,974	297,140

For the years ended December 31, 2017, 2016 and 2015, we derived revenue from sales to customers outside the United States of approximately \$168.3 million, \$144.8 million, and \$131.3 million, respectively. Our remaining revenue was derived from domestic sales.

License revenues related to our warehouse and non-warehouse product groups for the years ended December 31, 2017, 2016 and 2015, are as follows (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Warehouse	\$ 52,579	\$ 48,311	\$ 50,097
Non-Warehouse	19,734	30,902	23,901
Total software license revenue	\$ 72,313	\$ 79,213	\$ 73,998

8. Restructuring Charge

In May 2017, the Company eliminated about 100 positions due to retail sector headwinds and to align our services capacity with demand. The Company recorded a restructuring charge of approximately \$2.9 million pretax (\$1.8 million after-tax or \$0.03 per fully diluted share) in 2017. The charge primarily consists of employee severance, employee transition cost and outplacement services. The charge is classified in "Restructuring charge" in the Company's Consolidated Statements of Income.

The following table summarizes the segment activity in the restructuring accrual for the year ended December 31, 2017:

	Americas	EMEA	APAC	Consolidated
	(in thousands)			
Restructuring charge	\$ 2,813	\$ 108	\$ -	\$ 2,921
Cash payments	(2,813)	(108)	-	(2,921)
Restructuring accrual balance at December 31, 2017	\$ -	\$ -	\$ -	\$ -

9. Subsequent Events

The Company evaluated all subsequent events that occurred after the date of the accompanying financial statements and determined that there were no events or transactions during this subsequent event reporting period which require recognition or disclosure in the Company's financial statements.

10. Quarterly Results of Operations (Unaudited)

Following is the quarterly results of operations of the Company for the years ended December 31, 2017 and 2016. The unaudited quarterly results have been prepared on substantially the same basis as the audited Consolidated Financial Statements.

	Quarter Ended							
	Mar 31, 2016	Jun 30, 2016	Sep 30, 2016	Dec 31, 2016	Mar 31, 2017	Jun 30, 2017	Sep 30, 2017	Dec 31, 2017
	(In thousands, except per share data)							
Statements of Income Data:								
Revenue:								
Software license	\$ 19,617	\$ 18,882	\$ 20,012	\$ 20,702	\$ 21,277	\$ 20,064	\$ 16,260	\$ 14,712
Cloud subscriptions	990	1,749	1,621	1,423	1,496	2,378	2,534	3,188
Maintenance	31,757	32,841	34,424	34,826	33,376	35,959	36,338	37,325
Services	88,735	91,866	89,613	81,571	79,781	85,327	84,211	77,183
Hardware	8,761	9,554	6,543	9,070	7,559	10,413	13,540	11,678
Total revenue	149,860	154,892	152,213	147,592	143,489	154,141	152,883	144,086
Costs and expenses:								
Cost of license	2,322	1,361	1,706	1,429	1,352	1,438	1,316	1,377
Cost of cloud subscriptions, maintenance and services	56,862	54,053	55,346	53,374	54,899	53,109	51,103	48,934
Cost of hardware	5,629	7,103	4,626	6,068	5,370	7,766	10,653	8,416
Research and development	14,706	13,458	13,389	13,183	14,225	14,102	14,747	14,630
Sales and marketing	12,588	12,015	10,003	13,617	11,789	11,732	10,739	13,222
General and administrative	12,448	12,368	11,225	12,281	11,872	11,387	11,031	11,764
Depreciation and amortization	2,206	2,266	2,334	2,284	2,262	2,326	2,275	2,197
Restructuring charge	-	-	-	-	-	3,022	(77)	(24)
Total costs and expenses	106,761	102,624	98,629	102,236	101,769	104,882	101,787	100,516
Operating income	43,099	52,268	53,584	45,356	41,720	49,259	51,096	43,570
Other income (loss), net	520	654	210	416	(371)	(68)	207	(580)
Income before income taxes	43,619	52,922	53,794	45,772	41,349	49,191	51,303	42,990
Income tax provision	16,139	19,581	20,298	15,855	13,125	18,047	18,704	18,476
Net income	\$ 27,480	\$ 33,341	\$ 33,496	\$ 29,917	\$ 28,224	\$ 31,144	\$ 32,599	\$ 24,514
Basic earnings per share	\$ 0.38	\$ 0.46	\$ 0.47	\$ 0.42	\$ 0.40	\$ 0.45	\$ 0.47	\$ 0.36
Diluted earnings per share	\$ 0.38	\$ 0.46	\$ 0.47	\$ 0.42	\$ 0.40	\$ 0.45	\$ 0.47	\$ 0.36
Shares used in computing basic earnings per share	72,630	71,880	71,403	70,742	69,973	69,227	68,928	68,485
Shares used in computing diluted earnings per share	73,020	72,228	71,743	71,148	70,247	69,421	69,135	68,791

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

None.

Item 9A. *Controls and Procedures*

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures designed to ensure that information required to be disclosed in reports filed under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

No system of controls, no matter how well designed and operated, can provide absolute assurance that the objectives of the system of controls are met, and no evaluation of controls can provide absolute assurance that the system of controls has operated effectively in all cases. Our disclosure controls and procedures, however, are designed to provide reasonable assurance that the objectives of disclosure controls and procedures are met.

As of the end of the period covered by this report, our Chief Executive Officer and Chief Financial Officer evaluated, with the participation of management, the effectiveness of our disclosure controls and procedures. Based on the evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective to provide reasonable assurance that the objectives of disclosure controls and procedures are met.

Management's Report on Internal Control over Financial Reporting

Management's assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2017, and the report of Ernst & Young LLP on the effectiveness of the Company's internal control over financial reporting are contained on pages 41 and 42 of this report.

Change in Internal Control over Financial Reporting

During the fourth quarter of 2017, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting, including any corrective actions with regard to material weaknesses.

Item 9B. *Other Information*

None.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

The information required by this item is incorporated by reference from the information contained in our Proxy Statement for the Annual Meeting of Shareholders expected to be filed with the SEC on or prior to April 6, 2018, under the captions “Election of Directors,” “Executive Officers,” “Section 16(a) Beneficial Ownership Reporting Compliance,” “Code of Ethics,” and “Board Committees.”

Item 11. *Executive Compensation*

The information required by this item is incorporated by reference from the relevant information contained in our Proxy Statement for the Annual Meeting of Shareholders expected to be filed with the SEC on or prior to April 6, 2018, under the captions “Director Compensation,” “Executive Compensation,” “Compensation Committee Interlocks and Insider Participation,” and “Compensation Committee Report.”

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

The information required by this item is incorporated by reference from the relevant information contained in our Proxy Statement for the Annual Meeting of Shareholders expected to be filed with the SEC on or prior to April 6, 2018, under the caption “Security Ownership of Certain Beneficial Owners and Management.” The information required by this item with respect to the Company’s securities authorized for issuance under equity compensation plans is included in Part II, Item 5 of this Annual Report on Form 10-K and is incorporated by reference herein.

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

The information required by this item is incorporated by reference from the relevant information contained in our Proxy Statement for the Annual Meeting of Shareholders expected to be filed with the SEC on or prior to April 6, 2018, under the captions “Related Party Transactions” and “Election of Directors.”

Item 14. *Principal Accountant Fees and Services*

The information required by this item is incorporated by reference from the relevant information contained in our Proxy Statement for the Annual Meeting of Shareholders expected to be filed with the SEC on or prior to April 6, 2018, under the caption “Ratification of Appointment of Independent Registered Public Accounting Firm.”

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) 1. *Financial Statements.*

The response to this item is submitted as a separate section of this Form 10-K. See Item 8.

2. *Financial Statement Schedule.*

The following financial statement schedule is filed as a part of this report:

SCHEDULE II
MANHATTAN ASSOCIATES, INC. AND SUBSIDIARIES
VALUATION AND QUALIFYING ACCOUNTS
(in thousands)

<u>Classification:</u>	<u>Balance at Beginning of Period</u>	<u>Additions Charged to Operations</u>	<u>Net Deductions</u>	<u>Balance at End of Period</u>
Allowance for Doubtful Accounts				
For the year ended:				
December 31, 2015	\$ 4,164	\$ 7,130	\$ 4,263 (a)	\$ 7,031
December 31, 2016	\$ 7,031	\$ 4,889	\$ 8,325 (a)	\$ 3,595
December 31, 2017	\$ 3,595	\$ 1,574	\$ 2,477 (a)	\$ 2,692
Deferred Tax Asset Valuation Allowance				
For the year ended:				
December 31, 2015	\$ 5,071	\$ -	\$ 155 (b)	\$ 4,916
December 31, 2016	\$ 4,916	\$ -	\$ 885 (b)	\$ 4,031
December 31, 2017	\$ 4,031	\$ 53	\$ - (b)	\$ 4,084
Restructuring Charge Accrual				
For the year ended:				
December 31, 2017	\$ -	\$ 2,921	\$ 2,921 (c)	\$ -

(a) Represents write-offs of accounts, net of recoveries.

(b) Represents current year releases credited to expenses and current year reductions due to decreases in net deferred tax assets.

(c) Represents current year cash payments.

All other schedules are omitted because they are not required or the required information is shown in the consolidated financial statements or notes thereto.

3. *Exhibits.*

See (b) below.

(b) The exhibits listed below under "Exhibit Index" are filed with or incorporated by reference in this Report. Where such filing is made by incorporation by reference to a previously filed registration statement or report, such registration statement or report is identified in parentheses.

(c) See Item 15(a)(2).

Item 16. Form 10-K Summary

None.

EXHIBIT INDEX

The following exhibits are filed with this Report.

<u>Exhibit Number</u>	<u>Description</u>
3.1	<u>Articles of Incorporation of the Registrant dated February 24, 1998 (Incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2014 (File No. 00023999), filed on July 29, 2014).</u>
3.2	<u>Amended Bylaws of the Registrant (As Amended Effective October 13, 2010).(Incorporated by reference to Exhibit 3.2 to the Company's Form 8-K (File No. 000-23999), filed on October 19, 2010).</u>
4.1	<u>Provisions of the Articles of Incorporation and Bylaws of the Registrant defining rights of the holders of common stock of the Registrant (Incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1 (File No. 333-47095), filed on February 27, 1998).</u>
4.2	<u>Specimen Stock Certificate (Incorporated by reference to Exhibit 4.2 to the Company's Pre-Effective Amendment No. 1 to its Registration Statement on Form S-1 (File No. 333-47095), filed on April 2, 1998).</u>
10.1(a)	<u>Lease Agreement by and between Wildwood Associates, a Georgia general partnership, and the Registrant dated September 24, 1997 (Incorporated by reference to Exhibit 10.1 to the Company's Registration Statement on Form S-1 (File No. 333-47095), filed on February 27, 1998).</u>
(b)	<u>First Amendment to Lease between Wildwood Associates, a Georgia general partnership, and the Registrant dated October 31, 1997 (Incorporated by reference to Exhibit 10.2 to the Company's Registration Statement on Form S-1 (File No. 333-47095), filed on February 27, 1998).</u>
(c)	<u>Second Amendment to Lease Agreement between Wildwood Associates, a Georgia general partnership, and the Registrant, dated February 27, 1998 (Incorporated by reference to Exhibit 10.8 to the Company's Pre-Effective Amendment No. 1 to its Registration Statement on Form S-1 (File No. 333-47095), filed on April 2, 1998).</u>
(d)	<u>Third Amendment to Lease Agreement between Wildwood Associates and the Registrant, dated October 24, 2000 (Incorporated by reference to Exhibit 10.9 to the Company's Annual Report for the period ended December 31, 2000 (File No. 000-23999), filed on April 2, 2001).</u>
10.2(a)	<u>Lease Agreement by and between Wildwood Associates, a Georgia general partnership, and the Registrant, dated June 25, 2001 (Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report for the period ended June 30, 2001 (File No. 000-23999), filed August 14, 2001).</u>
(b)	<u>First Amendment to Lease Agreement between Wildwood Associates, and the Registrant, dated June 10, 2002 (Incorporated by reference to Exhibit 10.6 to the Company's Annual Report for the period ended December 31, 2006 (File No. 000-23999), filed on March 14, 2007).</u>
(c)	<u>Second Amendment to Lease Agreement between 2300 Windy Ridge Parkway Investors LLC, and the Registrant, dated February 27, 2007 (Incorporated by reference to Exhibit 10.7 to the Company's Annual Report for the period ended December 31, 2006 (File No. 000-23999), filed on March 14, 2007).</u>
(d)	<u>Third Amendment to Lease Agreement between 2300 Windy Ridge Parkway Investors LLC, and the Registrant, dated June 14, 2007 (Incorporated by reference to Exhibit 10.2(d) to the Company's Annual Report for the period ended December 31, 2014 (File No. 000-23999), filed on February 5, 2015).</u>
(e)	<u>Fourth Amendment to Lease Agreement between SP4 2300 Windy Ridge LP, and the Registrant, dated August 14, 2012 (Incorporated by reference to Exhibit 10.2(e) to the Company's Annual Report for the period ended December 31, 2014 (File No. 000-23999), filed on February 5, 2015).</u>
(f)	<u>Fifth Amendment to Lease Agreement between 2300 Windy Ridge LLC, and the Registrant, dated May 19, 2014 (Incorporated by reference to Exhibit 10.2(f) to the Company's Annual Report for the period ended December 31, 2014 (File No. 000-23999), filed on February 5, 2015).</u>
(g)	<u>Sixth Amendment to Lease Agreement between 2300 Windy Ridge LLC, and the Registrant, dated August 13, 2014 (Incorporated by reference to Exhibit 10.2(g) to the Company's Annual Report for the period ended December 31, 2014 (File No. 000-23999), filed on February 5, 2015).</u>

Exhibit Number	Description
(h)	Seventh Amendment to Lease Agreement between 2300 Windy Ridge LLC and the Registrant, dated April 29, 2015 (Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2015 (File No. 000-23999), filed on July 28, 2015).
10.3	Agreement to Build and Lease between Orchid Apartments Private Limited and Manhattan Associates India Development Centre Private Limited, executed on November 19, 2004 (Incorporated by reference to Exhibit 10.8 to the Company's Annual Report for the period ended December 31, 2004 (File No. 000-23999), filed on March 16, 2005).
10.4	Lease Agreement between IGE Energy Services (UK) Limited, Manhattan Associates Limited and Manhattan Associates, Inc., dated February 1, 2005 (Incorporated by reference to Exhibit 10.9 to the Company's Annual Report for the period ended December 31, 2004 (File No. 000-23999), filed on March 16, 2005).
10.5	Form of Director and Officer Indemnification Agreement (Incorporated by reference to Exhibit 10.2 to the Company's Form 8-K (File No. 000-23999) filed on April 4, 2013).
10.6*	Summary Plan Description of the Registrant's 401(k) Plan and Trust, effective January 1, 1995 (Incorporated by reference to Exhibit 10.4 to the Company's Registration Statement on Form S-1 (File No. 333-47095), filed on February 27, 1998).
10.7(a)*	Manhattan Associates, Inc. 1998 Stock Incentive Plan (Incorporated by reference to Exhibit 10.10 to the Company's Registration Statement on Form S-1 (File No. 333-47095), filed on February 27, 1998).
(b)*	First Amendment to the Manhattan Associates, Inc. 1998 Stock Incentive Plan (Incorporated by reference to Exhibit 10.22 to the Company's Annual Report for the period ended December 31, 1998 (File No. 000-23999), filed on March 31, 1999).
(c)*	Second Amendment to the Manhattan Associates, Inc. 1998 Stock Incentive Plan (Incorporated by reference to Exhibit 10.23 to the Company's Annual Report for the period ended December 31, 1998 (File No. 000-23999), filed on March 31, 1999).
(d)*	Third Amendment to the Manhattan Associates, Inc. 1998 Stock Incentive Plan (Incorporated by reference to Exhibit 10.24 to the Company's Annual Report for the period ended December 31, 1998 (File No. 000-23999), filed on March 31, 1999).
(e)*	Fourth Amendment to the Manhattan Associates, Inc. 1998 Stock Incentive Plan (Incorporated by reference to Exhibit 10.25 to the Company's Annual Report for the period ended December 31, 1999 (File No. 000-23999), filed on March 30, 2000).
(f)*	Fifth Amendment to the Manhattan Associates, Inc. 1998 Stock Incentive Plan (Incorporated by reference to Exhibit 4.8 to the Company's Form S-8 (File No. 333-68968), filed on September 5, 2001).
(g)*	Sixth Amendment to the Manhattan Associates, Inc. 1998 Stock Incentive Plan (Incorporated by reference to Annex A to the Company's Proxy Statement for its Annual Meeting held May 17, 2002 (File No. 000-23999), filed on April 24, 2002).
(h)*	Amendment No. 7 to the Manhattan Associates, Inc. 1998 Stock Incentive Plan (Incorporated by reference to Exhibit 4.10 to the Company's Form S-8 (File No. 333-105913), filed on June 6, 2003).
10.8*	Form of Composite Stock Option Agreement (Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report for the period ended March 31, 2006 (File No. 000-23999), filed on May 4, 2006).
10.9(a)*	Executive Employment Agreement by and between the Registrant and Peter F. Sinisgalli, effective as of February 25, 2004 (Incorporated by reference to Exhibit 10.28 to the Company's Annual Report for the period ended December 31, 2003 (File No. 000-23999), filed on March 15, 2004).
(b)*	Modification dated July 19, 2007 by and between the Company and Peter F. Sinisgalli to the Executive Employment Agreement dated February 25, 2004 (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 000-23999), filed on July 24, 2007).
10.10*	Executive Employment Agreement by and between the Registrant and Peter F. Sinisgalli, effective as of April 13, 2012 (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 000-23999), filed on December 23, 2011).

Exhibit Number	Description
10.11*	<u>Separation and Non-Competition Agreement by and between the Registrant and Peter F. Sinisgalli, effective as of February 25, 2004 (Incorporated by reference to Exhibit 10.29 to the Company's Annual Report for the period ended December 31, 2003 (File No. 000-23999), filed on March 15, 2004).</u>
10.12(a)*	<u>Form of Executive Employment Agreement (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 000-23999) filed on April 4, 2013).</u>
(b)*	<u>Updated Schedule to Form of Executive Employment Agreement of Initial Salaries and Target Bonus Opportunities for Named Executive Officers (Incorporated by reference to Exhibit 10.1(b) to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2013 (File No. 000-23999) filed on July 31, 2013).</u>
10.13*	<u>Executive Employment Agreement with Steven P. Smith (Incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2013 (File No. 000-23999) filed on July 31, 2013).</u>
10.14 *	<u>Form of Modification Agreement for Terms and Conditions for Stock Options. (Incorporated by reference to Exhibit 10.3 to the Company's Form 8-K (File No. 000-23999), filed on January 2, 2009).</u>
10.15	<u>Form of License Agreement, Software Maintenance Agreement and Consulting Agreement (Incorporated by reference to Exhibit 10.18 to the Company's Pre-Effective Amendment No. 1 to its Registration Statement on Form S-1 (File No. 333-47095), filed on April 2, 1998).</u>
10.16	<u>Form of Software License, Services and Maintenance Agreement (Incorporated by reference to Exhibit 10.21 to the Company's Annual Report for the period ended December 31, 1998 (File No. 000-23999), filed on March 31, 1999).</u>
10.17(a)*	<u>2007 Stock Incentive Plan, as amended by the First Amendment thereto (Incorporated by reference to Annex A to the Company's Definitive Proxy Statement related to its 2009 Annual Meeting of Shareholders (File No. 000-23999) filed on April 20, 2009).</u>
(b)*	<u>Second amendment to 2007 Stock Incentive Plan (Incorporated by reference to Annex A to the Company's Definitive Proxy Statement related to its 2011 Annual Meeting of Shareholders (File No. 000-23999) filed on April 15, 2011).</u>
(c)*	<u>Third amendment to 2007 Stock Incentive Plan (Incorporated by reference to Annex A to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2017 (File No. 000-23999) filed on October 30, 2017).</u>
10.18*	<u>Written Summary of Manhattan Associates, Inc. Annual Cash Incentive Plan (Incorporated by reference to Exhibit 10.47 to the Company's Annual Report for the period ended December 31, 2009 (File No. 000-23999), filed on February 19, 2010).</u>
10.19*	<u>Form of Manhattan Associates, Inc. Restricted Stock Award Agreement for Employees (Incorporated by reference to Exhibit 10.48 to the Company's Annual Report for the period ended December 31, 2009 (File No. 000-23999), filed on February 19, 2010).</u>
10.20*	<u>Form of Manhattan Associates, Inc. Restricted Stock Award Agreement for Non-Employee Directors (Incorporated by reference to Exhibit 10.49 to the Company's Annual Report for the period ended December 31, 2009 (File No. 000-23999), filed on February 19, 2010).</u>
10.21*	<u>Form of Manhattan Associates, Inc. Restricted Stock Unit Award Agreement for Employees (Incorporated by reference to Exhibit 10.50 to the Company's Annual Report for the period ended December 31, 2012 (File No. 000-23999), filed on February 23, 2012).</u>
10.22*	<u>Form of Manhattan Associates, Inc. Restricted Stock Unit Award Agreement for Non-Employee Directors (Incorporated by reference to Exhibit 10.51 to the Company's Annual Report for the period ended December 31, 2012 (File No. 000-23999), filed on February 23, 2012).</u>
10.23*	<u>Executive Employment Agreement by and between the Registrant and Bruce Richards, effective as of August 1, 2011 (Incorporated by reference to Exhibit 10.52 to the Company's Annual Report for the period ended December 31, 2012 (File No. 000-23999), filed on February 23, 2012).</u>

Exhibit Number	Description
10.24*	Severance and Non-Competition Agreement by and between the Registrant and Bruce Richards, effective as of August 1, 2011 (Incorporated by reference to Exhibit 10.53 to the Company's Annual Report for the period ended December 31, 2012 (File No. 000-23999), filed on February 23, 2012).
10.25*	Modification Agreement for Terms and Conditions for Stock Options by and between the Registrant and Eddie Capel, effective as of June 4, 2007 (Incorporated by reference to Exhibit 10.54 to the Company's Annual Report for the period ended December 31, 2012 (File No. 000-23999), filed on February 23, 2012).
10.26*	Severance and Non-Competition Agreement by and between the Registrant and Eddie Capel, effective as of March 18, 2010 (Incorporated by reference to Exhibit 10.55 to the Company's Annual Report for the period ended December 31, 2012 (File No. 000-23999), filed on February 23, 2012).
10.27*	Settlement Agreement by and between the Registrant and Steven P. Smith, effective as of June 8, 2015 (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 000-23999), filed on June 12, 2015).
10.28	2016 Annual Cash Bonus Plan (Incorporated by reference from Annex B to the Company's Definitive Proxy Statement for its 2016 Annual Meeting of Shareholders filed with the SEC on April 8, 2016 (SEC File No. 000-23999)).
10.29*	Executive Employment Agreement with Linda C. Pinne (Incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2016 (File No. 000-23999), filed on April 22, 2016).
10.30*	Indemnification Agreement with Linda C. Pinne (Incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2016 (File No. 000-23999), filed on April 22, 2016).
10.31*	Consulting Agreement, dated May 12, 2016, by and between the Registrant and Dan Lautenbach (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 000-23999), filed on May 13, 2016).
10.32*	Executive Employment Letter Agreement, dated July 27, 2016, by and between the Registrant and Dennis Story (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K (File No. 000-23999), filed on August 1, 2016).
21.1	List of Subsidiaries.
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
31.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32**	Certification of Principal Executive Officer and Principal 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 Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Management contract or compensatory plan or agreement.

** In accordance with Item 601(b)(32)(ii) of the SEC's Regulation S-K, this Exhibit is hereby furnished to the SEC as an accompanying document and is not deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that Section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933.

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.

MANHATTAN ASSOCIATES, INC.

By: /s/ Eddie Capel
Eddie Capel
President, Chief Executive Officer, and Director

Date: February 9, 2018

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
<u>/s/ John J. Huntz, Jr.</u> John J. Huntz, Jr.	Chairman of the Board	February 9, 2018
<u>/s/ Eddie Capel</u> Eddie Capel	President, Chief Executive Officer, and Director (Principal Executive Officer)	February 9, 2018
<u>/s/ Dennis B. Story</u> Dennis B. Story	Executive Vice President, Chief Financial Officer, and Treasurer (Principal Financial Officer)	February 9, 2018
<u>/s/ Linda C. Pinne</u> Linda C. Pinne	Senior Vice President, Global Corporate Controller, and Chief Accounting Officer (Principal Accounting Officer)	February 9, 2018
<u>/s/ Edmond I. Eger III</u> Edmond I. Eger III	Director	February 9, 2018
<u>/s/ John H. Heyman</u> John H. Heyman	Director	February 9, 2018
<u>/s/ Charles E. Moran</u> Charles E. Moran	Director	February 9, 2018
<u>/s/ Thomas E. Noonan</u> Thomas E. Noonan	Director	February 9, 2018
<u>/s/ Deepak Raghavan</u> Deepak Raghavan	Director	February 9, 2018

MANHATTAN ASSOCIATES, INC. SUBSIDIARIES

<u>Subsidiaries</u>	<u>Place of Incorporation</u>
Manhattan Associates Limited	United Kingdom
Manhattan Associates Europe B.V.	Netherland
Manhattan Associates France SARL	France
Manhattan Associates GmbH	Germany
Manhattan Associates KK	Japan
Manhattan Associates Software (Shanghai), Co. Ltd.	China
Manhattan Associates Pty Ltd.	Australia
Manhattan Associates Software Pte Ltd.	Singapore
Manhattan Associates (India) Development Centre Private Limited	India
Manhattan Associates, S. de R.L. de CV	Mexico
Manhattan Associates Services, S. de R.L. de CV	Mexico
Manhattan Associates Supply Chain Software, LLC	Georgia, USA
Manhattan Associates Chile SpA	Chile

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

1. Form S-8 No. 333-143611 pertaining to the Manhattan Associates, Inc. 2007 Stock Incentive Plan,
2. Form S-8 No. 333-159852 pertaining to the Manhattan Associates, Inc. 2007 Stock Incentive Plan, and
3. Form S-8 No. 333-174499 pertaining to the Manhattan Associates, Inc. 2007 Stock Incentive Plan;

of our reports dated February 9, 2018, with respect to the consolidated financial statements and schedule of Manhattan Associates, Inc. and subsidiaries and the effectiveness of internal control over financial reporting of Manhattan Associates, Inc. and subsidiaries included in this Annual Report (Form 10-K) of Manhattan Associates, Inc. and subsidiaries for the year ended December 31, 2017.

/s/ Ernst & Young LLP

Atlanta, Georgia
February 9, 2018

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a)/15d-14(a), AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Eddie Capel, certify that:

1. I have reviewed this annual report on Form 10-K of the registrant;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated this 9th day of February, 2018

/s/ Eddie Capel

Eddie Capel, President and Chief Executive Officer

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a)/15d-14(d), AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Dennis B. Story, certify that:

1. I have reviewed this annual report on Form 10-K of the registrant;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated this 9th day of February, 2018

/s/ Dennis B. Story

Dennis B. Story, Executive Vice President, Chief Financial Officer,
and Treasurer

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

This Certificate is being delivered pursuant to the requirements of Section 1350 of Chapter 63 (Mail Fraud) of Title 18 (Crimes and Criminal Procedures) of the United States Code and shall not be relied on by any person for any other purpose.

The undersigned, who are the Chief Executive Officer and Chief Financial Officer, respectively, of Manhattan Associates, Inc. (the "Company"), hereby each certify that, to the undersigned's knowledge:

1. the Annual Report on Form 10-K of the Company for the twelve month period ended December 31, 2017 (the "Report"), which accompanies this Certification, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. all information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated this 9th day of February, 2018

/s/ Eddie Capel

Eddie Capel, President and Chief Executive Officer

/s/ Dennis B. Story

Dennis B. Story, Executive Vice President, Chief Financial Officer,
and Treasurer

In accordance with SEC Release No. 34-47986, this Exhibit is furnished to the SEC as an accompanying document and is not deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that Section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933. A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the registrant and will be retained by the registrant and furnished to the Securities and Exchange Commission or its staff upon request.