Annual Report 2017

TO OUR STOCKHOLDERS

2017 was a tremendous year for RealPage®. We significantly enhanced our product offerings while executing against our financial goals. The investments we made in both internal development and acquisitions have positioned us to continue growing in 2018 and beyond, above the trajectory we need to reach our goal of $1 billion in revenue and $300 million in adjusted EBITDA by 2020.

RealPage empowers the real estate industry with a unique, powerful and data-rich platform that improves owner and manager operational returns through increased revenue, reduced expenses and less risk. Our vision is expanding beyond the operational holding period of an asset to the transactional side of real estate, where we believe we are well positioned to use our data to help optimize the yield on the purchase and sale of an asset.

In 2018 and beyond, two themes will guide our focus—innovation and simplification. We call these themes our "North Star." What does this mean? First, we are driving a culture across the entirety of the organization that fosters and encourages innovation at every level. Second, we want to make RealPage easier to do business with. We are working toward showing our clients a unified and cohesive product offering and service while we continue to extend our capabilities through organic innovation augmented with a productive M&A strategy.

2017

In 2017, we continued to invest in our sales force with a focus on productivity. This investment, combined with a refined sales deployment strategy, resulted in strong bookings and productivity growth. Specifically, full-year 2017 bookings grew more than 20%. This is an extremely encouraging sign, as bookings growth was the strongest in the third and fourth quarters, with momentum building as the year progressed.

We expect to leverage this momentum and further refine our go-to-market strategy in 2018 to increase the number of dedicated solution representatives that focus on specific product solutions. We believe these specialty sales teams will provide in-depth knowledge of each product solution and help deepen penetration of our platform.

In 2017, we also made significant organic investments. The Unity platform allows us to share data across all applications, provide a single sign-on and user authentication, deliver a consistent user experience across all solutions, introduce new artificial intelligence enabled learning and coaching tools, build a vast library of shared services that all applications uses, and build the technical framework that will enable us to more rapidly add new clients and integrate future acquisitions.

Unity is helping support our focus on innovation as well. Soon, we expect to release new document management functionality that unifies the user experience and enables clients to use the Unity infrastructure for leasing operations and their own corporate needs. For example, leases, compliance documents, work orders, invoices and reports from virtually anywhere can be searched, retrieved and shared portfolio-wide. These are just some of the benefits we are achieving with Unity and we expect to continue our innovation on this front throughout 2018.

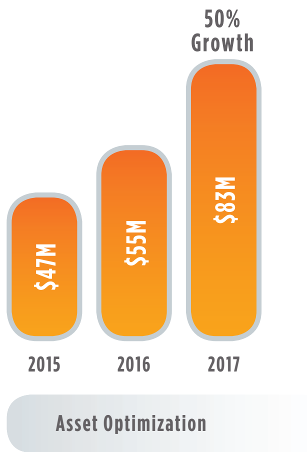
Last year, we also invested in our vacation rental platform and launched Kigo® Marketplace, a global platform that optimizes the management of short-term rental inventory, enabling property managers to capture a larger percentage of booking fee revenue from guests. The integrated platform can replace numerous point-products currently cobbled together by managers, and features multi-currency payment, enhanced fraud and chargeback mitigation, and intuitive guest communication capabilities. Short-term rental property managers now have the tools to build their local brands separately from lead-generation channels, increasing the number of profitable repeat guests that book directly. We benefit from our clients' increased revenue because Kigo Marketplace pricing is based on a percentage of booking revenue generated by the property manager.

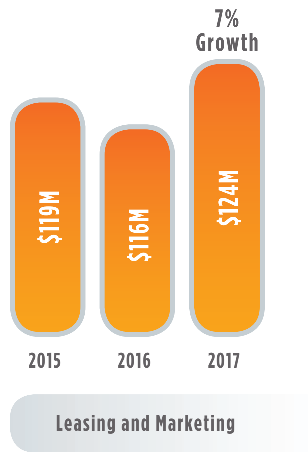
We continue to augment our product portfolio with a consistent M&A strategy. Our inorganic investments in 2017 were centered on five acquisitions. First, the acquisition of Axiometrics® helped improve our data analytics offerings and begin to attack the transactional opportunity within multifamily rental housing assets. Second, the acquisition of American Utility Management (AUM) expanded the scale of our resident billing operations and included important energy consumption and cost data. Our Resident Utility Management platform is now one of the largest solutions in the industry with over 2.6 million units on the platform. Third, the acquisition of On-Site solidified our front-end solution to manage the entire leasing process, from lead assimilation to applicant screening, to the final generation of signed lease documents. The acquisition also significantly improved our lease management integration into major third-party property management systems. Finally, in October and December, we closed the acquisition of PEX™ and LRO, respectively. Combined, LRO, YieldStar® and Axiometrics form the most comprehensive suite of solutions for data analytics and asset optimization for rental housing assets.

In summary, we have never been more excited about the future of RealPage. I am proud of the value we have created for our shareholders, our teammates and our clients. However, our focus is forward, on our North Star of innovation and simplification that will guide our strategy and our culture as well. I appreciate the sacrifices and hard work of our teammates that enabled our vision in 2017 to become a reality, and I believe we have the right team in place to drive long-term growth with our North Star as our guide. Thank you for your support as we continue our transformation into a world-class company and a more innovative one.

Sincerely,

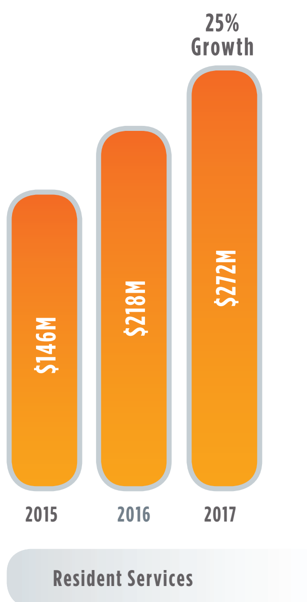
Steve Winn
Chairman, Chief Executive Officer and President

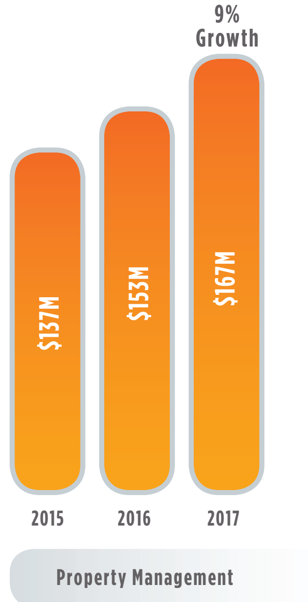




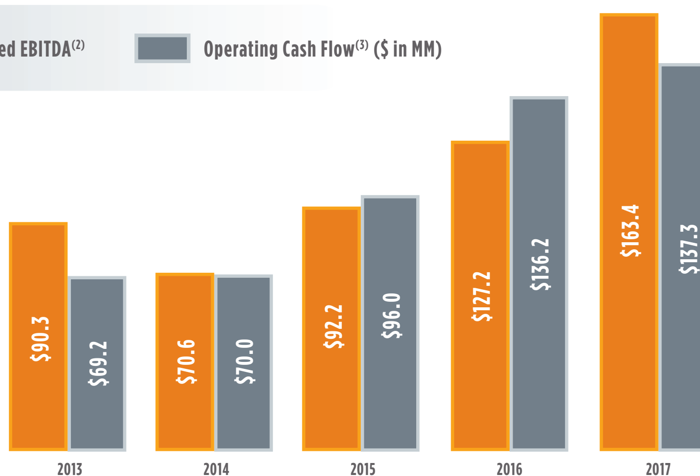
2017

Non-GAAP On-Demand Revenue by Product Family[1]





KEY OPERATING METRICS



(1) Includes acquisition-related and other deferred revenue adjustments for the years ended December 31, 2017, 2016, 2015, 2014, 2013.

(2) See discussion and reconciliation of Non-GAAP Total Revenue and Adjusted EBITDA to GAAP Total Revenue and GAAP Net Income included within the Annual Report on Form 10-K filed with the SEC on March 1, 2018.

(3) Includes the accounting treatment of tenant reimbursements related to the headquarters move during 2016. In addition, includes the imapct from the company's renter's insurance solution related to hurricanes Harvey and Irma during 2017.

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 AND 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: 001-34846

RealPage, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**75-2788861**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

2201 Lakeside Blvd. Richardson, Texas	**75082-4305**
(Address of principal executive offices)	**(Zip Code)**

(972) 820-3000
(Registrant's telephone number, including area code)

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

Common Stock, $0.001 par value	**The NASDAQ Stock Market LLC**
(Title of class)	**(Name of each exchange on which registered)**

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

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

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a 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	☒	Accelerated filer	☐
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☐
		Emerging growth company	☐

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

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

Based on the closing price of the registrant's common stock on the last business day of the registrant's most recently completed second fiscal quarter, which was June 30, 2017, the aggregate market value of its shares held by non-affiliates on that date was approximately $2,133,339,400. On February 16, 2018, 83,093,674 shares of the registrant's Common Stock, $0.001 par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive proxy statement for its 2018 Annual Meeting of Stockholders to be filed within 120 days of the Registrant's fiscal year ended December 31, 2017 are incorporated by reference into Part III of this Annual Report on Form 10-K where indicated.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

We have made forward-looking statements in this Annual Report on Form 10-K that are subject to risks and uncertainties. Forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, are subject to the "safe harbor" created by those sections. The forward-looking statements in this Annual Report on Form 10-K are based on our management's beliefs and assumptions and on information currently available to our management. In some cases, you can identify forward-looking statements by terms such as "anticipates," "aspires," "believes," "can," "continue," "could," "estimates," "expects," "intends," "may," "plans," "projects," "seeks," "should," "will" or "would" or the negative of these terms and similar expressions intended to identify forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors, which may cause our actual results, performance, time frames or achievements to be materially different from any future results, performance, time frames or achievements expressed or implied by the forward-looking statements. We discuss many of these risks, uncertainties and other factors in this document in greater detail under the heading "Risk Factors." We believe it is important to communicate our expectations to our investors. However, there may be events in the future that we are not able to predict accurately or over which we have no control. The risks described in "Risk Factors" included in this Annual Report on Form 10-K, as well as any other cautionary language in this Annual Report on Form 10-K, provide examples of risks, uncertainties and events that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Before you invest in our common stock, you should be aware that the occurrence of the events described in "Risk Factors" and elsewhere in this Annual Report on Form 10-K could harm our business.

Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this Annual Report on Form 10-K. You should read this document completely and with the understanding that our actual future results may be materially different from what we expect. We hereby qualify our forward-looking statements by these cautionary statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

PART I

Item 1. Business

Company Overview

RealPage, Inc., a Delaware corporation (together with its subsidiaries, the "Company" or "we" or "us"), is a leading global provider of software and data analytics to the real estate industry. Our platform of data analytics and software solutions enables the rental real estate industry to manage property operations (such as marketing, pricing, screening, leasing, and accounting), identify opportunities through market intelligence, and obtain data-driven insight for better operational and financial decision-making. Our integrated, on demand platform provides a single point of access and a massive repository of real-time lease transaction data, including prospect, renter, and property data. By leveraging data as well as integrating and streamlining a wide range of complex processes and interactions among the rental real estate ecosystem (owners, managers, prospects, renters, service providers, and investors), our platform helps our clients improve financial and operational performance and prudently place and harvest capital.

As of December 31, 2017, over 12,400 clients used one or more of our on demand software solutions to help manage the operations of approximately 13.0 million multifamily, single family, and vacation rental units. Our clients include each of the ten largest multifamily property management companies in the United States, ranked as of January 1, 2017 by the National Multifamily Housing Council ("NMHC"), based on the number of units managed.

We sell our solutions through our direct sales organization. Our total revenues were approximately $671.0 million, $568.1 million, and $468.5 million for the years ended December 31, 2017, 2016, and 2015, respectively. In the same periods, we had operating income (loss) of approximately $30.0 million, $31.2 million, and $(11.6) million, respectively, and net income (loss) of approximately $0.4 million, $16.7 million, and $(9.2) million, respectively.

Our company was formed in 1998 to acquire Rent Roll, Inc., which marketed and sold on premise property management systems for the conventional and affordable multifamily rental housing markets. In June 2001, we released OneSite, our first on demand property management system. Since 2002, we have expanded our platform of solutions to include property management, leasing and marketing, resident services, and asset optimization capabilities. In addition to the multifamily markets, we now serve the single family, senior living, student living, military housing, commercial, hospitality, and vacation rental markets. In addition, since July 2002, we have completed over 40 acquisitions of complementary technologies to supplement our internal product development and sales and marketing efforts and expand the scope of our solutions, the types of rental housing and vacation rental properties served by our solutions, and our client base. In connection with this expansion and these acquisitions, we have committed greater resources to developing and increasing sales of our platform of data analytics and on demand solutions. As part of our strategy, we plan to continue to pursue acquisitions of complementary businesses, products, and technologies.

Industry Overview

The rental real estate market is large, growing, and complex.

The rental real estate market is large and characterized by challenging and location-specific operating requirements, diverse industry participants, significant mobility among renters, and a variety of property types, including single family and a wide range of multifamily property types, including conventional, affordable, privatized military, student, and senior housing. According to the U.S. Census Bureau American Housing Survey for the United States, there were 44.2 million rental real estate units in the United States in 2015. Based on U.S. Census Bureau data and our own estimates, we believe that the overall size of the U.S. rental real estate market, including rent, utilities, and insurance, exceeds $525.0 billion annually. We estimate that the total addressable market for our current data analytics and on demand software solutions is approximately $9.8 billion per year. This estimate assumes that each of the 44.2 million rental units in the United States has the potential to generate annually a range of approximately $140 in revenue per unit for single family units to approximately $370 in revenue per unit for conventional multifamily units. In addition, we estimate that the student and senior markets have the potential to generate annually approximately $690 in revenue per unit, and affordable housing markets will generate annually approximately $160 in revenue per unit. We base this potential revenue assumption on our review of the purchasing patterns of our existing clients with respect to our data analytics and on demand software solutions, the solutions currently utilized by our existing clients, the number of units our clients manage with these solutions, and our current pricing for data analytics and on demand software solutions.

The global vacation rental market is large and generally segmented by the type of property and seasonality. Based on our industry research, we estimate the total global vacation rental market to be approximately $130.0 billion annually. Professional vacation managers, representing roughly 2.0 million units, are responsible for approximately half of the total vacation rental transactions in the market and the other half of the total transactions relate to properties that are individually managed by the property owners. We estimate that the total addressable market for our vacation rental solutions is approximately $1.6 billion per year. This estimate assumes that each of the 2.0 million units managed has the potential to generate annual revenue per unit

of $810. We estimate the potential revenue assumptions based on our review of market industry research and realistic solution penetration rates, as well as related trends affecting the vacation rental market, including the analysis of vacancy rates and the average number of nights booked.

We believe there is increasing demand for solutions that bring efficiency and precision to the rental real estate industry, which has historically lacked the tools available to many other investment classes. We leverage our massive pool of lease transaction data to provide our clients with analytical tools and actionable intelligence to inform the prudent allocation of capital. We believe that the use of precision data analytics and price optimization solutions represent a significant opportunity to increase yield from the approximate $3.0 trillion of apartment stock in the U.S., turning over at a rate of approximately $150.0 billion per year.

Rental real estate management spans both the renter life cycle and the operations of a property.

The renter life cycle can be separated into four key stages: prospect, applicant, residency or stay, and post-residency or post-stay. Each stage has unique requirements, and a property owner's or manager's ability to effectively address these requirements can significantly impact revenue and profitability.

In addition to managing the renter life cycle, property owners and managers must also manage the operations of their properties. Critical components of property operations include materials and service provider procurement; insurance and risk mitigation; utility and energy management; yield management; information technology and telecommunications management; accounting; expense tracking and management; document management; security; staff hiring and training; staff performance measurement and management; and marketing.

Managing the renter life cycle and the operations of a property involves several different constituents, including property owners and managers, prospects, renters, service providers, and investors. Property owners can include single-property owners, multi-property owners, national residential apartment syndicates that may own thousands of units through a variety of investment funds, and real estate investment trusts ("REITs"). Property managers often are responsible for a large number of properties that can range from single family units to multifamily apartment communities. Property owners and managers also need to manage a variety of service providers, including utilities, insurance providers, video, voice and data providers, and maintenance and capital goods suppliers. Managing these diverse relationships, combined with renter turnover, property turnover, as well as regulatory and compliance requirements, can make the operations of even a small portfolio of rental properties complex. Challenges are compounded for real estate portfolio managers responsible for a large number of geographically dispersed properties, which require overseeing potentially hundreds of thousands of individual rental processes.

Legacy information technology solutions designed to manage the rental real estate management process are inadequate.

During the 1970's and 1980's, the rental real estate industry was highly fragmented and regionally organized. During this period, the first property management systems and software solutions emerged to help property owners and managers with basic accounting and record keeping functions. These solutions provided limited functionality and scalability and often were not tailored to the specific needs of the rental real estate industry.

Beginning in the mid 1990's, the rental real estate market began to consolidate and large, nationally focused and publicly financed companies emerged, which aggregated significant numbers of units. The rise of national real estate portfolio managers, many of them accountable to public shareholders, created a need for more sophisticated and scalable property management systems that included a centralized database and were designed to optimize and automate multiple business processes within the renter life cycle and property operations. Despite increasing market demands, the available solutions continued to be insufficient to fully address the complex requirements of the rental real estate industry, which moved beyond basic accounting and record keeping functions to also include value-added services, such as Internet marketing, applicant screening, billing solutions and analytics for pricing, and yield optimization. Additionally, the rise of national syndicates and REITs fueled the need for tools that provide increased visibility into the operational performance of portfolio properties and market analysis resources to maximize return on investment.

To address its complex and evolving requirements, the rental real estate industry has historically implemented a myriad of single point solutions; general purpose applications, such as Microsoft Excel; and/or internally developed solutions to manage their properties. These solutions can be expensive to implement and maintain; often lack integrated functionality to help rental real estate owners, managers, and investors maximize operational yields; and do not have dynamic reporting and analysis tools necessary to optimize investment returns or support capital allocation decisions. In addition, many professionals in the rental real estate industry still rely on paper or spreadsheet-based approaches, which are typically time-intensive and prone to human error or internal mismanagement.

The rental real estate industry has relied upon print and Internet listing firms to attract leads required to fill available vacancies.

We believe these historical solutions are inadequate because they:

- require significant customization to implement, which frequently inhibits upgrading to new versions or platforms in a timely manner;
- require information technology ("IT") resources to support integration points between property management systems and disparate value-added services;
- require IT resources to implement and maintain data security, data integrity, performance, and business continuity solutions;
- lack scalability and flexibility to account for the expansion or contraction of a property portfolio;
- lack material organic lease generation capability and do not track the cost of leads generated by each source;
- lack effective spend management capabilities for controlling property management costs;
- lack comprehensive analytics for pricing and yield optimization;
- lack workflow level integration;
- do not provide owners, managers, and investors with visibility into overall property performance; and
- cannot be easily updated to meet new regulations and compliance requirements.

On demand software solutions are well suited to meet the rental real estate market's needs.

The ubiquitous nature of the Internet, widespread broadband adoption, and improved network reliability and security has enabled the deployment and delivery of business-critical applications online. The on demand delivery model is substantially more economical than traditional on premise software solutions that generally have higher deployment and support costs and require the client to purchase and maintain the associated servers, storage, networks, security, and disaster recovery solutions.

The RealPage Solution

We provide a technology platform of data analytics and on demand software solutions that integrates and streamlines rental real estate management and property operations. Our platform provides the analytical and software solutions necessary to optimize operational yields and returns on investment, and contributes to a more efficient property management process and an improved experience for all of the constituents involved in the rental real estate ecosystem.

Benefits to our Clients

We believe the benefits of our solutions for our clients include the following:

Increased revenues: Our data analytics and on demand software solutions enable our clients to increase their revenues and optimize operational yields by improving their sales and marketing effectiveness; pricing and occupancy; and collection of rental payments, utility expenses, late fees, and other charges. Additionally, our solutions enable our clients to realize new sources of revenue from complementary solutions and services.

Reduced operating costs: Our data analytics and on demand software solutions help our clients reduce costs and optimize operational yields by streamlining and automating many ongoing property management functions; centralizing and controlling purchasing by on-site personnel; and transferring costs from the site to more efficient, centrally managed operations. Our on demand delivery model also reduces a rental property's operating costs by eliminating the need to own and support the applications or associated hardware infrastructure. In addition, our integrated solutions consolidate the initial implementation and training costs and ongoing support associated with multiple applications. This is particularly important for rental real estate professionals who want to reduce enterprise-class IT infrastructure, support, and staff training.

Improved quality of service for renters and prospects: Our solutions improve the level of service that rental real estate properties provide to renters and prospects by enabling certain types of transactions to be completed online; expediting the processing of rental applications, maintenance service requests, and payments; and increasing the frequency and quality of communication with their renters and prospects. This provides higher renter satisfaction and increased differentiation from competing properties that do not use our solutions while optimizing operational yields.

Streamlined and simplified property management business processes: Our platform provides integrated solutions for managing a wide variety of property management processes that have traditionally been managed by separate manual or disaggregated applications. Our on demand software solutions utilize common authentication that enables data sharing and workflow automation of certain business processes, thereby eliminating redundant data entry and simplifying many recurring tasks. The efficiency of our solutions allows for optimization of operational yields.

Greater visibility into real estate investment portfolio: Our portfolio management solutions are designed specifically for general partners, limited partners, property management professionals, and other real estate investment firms. These solutions allow stakeholders to quickly combine financial and operating metrics based upon portfolio attributes to evaluate performance,

trends, and operations across a portfolio, as well as facilitate the assessment of potential asset management strategies. These solutions provide an unprecedented level of visibility into a real estate portfolio, including information down to the property level, and are designed to work with any property management system. Our portfolio management solutions provide stakeholders the critical information necessary to maximize investment returns and prudently allocate and harvest capital investment.

Ability to integrate third-party products and services: Our open architecture and application framework facilitate the integration of third-party applications and services into our solutions. This enables our clients to conduct these business functions through the same system that they already use for many of their other tasks and to leverage the same repository of lease transaction data, including prospect, renter, and property data, which supports our solutions.

Increased visibility into property performance: Our platform of data analytics and on demand software solutions enable rental real estate owners, managers, and investors to gain a comprehensive view of the operational and financial performance of each of their properties. Our solutions provide a library of standard reports, dashboards, scorecards, and alerts, and we also provide interfaces to several widely used report writers and business intelligence tools. We maintain a massive repository of real-time lease transaction data, subsets of which can be utilized to factor rental payment history into applicant screening processes and to create more accurate supply and demand models and statistically-based price elasticity models to improve price optimization. This enables our clients to optimize both operational yields and investment returns.

Simple implementation and support: Our platform of solutions includes pre-configured extensions that meet the specific needs of a variety of property types and can be easily tailored by our clients to meet more specific requirements of their properties and business processes. We strive to minimize the need for professional consulting services to implement our solutions and train personnel.

Improved scalability: We host our solutions for our clients, thereby reducing or eliminating our clients' costs associated with expanding or contracting IT infrastructure as their property portfolios evolve. We also bear the risk of technological obsolescence because we own and manage our data center infrastructure and are continually upgrading it to newer generations of technology without incremental cost to our clients.

Competitive Strengths of our Solutions

The competitive strengths of our solutions are as follows:

Integrated on demand software platform based on a repository of real-time lease transaction data: Our solutions are delivered through an integrated on demand software platform that provides a single point of access via the Internet with a common repository of lease transaction data, including prospect, renter, and property data, which permits our solutions to access requested data through offline data transfer or in real-time.

Large and growing apartment real estate ecosystem: At December 31, 2017, our client base of over 12,400 clients used one or more of our integrated data analytics or on demand software solutions to help manage the operations of approximately 13.0 million rental real estate units. Our solutions automate and streamline many of the recurring transactions and interactions among this large and expanding apartment real estate ecosystem, including prospect inquiries, applications, monthly rent payments, and service requests. As the number of constituents of the apartment real estate ecosystem increases, the volume of lease transaction date in our repository and its value to the constituents of the ecosystem grows.

Comprehensive platform of data analytics and on demand software solutions and services for the rental real estate industry: Our platform of solutions and services provides a broad range of analytical and on demand capabilities for managing the renter life cycle and core operational processes for property management. This integrated, on demand platform enables our clients to optimize operational yields and investment returns.

Precision data analytics and price optimization tools based on in-depth lease transaction data: The combination of our massive pool of lease transaction data, our expertise in apartment marketing dynamics, our data science team that can extract actionable insights, and our forecasting abilities creates a unique competitive advantage. Our statistical-based modeling and forecasting solutions provide our clients with granular, market-specific intelligence which facilitates the optimization of operational yields and returns on investment. We believe the use of precision data analytics and price optimization solutions represents a significant opportunity to increase yields from the nearly $3.0 trillion of apartment stock in the U.S., turning over at a rate of $150.0 billion per year.

Open cloud computing architecture: Our cloud computing architecture enables our solutions to interface with our clients' existing systems and allows our clients to outsource the management of third-party business applications. This open architecture enables our clients to buy our solutions incrementally while continuing to use existing third-party solutions, allowing us to shorten sales cycles and increase adoption of our solutions within our target markets.

Deep rental real estate industry expertise: We have been serving the rental real estate industry exclusively for over 19 years, and the members of our senior management team have extensive experience in the rental real estate industry. We

design our solutions based on our extensive expertise, insight into industry trends and developments, and property management best practices that help our clients simplify the challenges of owning and managing rental properties.

Experienced management team with strong integrating and operating track record: We have a highly seasoned and effective management team with extensive expertise in the rental real estate industry. By leveraging this expertise and knowledge, we have developed, and continue to improve, data analytics and on demand software solutions which help our clients simplify the challenges of owning and managing rental properties, increase operational yields, and make better capital placement and harvesting decisions. Our management team has a proven ability to acquire and integrate complementary businesses and technologies, as demonstrated by the over 40 acquisitions we have completed since July 2002. We continue to attract and retain experienced management talent to support our growth.

Our Strategy

We plan to continue to leverage our platform of solutions and industry presence to maintain our position as a leading provider of technology solutions to the real estate industry. The key elements of our strategy to accomplish this objective are as follows:

Acquire new clients: We intend to actively pursue new client relationships with property management professionals and investors that do not currently use our solutions. In addition to marketing our property management solutions, we will seek to sell our software-enabled, value-added services to clients of other third-party property management systems by utilizing our open architecture to facilitate integration of our solutions with those systems.

Increase the adoption of the RealPage platform: Many of our clients rely on our platform to manage their daily operations and track all of their critical prospect, renter, and property information. Additionally, some of our clients utilize our software-enabled, value-added services to complement third-party Enterprise Resource Planning (“ERP”) systems. We have continually introduced new software-enabled, value-added services to complement our platform of solutions and marketed our on demand solutions to our clients who are utilizing third-party ERP systems. We believe that the penetration of our on demand software solutions to date has been modest, and significant potential exists for additional on demand revenue from sales of these solutions to our client base. We have significant opportunities to further leverage the critical role that our solutions play in our clients’ operations by increasing the adoption of our platform of solutions and value-added services within our existing client base, and we intend to actively focus on up-selling and cross-selling our solutions to our clients.

Add new features and functionality to our rental real estate industry platform: We believe that we offer the most comprehensive platform of data analytics and on demand software solutions for the rental real estate industry. Our platform enables our clients to control many aspects of the residential rental property management process. We are able to add new capabilities that further enhance our platform, and we intend to continue developing and introducing new solutions to sell to both new and existing clients. These solutions may include localized solutions to support our clients as they grow their international operations. We also intend to develop new relationships with third-party application providers that can use our open architecture to offer additional product and service capabilities to their clients through our platform.

Pursue acquisitions of complementary businesses, products, and technologies: Since July 2002, we have completed over 40 acquisitions that have enabled us to expand our platform, enter into new rental property markets, and expand our client base. We intend to continue to pursue acquisitions of complementary businesses, products, and technologies. We continue to selectively evaluate our capital allocation strategy to focus on the most efficient sources of capital available to us for the acquisition of businesses and technologies that may help us accomplish these and other strategic objectives.

Solutions and Services

Our platform is designed to serve as a single system of record for all of the constituents of the rental real estate ecosystem; to support the entire renter life cycle, from prospect to applicant to residency or guest to post-residency or post-stay; and to optimize operational yields and returns on investment. Common authentication, work flow, and user experience across solution categories enables each of these constituents to access different applications as appropriate for their roles.

Our platform consists of four primary categories of solutions: Property Management, Leasing and Marketing, Resident Services, and Asset Optimization. These solutions provide complementary asset performance and investment decision support; risk mitigation, billing and utility management; resident engagement, spend management, operations and facilities management; and lead generation and lease management capabilities that collectively enable our clients to manage all the stages of the renter life cycle. Each of our solution categories includes multiple product centers that provide distinct capabilities that can be bundled as a package or licensed separately. Each product center integrates with a central repository of lease transaction data, including prospect, renter, and property data. In addition, our open architecture allows third-party applications to access our solutions using our RealPage Exchange platform.

We offer different versions of our platform for different types of properties in different real estate markets. For example, our platform supports the specific and distinct requirements of:

- conventional single family properties;
- conventional multifamily properties;
- affordable Housing and Urban Development ("HUD") properties;
- affordable tax credit properties;
- rural housing properties;
- privatized military housing;
- commercial properties;
- student housing;
- senior living; and
- vacation rentals.

Property Management

Our property management solutions are referred to as ERP systems. These solutions manage core property management business processes, including leasing, accounting, budgeting, purchasing, facilities management, document management, and support and advisory services. The solutions include a central database of prospect, applicant, renter, and property information that is accessible in real time by our other solutions. Our property management solutions also interface with most popular general ledger accounting systems through our RealPage Exchange platform. This makes it possible for clients to deploy our solutions using our accounting system or a third-party accounting system. Our property management solution category consists of eight primary solutions including OneSite, Propertyware, RealPage Financial Services, Kigo, Spend Management Solutions, The RealPage Cloud, SmartSource, and EasyLMS.

OneSite

OneSite is our flagship on demand property management solution for multifamily properties and is tailored to the specific needs of different property types (conventional multifamily, affordable properties, rural housing, privatized military housing, senior living, student living, and commercial). OneSite offers functionality that generates lease documents, manages service requests, measures acuity of senior residents, enables senior community management, and manages procurement activities.

Propertyware

Propertyware is our on demand property management system for single-family properties and small, centrally managed multifamily properties. Propertyware functionality includes accounting, maintenance and work order management, marketing, spend management, and portal services. In addition, we offer our screening and payment solutions through our Propertyware brand to single family and small, centrally managed multifamily properties.

RealPage Financial Services

RealPage Financial Services is an on demand offering of products and services for all back office accounting. The RealPage Financial Suite includes budgeting, property accounting, corporate accounting, job cost, and investment accounting. SmartSource Accounting provides for full outsourcing services of the back office accounting.

Kigo

Kigo is our on demand vacation rental property management system. Kigo offers solutions for vacation rental property management that include vacation rental calendars, scheduling, reservations, accounting, channel management, website design, payment processing, and other tasks to aid the management of leads, revenue, resources, and lodging calendars.

Spend Management Solutions

Our spend management solutions enable property owners and managers to better control costs. Spend management functionality includes purchase order automation; automated approval workflows, including mobile approvals; eProcurement solutions and services leveraging our volume to negotiate vendor discounts; budget and spend limit controls; centralized expense reporting; invoice management; bid management for capital projects; and automated vendor compliance tools.

The RealPage Cloud

The RealPage Cloud leverages our robust application infrastructure to allow property owners and managers to outsource portions of their IT operations. The platform offers functionality to property owners and managers that reduces IT complexity, lowers the total cost of ownership for technology, improves security, improves performance, and increases scalability.

SmartSource IT

SmartSource IT provides outsourced IT management and support services to managers of multifamily properties. Outsourcing these functions through SmartSource IT allows property managers to focus on their core competencies and to scale their operations with lower risk and greater flexibility and productivity.

EasyLMS

EasyLMS is a learning management system for property management professionals and their staff. EasyLMS substantially reduces training time by compartmentalizing subject matter and disseminating lessons in 10 to 15 minute increments for easier consumption during the workday. The system also incorporates gamification and active engagement to enhance the effectiveness of the learning solution and knowledge retention.

Leasing and Marketing

Leasing and marketing solutions aim to optimize marketing spend and the leasing process. These solutions manage core leasing and marketing processes, including websites and syndication, paid lead generation, organic lead generation, lead management, automated lead closure, lead analytics, real-time unit availability, automated online apartment leasing, and applicant screening. Our leasing and marketing solutions category consists of six primary solutions: Online Leasing, Contact Center, Websites & Syndication, MyNewPlace, Lead2Lease CRM, and Resident Screening. In 2017, we acquired On-Site and Intelligent Lease Management (ILM), two platforms for property managers and renters that offer solutions to complement our existing leasing and marketing solutions. Our integration of these platforms, which we intend to complete over time, is expected to enhance our existing leasing and marketing solutions.

Online Leasing

Online Leasing is our on demand leasing platform that transacts the entire leasing process online. Among other functions, the platform utilizes widgets that enable renters to confirm unit availability, generate a price quote, apply for residency, and fully execute a lease.

Contact Center

Contact Center is our 24/7 on demand lead closure and resident maintenance support solution. Contact Center provides both live agent and automated platforms. Communication channels and functionality include call, web chat, email with instant call reply, email for leasing, as well as RealPage Live Agent calls and answer automation for maintenance support. Contact Center is a strategic service partner offering a combination of people, process, and technology to track all leads, schedule visits, and capture emergency and non-emergency maintenance requests on behalf of our clients.

Websites & Syndication

Websites and Syndication anchor our on demand organic lead generation platform. Functionality includes property website design and enhanced search engine optimized (“SEO”) content (e.g. high-resolution photography, video tours, animated tours, 3D floor plans, and interactive site maps), mobile applications and integration with online leasing to drive traffic and lead quality. Syndication tools ensure consistency across multiple marketing channels and include classified directory campaign services, renter social referrals, reputation management, surveys, real-time reporting, and enhanced lead management.

MyNewPlace

MyNewPlace is a paid lead generation site that helps renters find rental housing options utilizing functionality including enhanced photography, 3D floor plans, SEO-enhanced descriptions, and neighborhood information. Our acquisition of Lease Rent Options in 2017 included the Rent Jungle product, which added additional functionality to our lead generation and leasing solutions.

Lead2Lease CRM

Lead2Lease CRM is a lead management tool that cultivates lead generation, tracks lead activity and communications, and influences lead conversion.

Resident Screening

Screening is part of our risk mitigation platform to reduce rental payment delinquency. Resident screening uses many disparate data sources, including national credit bureaus and a large, proprietary database of on demand rental payment histories, to evaluate applicant credit profiles. Additional functionality includes criminal background checks and eviction history from real-time databases aggregated by third-party data providers. In addition, certain functionality enables owners and managers to optimize credit thresholds based on occupancy levels, and adjust deposit and rent amounts based on the default risk of the renter in a yield neutral manner.

Resident Services

Our resident services solutions provide a platform to optimize the transactional and social experience of prospects and renters, and enhance a property's reputation. These solutions facilitate core renter management business processes including utility billing, renter payment processing, service requests, lease renewal, renter's insurance, and consulting and advisory services. In connection with our On-Site acquisition, we acquired Deposit IQ, a subsidiary of On-Site, which added additional solutions to our platform. Our resident services solution category consists of five primary solutions: Resident Utility Management, Resident Payments, Resident Portal, Contact Center Maintenance, and Renter's Insurance.

Resident Utility Management

Resident Utility Management is our on demand billing and utility management platform. In 2016, we augmented our utility management solutions with the acquisition of NWP Services Corporation ("NWP"), and further expanded the service through our acquisition of American Utility Management ("AUM") in 2017. Combining the complementary functionalities of these solutions with our existing platform offers our clients automated convergent billing, utility invoice processing, utility cost management, automated energy recovery, infrastructure services (e.g., accounting, community energy, media, data, and telecom), the ability to benchmark energy consumption and cost, and sub-metering services.

Resident Payments

Payments is our on demand payment-processing platform that enables electronic collection of rent and other payments. Provided through our RealPage Payments subsidiaries with both operator and renter processing options for fee reduction, the platform accommodates the processing of multiple payment types including check, money order, automated clearing house ("ACH"), debit cards, and credit cards.

Resident Portal

Resident Portal is our on demand platform for facilitating renter transactions, social engagement, and community management. Resident portal functionality includes online community facilitation (between multifamily property managers, local vendors, and other renters), service request placement and status, and lease renewals.

Contact Center Maintenance

Contact Center Maintenance is our on demand platform for service request management. Functionality from the platform includes service call, email, and chat routing technology; service request tracking; and remote agent staffing, on a permanent or overflow basis to optimize the service request process. Enhancements include automated answering services and other features that amplify the ability of multifamily property managers to communicate with their residents.

Renter's Insurance

Renter's Insurance is part of our risk mitigation platform to reduce liability and property damage risk. The platform offers liability and content protection renter's insurance provided through our subsidiary Multifamily Internet Ventures, LLC, under the consumer-facing brand name "eRenterPlan." Liability policies protect property owners and managers against financial loss due to renter-caused damage, while content protection provides additional coverage for a renter's personal belongings in the event of loss.

Asset Optimization

Our asset optimization solutions aim to optimize property financial and operational performance, and provide comprehensive analytics-based decision support for optimum investment performance throughout the phases of real estate investment (e.g., acquisition, operation, renovation, and disposition). These solutions facilitate core asset management, business intelligence, performance benchmarking and investment analysis including real-time yield management, revenue growth forecasting, key variable sensitivity forecasting, internal operating metric benchmarking and external market benchmarking. Our asset optimization solution category consists of three primary solutions: YieldStar Revenue Management, Business Intelligence, and Asset and Investment Management.

YieldStar Revenue Management

YieldStar is our on demand yield management platform. The platform includes real-time statistical models leveraging a repository of lease transaction data to calculate optimal rent for each rental unit, pricing management advisory services, and MPF Research, an apartment market research database. The data coverage and forecasting capabilities of YieldStar were expanded through our 2017 acquisitions of Axiometrics and Lease Rent Options. Augmenting our data science talent and modeling tools through these acquisitions allows our customers to achieve better harvesting and placement of capital in the rental housing industry.

Business Intelligence

Business intelligence is our on demand business intelligence platform designed to enable property owners and managers to outperform their peers. Business intelligence functionality includes easy-to-use customized internal reporting at any aggregation level and during any time horizon, simultaneously leveraging operational, financial and marketing data. In addition, the platform includes a robust peer-benchmarking component that leverages a massive repository of lease transaction data for assessing both internal and external market performance metrics, economic tools for revenue forecasting, and key operating variable forecasting.

Asset and Investment Management

Asset and Investment Management is an integrated analytics platform providing general partners, limited partners, REITs and property management companies with increased transparency into their portfolios. The anchor component, Portfolio Asset Management ("PAM"), enables the collection of property level financial information and operational data across a portfolio, regardless of asset type or operational platform. Using PAM, portfolio managers can collect, share, analyze and report on critical metrics, facilitating better investment and operational decisions.

Professional Services

We have developed repeatable, cost-effective consulting and implementation services to assist our clients in taking advantage of the capabilities enabled by our asset optimization solutions. Our consulting and implementation methodology leverages the nature of our on demand software architecture, the industry-specific expertise of our professional services employees, and the design of our platform to simplify and expedite the implementation process. Our consulting and implementation services include project and application management procedures, business process evaluation, business model development and data conversion. Our consulting teams work closely with customers to facilitate the smooth transition and operation of our solutions.

We offer training programs for training administrators and onsite property managers on the use of our solutions. Training options include regularly hosted classroom and online instruction (through our online learning courseware), as well as online webinars. Our clients can integrate their own training content with our content to deliver an integrated and customized training program for their on-site property managers.

On Demand Delivery Infrastructure

Our IT infrastructure operates four redundant 40 GBPS dedicated fiber links connecting data centers containing hundreds of servers and multiple storage area networks. This architecture makes it possible to expand the data center incrementally with little or no disruption as more users or additional applications are added. With approximately 9,500 virtual servers, 700 physical servers and 5.4 petabytes of data storage, we leverage this infrastructure and massive repository of lease transaction data to power our platform of solutions.

Our infrastructure is based on an open architecture that enables third-party applications to access OneSite and other hosted applications through our RealPage Exchange platform that provides access to more than 100 different public and private web services and extensible markup language ("XML") gateways that are used to import and export data through third-party application program interfaces ("APIs") and process hundreds of thousands of transactions per day. RealPage Exchange also interfaces with third-party property management systems as well as our platform solutions.

In addition, our system is designed to replicate data into a Universal Data Store ("UDS") each day. Access to UDS is enabled through an access layer called UDS Direct, which enables clients to build portfolio reports, dashboards and alerts using

any Open Database Connectivity or Java Database Connectivity compliant report writer tool such as Microsoft Excel, Microsoft Access, Microsoft SQL Server Reporting Service or Crystal Reports. UDS is also transmitted to a number of our larger clients each night to feed portfolio reporting systems that they have built internally.

As of December 31, 2017, we employed approximately 230 employees who were responsible for maintaining data security, integrity, availability, performance and business continuity in our cloud computing facilities. We annually obtain a Service Organization Controls audit performed under Statements on Standards for Attestation Engagements No. 16 on a specified set of internal controls. Certain clients conduct separate business continuity audits of their own.

In addition to our production data centers, we manage a separate development and quality assurance testing facility used to control the pre-production testing required before each new release of our on demand software. We typically deploy new releases of the software underlying our on demand software solutions on a monthly or quarterly schedule depending on the solution.

Product Support

We offer product support services that provide our clients with assistance from our product support professionals by phone, web, or email in resolving issues with our solutions. We offer two product support options: Standard and Platinum Support. Standard Support includes product support during business hours Monday through Friday. Platinum Support includes the features of Standard Support, with customized engagement that includes a designated senior product support liaison. We also sponsor the RealPage User Group to facilitate communications between us and our community of users. The RealPage User Group is governed by a steering committee of our clients, which consists of two elected positions and subcommittee chairs, each representing a RealPage product center or group of product centers.

Product Development

We devote a substantial portion of our resources to developing new solutions and enhancing existing solutions, conducting product and quality assurance testing, improving core technology, and strengthening our technological expertise in the rental real estate industry. We typically deploy new releases of the software underlying our on demand software solutions on a monthly or quarterly schedule depending on the solution. As of December 31, 2017, our product development group consisted of approximately 590 employees in the United States and 650 employees located primarily in Hyderabad, India; Manila, Philippines; and Cebu City, Philippines. Product development expense totaled $89.5 million, $73.6 million and $68.8 million during the years ended December 31, 2017, 2016, and 2015, respectively.

Sales and Marketing

We sell our rental real estate software and services through our direct sales organization. We organize our sales force by geographic region, size of our prospective clients, and property type. We believe this focus provides a higher level of service and understanding of our clients' unique needs. Our typical sales cycle with a prospective client begins with the generation of a sales lead through Internet marketing, email campaigns, telemarketing efforts, trade shows, or other means of referral. The sales lead is followed by an assessment of the prospective client's requirements, sales presentations, and product demonstrations. Our sales cycle can vary substantially from client to client but typically requires three to six months for larger clients and one to six weeks for smaller clients.

In addition to new client sales, we sell additional solutions and consulting services to our existing clients to help them more efficiently and effectively manage their properties as the rental real estate market evolves and competitive conditions change.

We generate qualified client leads, accelerate sales opportunities, and build brand awareness through our marketing programs. Our marketing programs target property management company executives, technology professionals, and senior business leaders. Our marketing team focuses on the unique needs of clients within our target markets. Our marketing programs include the following activities:

- field marketing events for clients and prospects;
- participation in, and sponsorship of, user conferences, trade shows, and industry events;
- client programs, including client user meetings and our online client community;
- online marketing activities, including online advertising and SEO, email campaigns, web campaigns, white papers, free product trials and demos, webcasts, case studies, and the use of social media, including blogging, Facebook, LinkedIn, and Twitter;
- public relations;
- use of our website to provide product and company information, as well as learning opportunities for potential clients; and

- ongoing consumer email marketing campaigns that drive adoption of transactional products, such as online payments and renter's insurance, by residents on behalf of our property management clients.

We host an annual user conference where clients both participate in and lead various types of sessions and planned discussions designed to help accelerate business performance through the use of our integrated platform of solutions. The conference features a variety of client speakers, panelists, and presentations focused on businesses of all sizes. The event also brings together our clients, technology vendors, service providers, and other key participants in the rental real estate industry to exchange ideas and best practices for improving business performance. Attendees gain insight into our product plans and participate in interactive sessions that give them the opportunity to provide input into new features and functionality.

Strategic Relationships

We maintain relationships with a variety of technology vendors and service providers to enhance the capabilities of our integrated platform of solutions. This approach allows us to expand our platform and client base and to enter new markets. We have established the following types of strategic relationships:

Technology Vendors

We have relationships with a number of leading technology companies whose products we integrate into our platform or offer to complement our solutions. The cooperative relationships with our software and hardware technology partners allow us to build, optimize, and deliver a broad range of solutions to our clients.

Service Providers

We have relationships with a number of service providers that offer complementary services that integrate into our platform and address key requirements of rental property owners and managers, including credit card and ACH services, transaction processing capabilities, and insurance underwriting services.

Clients

We are committed to developing long-term client relationships and working closely with our clients to configure our solutions to meet the evolving needs of the rental real estate industry. Our clients include REITs, leading property management companies, fee managers, regionally based owner operators, vacation property owners, and service providers. As of December 31, 2017, we had over 12,400 clients who used one or more of our on demand software solutions to help manage the operations of approximately 13.0 million rental real estate units. Our clients include each of the ten largest multifamily property management companies in the United States, ranked as of January 1, 2017 by the NMHC, based on number of units managed. For the years ended December 31, 2017, 2016 and 2015, no one client accounted for more than 10% of our revenue. Revenues for our largest client were 6.2%, 5.7%, and 4.6% of total revenues for the years ended December 31, 2017, 2016, and 2015, respectively.

Intellectual Property

We rely on a combination of copyright, trademark, and trade secret laws, as well as confidentiality procedures and contractual restrictions, to establish and protect our proprietary rights. These laws, procedures, and restrictions provide only limited protection. We currently have a limited number of patents or pending patent applications. In the future, we may file additional patent applications, but patents may not be issued with respect to these patent applications, or if patents are issued, they may not provide us with any competitive advantages, may not be issued in a manner that gives us the protection that we seek, and may be successfully challenged by third parties.

We endeavor to enter into agreements with our employees and contractors and with parties with whom we do business in order to limit access to and disclosure of our proprietary information. We cannot be certain that the steps we have taken will prevent unauthorized use or reverse engineering of our technology. Moreover, others may independently develop technologies that are competitive with ours or that infringe on our intellectual property. The enforcement of our intellectual property rights also depends on any legal actions against these infringers being successful, but these actions may not be successful, even when our rights have been infringed.

Furthermore, effective patent, trademark, trade dress, copyright, and trade secret protection may not be available in every country in which our solutions are available over the Internet. In addition, the legal standards relating to the validity, enforceability, and scope of protection of intellectual property rights are uncertain and still evolving.

Employees

As of December 31, 2017, we had approximately 5,400 employees. We believe that our success is attributable in large part to our employees and an experienced management team, many members of which have years of industry experience in building, implementing, marketing, and selling property management solutions critical to business operations. Our future performance depends upon the continued service of our key sales, marketing, technical, and senior management personnel and our continuing ability to attract and retain highly qualified personnel. We believe we have a corporate culture that attracts

highly qualified and motivated employees. We consider our current relationship with our employees to be good. Our employees are not represented by a labor union and are not subject to a collective bargaining agreement.

Available Information

We maintain an Internet website at *www.realpage.com.* We make available, free of charge, on our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports, as soon as reasonably practicable after providing such reports to the Securities and Exchange Commission ("SEC").

We file annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, and other documents with the SEC under the Securities Exchange Act of 1934, as amended. The public may read and copy any materials that we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC's Office of Investor Education and Advocacy at 1-800-SEC-0330. Also, the SEC maintains an Internet website that contains reports, proxy, and information statements and other information regarding issuers, including RealPage, Inc., that file electronically with the SEC. The public can obtain any document we file with the SEC at *www.sec.gov*. Information contained on, or connected to, our website is not incorporated by reference into this Annual Report on Form 10-K and should not be considered part of this Annual Report on Form 10-K or any other filing that we make with the SEC.

Item 1A. Risk Factors

Financial Risks Related to Our Business

Our quarterly operating results have fluctuated in the past and may fluctuate in the future, which could cause our stock price to decline.

Our quarterly operating results may fluctuate as a result of a variety of factors, many of which are outside of our control. Fluctuations in our quarterly operating results may be due to a number of factors, including the risks and uncertainties discussed elsewhere in this filing. Some of the important factors that could cause our revenues and operating results to fluctuate from quarter to quarter include:

- the extent to which on demand software solutions maintain market acceptance;
- fluctuations in leasing activity by our clients;
- our ability to timely introduce enhancements to our existing solutions and new solutions;
- our ability to renew the use of our on demand solutions for units managed by our existing clients and to increase the use of our on demand solutions for the management of units by our existing and new clients;
- changes in our pricing policies or those of our competitors or new competitors;
- the variable nature of our sales and implementation cycles;
- our ability to anticipate and adapt to external forces and the emergence of new technologies and products;
- our ability to enter into new markets and capture additional market share;
- our ability to integrate acquisitions in a cost-effective and timely manner;
- the timing of revenue and expenses related to recent and potential acquisitions or dispositions of businesses or technologies;
- changes in local economic, political and regulatory environments of our international operations;
- general economic, industry and market conditions in the rental housing industry that impact our current and potential clients;
- the amount and timing of our investment in research and development activities;
- technical difficulties, service interruptions, data or document losses or security breaches;
- our ability to hire and retain qualified key personnel, including particular key positions in our sales force and IT department;
- changes in the legal, regulatory or compliance environment related to the rental housing industry or the markets in which we operate, including without limitation changes related to fair credit reporting, payment processing, data protection and privacy, utility billing, insurance, the Internet and e-commerce, licensing, telemarketing, electronic communications, the Health Insurance Portability and Accountability Act of 1996 ("HIPAA") and the Health Information Technology Economic and Clinical Health Act ("HITECH");

- the amount and timing of operating expenses and capital expenditures related to the expansion of our operations and infrastructure;
- increase in the number or severity of insurance claims on policies sold by us;
- litigation and settlement costs, including unforeseen costs;
- new accounting pronouncements and changes in accounting standards or practices, particularly any affecting the recognition of subscription revenue or accounting for mergers and acquisitions; and
- changes in tax policy in the United States and globally that affect the deductibility of certain expenses and how our profits are taxed.

Fluctuations in our quarterly operating results or guidance that we provide may lead analysts to change their long-term models for valuing our common stock, cause us to face short-term liquidity issues, impact our ability to retain or attract key personnel or cause other unanticipated issues, all of which could cause our stock price to decline. As a result of the potential variations in our quarterly revenue and operating results, we believe that quarter-to-quarter and year-to-date period comparisons of our revenues and operating results may not be meaningful and the results of any one quarter should not be relied upon as an indication of future performance.

If we are unable to continue to manage the growth of our diverse and complex operations, our financial performance may suffer.

The growth in the size, dispersed geographic locations, complexity and diversity of our business and the expansion of our product lines and client base has placed, and our anticipated growth may continue to place, a significant strain on our managerial, administrative, operational, financial and other resources. We continue to experience growth, and have increased our number of employees from approximately 4,400 as of December 31, 2016 to approximately 5,400 as of December 31, 2017. We increased our number of on demand clients from approximately 11,000 as of December 31, 2016 to nearly 12,400 as of December 31, 2017. In addition, we have grown and expect to continue to grow through acquisitions. Our ability to effectively manage our anticipated future growth will depend on, among other things, the following:

- successfully supporting and maintaining a broad range of current and emerging solutions;
- identifying suitable acquisition targets and efficiently managing the closing of acquisitions and the integration of targets into our operations;
- maintaining continuity in our senior management and key personnel;
- attracting, retaining, training and motivating our employees, particularly technical, client service and sales personnel;
- enhancing our financial and accounting systems and controls;
- enhancing our information technology infrastructure, processes and controls;
- successfully completing system upgrades and enhancements; and
- managing expanded operations in geographically dispersed locations.

If we do not manage the size, complexity and diverse nature of our business effectively, we could experience product performance issues, delayed software releases and longer response times for assisting our clients with implementation of our solutions and could lack adequate resources to support our clients on an ongoing basis, any of which could adversely affect our reputation in the market and our ability to generate revenue from new or existing clients.

Because we recognize subscription revenue over the term of the applicable client agreement, a decline in subscription renewals or new service agreements may not be reflected immediately in our operating results.

We generally recognize revenue from clients ratably over the terms of their client agreements, which are typically for a period of one or more years. As a result, much of the revenue we report in each quarter is deferred revenue from client agreements entered into during previous quarters. Consequently, a decline in new or renewed client agreements in any one quarter will not be fully reflected in our revenue or our results of operations until future periods. Accordingly, this revenue recognition model also makes it difficult for us to rapidly increase our revenue through additional sales in any period, as revenue from new clients must be recognized over the applicable subscription term.

The conditional conversion feature of our Convertible Notes, if triggered, may adversely affect our financial condition and operating results.

In the event the conditional conversion feature of the Convertible Notes is triggered, holders of the Convertible Notes will be entitled to convert the Convertible Notes at any time during specified periods at their option. If one or more holders elect to convert their Convertible Notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our common

stock (other than paying cash in lieu of delivering any fractional share), we would be required to settle a portion or all of our conversion obligation through the payment of cash, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their Convertible Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the Convertible Notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

The accounting method for convertible debt securities that may be settled in cash, such as the Convertible Notes, could have a material effect on our reported financial results.

In May 2008, the Financial Accounting Standards Board ("FASB") issued FASB Staff Position No. APB 14-1, Accounting for Convertible Debt Instruments That May Be Settled in Cash Upon Conversion (Including Partial Cash Settlement), which has subsequently been codified as Accounting Standards Codification 470-20, Debt with Conversion and Other Options, which we refer to as ASC 470-20. Under ASC 470-20, an entity must separately account for the liability and equity components of the convertible debt instruments, such as the Convertible Notes, that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer's economic interest cost. The effect of ASC 470-20 on the accounting for the notes is that the equity component is required to be included in the additional paid-in capital section of stockholders' equity on our Consolidated Balance Sheet, and the value of the equity component would be treated as original issue discount for purposes of accounting for the debt component of the Convertible Notes. As a result, we will be required to record a greater amount of non-cash interest expense in current periods presented as a result of the amortization of the discounted carrying value of the Convertible Notes to their face amount over the term of the Convertible Notes. We will report lower net income in our financial results because ASC 470-20 will require interest to include both the current period's amortization of the debt discount and the instrument's coupon interest, which could adversely affect our reported or future financial results, and the trading price of our common stock.

In addition, under certain circumstances, convertible debt instruments, such as the Convertible Notes, that may be settled entirely or partly in cash are currently accounted for utilizing the treasury stock method, the effect of which is that the shares issuable upon conversion of the Convertible Notes are not included in the calculation of diluted earnings per share except to the extent that the conversion value of the Convertible Notes exceeds their principal amount. Under the treasury stock method, for diluted earnings per share purposes, the transaction is accounted for as if the number of shares of common stock that would be necessary to settle such excess, if we elected to settle such excess in shares, are issued. We cannot be sure that the accounting standards in the future will continue to permit the use of the treasury stock method. If we are unable to use the treasury stock method in accounting for the shares issuable upon conversion of the Convertible Notes, then our diluted earnings per share would be adversely affected.

If we are not able to integrate past or future acquisitions successfully, our operating results and prospects could be harmed.

We have acquired new technology and domain expertise through multiple acquisitions, including our most recent acquisitions of LRO, On-Site, PEX, AUM, Axiometrics, eSupply, AssetEye and NWP. We expect to continue making acquisitions in the future. The success of our future acquisition strategy will depend on our ability to identify, negotiate, complete and integrate acquisitions. Acquisitions are inherently risky, and any acquisitions we complete may not be successful. Any acquisitions we pursue involve numerous risks, including the following:

- difficulties in integrating and managing the operations and technologies of the companies we acquire;
- diversion of our management's attention from normal daily operations of our business;
- our inability to maintain the clients, the key employees, the key business relationships and the reputations of the businesses we acquire;
- our inability to generate sufficient revenue from acquisitions to offset our increased expenses associated with acquisitions;
- difficulties in predicting or achieving the synergies between acquired businesses and our own businesses;
- our responsibility for the liabilities of the businesses we acquire, including, without limitation, liabilities arising out of their failure to maintain effective data security, data integrity, disaster recovery and privacy controls prior to the acquisition, or their infringement or alleged infringement of third-party intellectual property, contract or data access rights prior to the acquisition;
- difficulties in complying with new markets or regulatory standards to which we were not previously subject;
- delays in our ability to implement internal standards, controls, procedures and policies in the businesses we acquire; and
- adverse effects of acquisition activity on the key performance indicators we use to monitor our performance.

Our current acquisition strategy includes the acquisition of complementary businesses, products, and solutions. In order to integrate and fully realize the benefits of such acquisitions, we expect to build application interfaces that enable such clients to use a wide range of our solutions while they continue to use their legacy management systems. In addition, over time we expect to migrate each acquired company's clients to our on demand property management solutions to retain them as clients and to be in a position to offer them our solutions on a cost-effective basis. These efforts may be unsuccessful or entail costs that result in losses or reduced profitability.

Unanticipated events and circumstances occurring in future periods may affect the realizability of our intangible assets obtained through acquisitions. The events and circumstances that we consider include significant under-performance relative to projected future operating results and significant changes in our overall business or product strategies. These events and circumstances may cause us to revise our estimates and assumptions used in analyzing the value of our other intangible assets with indefinite lives, and any such revision could result in a non-cash impairment charge that could have a material impact on our financial results.

We may be unable to secure the equity or debt funding necessary to finance future acquisitions on terms that are acceptable to us, or at all. If we finance acquisitions by issuing equity or convertible debt securities, our existing stockholders will likely experience ownership dilution, and if we finance future acquisitions with debt funding, we will incur interest expense and may have to comply with additional financing covenants or secure that debt obligation with our assets.

Variability in our sales and activation cycles could result in fluctuations in our quarterly results of operations and cause our stock price to decline.

The sales and activation cycles for our solutions, from initial contact with a prospective client to contract execution and activation, vary widely by client and solution. We do not recognize revenue until the solution is activated. While most of our activations follow a set of standard procedures, a client's priorities may delay activation and our ability to recognize revenue, which could result in fluctuations in our quarterly operating results. Additionally, certain of our products are offered in suites containing multiple solutions, resulting in additional fluctuation in activations depending on each client's priorities with respect to solutions included in the suite.

Many of our clients are price sensitive, and if market dynamics require us to change our pricing model or reduce prices, our operating results will be harmed.

Many of our existing and potential clients are price sensitive, and uncertain global economic conditions, as well as decreased leasing velocity, have contributed to increased price sensitivity in the multifamily housing market and the other markets that we serve. As market dynamics change, or as new and existing competitors introduce more competitive pricing or pricing models, we may be unable to renew our agreements with existing clients or clients of the businesses we acquire or attract new clients at the same price or based on the same pricing model as previously used. As a result, it is possible that we may be required to change our pricing model, offer price incentives or reduce our prices, which could harm our revenue, profitability and operating results.

Economic trends that affect the rental housing market may have a negative effect on our business.

Our clients include a range of organizations whose success is closely linked to the rental housing market. Economic trends that negatively or positively affect the rental housing market may adversely affect our business. Instability or downturns affecting the rental housing market may have a material adverse effect on our business, prospects, financial condition and results of operations by:

- decreasing demand for leasing and marketing solutions;
- reducing the number of occupied sites and units on which we earn revenue;
- preventing our clients from expanding their businesses and managing new properties;
- causing our clients to reduce spending on our solutions;
- subjecting us to increased pricing pressure in order to add new clients and retain existing clients;
- causing our clients to switch to lower-priced solutions provided by our competitors or internally developed solutions;
- delaying or preventing our collection of outstanding accounts receivable; and
- causing payment processing losses related to an increase in client insolvency.

In addition, economic trends that reduce the frequency of renter turnover or the quantity of new renters may reduce the number of rental transactions completed by our clients and may, as a result, reduce demand for our rental, leasing or marketing transaction specific services.

We may require additional capital to support business growth or acquisitions, and this capital might not be available on terms acceptable to us or at all.

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges or opportunities, including the need to develop new solutions or enhance our existing solutions, enhance our operating infrastructure or acquire businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional funds through further issuances of equity or convertible debt securities, our existing stockholders could suffer significant ownership dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock. In 2017, we amended our Credit Facility to increase our borrowing capacity and completed a convertible debt offering in which we sold $345.0 million of Convertible Notes. Future debt financing could involve additional restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. In addition, we may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges or opportunities could be significantly limited.

Our Credit Facility contains restrictions that impact our business and expose us to risks that could adversely affect our liquidity and financial condition.

All of our obligations under the Credit Facility are secured by substantially all of our assets. All of our existing and future domestic subsidiaries are required to guarantee our obligations under the Credit Facility, other than certain immaterial subsidiaries, foreign subsidiary holding companies and our payment processing subsidiaries. Such guarantees by existing and future domestic subsidiaries are and will be secured by substantially all of the assets of such subsidiaries.

Our Credit Facility contains customary covenants, subject in each case to customary exceptions and qualifications, which limit our and certain of our subsidiaries' ability to, among other things:

- incur additional indebtedness or guarantee indebtedness of others;
- create liens on our assets;
- enter into mergers or consolidations;
- dispose of assets;
- prepay certain indebtedness;
- make changes to our governing documents and certain of our agreements;
- pay dividends and make other distributions on our capital stock, and redeem and repurchase our capital stock;
- make investments, including acquisitions; and
- enter into transactions with affiliates.

Our Credit Facility also contains, subject in each case to customary exceptions and qualifications, customary affirmative covenants. We are also required to comply with a maximum Consolidated Net Leverage Ratio, a maximum Consolidated Senior Secured Net Leverage Ratio, and a minimum Consolidated Interest Coverage Ratio. See additional discussion of these requirements in Note 7 to the Consolidated Financial Statements under Item 8 of this Annual Report on Form 10-K. As of December 31, 2017, we were in compliance with all of the covenants under our Credit Facility.

The Credit Facility contains customary events of default, subject to customary cure periods for certain defaults, that include, among others, non-payment defaults, covenant defaults, material judgment defaults, bankruptcy and insolvency defaults, cross-defaults to certain other material indebtedness, ERISA defaults, inaccuracy of representations and warranties and a change in control default.

Even if we comply with all of the applicable covenants, the restrictions on the conduct of our business could adversely affect our business by, among other things, limiting our ability to take advantage of financings, mergers, acquisitions and other corporate opportunities that may be beneficial to the business. Even if the Credit Facility was terminated, additional debt we could incur in the future may subject us to similar or additional covenants.

A significant decline in our cash flow could impair our ability to make payments under our debt obligations.

If we experience a decline in cash flow due to any of the factors described in this "Risk Factors" section or otherwise, we could have difficulty paying interest and principal amounts due on our indebtedness and meeting the financial covenants set forth in our Credit Facility. If we are unable to generate sufficient cash flow or otherwise obtain the funds necessary to make required payments under our Credit Facility or Convertible Notes Indenture, or if we fail to comply with the requirements of our indebtedness, we could default under our Credit Facility or Convertible Notes Indenture. Any default that is not cured or

waived could result in the termination of the revolving commitments, the acceleration of the obligations under the Credit Facility or Convertible Notes Indenture, an increase in the applicable interest rate under the Credit Facility and a requirement that our subsidiaries that have guaranteed the Credit Facility pay the obligations in full, and would permit our lenders to exercise remedies with respect to all of the collateral that is securing the Credit Facility, including substantially all of our and our subsidiary guarantors' assets. Any such default could have a material adverse effect on our liquidity and financial condition.

If we fail to maintain proper and effective internal controls, our ability to produce accurate and timely financial statements could be impaired, which could harm our operating results, our ability to operate our business and investors' views of us.

Ensuring that we have adequate internal financial and accounting controls and procedures so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Our 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 in accordance with United States generally accepted accounting principles. We are required to comply with Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, which requires annual management assessment of the effectiveness of our internal control over financial reporting and a report by our independent auditors. If we fail to maintain proper and effective internal controls, our ability to produce accurate and timely financial statements could be impaired, which could harm our operating results, harm our ability to operate our business and reduce the trading price of our stock.

Changes in, or errors in our interpretations and applications of, financial accounting standards or practices may cause adverse, unexpected financial reporting fluctuations and affect our reported results of operations.

A change in accounting standards or practices can have a significant effect on our reported results and may even affect our reporting of transactions completed before the change is effective. New accounting pronouncements and varying interpretations of accounting pronouncements have occurred and may occur in the future. Changes to existing rules or the questioning of current practices or errors in our interpretations and applications of financial accounting standards or practices may adversely affect our reported financial results or the way in which we conduct our business.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*. ASU 2014-09, as amended by certain supplementary ASU's released in 2016 and 2017, replaced all current GAAP guidance on revenue recognition and eliminated all industry-specific guidance. Our adoption of this ASU was effective on January 1, 2018 and required changes in our revenue recognition timing related to commissions paid to our direct sales force, certain client accommodations and our allocation of contract transaction prices. The new standard also requires new revenue disclosures in our consolidated financial statements relating to, among other items, the disaggregation of revenue and contract backlog. We have developed expanded disclosures to meet the new requirements. We have also identified and designed additional controls and updated our accounting policies to support our implementation and ongoing compliance with the new standard.

We generate commission revenue from the insurance policies we sell as a registered insurance agent, and if insurance premiums decline or if the insureds experience greater than expected losses, our revenues could decline and our operating results could be harmed.

Through our wholly owned subsidiary, Multifamily Internet Ventures LLC, a managing general insurance agency, we generate commission revenue from offering liability and renter's insurance. Through Multifamily Internet Ventures LLC we also sell additional insurance products, including auto and other personal lines insurance, to renters that buy renter's insurance from us. These policies are ultimately underwritten by various insurance carriers. Some of the property owners and managers that participate in our programs opt to require renters to purchase rental insurance policies and agree to grant to Multifamily Internet Ventures LLC exclusive marketing rights at their properties. If demand for residential rental housing declines, property owners and managers may be forced to reduce their rental rates and to stop requiring the purchase of rental insurance in order to reduce the overall cost of renting. If property owners or managers cease to require renter's insurance, elect to offer policies from competing providers or insurance premiums decline, our revenues from selling insurance policies will be adversely affected.

Additionally, one type of commission paid by insurance carriers to Multifamily Internet Ventures LLC is contingent commission, which is affected by claims experienced at the properties for which the renters purchase insurance. In the event that the severity or frequency of claims by the insureds increase unexpectedly, the contingent commission we typically earn will be adversely affected. As a result, our quarterly, or annual, operating results could fall below the expectations of analysts or investors, in which event our stock price may decline.

Our ability to use net operating losses to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Internal Revenue Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating losses, or NOLs, to offset future taxable income. Our ability to utilize NOLs of companies that we have acquired or may acquire in the future may be subject to limitations. Future changes in our stock ownership, some of which are outside of our

control, could result in an ownership change under Section 382 of the Internal Revenue Code. For these reasons, we may not be able to utilize a material portion of the NOLs reflected on our balance sheet, even if we maintain profitability.

If we are required to collect sales and use taxes on the solutions we sell in additional taxing jurisdictions, we may be subject to liability for past sales and our future sales may decrease.

States and some local taxing jurisdictions have differing rules and regulations governing sales and use taxes, and these rules and regulations are subject to varying interpretations that may change over time. We review these rules and regulations periodically and currently collect and remit sales taxes in taxing jurisdictions where we believe we are required to do so. However, additional state and/or local taxing jurisdictions may seek to impose sales or other tax collection obligations on us, including for past sales. A successful assertion that we should be collecting additional sales or other taxes on our solutions could result in substantial tax liabilities for past sales, discourage clients from purchasing our solutions or otherwise harm our business and operating results. This risk may be greater with regard to solutions acquired through acquisitions because the acquired entities may not have had the same practices and procedures that we have in place.

We may also become subject to tax audits or similar procedures in jurisdictions where we already collect and remit sales taxes. A successful assertion that we have not collected and remitted taxes at the appropriate levels may also result in substantial tax liabilities for past sales. Liability for past taxes may also include very substantial interest and penalty charges. Our client contracts provide that our clients must pay all applicable sales and similar taxes. Nevertheless, clients may be reluctant to pay back taxes and may refuse responsibility for interest or penalties associated with those taxes. If we are required to collect and pay back taxes and the associated interest and penalties, and if our clients fail or refuse to reimburse us for all or a portion of these amounts, we will incur unplanned expenses that may be substantial. Moreover, imposition of such taxes on our solutions going forward will effectively increase the cost of such solutions to our clients and may adversely affect our ability to continue to sell those solutions to existing clients or to gain new clients in the areas in which such taxes are imposed.

Changes to applicable U.S. or foreign tax laws and regulations may have a material adverse effect on our business, financial condition and results of operations.

We are subject to federal and state income taxes in the United States and various foreign jurisdictions, and our domestic and international tax liabilities are subject to the allocation of expenses in differing jurisdictions. Our tax rate is affected by changes in the mix of earnings and losses in jurisdictions with differing statutory tax rates, including jurisdictions in which we have completed or may complete acquisitions and the valuation of deferred tax assets and liabilities, including our ability to utilize our net operating losses. Increases in our effective tax rate could harm our operating results.

The Tax Cuts and Jobs Act ("Tax Reform Act"), which was signed into law on December 22, 2017, contains significant changes to the U.S. federal income tax laws, the full consequences of which have not yet been determined. As a result of the enacted reduction in the federal corporate income tax rate, we recorded a non-cash adjustment to revalue our net deferred tax assets, with a corresponding charge to earnings. This one-time revaluation was based on our current knowledge, interpretation, and understanding of the Tax Reform Act and its impact to our business. If we are required to further adjust the value of our deferred tax assets and/or recognize a deferred tax liability for non-U.S. earnings, we may be required to record additional charges to earnings, which could have could have a material adverse effect on our business, financial condition, and results of operations.

The ultimate impact of the Tax Reform Act may differ materially from our estimates, due to changes in the interpretations and assumptions made by us as well as additional regulatory and accounting guidance that may be issued and actions we may take as a result of the Tax Reform Act.

Operational Risks Related to Our Business

The nature of our platform is complex and highly integrated, and if we fail to successfully manage releases or integrate new solutions, it could harm our revenues, operating income and reputation.

We manage a complex platform of solutions that consists of our property management solutions, integrated software-enabled value-added services and advertising and lease generation services. Many of our solutions include a large number of product centers that are highly integrated and require interoperability with other RealPage, Inc. products, as well as products and services of third-party service providers. Additionally, we typically deploy new releases of the software underlying our on demand software solutions on a bi-weekly, monthly or quarterly schedule, depending on the solution. Due to this complexity and the condensed development cycles under which we operate, we may experience errors in our software, corruption or loss of our data or unexpected performance issues from time to time. For example, our solutions may face interoperability difficulties with software operating systems or programs being used by our clients, or new releases, upgrades, fixes or the integration of acquired technologies may have unanticipated consequences on the operation and performance of our other solutions. If we encounter integration challenges or discover errors in our solutions late in our development cycle, it may cause us to delay our launch dates. Any major integration or interoperability issues or launch delays could have a material adverse effect on our revenues, operating income and reputation.

Our business depends substantially on the renewal of our products and services for on demand units managed by our clients and the increase in the use of our on demand products and services for on demand units.

We generally license our solutions pursuant to client agreements with a term of one year or longer. The pricing of the agreements is typically based on a price per unit basis. Our clients have no obligation to renew these agreements after their term expires, or to renew these agreements at the same or higher annual contract value. In addition, under specific circumstances, our clients have the right to cancel their client agreements before they expire, for example, in the event of an uncured breach by us, or in some circumstances, upon the sale or transfer of a client property, by giving 30 days' notice or paying a cancellation fee. In addition, clients often purchase a higher level of professional services in the initial term than they do in renewal terms to ensure successful activation. As a result, our ability to grow is dependent in part on clients purchasing additional solutions or increasing the number of units they own or manage after the initial term of their client agreement. Though we maintain and analyze historical data with respect to rates of client renewals, upgrades and expansions, those rates may not accurately predict future trends in renewal of on demand units. Our clients' on demand unit renewal rates may decline or fluctuate for a number of reasons, including, but not limited to, their level of satisfaction with our solutions, our pricing, our competitors' pricing, reductions in our clients' spending levels or reductions in the number of on demand units managed by our clients. If our clients cancel or amend their agreements with us during their term, do not renew their agreements, renew on less favorable terms or do not purchase additional solutions or professional services in renewal periods, our revenue may grow more slowly than expected or decline and our profitability may be harmed.

Additionally, we have experienced, and expect to continue to experience, some level of on demand unit attrition as properties are sold and the new owners and managers of properties previously owned or managed by our clients do not continue to use our solutions. We cannot predict the amount of on demand unit turnover we will experience in the future. However, we have experienced higher rates of on demand unit attrition with our Propertyware property management system, primarily because it serves smaller properties than our OneSite property management system, and we may experience higher levels of on demand unit attrition to the extent Propertyware grows as a percentage of our revenues. If we experience increased on demand unit turnover, our financial performance and operating results could be adversely affected.

On demand revenue that is derived from products that help owners and managers lease and market apartments, such as certain products in LeaseStar and LeasingDesk, may decrease as occupancy rates rise. We have also experienced, and expect to continue to experience, some number of consolidations of our clients with other parties. In addition, if one of our clients is consolidated with another client, the acquiring client may have negotiated lower prices for our solutions or may use fewer of our solutions than the acquired client. In each case, the consolidated entity may attempt to negotiate lower prices for using our solutions as a result of the entity's increased size. These consolidations may cause us to lose on demand units or require us to reduce prices as a result of enhanced client leverage, which could cause our financial performance and operating results to be adversely affected.

We may not be able to continue to add new clients and retain and increase sales to our existing clients, which could adversely affect our operating results.

Our revenue growth is dependent on our ability to continually attract new clients while retaining and expanding our service offerings to existing clients. Growth in the demand for our solutions may be inhibited and we may be unable to sustain growth in our sales for a number of reasons, including, but not limited to:

- our failure to develop new or additional solutions;
- our inability to market our solutions in a cost-effective manner to new clients or in new vertical or geographic markets;
- our inability to expand our sales to existing clients;
- our inability to build and promote our brand; and
- perceived or actual security, integrity, reliability, quality or compatibility problems with our solutions.

A substantial amount of our past revenue growth was derived from purchases of upgrades and additional solutions by existing clients. Our costs associated with increasing revenue from existing clients are generally lower than costs associated with generating revenue from new clients. Therefore, a reduction in the rate of revenue increase from our existing clients, even if offset by an increase in revenue from new clients, could reduce our profitability and have a material adverse effect on our operating results.

If we are unable to successfully develop or acquire and sell enhancements and new solutions, our revenue growth will be harmed and we may not be able to meet profitability expectations.

The industry in which we operate is characterized by rapidly changing client requirements, technological developments and evolving industry standards. Our ability to attract new clients and increase revenue from existing clients will depend in large part on our ability to successfully develop, bring to market and sell enhancements to our existing solutions and new

solutions that effectively respond to the rapid changes in our industry. Any enhancements or new solutions that we develop or acquire may not be introduced to the market in a timely or cost-effective manner and may not achieve the broad market acceptance necessary to generate the revenue required to offset the operating expenses and capital expenditures related to development or acquisition. If we are unable to timely develop or acquire and sell enhancements and new solutions that keep pace with the rapid changes in our industry, our revenue will not grow as expected and we may not be able to maintain or meet profitability expectations.

Any disruption of service at our data centers or other facilities could interrupt or delay our clients' access to our solutions, which could harm our operating results.

The ability of our clients to access our service is critical to our business. We host our products and services, support our operations and service our clients primarily from data centers in the Dallas, Texas area, but also from data centers located elsewhere in the United States and in Europe.

We may fail to provide such service as a result of numerous factors, many of which are beyond our control, including, without limitation: mechanical failure, power outage, human error, physical or electronic security breaches, war, terrorism and related conflicts or similar events worldwide, fire, earthquake, hurricane, flood and other natural disasters, sabotage and vandalism. We attempt to mitigate these risks at our Texas-based data centers and other facilities through various business continuity efforts, including: redundant infrastructure, 24 x 7 x 365 system activity monitoring, backup and recovery procedures, use of a secure off-site storage facility for backup media, separate test systems and rotation of management and system security measures, but our precautions may not protect against all potential problems. Disaster recovery procedures are in place to facilitate the recovery of our operations, products and services within the stated service level goals. Our secondary data center is equipped with physical space, power, storage and networking infrastructure and Internet connectivity to support the solutions we provide in the event of the interruption of services at our primary data center. Even with this secondary data center, however, our operations would be interrupted during the transition process should our primary data center experience a failure. Moreover, both our primary and secondary data centers are located in the greater metropolitan Dallas area. As a result, any regional disaster could affect both data centers and result in a material disruption of our services.

Problems at one or more of our data centers, whether or not within our control, could result in service disruptions or delays or loss or corruption of data or documents. This could damage our reputation, cause us to issue credits to clients, subject us to potential liability or costs related to defending against claims, or cause clients to terminate or elect not to renew their agreements, any of which could negatively impact our revenues and harm our operating results.

Interruptions or delays in service from our third-party data center providers could impair our ability to deliver certain of our products to our clients, resulting in client dissatisfaction, damage to our reputation, loss of clients, limited growth and reduction in revenue.

Our products and services are hosted and supported from data centers in various geographic locations within the continental United States and Europe, and are operated by third-party providers. Our operations depend on our third-party data center providers' abilities to protect these facilities against damage or interruption from natural disasters, power or telecommunications failures, criminal acts and similar events. In the event that any of our third-party hosting or facilities arrangements is terminated, or if there is a lapse of service or damage to a facility, we could experience interruptions in the availability of our on demand software as well as delays and additional expenses in arranging new facilities and services.

Despite precautions taken at these third party data centers, the occurrence of spikes in usage volume, a natural disaster, an act of terrorism, adverse changes in United States or foreign laws and regulations, vandalism or sabotage, a decision to close a third-party facility without adequate notice, or other unanticipated problems at a facility could result in lengthy interruptions in the availability of our on demand software. Even with current and planned disaster recovery arrangements, our business could be harmed. Also, in the event of damage or interruption, our insurance policies may not adequately compensate us for any losses that we may incur. These factors in turn could further reduce our revenue, subject us to liability and cause us to issue credits or cause clients to fail to renew their subscriptions, any of which could materially adversely affect our business.

We provide service level commitments to our clients, and our failure to meet the stated service levels could significantly harm our revenue and our reputation.

Our client agreements provide that we maintain certain service level commitments to our clients relating primarily to product functionality, network uptime, critical infrastructure availability and hardware replacement. For example, our service level agreements generally require that our solutions are available 98% of the time during coverage hours (normally 6:00 a.m. though 10:00 p.m. Central time daily) 365 days per year (other than certain permitted exceptions such as maintenance). If we are unable to meet the stated service level commitments, we may be contractually obligated to provide clients with refunds or credits. Additionally, if we fail to meet our service level commitments a specified number of times within a given time frame or for a specified duration, our clients may terminate their agreements with us or extend the term of their agreements at no additional fee. As a result, a failure to deliver services for a relatively short duration could cause us to issue credits or refunds to a large number of affected clients or result in the loss of clients. In addition, we cannot assure you that our clients will accept

these credits, refunds, termination or extension rights in lieu of other legal remedies that may be available to them. Our failure to meet our commitments could also result in substantial client dissatisfaction or loss. Because of the loss of future revenues through the issuance of credits or the loss of clients or other potential liabilities, our revenue could be significantly impacted if we cannot meet our service level commitments to our clients.

We face intense competitive pressures and our failure to compete successfully could harm our business and operating results.

We compete in a number of markets including accounting software, property management software for multifamily, single family and commercial solutions, vertically-integrated cloud computing services, software-enabled value-added services including applicant screening, insurance, relationship management ("CRM"), marketing and web portals, Internet listing services, utility billing and energy management, revenue management, multifamily housing and commercial real estate market research, spend management, payment processing, affordable housing compliance and audit services and vacation rentals. The markets for many of our solutions are intensely competitive, fragmented and rapidly changing. Some of these markets have relatively low barriers to entry. With the introduction of new technologies and market entrants, we expect competition to intensify in the future. Increased competition could result in pricing pressures, reduced sales and reduced margins. Often we compete to sell our solutions against existing systems that our potential clients have already made significant expenditures to install.

Our competitors vary depending on our product and service. Certain competitors compete with us in a number of areas, including Yardi, Inc., Entrata, Inc., MRI Software LLC, AppFolio, Inc., and CoStar Group, Inc. Other competitors compete with us with respect to a single product or category of products. We compete in various markets, with different competitive considerations in these various markets. In many of our markets we compete with a number of providers, including those who market specifically to multifamily, single family, and commercial real estate owners and property managers as well as other providers. In addition, many of our existing or potential clients have developed or may develop their own solutions that may be competitive with our solutions. We also may face competition for potential acquisition targets from our competitors who are seeking to expand their offerings.

With respect to all of our competitors, we compete based on a number of factors, including total cost of ownership, level of integration with property management systems, ease of implementation, product functionality and scope, performance, security, scalability and reliability of service, brand and reputation, sales and marketing capabilities and financial resources. Some of our existing competitors and new market entrants may enjoy substantial competitive advantages, such as greater name recognition, longer operating histories, larger installed client bases and larger sales and marketing budgets, as well as greater financial, technical and other resources. In addition, any number of our existing competitors or new market entrants could combine or consolidate, or obtain new financing through public or private sources, to become a more formidable competitor with greater resources. As a result of such competitive advantages, our existing and future competitors may be able to:

- develop superior products or services, gain greater market acceptance and expand their offerings more efficiently or more rapidly;
- adapt to new or emerging technologies and changes in client requirements more quickly;
- take advantage of acquisition and other opportunities more readily;
- adopt more aggressive pricing policies, such as offering discounted pricing for purchasing multiple bundled products;
- devote greater resources to the promotion of their brand and marketing and sales of their products and services; and
- devote greater resources to the research and development of their products and services.

If we are not able to compete effectively, our operating results will be harmed.

We integrate our software-enabled value-added services with competitive property management software for some of our clients. Our application infrastructure, marketed to our clients as the RealPage Cloud, is based on an open architecture that enables third-party applications to access and interface with applications hosted in the RealPage Cloud through our RealPage Exchange platform. Likewise, through this platform our RealPage Cloud services are able to access and interface with other third-party applications, including third-party property management systems. We also provide services to assist in the implementation, training, support and hosting with respect to the integration of some of our competitors' applications with our solutions. We sometimes rely on the cooperation of our competitors to implement solutions for our clients. However, frequently our reliance on the cooperation of our competitors can result in delays in integration. There is no assurance that our competitors, even if contractually obligated to do so, will continue to cooperate with us or will not prospectively alter their obligations to do so. We also occasionally develop interfaces between our software-enabled value-added services and competitor property management software without their cooperation or consent. There is no assurance that our competitors will not alter their applications in ways that inhibit or prevent integration or assert that their intellectual property rights restrict our

ability to integrate our solutions with their applications. Moreover, regardless of merit, such interface-related activity may result in costly litigation.

Material defects or errors in the software we use to deliver our solutions could harm our reputation, result in significant costs to us and impair our ability to sell our solutions.

The software applications underlying our solutions are inherently complex and may contain material defects or errors, particularly when first introduced or when new versions or enhancements are released. We have, from time to time, found defects in the software applications underlying our solutions, and new errors in our existing solutions may be detected in the future. Any errors or defects that cause performance problems or service interruptions could result in:

- a reduction in new sales or subscription renewal rates;
- unexpected sales credits or refunds to our clients, loss of clients and other potential liabilities;
- delays in client payments, increasing our collection reserve and collection cycle;
- diversion of development resources and associated costs;
- harm to our reputation and brand; and
- unanticipated litigation costs.

Additionally, the costs incurred in correcting defects or errors could be substantial and could adversely affect our operating results.

Failure to effectively manage the development, sale and support of our solutions and data processing efforts outside the United States could harm our business.

Our success depends on our ability to process high volumes of client data, enhance existing solutions and develop new solutions rapidly and cost effectively. We currently maintain offices in Hyderabad, India; Cebu, Philippines and Manila, Philippines where we employ development and data processing personnel or conduct other business functions important to our operations. We believe that performing these activities in Hyderabad, Cebu and Manila increases the efficiency and decreases the costs of our related operations. We maintain an office in Barcelona, Spain where certain of our vacation rental product development, sales and support operations are based. We also maintain offices in London, England and Sydney, Australia, where we provide property management, online leasing and resident software solutions. We believe our access to a multilingual employee base enhances our ability to serve vacation and other rental property managers outside the United States and in non-English speaking countries. Managing and staffing international operations requires management's attention and financial resources. The level of cost savings achieved by our international operations may not exceed the amount of investment and additional resources required to manage and operate these international operations. Our product offerings outside the United States may not be profitable or otherwise successful. Additionally, if we experience difficulties as a result of political, social, economic or environmental instability, change in applicable law, limitations of local infrastructure or problems with our workforce or facilities at our or third parties' international operations, our business could be harmed due to delays in product release schedules or data processing services.

We rely on third-party technologies and services that may be difficult to replace or that could cause errors, failures or disruptions of our service, any of which could harm our business.

We rely on third-party providers in connection with the delivery of our solutions. Such providers include, but are not limited to, computer hardware and software vendors, database and data providers and cloud hosting providers. We utilize equipment, software and services from Amazon Web Services, a division of Amazon, Inc., Microsoft Corporation, salesforce.com, Avaya, Inc., Twilio, Inc., Palo Alto Networks, Inc., F5 Networks, Inc., EMC Corporation and various other third party providers. Our OneSite Accounting service relies on a software-as-a-service, or SaaS, accounting system developed and maintained by a third-party service provider. We host this application in our data centers and provide supplemental development resources to extend this accounting system to meet the unique requirements of the rental housing industry. Our shared cloud portfolio reporting service utilizes software licensed from IBM. We expect to utilize additional service providers as we expand our platform. Although the third-party technologies and services that we currently require are commercially available, such technologies and services may not continue to be available on commercially reasonable terms, or at all. Any loss of the right to use any of these technologies or services could result in delays in the provisioning of our solutions until alternative technology is either developed by us, or, if available, is identified, obtained and integrated, and such delays could harm our business. It also may be time consuming and costly to enter into new relationships. Additionally, any errors or defects in the third-party technologies we utilize or delays or interruptions in the third-party services we rely on could result in errors, failures or disruptions of our services, which also could harm our business.

We depend upon third-party service providers for important payment processing functions. If these third-party service providers do not fulfill their contractual obligations or choose to discontinue their services, our business and operations could be disrupted and our operating results would be harmed.

We rely on several large payment processing organizations to enable us to provide payment processing services to our clients, including electronic funds transfers, or EFT, check services, bank card authorization, data capture, settlement and merchant accounting services and access to various reporting tools. We also rely on third-party hardware manufacturers to manufacture the check scanning hardware our clients utilize to process transactions. Some of these organizations and service providers are competitors who also directly or indirectly sell payment processing services to clients in competition with us. With respect to these organizations and service providers, we have significantly less control over the systems and processes than if we were to maintain and operate them ourselves. In some cases, functions necessary to our business are performed on proprietary third-party systems and software to which we have no access. We also generally do not have long-term contracts with these organizations and service providers. Accordingly, the failure of these organizations and service providers to renew their contracts with us or fulfill their contractual obligations and perform satisfactorily could result in significant disruptions to our operations and adversely affect operating results. In addition, businesses that we have acquired, or may acquire in the future, typically rely on other payment processing service providers. We may encounter difficulty converting payment processing services from these service providers to our payment processing platform. If we are required to find an alternative source for performing these functions, we may have to expend significant money, time and other resources to develop or obtain an alternative, and if developing or obtaining an alternative is not accomplished in a timely manner and without significant disruption to our business, we may be unable to fulfill our responsibilities to clients or meet their expectations, with the attendant potential for liability claims, damage to our reputation, loss of ability to attract or maintain clients.

If our security measures are breached and unauthorized access is obtained to our software platform and infrastructure, or our clients' or their renters' or prospects' data, we may incur significant liabilities, third parties may misappropriate our intellectual property, our solutions may be perceived as not being secure and clients may curtail or stop using our solutions.

Maintaining the security of our software platform and service infrastructure is of paramount importance to us and our clients, and we devote significant resources to this effort. Breaches of the security measures we take to protect our software platform and service infrastructure and our and our clients' confidential or proprietary information that is stored on and transmitted through those systems could disrupt and compromise the security of our internal systems and on demand applications, impair our ability to provide products and services to our clients and protect the privacy of their data, compromise our confidential or technical business information harming our competitive position, result in theft or misuse of our intellectual property or otherwise adversely affect our business.

The solutions we provide involve the collection, storage and transmission of confidential personal and proprietary information regarding our clients and our clients' current and prospective renters and business partners. Specifically, we collect, store and transmit a variety of client data such as demographic information and payment histories of our clients' prospective and current renters and business partners. Additionally, we collect and transmit sensitive financial data such as credit card and bank account information. Treatment of certain types of data, such as personally identifiable information, protected health information and sensitive financial data may be subject to federal or state regulations requiring heightened privacy and security. If our data security or data integrity measures are breached or otherwise fail or prove to be inadequate for any reason, as a result of third-party actions or our employees' or contractors' errors or malfeasance or otherwise, and unauthorized persons obtain access to this information, or the data is otherwise compromised, we could incur significant liability to our clients and to their prospective or current renters or business partners, significant costs associated with internal regulatory investigations and litigation, or significant fines and sanctions by payment processing networks or governmental authorities. Any of these events or circumstances could result in damage to our reputation and material harm to our business.

We also rely upon our clients as users of our system to promote security of the system and the data within it, such as administration of client-side access credentialing and control of client-side display of data. On occasion, our clients have failed to perform these activities in such a manner as to prevent unauthorized access to data. To date, these breaches have not resulted in claims against us or in material harm to our business, but we cannot be certain that the failure of our clients in future periods to perform these activities will not result in claims against us, which could expose us to potential litigation, damage to our reputation and material harm to our business.

There can be no certainty that the measures we have taken to protect our software platform and service infrastructure, our confidential and proprietary information and the privacy and integrity of our clients', their current or prospective renters' and business partners' data are adequate to prevent or remedy unauthorized access to our system. Because techniques used to obtain unauthorized access to, or to sabotage, systems change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventive measures. Experienced computer programmers seeking to intrude or cause harm, or hackers, may attempt to penetrate our service infrastructure from time to time. Hackers may consist of sophisticated organizations, competitors, governments or individuals who launch targeted attacks to gain unauthorized access to our systems. A hacker who is able to penetrate our service infrastructure could misappropriate

proprietary or confidential information or cause interruptions in our services. We might be required to expend significant capital and resources to protect against, or to remedy, problems caused by hackers, and we may not have a timely remedy against a hacker who is able to penetrate our service infrastructure. In addition to purposeful breaches, inadvertent actions or the transmission of computer viruses could expose us to security risks. If an actual or perceived breach of our security occurs or if our clients and potential clients perceive vulnerabilities, the market perception of the effectiveness of our security measures could be harmed, we could lose sales and clients and our business could be materially harmed.

Our business is subject to the risks of international operations.

Compliance with complex foreign and U.S. laws and regulations that apply to our international operations increases our cost of doing business. These numerous and sometimes conflicting laws and regulations include internal control and disclosure rules, data privacy and filtering requirements, anti-corruption laws, such as the Foreign Corrupt Practices Act, and other local laws prohibiting corrupt payments to governmental officials, and antitrust and competition regulations, among others.

Violations of these laws and regulations could result in fines and penalties, criminal sanctions against us, our officers, or our employees, prohibitions on the conduct of our business and on our ability to carry on operations in one or more countries, and could also materially affect our brand, our international expansion efforts, our ability to attract and retain employees, our business and our operating results. Although we have implemented policies and procedures designed to ensure compliance with these laws and regulations, there can be no assurance that our employees, contractors, or agents will not violate our policies.

In addition, we are subject to a variety of risks inherent in doing business internationally, including:

- political, social, economic or environmental instability, terrorist attacks and security concerns in general;
- limitations of local infrastructure;
- fluctuations in currency exchange rates;
- higher levels of credit risk and payment fraud;
- reduced protection for intellectual property rights in some countries;
- difficulties in staffing and managing global operations and the increased travel, infrastructure and legal compliance costs associated with multiple international locations;
- compliance with statutory equity requirements and management of tax consequences; and
- outbreaks of highly contagious diseases.

If we are unable to manage the complexity of our international operations successfully, our financial results could be adversely affected.

We rely on our management team and need additional personnel to grow our business, and the loss of one or more key employees or our inability to attract and retain qualified personnel could harm our business.

Our success and future growth depend on the skills, working relationships and continued services of our management team. The loss of our Chief Executive Officer or other senior executives, or our inability to successfully integrate certain new members of our management, could adversely affect our business. Our future success also will depend on our ability to attract, retain and motivate highly skilled software developers, marketing and sales personnel, technical support and product development personnel in the United States and internationally. All of our employees work for us on an at-will basis. Competition for these types of personnel is intense, particularly in the software industry. As a result, we may be unable to attract or retain qualified personnel. Our inability to attract and retain the necessary personnel could adversely affect our business.

Legal and Regulatory Risks Related to Our Business

We face a number of risks in our payment processing business that could result in a reduction in our revenues and profits.

In connection with our electronic payment processing services, we process renter payments and subsequently submit these renter payments to our clients after varying clearing times established by RealPage. These payments are settled through our sponsor banks, and in the case of EFT, our Originating Depository Financial Institutions, or ODFIs. The renter payments that we process for our clients at our sponsor banks are identified in our Consolidated Balance Sheets as restricted cash and the corresponding liability for these renter payments is identified as client deposits. Our electronic payment processing business and related maintenance of custodial accounts subjects us to a number of risks, including, but not limited to:

- liability for client costs related to disputed or fraudulent transactions if those costs exceed the amount of the client reserves we have during the clearing period or after renter payments have been settled to our clients;
- electronic processing limits on the amount of custodial balances that any single ODFI, or collectively all of our ODFIs, will underwrite;

- reliance on sponsor banks, card payment processors and other payment service provider partners to process electronic transactions;
- failure by us or our sponsor banks to adhere to applicable laws and regulatory requirements or the standards of the electronic payments rules and regulations and other rules and regulations that may impact the provision of electronic payment services;
- continually evolving and developing laws and regulations governing payment processing and money transmission, the application or interpretation of which is not clear in some jurisdictions;
- incidences of fraud, a security breach or our failure to comply with required external audit standards;
- our inability to increase our fees at times when electronic payment partners or associations increase their transaction processing fees; and
- repricing actions taken by card associations or payment networks or imposed as a result of governmental regulation or due to competitive pressures, which could negatively impact the prices we can charge customers for our services.

If any of these risks related to our electronic payment processing business were to materialize, our business or financial results could be negatively affected. Although we attempt to structure and adapt our payment processing operations to comply with these complex and evolving laws and regulations, our efforts may not guarantee compliance. In the event that we are found to be in violation of these legal requirements, we may be subject to monetary fines, cease and desist orders, mandatory product changes, or other penalties that could have an adverse effect on our results of operations. Additionally, with respect to the processing of EFTs, we are exposed to financial risk and EFTs between a renter and our client may be returned for various reasons such as insufficient funds or stop payment orders. These returns are charged back to the client by us. However, if we or our sponsor banks are unable to collect such amounts from the client's account or if the client refuses or is unable to reimburse us for the chargeback, we bear the risk of loss for the amount of the transfer. While we have not experienced material losses resulting from chargebacks in the past, there can be no assurance that we will not experience significant losses from chargebacks in the future. Any increase in chargebacks not paid by our clients may adversely affect our financial condition and results of operations.

We entered into a service provider agreement with a financial institution merchant service provider under which we are a registered independent sales organization, or ISO, of the merchant service providers. The merchant service provider acts as a merchant acquiring bank for processing our client credit card and debit card payments ("Card Payments"), and we serve as an ISO. As an ISO, we assume the underwriting risk for processing Card Payments on behalf of our clients. If we experience excessive chargebacks, either we or the merchant service provider has the authority to cease client card processing services, and such events could result in a material adverse effect on our revenues, operating income, and reputation.

Evolution and expansion of our payment processing business may subject us to additional regulatory requirements and other risks, for which failure to comply or adapt could harm our operating results.

The evolution and expansion of our payment processing business may subject us to additional risks and regulatory requirements, including laws governing money transmission and payment processing/settlement services. These requirements vary throughout the markets in which we operate, and have increased over time as the geographic scope and complexity of our product services have expanded. While we maintain a compliance program focused on applicable laws and regulations throughout the payments industry, there is no guarantee that we will not be subject to fines, criminal and civil lawsuits or other regulatory enforcement actions in one or more jurisdictions, or be required to adjust business practices to accommodate future regulatory requirements.

In order to maintain flexibility in the growth and expansion of our payments operations, we have obtained money transmitter licenses (or their equivalents) in several states, the District of Columbia and Puerto Rico and expect to continue the license application process in additional jurisdictions throughout the United States as needed to accommodate new product development. Our efforts to acquire and maintain these licenses could result in significant management time, effort, and cost, and may still not guarantee compliance given the constant state of change in these regulatory frameworks. Accordingly, costs associated with changes in compliance requirements, regulatory audits, enforcement actions, reputational harm, or other regulatory limits on our ability to grow our payment processing business could adversely affect our financial results.

Because certain solutions we provide depend on access to client data, decreased access to this data or the failure to comply with the evolving laws and regulations governing privacy of data, cloud computing and cross-border data transfers, or the failure to address privacy concerns applicable to such data, could harm our business.

Certain of our solutions depend on our continued access to our clients' data regarding their prospective and current renters, including data compiled by other third-party service providers who collect and store data on behalf of our clients. Federal, state and foreign governments have adopted and continue to adopt new laws and regulations addressing data privacy and the collection, processing, storage, transmission, use and disclosure of personal information. Such laws and regulations are subject to differing interpretations and may be inconsistent among jurisdictions. These and other requirements could reduce

demand for our solutions or restrict our ability to store and process data or, in some cases, impact our ability to offer our services and solutions in certain locations.

In addition to government activity, privacy advocacy and other industry groups have established or may establish new self-regulatory standards that may place additional burdens on us. Our clients may expect us to meet voluntary certification or other standards established by third parties. If we are unable to maintain these certifications or meet these standards, it could adversely affect our ability to provide our solutions to certain clients and could harm our business.

Any restrictions on the use of or decrease in the availability of data from our clients, or other third parties that collect and store such data on behalf of our clients, and the costs of compliance with, and other burdens imposed by, applicable legislative and regulatory initiatives may limit our ability to collect, aggregate or use this data. Any limitations on our ability to collect, aggregate or use such data could reduce demand for certain of our solutions. Additionally, any inability to adequately address privacy concerns, even if unfounded, or comply with applicable privacy laws, regulations and policies, could result in liability to us or damage to our reputation and could inhibit sales and market acceptance of our solutions and harm our business.

Assertions by a third party that we infringe its intellectual property, whether successful or not, could subject us to costly and time-consuming litigation or expensive licenses.

The software and technology industries are characterized by the existence of a large number of patents, copyrights, trademarks and trade secrets and by frequent litigation based on allegations of infringement, misappropriation, misuse and other violations of intellectual property rights. We have received in the past, and may receive in the future, communications from third parties claiming that we have infringed or otherwise misappropriated the intellectual property rights or terms of use of others. Our technologies may not be able to withstand any third-party claims against their use. Since we currently have a limited number of patents, we may not be able to use patent infringement as a defensive strategy in such litigation. Additionally, although we have licensed from other parties proprietary technology covered by patents, we cannot be certain that any such patents will not be challenged, invalidated or circumvented. If such patents are invalidated or circumvented, this may allow existing and potential competitors to develop products and services that are competitive with, or superior to, our solutions.

Many of our client agreements require us to indemnify our clients for certain third-party claims, such as intellectual property infringement claims, which could increase our costs of defending such claims and may require that we pay damages if there were an adverse ruling or settlement related to any such claims. These types of claims could harm our relationships with our clients, may deter future clients from purchasing our solutions or could expose us to litigation for these claims. Even if we are not a party to any litigation between a client and a third party, an adverse outcome in any such litigation could make it more difficult for us to defend our intellectual property in any subsequent litigation in which we are a named party.

Litigation could force us to stop selling, incorporating or using our solutions that include the challenged intellectual property or redesign those solutions that use the technology. In addition, we may have to pay damages if we are found to be in violation of a third party's rights. We may have to procure a license for the technology, which may not be available on reasonable terms, if at all, may significantly increase our operating expenses or may require us to restrict our business activities in one or more respects. As a result, we may also be required to develop alternative non-infringing technology, which could require significant effort and expense. There is no assurance that we would be able to develop alternative solutions or, if alternative solutions were developed, that they would perform as required or be accepted in the relevant markets. In some instances, if we are unable to offer non-infringing technology, or obtain a license for such technology, we may be required to refund some or the entire license fee paid for the infringing technology by our clients.

Our exposure to risks associated with the use of intellectual property may be increased as a result of acquisitions, as we have a lower level of visibility into the development process with respect to acquired technology or the care taken to safeguard against infringement risks. Such risks include, without limitation, patent infringement risks, copyright infringement risks, risks arising from the inclusion of open source software that is subject to onerous license provisions that could even require disclosure of our proprietary source code, or violations of terms of use for third party solutions that our acquisition targets use. Third parties may make infringement and similar or related claims after we have acquired technology that had not been asserted prior to our acquisition.

Any failure to protect and successfully enforce our intellectual property rights could compromise our proprietary technology and impair our brands.

Our success depends on our ability to protect our proprietary rights to the technologies we use in our solutions. If we are unable to protect our proprietary rights adequately, our competitors could use the intellectual property we have developed to enhance their own products and services, which could harm our business. We rely on a combination of copyright, service mark, trademark and trade secret laws, as well as confidentiality procedures and contractual restrictions, to establish and protect our proprietary rights, all of which provide only limited protection. We currently have a limited number of issued patents and pending patent applications, and we may be unable to obtain patent protection in the future. In addition, if any patents are issued in the future, they may not provide us with any competitive advantages, may not be issued in a manner that gives us the

protection that we seek and may be successfully challenged by third parties. Unauthorized parties may attempt to copy or otherwise obtain and use the technologies underlying our solutions. Monitoring unauthorized use of our technologies is difficult, and we do not know whether the steps we have taken will prevent unauthorized use of our technology. If we are unable to protect our proprietary rights, we may find ourselves at a competitive disadvantage to others who have not incurred the substantial expense, time and effort required to create similar innovative products.

We cannot assure you that any future service mark or trademark registrations will be issued for pending or future applications or that any registered service marks or trademarks will be enforceable or provide adequate protection of our proprietary rights. If we are unable to secure new marks, maintain already existing marks and enforce the rights to use such marks against unauthorized third-party use, our ability to brand, identify and promote our solutions in the marketplace could be impaired, which could harm our business.

We customarily enter into agreements with our employees, contractors and certain parties with whom we do business to limit access to, use of, and disclosure of our confidential and proprietary information. The legal and technical steps we have taken, however, may not prevent unauthorized use or the reverse engineering of our technology. Moreover, we may be required to release the source code of our software to third parties under certain circumstances. For example, some of our client agreements provide that if we cease to maintain or support a certain solution without replacing it with a successor solution, then we may be required to release the source code of the software underlying such solution. In addition, others may independently develop technologies that are competitive to ours or infringe our intellectual property. Moreover, it may be difficult or practically impossible to detect copyright infringement or theft of our software code. Enforcement of our intellectual property rights also depends on our legal actions being successful against these infringers, but these actions may not be successful, even when our rights have been infringed. Furthermore, the legal standards relating to the validity, enforceability and scope of protection of intellectual property rights in Internet-related industries are uncertain and still evolving.

Additionally, as we sell our solutions internationally, effective patent, trademark, service mark, copyright and trade secret protection may not be available or as robust in every country in which our solutions are available. As a result, we may not be able to effectively prevent competitors outside the United States from infringing or otherwise misappropriating our intellectual property rights, which could reduce our competitive position and ability to compete or otherwise harm our business.

We may be unable to halt the operations of websites that aggregate or misappropriate data from our websites.

From time to time, third parties have misappropriated data from our websites through website scraping, software robots or other means and aggregated this data on their websites with data from other companies. In addition, copycat websites have misappropriated data on our network and attempted to imitate our brand or the functionality of our website. When we have become aware of such websites, we have employed technological or legal measures in an attempt to halt their operations. However, we may be unable to detect all such websites in a timely manner and, even if we could, technological and legal measures may be insufficient to halt their operations. In some cases, particularly in the case of websites operating outside of the United States, our available remedies may not be adequate to protect us against the impact of the operation of such websites. Regardless of whether we can successfully enforce our rights against the operators of these websites, any measures that we may take could require us to expend significant financial or other resources, which could harm our business, results of operations or financial condition. In addition, to the extent that such activity creates confusion among consumers or advertisers, our brand and business could be harmed.

Legal proceedings against us could be costly and time consuming to defend.

We are from time to time subject to legal proceedings and claims that arise in the ordinary course of business, including claims brought by our clients or vendors in connection with commercial disputes, claims brought by our clients' current or prospective renters, including class action lawsuits based on asserted statutory or regulatory violations, employment-based claims made by our current or former employees, administrative agencies, government regulators, or insurers.

As previously disclosed, in March 2015, we were named in a purported class action lawsuit in the United States District Court for the Eastern District of Pennsylvania, styled *Stokes v. RealPage, Inc.*, Case No. 2:15-cv-01520. The claims in this purported class action relate to alleged violations of the Fair Credit Reporting Act ("FCRA") in connection with background screens of prospective tenants of our clients.

As previously disclosed, in November 2014, we were named in a purported class action lawsuit in the United States District Court for the Eastern District of Virginia, styled *Jenkins v. RealPage, Inc.*, Case No. 3:14cv758. The claims in this purported class action relate to alleged violations of the FCRA in connection with background screens of prospective tenants of our clients.

Following various procedural motions, on June 19, 2017, the court in both the *Stokes* case and *Jenkins* case consolidated the cases for purposes of settlement. On June 30, 2017, the parties signed a Settlement Agreement and Release covering both cases and the plaintiffs in the consolidated cases filed an uncontested motion for preliminary approval of the class action settlement and the notice to the class. On August 3, 2017, the court issued a written order preliminarily approving the proposed

class settlement. Following the final approval hearing on February 6, 2018, the court entered an order granting final approval of the settlement.

On February 23, 2015, we received from the FTC a Civil Investigative Demand consisting of interrogatories and a request to produce documents relating to our compliance with the FCRA. We responded to the request and requests for additional information by the FTC. On November 2, 2017, the FTC staff informed us of its belief that there is a basis for claims that could include monetary and injunctive relief against us for failing to follow reasonable procedures to assure maximum possible accuracy of our tenant screening reports. We are continuing to assess the matter and plan to have further discussions with the FTC. We believe that our business practices did not, and do not, violate the FCRA or any other laws, and we intend to vigorously defend our position. However, we are unable to predict the outcome of this matter at this time.

Litigation, enforcement actions and other legal proceedings, regardless of their outcome, may result in substantial costs and may divert management's attention and our resources, which may harm our business, overall financial condition and operating results. In addition, legal claims that have not yet been asserted against us may be asserted in the future. Although we maintain insurance, there is no guarantee that such insurance will be available or sufficient to cover any such legal proceedings or claims. For example, insurance may not cover such legal proceedings or claims or the insurer may withhold or dispute coverage of such legal proceedings or claims on various grounds, including by alleging such coverage is beyond the scope of such policies, that we are not in compliance with the terms of such insurance policies or that such policies are not in effect, even after proceeds under such insurance policies have been received by us. In addition, insurance may not be sufficient for one or more such legal proceedings or claims and may not continue to be available on terms acceptable to us, or at all. A legal proceeding or claim brought against us that is uninsured or under-insured could result in unanticipated costs, thereby harming our operating results.

We could be sued for contract, warranty or product liability claims, and such lawsuits may disrupt our business, divert management's attention and our financial resources or have an adverse effect on our financial results.

We provide warranties to clients of certain of our solutions and services relating primarily to product functionality, network uptime, critical infrastructure availability and hardware replacement. General errors, defects, inaccuracies or other performance problems in the software applications underlying our solutions or inaccuracies in or loss of the data we provide to our clients could result in financial or other damages to our clients. Additionally, errors associated with any delivery of our services, including utility billing, could result in financial or other damages to our clients. There can be no assurance that any warranty disclaimers, general disclaimers, waivers or limitations of liability set forth in our contracts would be enforceable or would otherwise protect us from liability for damages. We maintain general liability insurance coverage, including coverage for errors and omissions, in amounts and under terms that we believe are appropriate. There can be no assurance that this coverage will continue to be available on terms acceptable to us, or at all, or in sufficient amounts to cover one or more large product liability claims, or that the insurer will not deny coverage for any future claim or dispute coverage of such legal proceedings or claims even after proceeds under such insurance policies have been received by us. The successful assertion of one or more large product liability claims against us that exceeds available insurance coverage, could have a material adverse effect on our business, prospects, financial condition and results of operations.

The rental housing industry, electronic commerce and many of the products and services that we offer, including background screening services, utility billing, affordable housing compliance and audit services, insurance and payments are subject to extensive and evolving governmental regulation. Changes in regulations or our failure to comply with regulations could harm our operating results.

The rental housing industry is subject to extensive and complex federal, state and local laws and regulations. Our services and solutions must work within the extensive and evolving legal and regulatory requirements applicable to our clients and third-party service providers, including, but not limited to, those under the Fair Credit Reporting Act, the Fair Housing Act, the Deceptive Trade Practices Act, the Drivers Privacy Protection Act, the Gramm-Leach-Bliley Act, the Fair and Accurate Credit Transactions Act, the United States Tax Reform Act of 1986 (TRA86), which is an IRS law governing tax credits, the Privacy Rules, Safeguards Rule and Consumer Report Information Disposal Rule promulgated by the Federal Trade Commission, or FTC, the FTC's Telemarketing Sales Rule, the Telephone Consumer Protection Act (TCPA), the CAN-SPAM Act, the Electronic Communications Privacy Act, the regulations of the United States Department of Housing and Urban Development, or HUD, HIPAA/HITECH, rules and regulations of the Consumer Financial Protection Bureau (CFPB) and complex and divergent state and local laws and regulations related to data privacy and security, credit and consumer reporting, deceptive trade practices, discrimination in housing, telemarketing, electronic communications, call recording, utility billing and energy and gas consumption. These regulations are complex, change frequently and may become more stringent over time. Although we attempt to structure and adapt our solutions and service offerings to comply with these complex and evolving laws and regulations, we may be found to be in violation. If we are found to be in violation of any applicable laws or regulations, we could be subject to administrative and other enforcement actions as well as class action lawsuits or demands for client reimbursement. Additionally, many applicable laws and regulations provide for penalties or assessments on a per occurrence basis. Due to the nature of our business, the type of services we provide and the large number of transactions processed by our

solutions, our potential liability in an enforcement action or class action lawsuit could be significant. In addition, entities such as HUD, the FTC and the CFPB have the authority to promulgate rules and regulations that may impact our clients and our business.

On February 23, 2015, we received from the FTC a Civil Investigative Demand consisting of interrogatories and a request to produce documents relating to our compliance with the FCRA. We responded to the request and requests for additional information by the FTC. On November 2, 2017, the FTC staff informed us of its belief that there is a basis for claims that could include monetary and injunctive relief against us for failing to follow reasonable procedures to assure maximum possible accuracy of our tenant screening reports. We are continuing to assess the matter and plan to have further discussions with the FTC. We believe that our business practices did not, and do not, violate the FCRA or any other laws, and we intend to vigorously defend our position. However, we are unable to predict the outcome of this matter at this time.

We believe increased regulation is likely in the area of data privacy, and laws and regulations applying to the solicitation, collection, processing or use of personally identifiable information or consumer information could affect our clients' ability to use and share data, potentially reducing demand for our on demand software solutions. In October 2015, the European Court of Justice invalidated the U.S.-EU Safe Harbor framework, which had been the primary compliance mechanism for establishing data transfers outside of the European Economic Area in accordance with the European Union's Data Protection Directive 95-46 EC. In July 2016, the U.S. and European Union entered into a new compliance framework, (the "Privacy Shield"), which was intended to replace the U.S.-EU Safe Harbor framework. The Privacy Shield is subject to review by European courts, and this creates some uncertainty regarding compliance with applicable privacy laws and regulations. While alternative compliance options exist, the long-term viability of the overall compliance framework remains in question, which could result in increased regulation, cost of compliance and limitations on data transfers for both our clients and us. Beginning in May 2018, the General Data Protection Regulation ("GDPR") will become effective in the European Union. The GDPR imposes new requirements upon companies in the EU or operating in the EU regarding the handling of personal data. If we are unable to meet the requirements of applicable privacy laws and regulations, the Privacy Shield or GDPR with respect to our services subject to these provisions, we may incur monetary or other penalties which could harm our business or financial condition.

Some of our LeaseStar products operate under the real estate brokerage laws of numerous states and require maintaining licenses in many of these states. Brokerage laws in these states could change, affecting our ability to provide some LeaseStar or, if applicable, other products in these states.

We deliver our on demand software solutions over the Internet and sell and market certain of our solutions over the Internet. As Internet commerce continues to evolve, increasing regulation by federal, state or foreign agencies becomes more likely. Taxation of products or services provided over the Internet or other charges imposed by government agencies or by private organizations for accessing the Internet may also be imposed. Any regulation imposing greater fees for Internet use or restricting information exchange over the Internet could result in a decline in the use of the Internet and the viability of on demand software solutions, which could harm our business and operating results.

Our LeasingDesk insurance business is subject to governmental regulation which could reduce our profitability or limit our growth.

Through our wholly owned subsidiary, Multifamily Internet Ventures LLC, we hold insurance agent licenses from a number of individual state departments of insurance and are subject to state governmental regulation and supervision in connection with the operation of our LeasingDesk insurance business. In addition, Multifamily Internet Ventures LLC has appointed numerous sub-producing agents to generate insurance business for its eRenterPlan product. These sub-producing agents primarily consist of property owners and managers who market the eRenterPlan to residents. The sub-producing agents are subject to the same state regulation and supervision, and Multifamily Internet Ventures LLC cannot ensure that these sub-producing agents will not violate these regulations, and thus expose the LeasingDesk business to sanctions by these state departments of insurance for any such violations. Furthermore, state insurance departments conduct periodic examinations, audits and investigations of the affairs of insurance agents. This state governmental supervision could reduce our profitability or limit the growth of our LeasingDesk insurance business by increasing the costs of regulatory compliance, limiting or restricting the solutions we provide or the methods by which we provide them or subjecting us to the possibility of regulatory actions or proceedings. Our continued ability to maintain these insurance agent licenses in the jurisdictions in which we are licensed depends on our compliance with the rules and regulations promulgated from time to time by the regulatory authorities in each of these jurisdictions.

In all jurisdictions, the applicable laws and regulations are subject to amendment or interpretation by regulatory authorities. Generally, such authorities are vested with relatively broad discretion to grant, renew and revoke licenses and approvals and to implement regulations, as well as regulate rates that may be charged for premiums on policies. Accordingly, we may be precluded or temporarily suspended from carrying on some or all of the activities of our LeasingDesk insurance business or fined or penalized in a given jurisdiction. No assurances can be given that our LeasingDesk insurance business can continue to be conducted in any given jurisdiction as it has been conducted in the past.

Multifamily Internet Ventures LLC is required to maintain a 50-state general agency insurance license as well as individual insurance licenses for each sales agent involved in the solicitation of insurance products. Both the agency and individual licenses require compliance with state insurance regulations, payment of licensure fees, and continuing education programs. In the event that regulatory compliance requirements are not met, Multifamily Internet Ventures LLC could be subject to license suspension or revocation, state Department of Insurance audits and regulatory fines. As a result, our ability to engage in the business of insurance could be restricted, and our revenue and financial results will be adversely affected.

Risks Related to Ownership of our Common Stock

The concentration of our capital stock owned by insiders may limit your ability to influence corporate matters.

Our executive officers, directors, and entities affiliated with them together beneficially owned approximately 26.2% of our common stock as of December 31, 2017. Of such amount, Stephen T. Winn, our President, Chief Executive Officer and Chairman of the Board, and entities beneficially owned by Mr. Winn held an aggregate of approximately 24.0% of our common stock as of December 31, 2017. This significant concentration of ownership may adversely affect the trading price of our common stock because investors often perceive disadvantages in owning stock in companies with controlling stockholders. Mr. Winn and entities beneficially owned by Mr. Winn may exert significant influence over our management and affairs and matters requiring stockholder approval, including the election of directors and the approval of significant corporate transactions, such as mergers, consolidations or the sale of substantially all of our assets. Consequently, this concentration of ownership may have the effect of delaying or preventing a change of control, including a merger, consolidation or other business combination involving us, or discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control, even if that change of control would benefit our other stockholders.

The trading price of our common stock price may be volatile.

The trading price of our common stock could be subject to wide fluctuations in response to various factors, including, but not limited to, those described in this "Risk Factors" section, some of which are beyond our control. Factors affecting the trading price of our common stock include:

- variations in our operating results or in expectations regarding our operating results;
- variations in operating results of similar companies;
- changes in our financial guidance and how our actual results compare to such guidance;
- changes in the estimates of our operating results or changes in recommendations by any research analysts that elect to follow our common stock;
- announcements of technological innovations, new solutions or enhancements, strategic alliances or agreements by us or by our competitors;
- announcements by competitors regarding their entry into new markets, and new product, service and pricing strategies;
- marketing, advertising or other initiatives by us or our competitors;
- increases or decreases in our sales of products and services for use in the management of units by clients and increases or decreases in the number of units managed by our clients;
- threatened or actual litigation;
- major changes in our board of directors or management;
- recruitment or departure of key personnel;
- market conditions in our industry and the economy as a whole;
- the overall performance of the equity markets;
- sales of our shares of common stock by existing stockholders;
- volatility in our stock price, which may lead to higher stock-based expense under applicable accounting standards; and
- adoption or modification of regulations, policies, procedures or programs applicable to our business.

In addition, the stock market in general, and the market for technology and specifically Internet-related companies, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors may harm the market price of our common stock regardless of our actual operating performance. In addition, in the past, following periods of volatility in the overall market and the market price of a particular company's securities, securities class action litigation has often been instituted against these

companies. This litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and our resources, whether or not we are successful in such litigation.

Future sales of our common stock in the public market could lower the market price for our common stock.

In the future, we may sell additional shares of our common stock to raise capital. In addition, a substantial number of shares of our common stock is reserved for issuance upon the exercise of stock options and upon conversion of the Convertible Notes. We cannot predict the size of future issuances or the effect, if any, that they may have on the market price for our common stock. The issuance and sale of substantial amounts of common stock, or the perception that such issuances and sales may occur, could adversely affect the market price of our common stock and impair our ability to raise capital through the sale of additional equity.

The Note Hedges and Warrant transactions may affect the value of our common stock.

In connection with the pricing of the Convertible Notes, we entered into Note Hedges transactions with the option counterparties. We also entered into Warrant transactions with the option counterparties. The Note Hedges transactions are expected generally to reduce the potential dilution upon conversion of the Convertible Notes and/or offset any cash payments we are required to make in excess of the principal amount of Convertible Notes once converted, as the case may be. However, the Warrants could separately have a dilutive effect on our common stock to the extent that the market price per share of our common stock exceeds the strike price of the Warrants.

In connection with establishing their initial hedges of the Note Hedges and Warrants, the option counterparties or their respective affiliates expected to enter into various derivative transactions with respect to our common stock concurrently with or shortly after the pricing of the Convertible Notes. The option counterparties or their respective affiliates may modify any such hedge positions by entering into or unwinding various derivatives with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the Convertible Notes (and are likely to do so during any observation period related to a conversion of the Convertible Notes). This activity could also cause or avoid an increase or a decrease in the market price of our common stock.

Our charter documents and Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our stock.

Our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could delay or prevent a change in control of our company. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include:

- a classified board of directors whose members serve staggered three-year terms;
- not providing for cumulative voting in the election of directors;
- authorizing our board of directors to issue, without stockholder approval, preferred stock with rights senior to those of our common stock;
- prohibiting stockholder action by written consent; and
- requiring advance notification of stockholder nominations and proposals.

These and other provisions of our amended and restated certificate of incorporation and our amended and restated bylaws and under Delaware law could discourage potential takeover attempts, reduce the price that investors might be willing to pay in the future for shares of our common stock and result in the market price of our common stock being lower than it would be without these provisions.

If securities analysts do not continue to publish research or reports about our business or if they publish negative evaluations of our stock, the price of our stock could decline.

We expect that the trading price for our common stock may be affected by research or reports that industry or financial analysts publish about us or our business. If one or more of the analysts who cover us downgrade their evaluations of our stock, the price of our stock could decline. If one or more of these analysts cease coverage of our company, we could lose visibility in the market for our stock, which in turn could cause our stock price to decline.

We do not anticipate paying any cash dividends on our common stock.

We do not anticipate paying any cash dividends on our common stock in the foreseeable future. If we do not pay cash dividends, you would receive a return on your investment in our common stock only if the market price of our common stock has increased when you sell your shares. In addition, the terms of our credit facilities currently restrict our ability to pay dividends. See additional discussion under the Dividend Policy heading of Part II, Item 5 of this Annual Report on Form 10-K.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

At December 31, 2017, we leased approximately 448,000 square feet of space for our corporate headquarters in Richardson, Texas under a lease agreement that expires in August 2028. We also have offices in Campbell, California; Costa Mesa, California; Irvine, California; San Francisco, California; Broomfield, Colorado; Denver, Colorado; Tampa, Florida; Alpharetta, Georgia; Lombard, Illinois; Louisville, Kentucky; Ann Arbor, Michigan; Bloomington, Minnesota; Pittsburgh, Pennsylvania; Greenville, South Carolina; South Burlington, Vermont; Seattle, Washington; Hyderabad, India; Cebu, Philippines; Manila, Philippines; Barcelona, Spain; and London, United Kingdom. We also license data center space and employ the services of cloud service providers at multiple locations in the U.S. and internationally. We believe our current and planned office and data center facilities will be adequate for the foreseeable future.

Item 3. Legal Proceedings

On February 23, 2015, we received from the FTC a Civil Investigative Demand consisting of interrogatories and a request to produce documents relating to our compliance with the FCRA. We responded to the request and requests for additional information by the FTC. On November 2, 2017, the FTC staff informed us of its belief that there is a basis for claims that could include monetary and injunctive relief against us for failing to follow reasonable procedures to assure maximum possible accuracy of our tenant screening reports. We are continuing to assess the matter and plan to have further discussions with the FTC. We believe that our business practices did not, and do not, violate the FCRA or any other laws, and we intend to vigorously defend our position. However, we are unable to predict the outcome of this matter at this time.

We are subject to legal proceedings and claims arising in the ordinary course of business. We are involved in litigation and other legal proceedings and claims that have not been fully resolved. At this time, we believe that any reasonably possible adverse outcome of these matters would not be material either individually or in the aggregate. Our view of those matters may change in the future as litigation and events related thereto unfold. See the risk factors "*Assertions by a third party that we infringe its intellectual property, whether successful or not, could subject us to costly and time-consuming litigation or expensive licenses,*" "*The rental housing industry, electronic commerce and many of the products and services that we offer, including background screening services, utility billing, affordable housing compliance and audit services, insurance and payments are subject to extensive and evolving governmental regulation. Changes in regulations or our failure to comply with regulations could harm our operating results,*" and "*Legal proceedings against us could be costly and time consuming to defend*" in Part I, Item 1A of this Form 10-K under the heading "Risk Factors."

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Information and Holders

Our common stock is traded on the NASDAQ Global Select Market under the symbol "RP." The following table sets forth, for the periods indicated, the high and low sale prices per share of our common stock as reported on the NASDAQ Global Select Market for the periods indicated:

Year Ended December 31, 2017	Low	High
First Quarter	$ 28.00	$ 37.40
Second Quarter	32.30	38.25
Third Quarter	35.00	36.15
Fourth Quarter	39.80	46.80

Year Ended December 31, 2016	Low	High
First Quarter	$ 16.06	$ 22.51
Second Quarter	19.54	23.55
Third Quarter	21.62	22.22
Fourth Quarter	23.69	30.85

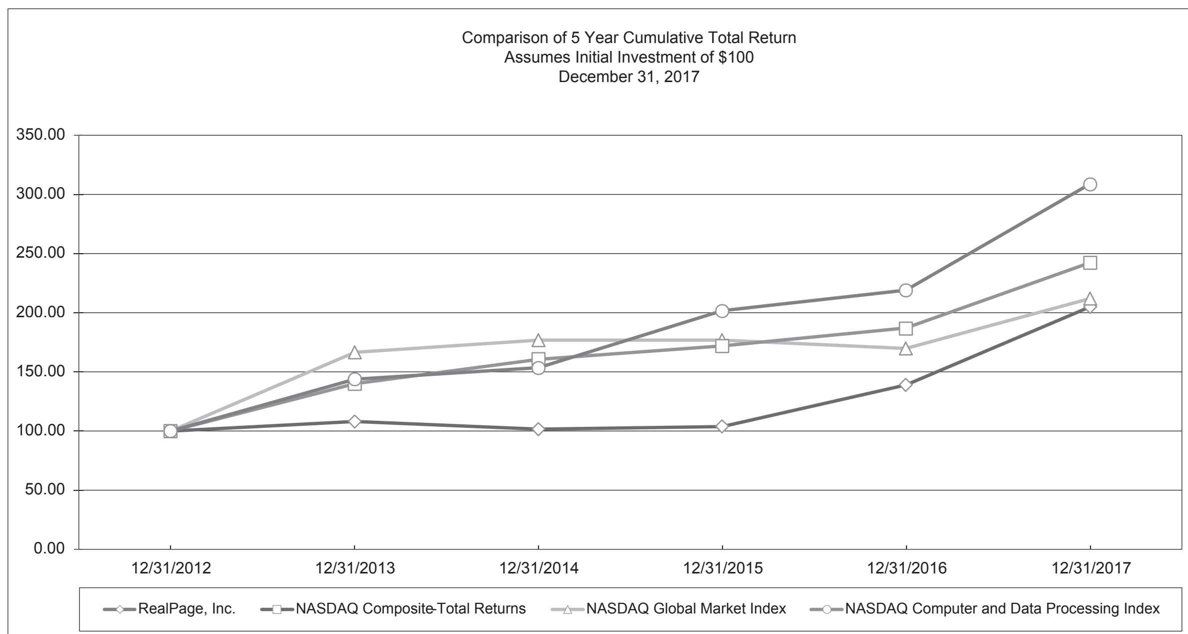
On February 16, 2018, the closing price of our common stock on the NASDAQ Global Select Market was $50.45 per share, and there were approximately 255 holders of record of our common stock. Restricted shares granted under our stock-based expense plans which have not yet vested are considered to be held by one holder. Because many of our shares of common stock are held by brokers and other institutions on behalf of stockholders, the number of record holders of our shares is not indicative of the total number of stockholders.

Dividend Policy

We have neither declared nor paid any cash dividends on our common stock in recent fiscal years. We do not expect to pay cash dividends on our common stock for the foreseeable future. Instead, we anticipate that all of our earnings will be used for the operation and growth of the business. Any future determination to declare cash dividends would be subject to the discretion of our board of directors and would depend upon various factors, including our results of operations; financial condition and liquidity requirements; restrictions that may be imposed by applicable law and our contracts; and other factors deemed relevant by our board of directors. Additionally, our secured revolving credit facility (as amended, the "Credit Facility") contains customary covenants, subject in each case to customary exceptions and qualifications. Included in these covenants is a restriction which prevents us from paying dividends and making other distributions on our capital stock.

Performance Graph

The following graph compares the relative performance of our common stock, the NASDAQ Global Market Index, NASDAQ Composite, and the NASDAQ Computer and Data Processing Index. This graph covers the annual periods ending December 31, 2012 through December 31, 2017. In each case, this graph assumes a $100 investment on December 31, 2012 at our closing price of $21.57 per share and reinvestment of all dividends, if any.



	December 31, 2012	December 31, 2013	December 31, 2014	December 31, 2015	December 31, 2016	December 31, 2017
RealPage, Inc.	$ 100.00	$ 108.39	$ 101.81	$ 104.08	$ 139.08	$ 205.38
NASDAQ Composite—Total Returns	100.00	140.17	160.84	172.04	187.30	242.81
NASDAQ Global Market Index	100.00	166.85	176.88	176.86	170.04	212.17
NASDAQ Computer and Data Processing Index	100.00	143.98	153.95	201.83	219.45	309.13

Issuer Purchases of Equity Securities

The following table provides information with respect to repurchases of our common stock made during the fourth quarter of 2017 by RealPage, Inc. or any "affiliated purchaser" of RealPage, Inc. as defined in Rule 10b-18(a)(3) under the Exchange Act:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs [1]	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs [1]
October 1, 2017 through October 31, 2017	—	$ —	—	$ 44,894,113
November 1, 2017 through November 30, 2017	—	—	—	44,894,113
December 1, 2017 through December 31, 2017	—	—	—	44,894,113
Total	—	$ —	—	$ 44,894,113

[1] Our board of directors approved an extension of our May 2014 share repurchase program in May 2015, April 2016, and again in April 2017. Each renewal permitted the repurchase of up to $50.0 million of our common stock during the period commencing on the extension start date and ending one year thereafter. The current extension of the share repurchase program will expire on May 4, 2018.

No shares were acquired by RealPage, Inc. or any "affiliated purchaser" of RealPage, Inc., as defined in Rule 10b-18(a)(3) under the Exchange Act, under the repurchase program during the year ended December 31, 2017. During the year ended December 31, 2016, we repurchased 1,012,823 shares under the share repurchase program at a weighted average cost of $20.98 per share and a total cost of $21.2 million.

Item 6. Selected Financial Data

We have derived the consolidated statements of operations and balance sheet data for the years ended December 31, 2017, 2016, 2015, 2014, and 2013 from our audited Consolidated Financial Statements. Over the last five fiscal years, we have acquired a number of companies as disclosed in Note 3 "Acquisitions" of the Notes to Consolidated Financial Statements under Item 8 of this Annual Report on Form 10-K. The results of our acquired companies have been included in our Consolidated Financial Statements since their respective dates of acquisition and have contributed to the growth in our results of operations. This information should be read in conjunction with our audited Consolidated Financial Statements, the related notes, and the information in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and included elsewhere in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of our future results.

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(in thousands, except per share data)				
Revenue:					
On demand	$ 642,622	$ 542,531	$ 450,962	$ 390,622	$ 362,312
On premise	2,644	2,836	2,970	3,094	3,691
Professional and other	25,697	22,761	14,588	10,835	11,019
Total revenue	670,963	568,128	468,520	404,551	377,022
Cost of revenue	273,447	242,301	198,613	174,871	148,321
Gross profit	397,516	325,827	269,907	229,680	228,701
Operating expenses:					
Product development	89,452	73,607	68,799	64,418	50,638
Sales and marketing	165,079	135,213	123,108	111,563	95,894
General and administrative	112,975	85,013	68,814	69,202	60,610
Impairment of identified intangible assets	—	750	20,801	—	—
Total operating expenses	367,506	294,583	281,522	245,183	207,142
Operating income (loss)	30,010	31,244	(11,615)	(15,503)	21,559
Interest expense and other, net	(14,769)	(3,758)	(1,449)	(1,104)	(1,077)
Income (loss) before income taxes	15,241	27,486	(13,064)	(16,607)	20,482
Income tax expense (benefit)	14,864	10,836	(3,846)	(6,333)	(210)
Net income (loss)	$ 377	$ 16,650	$ (9,218)	$ (10,274)	$ 20,692
Net income (loss) per share attributable to common stockholders:					
Basic	$ 0.00	$ 0.22	$ (0.12)	$ (0.13)	$ 0.28
Diluted	$ 0.00	$ 0.21	$ (0.12)	$ (0.13)	$ 0.27
Weighted average shares used in computing net income (loss) per share attributable to common stockholders:					
Basic	79,433	76,854	76,689	76,991	74,962
Diluted	82,398	77,843	76,689	76,991	76,187

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(in thousands, except client and employee data)				
Consolidated Balance Sheet Data:					
Cash and cash equivalents[1]	$ 69,343	$ 104,886	$ 30,911	$ 26,936	$ 34,502
Total current assets	308,579	297,455	221,943	186,819	180,531
Total assets	1,516,293	788,098	623,201	566,294	501,834
Total current liabilities	332,907	250,527	215,347	196,709	173,095
Total deferred revenue	122,160	95,891	91,179	80,388	71,756
Current and long-term debt[2]	648,818	122,429	40,292	20,882	1,428
Total liabilities	1,014,418	403,335	296,749	237,514	187,330
Total stockholders' equity	501,875	384,763	326,452	328,780	314,504
Other Financial Data:					
Adjusted EBITDA[3]	$ 163,445	$ 127,210	$ 92,191	$ 70,589	$ 90,312
Operating cash flow	137,327	136,216	96,012	69,972	69,209
Capital expenditures	49,752	75,241	33,384	37,062	32,952
Selected Operating Data:					
Number of on demand clients at period end	12,414	11,042	11,998	10,744	8,725
Number of on demand units at period end	13,003	10,989	10,568	9,560	9,022
Total number of employees at period end	5,462	4,410	4,122	3,875	3,337

(1) Excludes restricted cash.

(2) Includes capital lease obligations.

(3) A definition of this non-GAAP financial measure and a discussion of our use of it is included in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," in this Annual Report on Form 10-K.

The following table presents a reconciliation of net income (loss) to Adjusted EBITDA:

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(in thousands)				
Net income (loss)	$ 377	$ 16,650	$ (9,218)	$ (10,274)	$ 20,692
Acquisition-related and other deferred revenue adjustments	3,058	(949)	(2,157)	435	2,717
Depreciation, asset impairment, and loss on disposal of assets	27,752	25,813	44,385	19,288	14,411
Amortization of intangible assets	39,918	30,268	25,377	22,404	17,648
Acquisition-related expense (income)	5,557	363	(1,841)	1,987	3,269
Costs related to the Hart-Scott-Rodino review process	11,012	—	—	—	—
Interest expense, net	15,072	3,825	1,367	1,117	1,427
Income tax expense (benefit)	14,864	10,836	(3,846)	(6,333)	(210)
Litigation-related expense	—	—	2	4,915	661
Headquarters relocation costs	—	3,552	—	—	—
Stock-based expense	45,835	36,852	38,122	37,050	29,697
Adjusted EBITDA	$ 163,445	$ 127,210	$ 92,191	$ 70,589	$ 90,312

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

The following discussion and analysis of our financial condition and results of operations should be read together with "Selected Financial Data" and our audited Consolidated Financial Statements and accompanying notes included elsewhere in this filing. This discussion contains forward-looking statements, based on current expectations and related to our plans, estimates, beliefs, and anticipated future financial performance. These statements involve risks and uncertainties, and our actual results may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those set forth under "Risk Factors," "Special Note Regarding Forward-Looking Statements," and elsewhere in this filing.

Overview

We are a leading global provider of software and data analytics to the real estate industry. Clients use our platform of solutions to improve operating performance and increase capital returns. By leveraging data as well as integrating and streamlining a wide range of complex processes and interactions among the rental real estate ecosystem, our platform helps our clients improve financial and operational performance and prudently place and harvest capital.

The substantial majority of our revenue is derived from sales of our on demand software solutions, representing 95.8%, 95.5%, and 96.3% of our total revenue during 2017, 2016, and 2015, respectively. We also derive revenue from our professional and other services, and a small percentage of our revenue is derived from sales of our on premise software solutions. Our on demand software solutions are sold pursuant to subscription license agreements, and our on premise software solutions are sold pursuant to term or perpetual licenses and associated maintenance agreements. We price our solutions based primarily on the number of units the client manages with our solutions. For our insurance-based solutions, we earn revenue based on a commission rate that considers earned premiums, agent commission, incurred losses, and profit retained by our underwriting partner. Our transaction-based solutions are priced based on a fixed rate per transaction. We sell our solutions through our direct sales organization and derive substantially all of our revenue from sales in the United States. Our revenue has increased from $568.1 million in 2016 to $671.0 million in 2017. The increase in revenue was driven by incremental revenue from our recent acquisitions and growth in the sales of our on demand software solutions.

We believe there is increasing demand for solutions that bring efficiency and precision to the rental real estate industry, which has historically lacked the tools available to many other investment classes. While the use of, and transition to, data analytics and on demand software solutions in the rental real estate industry is growing rapidly, we believe it remains at a relatively early stage of adoption. Additionally, there is a low level of penetration of our on demand software solutions in our existing client base. These factors present us with significant opportunities to generate revenue through sales of additional data analytics and on demand software solutions.

Our company was formed in 1998 to acquire Rent Roll, Inc., which marketed and sold on premise property management systems for the conventional and affordable multifamily rental housing markets. In June 2001, we released OneSite, our first on demand property management system. Since 2002, we have expanded our platform of solutions to include property management, leasing and marketing, resident services, and asset optimization capabilities. In addition to the multifamily markets, we now serve the single family, senior living, student living, military housing, commercial, hospitality, and vacation rental markets. Since July 2002, we have completed over 40 acquisitions of complementary technologies to supplement our internal product development and sales and marketing efforts and expand the scope of our solutions, the types of rental housing and vacation rental properties served by our solutions, and our client base. In connection with this expansion and these acquisitions, we have committed greater resources to developing and increasing sales of our platform of data analytics and on demand solutions. As of December 31, 2017, we had approximately 5,400 employees.

Recent Developments

Credit Facility

In 2017, we executed several amendments to our 2014 Credit Facility which included, among other changes, the following modifications:

- Extended the maturity date of the Credit Facility from September 30, 2019 to February 27, 2022 and amended the Term Loan's payment schedule.
- Modified our financial debt covenants which, among other things, increased the maximum Net Leverage Ratio, implemented a new financial covenant in the form of a maximum Senior Leverage Ratio, and added an additional pricing tier for interest rates. The new pricing tier applies if the Company's Net Leverage Ratio equals or exceeds 4.00 to 1.00, resulting in a new Applicable Margin range of 1.25% to 2.25% for LIBOR loans and 0.25% to 1.25% for Base Rate loans.

- Replenished the Credit Facility's Accordion Feature to $150.0 million, plus an amount that would not cause our Senior Leverage Ratio to exceed 3.25 to 1.00. The amount available to borrow under the Accordion Feature had previously been reduced through the issuance of the Term Loan in 2016.
- Provided for an incremental $200.0 million Delayed Draw Term Loan, which was drawn in full in December 2017. The issuance of the Delayed Draw Term Loan reduced the amount available under the replenished Accordion Feature.

Refer to Note 7 of the accompanying Consolidated Financial Statements for applicable definitions, further discussion of these amendments, and other terms and conditions of the Credit Facility.

Convertible Notes

In May 2017, we raised approximately $304.2 million in net proceeds (after adjusting for debt issuance costs, including the underwriting discount, and the net cash used to purchase the Note Hedges and sell the Warrants, discussed below) upon completion of a private offering of convertible senior notes ("Convertible Notes").

The Convertible Notes pay semi-annual interest at a rate of 1.50% per annum on the $345.0 million aggregate principal balance and mature in November 2022. On or after May 15, 2022, and until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their Convertible Notes into shares of our common stock at their option. Prior to May 15, 2022, holders may, at their option, convert their Convertible Notes only subsequent to the occurrence of certain specified circumstances, as defined in the bond indenture. Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock, or a combination of cash and shares of our common stock, at our election. It is our current intent to settle the principal balance of the Convertible Notes in cash and any conversion obligation in excess of the principal portion in shares of our common stock.

We entered into hedging transactions designed to offset dilution to our common stock in the event of a conversion under the Convertible Notes. The note hedge instruments ("Note Hedges") have a strike price of $41.95 per share, which corresponds to the conversion price under the Convertible Notes, and expire in November 2022. To help offset the cost of the Note Hedges, we also issued warrants ("Warrants") for shares of our common stock. The Warrants have a strike price of $57.58 per share, and expire in ratable portions on a series of expiration dates commencing on February 15, 2023. The Note Hedges and Warrants each cover approximately 8.2 million shares of our common stock, subject to customary anti-dilutive provisions.

Refer to Note 7 of the accompanying Consolidated Financial Statements for further discussion of these transactions and their accounting implications.

Acquisition Activity

Lease Rent Options

In February 2017, we entered into an agreement with The Rainmaker Ventures, LLC ("Rainmaker") to acquire substantially all of the assets and liabilities that comprised Rainmaker's multifamily revenue optimization business ("Lease Rent Options" or "LRO"). LRO is a revenue management solution that empowers optimized pricing for multifamily housing communities. We completed the acquisition in December 2017. We acquired LRO for a purchase price of $299.9 million. The purchase price consisted of a cash payment of $298.0 million, a deferred cash obligation of up to $1.6 million, and the assumption of certain liabilities totaling $0.4 million.

This acquisition extended our revenue management footprint, augmented our repository of real-time lease transaction data, and increased our data science talent and capabilities. We also expect the acquisition of LRO to increase the market penetration of our YieldStar Revenue Management solution and drive revenue growth in our other asset optimization solutions.

PEX Software

In October 2017, we acquired all of the issued and outstanding shares of PEX Software Limited ("PEX"). PEX is a rental housing solution provider based in the United Kingdom which helps companies transform work practices and service delivery models, create and leverage competitive advantage, reduce costs, and scale businesses. The purchase price consisted of a cash payment of $5.1 million at closing, net of cash acquired of $0.1 million, and a deferred cash obligation of up to $1.0 million. The acquisition of PEX will help us to secure a leading market position in the private rental segment of the United Kingdom's housing market and facilitate our expansion into the European Union and other international markets.

On-Site

In September 2017, we acquired certain discrete assets of On-Site Manager, Inc. ("On-Site Manager"), including its ownership interest in its majority-owned subsidiary, DepositIQ & RentersIQ Insurance Agency, LLC ("DIQ") (collectively, "On-Site"). We also acquired the remaining minority interest in DIQ. On-Site is a leasing platform for property managers and renters that assimilates leads from any source and converts them into signed leases for both the multifamily and single family housing industries. We acquired On-Site, including the minority interest in DIQ, for an aggregate purchase price of $253.4

million. The purchase price consisted of a cash payment of $225.3 million, net of cash acquired of $1.7 million, and a deferred cash obligation of up to $29.6 million.

The integration of On-Site, which we intend to complete over time, will enhance many of our pre-existing leasing and marketing solutions. The acquisition of On-Site also increased the footprint of our screening services and added incremental data to our pool of lease transaction information. Additionally, we anticipate On-Site will improve the integration of our leasing solutions into other major property management systems.

American Utility Management

In June 2017, we acquired substantially all of the assets of American Utility Management ("AUM"), a provider of utility and energy management services for the multifamily housing industry. We acquired AUM for a purchase price of $69.4 million. The purchase price consisted of a cash payment of $64.8 million at closing, net of cash acquired of $0.1 million, and a deferred cash obligation of up to $5.1 million. The acquisition of AUM expanded the scale of our Resident Utility Management platform and provided energy consumption and cost data.

Axiometrics LLC

In January 2017, we acquired substantially all of the assets of Axiometrics LLC ("Axiometrics"), a leading provider of multifamily market data. Purchase consideration was comprised of a cash payment at closing of $66.1 million, a deferred cash obligation of up to $7.5 million, and contingent cash payments of up to $5.0 million. Payment of the contingent cash obligation is dependent upon the achievement of certain revenue targets during the twelve-month period ending December 31, 2018. The acquisition of Axiometrics enabled us to expand our data footprint, improve our data analytics offerings, and positioned us to exploit the transactional opportunity within multifamily rental housing assets.

Refer to Note 3 of the accompanying Consolidated Financial Statements for further discussion of these acquisitions.

Key Business Metrics

In addition to financial measures, we monitor our operating performance using a number of financially and non-financially derived metrics that are not included in our consolidated financial statements. We monitor the key performance indicators reflected in the following table:

	Year Ended December 31,		
	2017	2016	2015
	(in thousands, except dollar per unit data)		
Revenue:			
Total revenue	$ 670,963	$ 568,128	$ 468,520
On demand revenue	$ 642,622	$ 542,531	$ 450,962
On demand revenue as a percentage of total revenue	95.8%	95.5%	96.3%
Non-GAAP total revenue	$ 674,021	$ 567,179	$ 466,363
Non-GAAP on demand revenue	$ 645,680	$ 541,582	$ 448,805
Adjusted EBITDA	$ 163,445	$ 127,210	$ 92,191
Ending on demand units	13,003	10,989	10,568
Average on demand units	11,711	11,042	10,118
On demand annual client value	$ 751,183	$ 556,813	$ 468,796
On demand revenue per average on demand unit	$ 57.77	$ 50.67	$ 44.36

On demand revenue: This metric represents the GAAP revenue derived from license and subscription fees relating to our on demand software solutions, typically licensed over one year terms; commission income from sales of renter's insurance policies; and transaction fees for certain of our on demand software solutions. We consider on demand revenue to be a key business metric because we believe the market for our on demand software solutions represents the largest growth opportunity for our business.

On demand revenue as a percentage of total revenue: This metric represents on demand revenue for the period presented divided by total revenue for the same period. We use on demand revenue as a percentage of total revenue to measure our success executing our strategy to increase the penetration of our on demand software solutions and expand our recurring revenue streams attributable to these solutions. We expect our on demand revenue to remain a significant percentage of our

total revenue although the actual percentage may vary from period to period due to a number of factors, including the timing of acquisitions; professional and other revenues; and on premise perpetual license sales and maintenance fees.

Non-GAAP total revenue: This metric is calculated by adding acquisition-related and other deferred revenue adjustments to total revenue. We believe it is useful to include deferred revenue written down for GAAP purposes under purchase accounting rules and revenue deferred due to a lack of historical experience determining the settlement of the contractual obligation in order to appropriately measure the underlying performance of our business operations in the period of activity and associated expense. Further, we believe this measure is useful to investors as a way to evaluate our ongoing performance.

The following provides a reconciliation of GAAP to non-GAAP total revenue:

	Year Ended December 31,		
	2017	**2016**	**2015**
		(in thousands)	
Total revenue	$ 670,963	$ 568,128	$ 468,520
Acquisition-related and other deferred revenue adjustments	3,058	(949)	(2,157)
Non-GAAP total revenue	$ 674,021	$ 567,179	$ 466,363

Non-GAAP on demand revenue: This metric reflects total on demand revenue plus acquisition-related and other deferred revenue adjustments, as described above. We believe inclusion of these items provides a useful measure of the underlying performance of our on demand business operations in the period of activity and associated expense. Further, we believe that investors and financial analysts find this measure to be useful in evaluating our ongoing performance because it provides a more accurate depiction of on demand revenue.

The following provides a reconciliation of GAAP to non-GAAP on demand revenue:

	Year Ended December 31,		
	2017	**2016**	**2015**
		(in thousands)	
On demand revenue	$ 642,622	$ 542,531	$ 450,962
Acquisition-related and other deferred revenue adjustments	3,058	(949)	(2,157)
Non-GAAP on demand revenue	$ 645,680	$ 541,582	$ 448,805

Adjusted EBITDA: We define Adjusted EBITDA as net income (loss), plus (1) acquisition-related and other deferred revenue adjustments, (2) depreciation, asset impairment, and the loss on disposal of assets, (3) amortization of intangible assets, (4) acquisition-related expense (income), (5) costs arising from the Hart-Scott-Rodino review process for our acquisitions, (6) interest expense, net, (7) income tax expense (benefit), (8) litigation-related expense, (9) headquarters relocation costs, and (10) stock-based expense. We believe that investors and financial analysts find this non-GAAP financial measure to be useful in analyzing our financial and operational performance, comparing this performance to our peers and competitors, and understanding our ability to generate income from ongoing business operations.

The following provides a reconciliation of net income (loss) to Adjusted EBITDA:

	Year Ended December 31,		
	2017	2016	2015
		(in thousands)	
Net income (loss)	$ 377	$ 16,650	$ (9,218)
Acquisition-related and other deferred revenue adjustments	3,058	(949)	(2,157)
Depreciation, asset impairment, and loss on disposal of assets	27,752	25,813	44,385
Amortization of intangible assets	39,918	30,268	25,377
Acquisition-related expense (income)	5,557	363	(1,841)
Costs related to the Hart-Scott-Rodino review process	11,012	—	—
Interest expense, net	15,072	3,825	1,367
Income tax expense (benefit)	14,864	10,836	(3,846)
Litigation-related expense	—	—	2
Headquarters relocation costs	—	3,552	—
Stock-based expense	45,835	36,852	38,122
Adjusted EBITDA	$ 163,445	$ 127,210	$ 92,191

Ending on demand units: This metric represents the number of rental housing units managed by our clients with one or more of our on demand software solutions at the end of the period. We use ending on demand units to measure the success of our strategy of increasing the number of rental housing units managed with our on demand software solutions. Property unit counts are provided to us by our clients as new sales orders are processed. Property unit counts may be adjusted periodically as information related to our clients' properties is updated or supplemented, which could result in adjustments to the number of units previously reported.

Average on demand units: We calculate average on demand units as the average of the beginning and ending on demand units for each quarter in the period presented. This metric is a measure of our success increasing the number of on demand software solutions utilized by our clients to manage their rental housing units, our overall revenue, and profitability.

On demand annual client value ("ACV"): ACV represents our estimate of the annual value of our on demand revenue contracts at a point in time. We monitor this metric to measure our success in increasing the number of on demand units, and the amount of software solutions utilized by our clients to manage their rental housing units.

On demand revenue per average on demand unit ("RPU"): We define RPU as ACV divided by average on demand units. We monitor this metric to measure our success in increasing the penetration of on demand software solutions utilized by our clients to manage their rental housing units.

Non-GAAP Financial Measures

We report our financial results in accordance with GAAP; however, we believe that, in order to properly understand our short-term and long-term financial, operational, and strategic trends, it may be helpful for investors to exclude certain non-cash or non-recurring items when used as a supplement to financial performance measures in accordance with GAAP. These non-cash or non-recurring items result from facts and circumstances that vary in both frequency and impact on continuing operations. We also use results of operations excluding such items to evaluate our operating performance compared against prior periods, make operating decisions, determine executive compensation, and serve as a basis for long-term strategic planning. These non-GAAP financial measures provide us with additional means to understand and evaluate the operating results and trends in our ongoing business by eliminating certain non-cash expenses and other items that we believe might otherwise make comparisons of our ongoing business with prior periods more difficult, obscure trends in ongoing operations, reduce our ability to make useful forecasts, or obscure the ability to evaluate the effectiveness of certain business strategies and management incentive structures. In addition, we also believe that investors and financial analysts find this information helpful in analyzing our financial and operational performance and comparing this performance to our peers and competitors. These non-GAAP financial measures are used in conjunction with traditional GAAP financial measures as part of our overall assessment of our performance.

We do not place undue reliance on non-GAAP financial measures as measures of operating performance. Non-GAAP financial measures should not be considered substitutes for other measures of financial performance or liquidity reported in accordance with GAAP. There are limitations to using non-GAAP financial measures, including that other companies may calculate these measures differently than we do; that they do not reflect changes in, or cash requirements for, our working capital; and that they do not reflect our capital expenditures or future requirements for capital expenditures. We compensate for

the inherent limitations associated with using non-GAAP financial measures through disclosure of these limitations, presentation of our financial statements in accordance with GAAP, and reconciliation of non-GAAP financial measures to the most directly comparable GAAP financial measures.

We exclude or adjust each of the items identified below from the applicable non-GAAP financial measure referenced above for the reasons set forth with respect to each excluded item:

Acquisition-related and other deferred revenue: These items are included to reflect deferred revenue written down for GAAP purposes under purchase accounting rules and revenue deferred due to a lack of historical experience determining the settlement of the contractual obligation in order to appropriately measure the underlying performance of our business operations in the period of activity and associated expense.

Asset impairment and loss on disposal of assets: These items comprise gains and/or losses on the disposal and impairment of long-lived assets, which are not reflective of our ongoing operations. We believe exclusion of these items facilitates a more accurate comparison of our results of operations between periods.

Depreciation of long-lived assets: Long-lived assets are depreciated over their estimated useful lives in a manner reflecting the pattern in which the economic benefit is consumed. Management is limited in its ability to change or influence these charges after the asset has been acquired and placed in service. We do not believe that depreciation expense accurately reflects the performance of our ongoing operations for the period in which the charges are incurred, and are therefore not considered by management in making operating decisions.

Amortization of intangible assets: These items are amortized over their estimated useful lives and generally cannot be changed or influenced by management after acquisition. Accordingly, these items are not considered by us in making operating decisions. We do not believe such charges accurately reflect the performance of our ongoing operations for the period in which such charges are incurred.

Acquisition-related expense (income): These items consist of direct costs incurred in our business acquisition transactions and the impact of changes in the fair value of acquisition-related contingent consideration obligations. We believe exclusion of these items facilitates a more accurate comparison of the results of our ongoing operations across periods and eliminates volatility related to changes in the fair value of acquisition-related contingent consideration obligations.

Costs arising from Hart-Scott-Rodino review process: This item consists of direct costs incurred related to reviews by the United States Federal Trade Commission and Department of Justice of our 2017 acquisitions of LRO and On-Site under the Hart-Scott-Rodino Antitrust Improvements Act. We believe that these costs are not reflective of our ongoing operations or our normal acquisition activity. Exclusion of these costs facilitates a more accurate comparison of our results across periods.

Litigation-related expense: This item relates to our litigation with Yardi Systems, Inc., including related insurance litigation and settlement costs. This significant and non-recurring litigation and related ancillary matters were resolved in the second quarter of 2014. We believe that the costs incurred related to this litigation are not reflective of the Company's ongoing operations.

Headquarters relocation costs: These items consist of duplicative rent and other expenses related to the relocation of our corporate headquarters and data center, which was substantially completed in the third quarter of 2016. These costs are not reflective of our ongoing operations due to their non-recurring nature.

Stock-based expense: This item is excluded because these are non-cash expenditures that we do not consider part of ongoing operating results when assessing the performance of our business, and also because the total amount of the expenditure is partially outside of management's control because it is based on factors such as stock price, volatility, and interest rates, which may be unrelated to our performance during the period in which the expenses are incurred.

Key Components of Our Results of Operations

Revenue

We derive our revenue from three primary sources: our on demand software solutions, our on premise software solutions, and our professional and other services.

On demand revenue: Revenue from our on demand software solutions is comprised of license and subscription fees relating to our on demand software solutions, typically licensed for one year terms; commission income from sales of renter's insurance policies; and transaction fees for certain on demand software solutions, such as payment processing, spend management, and billing services. Typically, we price our on demand software solutions based primarily on the number of units the client manages with our solutions. For our insurance based solutions, our agreement provides for a fixed commission on earned premiums related to the policies sold by us. The agreement also provides for a contingent commission to be paid to us in accordance with the agreement. Our transaction-based solutions are priced based on a fixed rate per transaction.

On premise revenue: Our on premise software solutions are distributed to our clients and maintained locally on the client's hardware. Revenue from our on premise software solutions is comprised of license fees under term and perpetual license agreements. Typically, we have licensed our on premise software solutions pursuant to term license agreements with an initial term of one year that include maintenance and support. Clients can renew their term license agreement for additional one-year terms at renewal price levels. We only market our acquired on premise solutions.

Professional and other revenue: Revenue from professional and other services consists of consulting and implementation services; training; and other ancillary services. We complement our solutions with professional and other services for our clients willing to invest in enhancing the value or decreasing the implementation time of our solutions. Our professional and other services are typically priced as time and materials engagements. Professional and other revenue also includes revenues generated from sub-meter installation services under our resident utility management solutions.

Cost of Revenue

Cost of revenue consists primarily of personnel costs related to our operations; support services; training and implementation services; expenses related to the operation of our data centers; and fees paid to third-party service providers. Personnel costs include salaries, bonuses, stock-based expense, and employee benefits. Cost of revenue also includes an allocation of facilities costs; overhead costs and depreciation; as well as amortization of acquired technology related to strategic acquisitions and amortization of capitalized development costs. We allocate facilities costs, overhead costs, and depreciation based on headcount.

Operating Expenses

We classify our operating expenses into three categories: product development, sales and marketing, and general and administrative. Our operating expenses primarily consist of personnel costs; costs for third-party contracted development; marketing; legal; accounting and consulting services; and other professional service fees. Personnel costs for each category of operating expenses include salaries, bonuses, stock-based expense, and employee benefits for employees in that category. In addition, our operating expenses include an allocation of our facilities costs; overhead costs and depreciation based on headcount for that category; as well as amortization of purchased intangible assets resulting from our acquisitions.

Product development: Product development expense consists primarily of personnel costs for our product development employees and executives, information technology and facilities, and fees to contract development vendors. Our product development efforts are focused primarily on increasing the functionality and enhancing the ease of use of our platform of solutions and expanding our suite of data analytics and on demand software solutions. In addition to our locations in the United States, we maintain product development and service centers in Hyderabad, India; Manila, Philippines; and Cebu City, Philippines.

Sales and marketing: Sales and marketing expense consists primarily of personnel costs for our sales, marketing, and business development employees and executives; information technology; travel and entertainment; and marketing programs. Marketing programs consist of amounts paid for product marketing, renter's insurance; other advertising; trade shows; user conferences; public relations; and industry sponsorships and affiliations. In addition, sales and marketing expense includes amortization of certain purchased intangible assets, including client relationships; key vendor and supplier relationships; and finite-lived trade names, obtained in connection with our acquisitions.

General and administrative: General and administrative expense consists of personnel costs for our executives, finance and accounting, human resources, management information systems, and legal personnel. In addition, general and administrative expense includes fees for professional services, including legal, accounting, and other consulting services; information technology and facilities costs; and acquisition-related costs, including direct costs incurred to complete our acquisitions and changes in the fair value of our acquisition-related contingent consideration obligations.

Interest Expense and Other, Net

Interest expense, net, consists primarily of interest income and interest expense. Interest income represents earnings from our cash and cash equivalents. Interest expense is associated with amounts borrowed under the Credit Facility, Convertible Notes, capital lease obligations, and certain acquisition-related liabilities, and includes expense from the amortization of related discounts and debt issuance costs. We participate in interest rate swap agreements, the purpose of which is to eliminate variability in interest rate payments on a portion of the Term Loan. For that portion, the swap agreements replace the Term Loan's variable rate with a fixed rate.

Income Taxes

The Tax Reform Act included a reduction in the US corporate tax rate from 35% to 21% effective for tax years beginning after December 31, 2017 and a one-time transition tax on unremitted foreign earnings. We have calculated our best estimate of the impact of the Act in our year end income tax provision in accordance with our understanding of the Act and guidance available as of the date of this filing and as a result have recorded $27.3 million as additional income tax expense in the fourth quarter of 2017, the period in which the legislation was enacted.

As a result of our adoption of ASU 2016-09, *Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payments Accounting*, on January 1, 2017, we recorded a deferred tax asset of $43.8 million, net of a $0.3 million valuation allowance, with a corresponding increase to retained earnings. The deferred tax asset consisted of excess stock-based compensation deductions that arose but were not recognized in prior years. With the adoption of this ASU, we began to account for all excess tax benefits and deficits arising from current period stock transactions as part of our income tax provision effective January 1, 2017. During the year ended December 31, 2017, our tax provision was reduced by approximately $19.1 million as a result of excess stock compensation deductions from the vesting of restricted stock and the exercise of stock options during the year.

As of December 31, 2017, we had gross federal, state, and international net operating loss ("NOL") carryforwards of approximately $172.5 million, $60.2 million, and $1.0 million, respectively. If not utilized, our federal NOL carryforwards will begin to expire in 2024, and our state NOL carryforwards will begin to expire in 2018. Federal NOLs that we have generated are not currently subject to the carryforward limitation in Section 382 of the Internal Revenue Code ("Section 382 limitation"); however, $30.4 million of NOLs generated by our subsidiaries prior to our acquisitions of them are subject to the Section 382 limitation. The limitation on these pre-acquisition NOL carryforwards will fully expire in 2035. A cumulative change in ownership among material shareholders, as defined in Section 382 of the Internal Revenue Code, during a three-year period may also limit utilization of our federal net operating loss carryforwards. Total state NOLs expiring in the next five years total approximately $19.1 million.

See Note 11 Income Taxes in the accompanying Notes to our Consolidated Financial Statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K for additional information on income taxes.

Critical Accounting Policies

Our Consolidated Financial Statements are prepared in accordance with GAAP. In many cases, the accounting treatment of a particular transaction is specifically dictated by GAAP and does not require management's judgment in its application, while in other cases, management's significant judgment is required to make estimates, assumptions, and judgments that affect the reported amount of assets, liabilities, revenue, expenses, and related disclosures. We base our estimates and assumptions on historical experience and other factors that we believe to be reasonable under the circumstances. In some instances, we could reasonably use different accounting estimates, and in other instances, results could differ significantly from our estimates. We evaluate our estimates and assumptions on an ongoing basis. To the extent that there are differences between our estimates and actual results, our future financial statement presentation, financial condition, results of operations, and cash flows will be affected.

We believe that the assumptions and estimates associated with revenue recognition; fair value measurements; business combinations; goodwill and other intangible assets with indefinite lives; impairment of long-lived assets; stock-based expense; income taxes; and capitalized product development costs have the greatest potential impact on our Consolidated Financial Statements. Therefore, we believe the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving our management's judgments, assumptions, and estimates.

Revenue Recognition

We derive our revenue from three primary sources: on demand software solutions, on premise software solutions, and professional services. We commence revenue recognition when all of the following conditions are met:

- there is persuasive evidence of an arrangement;
- the solution and/or service has been provided to the client;
- the collection of the fees is probable; and
- the amount of fees to be paid by the client is fixed or determinable.

If the fees are not fixed or determinable, we recognize revenues as payments become due from clients or when amounts owed are collected, provided all other conditions for revenue recognition have been met. Accordingly, this may materially affect the timing of our revenue recognition and results of operations.

When arrangements with clients include multiple software solutions and/or services, we allocate arrangement consideration to each deliverable based on its relative selling price. In such circumstances, we determine the relative selling price for each deliverable based on vendor specific objective evidence of selling price ("VSOE"), if available, or our best estimate of selling price ("BESP"). We have determined that third-party evidence of selling price is not available as our solutions and services are not largely interchangeable with those of other vendors. Our process for determining BESP considers multiple factors, including prices charged by us for similar offerings when sold separately, pricing and discount strategies, and other business objectives.

Taxes collected from clients and remitted to governmental authorities are presented on a net basis.

On Demand Revenue

Our on demand revenue consists of license and subscription fees, transaction fees related to certain of our software-enabled value-added services, and commissions derived from us selling certain risk mitigation services.

License and subscription fees are composed of a charge billed at the initial order date and monthly or annual subscription fees for accessing our on demand software solutions. The license fee billed at the initial order date is recognized as revenue on a straight-line basis over the longer of the contractual term or the period in which the client is expected to benefit, which we consider to be three years. Recognition starts once the product has been activated. Revenue from monthly and annual subscription fees is recognized on a straight-line basis over the access period.

We recognize revenue from transaction fees derived from certain of our software-enabled value-added services as the related services are performed.

As part of our risk mitigation services to the rental housing industry, we act as an insurance agent and derive commission revenue from the sale of insurance products to individuals. The commissions are based upon a percentage of the premium that the insurance company charges to the policyholder and are subject to forfeiture in instances where a policyholder cancels prior to the end of the policy. Our contract with our underwriting partner provides for contingent commissions to be paid to us in accordance with the agreement. This agreement provides for a calculation that considers, on the policies sold by us, earned premiums less i) earned agent commissions; ii) a percent of premium retained by our underwriting partner; iii) incurred losses; and iv) profit retained by our underwriting partner during the time period. Our estimate of contingent commission revenue considers historical loss experience on the policies sold by us. If the policy is cancelled, our commissions are forfeited as a percent of the unearned premium. As a result, we recognize commissions related to these services as earned ratably over the policy term.

On Premise Revenue

Sales of our on premise software solutions consists of an annual term license, which includes maintenance and support. Clients can renew their annual term license for additional one-year terms at renewal price levels. We recognize revenue for the annual term license and support services on a straight-line basis over the contract term.

We also derive on premise revenue from multiple element arrangements that include perpetual licenses with maintenance and other services to be provided over a fixed term. Revenue is recognized for delivered items using the residual method when we have VSOE of fair value for the undelivered items and all other criteria for revenue recognition have been met.

When VSOE has not been asserted for the undelivered items, we recognize the arrangement fees ratably over the longer of the customer support period or the period during which professional services are rendered.

Professional and Other Revenue

Professional services and other revenue are recognized as the services are rendered for time and material contracts. Training revenues are recognized after the services are performed.

Business Combinations

When we acquire businesses, we allocate the total consideration to the fair value of tangible assets and liabilities and identifiable intangible assets acquired. Any residual purchase price is recorded as goodwill. The allocation of the purchase price requires management to make significant estimates in determining the fair values of assets acquired and liabilities assumed, especially with respect to intangible assets. These estimates are based on the application of valuation models using historical experience and information obtained from the management of the acquired companies. These estimates can include, but are not limited to, the cash flows that an asset is expected to generate in the future, the appropriate weighted average cost of capital, and the cost savings expected to be derived from acquiring an asset. These estimates are inherently uncertain and unpredictable. In addition, unanticipated events and circumstances may occur in future periods which may affect the realizability of these estimated asset values.

Additionally, at times we provide for the payment of additional cash consideration to the extent certain targets are achieved in the future. The fair value of this contingent consideration is based on significant estimates and is initially recorded as part of the purchase price. Changes to the fair value are reflected in the Consolidated Statements of Operations.

Stock-Based Expense

We recognize compensation expense related to awards of stock options and restricted stock granted to employees based on the estimated fair value of the awards on the date of grant.

The fair value of our time-based restricted stock awards is based on the closing price of our common stock on the NASDAQ Global Select Market on the date of grant. Compensation expense for these awards is recognized on a straight-line basis over the requisite service period.

The fair value of our market-based restricted stock awards is estimated using a discrete model based on multiple stock price-paths developed through the use of Monte Carlo simulation. Expense associated with market-based awards is recognized over the requisite service period using the graded-vesting attribution method. Changes to the assumptions underlying our valuation model may have a significant impact on the underlying value of the market-based restricted stock awards, which could have a material impact on our Consolidated Financial Statements.

Income Taxes

Income taxes are determined using the liability method, which results in income tax assets and liabilities arising from temporary differences. Temporary differences are differences between the tax basis of assets and liabilities and their reported amounts in the financial statements that will result in taxable or deductible amounts in future years. The liability method requires the effect of tax rate changes on current and accumulated deferred income taxes to be reflected in the period in which the rate change was enacted. The liability method also requires that the deferred tax assets be reduced by a valuation allowance unless it is more likely than not that the assets will be realized.

We record net deferred tax assets to the extent we believe these assets will more likely than not be realized. We consider whether a valuation allowance is needed on our deferred tax assets by evaluating all positive and negative evidence relative to our ability to recover deferred tax assets, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies and recent financial operations. In projecting future taxable income, we begin with historical results and incorporate assumptions including the amount of future state, federal and foreign pretax operating income, the reversal of temporary differences, and the implementation of feasible and prudent tax planning strategies, if any. These assumptions require significant judgment about the forecasts of future taxable income and are consistent with the plans and estimates we are using to manage the underlying businesses.

We may recognize the tax benefit from uncertain tax positions only if it is at least more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position should be measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon settlement with the taxing authorities. We currently have recorded no liability for uncertain tax positions due to the fact that there were no material identified tax benefits that were considered uncertain positions.

The Tax Reform Act signed into law in the U.S. on December 22, 2017 contains significant changes to the U.S. federal income tax laws, the full consequences of which have not yet been determined. In preparing our income tax provision for 2017, we have made reasonable estimates of the effect, among other things, of the reduction in the U.S. federal income tax rate from 35% to 21% and of the effect of the deemed repatriation of foreign earnings on our tax provision for the year. Because of the complexity of the new law, the timing of its enactment, and the fact that portions of it may be subject to interpretation or clarifications yet to be set forth, we consider our accounting for the change in the new law to be provisional as of December 31, 2017. We will make any adjustments of this provisional accounting during 2018 as the uncertainties are resolved.

Capitalized Product Development Costs

We capitalize specific product development costs, including costs to develop software products or the software components of our solutions to be marketed to our clients, as well as software programs to be used solely to meet our internal needs. The costs incurred in the preliminary stages of development related to research; project planning; training; maintenance and general and administrative activities; and overhead costs are expensed as incurred. The costs of relatively minor upgrades and enhancements to the software are also expensed as incurred. Once an application has reached the development stage, internal and external costs incurred in the performance of application development stage activities, including materials, services, and payroll-related costs for employees, are capitalized, if direct and incremental, until the software is substantially complete and ready for its intended use. Capitalization ceases upon completion of all substantial testing. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality. Capitalized costs are recorded as part of property, equipment, and software. Internal use software is amortized on a straight-line basis over its estimated useful life, generally three years. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.

Results of Operations

The following tables set forth our results of operations for the specified periods. The period-to-period comparison of financial results is not necessarily indicative of future results.

Consolidated Statements of Operations Data

	Year Ended December 31,		
	2017	2016	2015
	(in thousands)		
Revenue:			
On demand	$ 642,622	$ 542,531	$ 450,962
On premise	2,644	2,836	2,970
Professional and other	25,697	22,761	14,588
Total revenue	670,963	568,128	468,520
Cost of revenue [1]	273,447	242,301	198,613
Gross profit	397,516	325,827	269,907
Operating expenses:			
Product development [1]	89,452	73,607	68,799
Sales and marketing [1]	165,079	135,213	123,108
General and administrative [1]	112,975	85,013	68,814
Impairment of identified intangible assets	—	750	20,801
Total operating expenses	367,506	294,583	281,522
Operating income (loss)	30,010	31,244	(11,615)
Interest expense and other, net	(14,769)	(3,758)	(1,449)
Income (loss) before income taxes	15,241	27,486	(13,064)
Income tax expense (benefit)	14,864	10,836	(3,846)
Net income (loss)	$ 377	$ 16,650	$ (9,218)

[1] Includes stock-based expense as follows:

	Year Ended December 31,		
	2017	2016	2015
	(in thousands)		
Cost of revenue	$ 3,842	$ 3,310	$ 4,046
Product development	8,423	7,071	8,585
Sales and marketing	14,592	11,364	12,996
General and administrative	18,978	15,107	12,495

The following table sets forth our results of operations for the specified periods as a percentage of our revenue for those periods. The period-to-period comparison of financial results is not necessarily indicative of future results.

	Year Ended December 31,		
	2017	2016	2015
	(as a percentage of total revenue)		
Revenue:			
On demand	95.8%	95.5%	96.3%
On premise	0.4	0.5	0.6
Professional and other	3.8	4.0	3.1
Total revenue	100.0	100.0	100.0
Cost of revenue	40.8	42.6	42.4
Gross profit	59.2	57.4	57.6
Operating expenses:			
Product development	13.3	13.0	14.7
Sales and marketing	24.6	23.8	26.3
General and administrative	16.8	15.0	14.7
Impairment of identified intangible assets	—	0.1	4.4
Total operating expenses	54.7	51.9	60.1
Operating income (loss)	4.5	5.5	(2.5)
Interest expense and other, net	(2.2)	(0.7)	(0.3)
Income (loss) before income taxes	2.3	4.8	(2.8)
Income tax expense (benefit)	2.2	1.9	(0.8)
Net income (loss)	0.1%	2.9%	(2.0)%

Comparison of the years ended December 31, 2017 and 2016

Revenue

	Year Ended December 31,			
	2017	2016	Change	% Change
	(in thousands, except dollar per average on demand unit data)			
Revenue:				
On demand	$ 642,622	$ 542,531	$ 100,091	18.4%
On premise	2,644	2,836	(192)	(6.8)
Professional and other	25,697	22,761	2,936	12.9
Total revenue	$ 670,963	$ 568,128	$ 102,835	18.1
Non-GAAP on demand revenue	$ 645,680	$ 541,582	$ 104,098	19.2
Ending on demand units	13,003	10,989	2,014	18.3
Average on demand units	11,711	11,042	669	6.1
On demand annual client value	$ 751,183	$ 556,813	$ 194,370	34.9
On demand revenue per average on demand unit	$ 57.77	$ 50.67	$ 7.10	14.0%

On demand revenue: During the year ended December 31, 2017, on demand revenue increased $100.1 million, or 18.4%, as compared to the same period in 2016. This increase was driven by incremental revenue from our 2017 acquisitions and growth across our platform of solutions, most significantly in resident services. Revenue per average on demand unit increased from $50.67 to $57.77 during the year ended December 31, 2017, despite the dilutive effect of our year-over-year growth in on demand units.

On demand revenue associated with our property management solutions grew $13.3 million, or 8.7%, during the twelve months ended December 31, 2017, as compared to the same period in 2016. This increase was primarily driven by strong

performance in our spend management solutions, as well as adoption of our OneSite property management and accounting solutions.

On demand revenue from our resident services solutions continued to experience significant growth, increasing by $52.8 million, or 24.2%, year-over-year. This growth was principally driven by our payments solutions and our resident utility management solutions, which benefited from incremental revenue from our acquisition of AUM. The performance of our renter's insurance products also contributed to this growth, despite the adverse impact of Hurricanes Harvey and Irma during the third quarter of 2017.

On demand revenue from our leasing and marketing solutions increased $7.0 million, or 6.1%, during the year ended December 31, 2017, as compared to the same period in 2016. This increase was largely attributable to incremental revenue from our acquisition of On-Site in the third quarter of 2017. The increase was partially offset by lower revenues as a result of the sale of our senior living referral services in the fourth quarter of 2016 and from our contact center, which continues to be adversely effected by unfavorable macro-economic conditions and increased competition.

On demand revenue from our asset optimization solutions increased year-over-year by $27.0 million, or 49.0%, primarily driven by incremental revenue from our 2017 acquisition of Axiometrics and, to a lesser extent, our acquisition of LRO. On demand revenue also benefited from year-over-year growth across our asset optimization platform, evidencing market acceptance of data-driven solutions.

Professional and other revenue: Professional and other services revenue increased by $2.9 million during the year ended December 31, 2017, primarily driven by our acquisition of AUM in the second quarter of 2017 as well as growth from our asset optimization solutions, including our portfolio asset management solution. This growth was partially offset by lower implementation and consulting revenue during the year ended December 31, 2017, as compared to the same period in 2016.

On demand unit metrics: As of December 31, 2017, one or more of our on demand solutions was utilized in the management of approximately 13.0 million rental property units. On demand units increased year-over-year by 2.0 million units, or 18.3%. This growth is attributable to our 2017 acquisitions, new client sales, and marketing efforts to existing clients.

Cost of Revenue

	Year Ended December 31,			
	2017	2016	Change	% Change
	(in thousands)			
Cost of revenue	$ 242,503	$ 210,825	$ 31,678	15.0%
Stock-based expense	3,842	3,310	532	16.1
Depreciation and amortization expense	27,102	28,166	(1,064)	(3.8)
Total cost of revenue	$ 273,447	$ 242,301	$ 31,146	12.9%

Cost of revenue: During the year ended December 31, 2017, cost of revenue, excluding stock-based expense and depreciation and amortization expense, increased $31.7 million, as compared to the same period in 2016. Personnel expense was the primary driver of this increase, growing year-over-year by $17.6 million. This growth was largely attributable to employees from our 2017 acquisitions and investments to support our growth. Higher transaction volume from our payments solutions and incremental costs from our recent acquisitions drove an increase in direct costs of $13.1 million during the year ended December 31, 2017.

Our gross margin increased during the year ended December 31, 2017, as compared to the prior year, moving from 57.4% to 59.2%. This increase was driven by greater scale across our multifamily business and improving efficiencies in certain lower margin products. In addition, our recent acquisitions in the asset optimization product category have contributed to margin expansion due to margin profiles that are more heavily weighted to pure software rather than software-enabled services.

Operating Expenses

	Year Ended December 31,			
	2017	2016	Change	% Change
	(in thousands)			
Product development expense	$ 74,421	$ 60,800	$ 13,621	22.4%
Stock-based expense	8,423	7,071	1,352	19.1
Depreciation expense	6,608	5,736	872	15.2
Total product development expense	$ 89,452	$ 73,607	$ 15,845	21.5%

Product development: Product development expense, excluding stock-based expense and depreciation expense, increased year-over-year by $13.6 million. Incremental costs from our recent acquisitions resulted in a year-over-year increase of $6.9

million in product development expense. Additionally, our innovation investments drove a combined increase of $5.5 million in personnel expense and professional fees in 2017.

Product development expense as a percentage of total revenue in 2017 was relatively consistent with 2016, at 13.3% and 13.0%, respectively.

	Year Ended December 31,			
	2017	2016	Change	% Change
	(in thousands)			
Sales and marketing expense	$ 123,394	$ 107,942	$ 15,452	14.3%
Stock-based expense	14,592	11,364	3,228	28.4
Depreciation and amortization expense	27,093	15,907	11,186	70.3
Total sales and marketing expense	$ 165,079	$ 135,213	$ 29,866	22.1%

Sales and marketing: Sales and marketing expense for the year ended December 31, 2017, excluding stock-based expense and depreciation and amortization expense, increased $15.5 million, as compared to the same period in 2016. Personnel expense increased $11.1 million year-over-year, reflecting incremental headcount from our 2017 acquisitions and investment in our sales force to drive future growth. Investments to accelerate demand across our portfolio of solutions drove a year-over-year increase in marketing program costs of $2.9 million. These combined investments resulted in improved sales force productivity and strong new sales bookings.

Sales and marketing expense as a percentage of total revenue increased from 23.8% for the year ended December 31, 2016, to 24.6% for the year ended December 31, 2017. This increase was chiefly attributable to higher amortization expense, primarily related to our 2017 acquisitions. Excluding the impact of this incremental amortization expense, sales and marketing expense was 22.9% of total revenue in 2017, reflecting increased efficiency and productivity in our sales operations.

	Year Ended December 31,			
	2017	2016	Change	% Change
	(in thousands)			
General and administrative expense	$ 87,654	$ 64,881	$ 22,773	35.1%
Stock-based expense	18,978	15,107	3,871	25.6
Depreciation expense	6,343	5,025	1,318	26.2
Total general and administrative expense	$ 112,975	$ 85,013	$ 27,962	32.9%

General and administrative: General and administrative expense, excluding stock-based expense and depreciation expense, increased year-over-year by $22.8 million. Professional fees increased year-over-year by $18.9 million, driven by costs related to the Hart-Scott-Rodino review process for our acquisitions of LRO and On-Site, and higher levels of other legal activity. Personnel expense increased $3.2 million between the two periods, primarily reflecting additional headcount from our 2017 acquisitions. The increase in general and administrative expense was partially offset by costs incurred in 2016 related to the relocation of our corporate headquarters and data center which were not incurred in 2017, and a year-over-year decrease of $1.5 million related to sales tax matters.

General and administrative expense as a percentage of total revenue increased from 15.0% to 16.8% during the year ended December 31, 2017, as compared to the same period in 2016. This increase was largely driven by acquisition-related professional fees, as described above. Excluding the costs related to the Hart-Scott-Rodino review process incurred in connection with our acquisitions of LRO and On-Site, general and administrative expense was relatively flat between the periods, at 15.0% in 2016 and 15.2% in 2017.

Impairment of Identified Intangible Assets: In the fourth quarter of 2016, we sold certain assets associated with our senior living referral services with a net carrying value of $3.7 million. Based on the status of the sale negotiations at the end of the third quarter, we determined there was a possibility that certain of the assets could be impaired and performed an impairment analysis. As a result of that analysis we recorded an impairment of the associated trade names at September 30, 2016, in the amount of $0.8 million, the amount by which the carrying value of the trade names exceeded their estimated fair value on the date of analysis.

Stock-based Expense

	Year Ended December 31,			
	2017	2016	Change	% Change
	(in thousands)			
Stock-based expense	$ 45,835	$ 36,852	$ 8,983	24.4%

Stock-based expense for the year ended December 31, 2017, increased $9.0 million as compared to 2016. This increase is principally attributable to incremental expense from awards granted subsequent to the first quarter of 2016. Stock based expense as a percent of total revenue was 6.8% and 6.5% for the years ended December 31, 2017 and 2016, respectively.

Depreciation and Amortization Expense

	Year Ended December 31,			
	2017	2016	Change	% Change
	(in thousands)			
Depreciation expense	$ 27,228	$ 24,566	$ 2,662	10.8%
Amortization expense	39,918	30,268	9,650	31.9
Total depreciation and amortization expense	$ 67,146	$ 54,834	$ 12,312	22.5%

Depreciation and amortization expense increased $12.3 million year-over-year from 2016 to 2017. The increase in depreciation expense was primarily driven by capital expenditures related to our corporate headquarters and data center. Finite-lived intangible assets acquired in our recent acquisitions drove a year-over-year increase in amortization expense of $9.7 million.

Interest Expense and Other, Net

	As of December 31,	
	2017	2016
	(in thousands)	
Interest income	$ 940	$ 1
Interest expense	(16,012)	(3,826)
Other income	303	67
	$ (14,769)	$ (3,758)

Interest expense and other for the year ended December 31, 2017, increased $11.0 million as compared to the same period in 2016. Higher interest and amortization expense, driven by our issuance of the Convertible Notes in May 2017 and borrowings under our Credit Facility in the fourth quarter of 2017, were the largest contributors to this increase.

Provision for Income Taxes

On December 22, 2017, the Tax Reform Act was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a corporate tax rate reduction from 35% to 21% effective for tax years beginning after December 31, 2017, the transition of U.S international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of cumulative foreign earnings as of December 31, 2017. We have calculated our best estimate of the impact of the Act in our year end income tax provision in accordance with our understanding of the Act and guidance available as of the date of this filing and as a result have recorded $27.3 million as additional income tax expense in the fourth quarter of 2017, the period in which the legislation was enacted. The provisional amount related to the remeasurement of certain deferred tax assets and liabilities, based on the rates at which they are expected to reverse in the future, was $25.1 million. The provisional amount related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings was $2.2 million based on cumulative foreign earnings of $17.7 million.

For the year ended December 31, 2017, we recognized a consolidated tax expense of $14.9 million on income before income taxes of $15.2 million, resulting in an effective tax rate of 97.5%. We recognized a domestic income tax expense of $14.3 million, with an effective tax rate of 115.4%. This primarily resulted from (1) the recognition of tax expense of $27.3 million as a result of the Tax Reform Act as described above and (2) a decrease in tax expense of approximately $19.1 million, resulting from excess stock compensation deductions recognized in connection with the vesting of certain restricted stock grants and the exercise of certain stock options in 2017. Prior to our adoption of ASC 2016-09 effective January 1, 2017, the benefit of such stock compensation deductions when realized was recognized in additional paid in capital rather than as a benefit or charge to the tax provision. We incurred foreign income tax expense of $0.5 million with an effective rate of 18.9%. Our foreign

effective tax rate is lower than foreign statutory rates primarily because a significant portion of our foreign operations in India and the Philippines occur in tax advantaged economic zones or are subject to statutory tax holidays.

Comparison of the years ended December 31, 2016 and 2015

Revenue

	Year Ended December 31,			
	2016	2015	Change	% Change
	(in thousands, except dollar per average on demand unit data)			
Revenue:				
On demand	$ 542,531	$ 450,962	$ 91,569	20.3%
On premise	2,836	2,970	(134)	(4.5)
Professional and other	22,761	14,588	8,173	56.0
Total revenue	$ 568,128	$ 468,520	$ 99,608	21.3
On demand unit metrics:				
Ending on demand units	10,989	10,568	421	4.0
Average on demand units	11,042	10,118	924	9.1
Non-GAAP on demand revenue	$ 541,582	$ 448,805	$ 92,777	20.7
On demand revenue per average on demand unit	$ 50.67	$ 44.36	$ 6.31	14.2
On demand annual client value	$ 556,813	$ 468,796	$ 88,017	18.8%

On demand revenue: Although on demand revenue decreased as a percentage of total revenue, from 96.3% in 2015 to 95.5% in 2016, in absolute dollars it increased year-over-year by $91.6 million, or 20.3%. This increase was driven by incremental revenue from our acquisition activity, greater client adoption across our platform of solutions, and growth in the number of rental units managed with one or more of our solutions. Continued client adoption across our platforms contributed to an increase in our on demand revenue per average on demand unit from $44.36 to $50.67, or 14.2%, during the twelve months ended December 31, 2016, as compared to the same period in 2015.

On demand revenue associated with our property management solutions grew $15.7 million, or 11.4%, during the twelve months ended December 31, 2016, as compared to the same period in 2015. This increase was driven by the growth of our OneSite and spend management solutions and benefited from incremental revenue from our acquisition activity.

On demand revenue was most impacted by strong growth within our resident services solutions, which grew $72.0 million, or 49.2%, year-over-year. This growth is attributable to incremental revenues from our acquisition activity and the continued growth of our other resident services solutions, most notably payments and renter's insurance.

Leasing and marketing solutions' on demand revenue decreased $4.4 million, or 3.6%, during the twelve months ended December 31, 2016, as compared to the same period in 2015. Despite growth in our online leasing and screening solutions, leasing and marketing decreased due to lower revenues from our contact center and senior leasing solutions. These decreases reflect the sale of certain assets associated with our senior living referral services in the fourth quarter of 2016 and the effect of continued unfavorable macro-economic conditions and increased competition.

On demand revenue from our asset optimization solutions increased year-over-year by $8.3 million, or 17.8%. This increase is primarily attributable to the growth of our Business Intelligence solution, revenues from which increased 37.7% from 2015 to 2016, and the continued growth of our YieldStar solution.

Professional and other revenue: Professional and other services revenue increased $8.2 million for the year ended December 31, 2016, as compared to the same period in 2015. This increase is primarily attributable to incremental revenue from our acquisition activity and service offerings which were new in 2016, such as portfolio management and learning solutions.

On demand unit metrics: As of December 31, 2016, one or more of our on demand solutions was utilized in the management of approximately 11.0 million rental property units. On demand units increased year-over-year by 0.4 million units, or 4.0%, despite the sale of certain assets associated with our senior living referral services in the fourth quarter of 2016. This growth is attributable to new client sales; marketing efforts to existing clients; and our 2016 acquisitions, which contributed 2.4% to total ending on demand units.

Cost of Revenue

	Year Ended December 31,			
	2016	2015	Change	% Change
	(in thousands)			
Cost of revenue	$ 210,825	$ 170,552	$ 40,273	23.6%
Stock-based expense	3,310	4,046	(736)	(18.2)
Depreciation and amortization expense	28,166	24,015	4,151	17.3
Total cost of revenue	$ 242,301	$ 198,613	$ 43,688	22.0%

Cost of revenue: During the year ended December 31, 2016, cost of revenue, excluding stock-based expense and depreciation and amortization expense, increased $40.3 million, as compared to the same period in 2015. A year-over-year increase in direct costs of $20.0 million was primarily attributable to incremental costs from our acquisition activity and higher transaction volumes from our Payments solution. Personnel costs and consulting fees increased during 2016 by $11.7 million and $2.4 million, respectively, largely driven by incremental costs from our acquisition activity. Additionally, investment in our infrastructure and the relocation of our corporate headquarters and data center drove a year-over-year increase of $5.8 million in information technology and facilities expense. Changes in stock-based expense and depreciation and amortization expense are separately addressed below.

Cost of revenue as a percentage of total revenue was 42.6% and 42.4% during the years ended December 31, 2016 and 2015, respectively. The cost of revenue from our NWP acquisition served to increase this percentage because of NWP's higher mix of sub-meter installation revenue and services that carry a higher direct labor cost. Excluding the effect of these factors, cost of revenue as a percentage of total revenue decreased between the periods due to the growth of our higher margin products, such as payments and renter's insurance, partially offset by higher depreciation expense.

Operating Expenses

	Year Ended December 31,			
	2016	2015	Change	% Change
	(in thousands)			
Product development expense	$ 60,800	$ 54,935	$ 5,865	10.7%
Stock-based expense	7,071	8,585	(1,514)	(17.6)
Depreciation expense	5,736	5,279	457	8.7
Total product development expense	$ 73,607	$ 68,799	$ 4,808	7.0%

Product development: Product development expense, excluding stock-based expense and depreciation expense, increased $5.9 million during the year ended December 31, 2016, as compared to the same period in 2015. Personnel expense during the period increased $6.5 million, driven by additional headcount to support the development of our next generation infrastructure, new functionality, and incremental expense from our acquisition activity. A year-over-year increase in facilities expense of $1.3 million was primarily driven by the relocation of our corporate headquarters and data center and, to a lesser extent, incremental cost from our acquisition activity.

These increases were partially offset by a decrease in professional fees between the periods of $1.2 million, primarily attributable to the completion of 2015 projects related to our leasing and marketing solutions. Additionally, a loss of $1.4 million on the disposal of assets related to in-process software development projects was recognized in 2015.

Product development as a percentage of total revenue decreased from 14.7% for the year ended December 31, 2015, to 13.0% for the same period in 2016. Improvement in this ratio was attributable to incremental revenue from acquired solutions introduced in 2016, the completion of projects related to our leasing and marketing solutions, and focused cost containment strategies.

	Year Ended December 31,			
	2016	2015	Change	% Change
	(in thousands)			
Sales and marketing expense	$ 107,942	$ 96,778	$ 11,164	11.5%
Stock-based expense	11,364	12,996	(1,632)	(12.6)
Depreciation and amortization expense	15,907	13,334	2,573	19.3
Total sales and marketing expense	$ 135,213	$ 123,108	$ 12,105	9.8%

Sales and marketing: Sales and marketing expense, excluding stock-based expense and depreciation and amortization expense, for the year ended December 31, 2016, increased $11.2 million, as compared to the same period in 2015. Personnel expense increased $5.8 million year-over-year, primarily due to incremental headcount from our acquisition activity, and investments to enhance sales productivity and expand our client engagement function. Marketing program costs increased $3.6 million during 2016, reflecting investments to accelerate client demand across our portfolio of solutions. Investment in our sales support technology infrastructure led to a year-over-year increase in information technology expense of $1.3 million, and the relocation of our corporate headquarters and data center drove an increase in facilities expense of $0.9 million.

Sales and marketing expense as a percentage of total revenue decreased from 26.3% for the year ended December 31, 2015, to 23.8% for 2016. This reduction was attributable to benefits from our cost containment strategy, leverage gained from our focus on sales productivity, and lower consulting expense. Lower stock-based expense during 2016 also contributed to the decrease. These reductions were partially offset by higher depreciation and amortization expense related to our acquisition activity.

	Year Ended December 31,			
	2016	2015	Change	% Change
	(in thousands)			
General and administrative expense	$ 64,881	$ 53,056	$ 11,825	22.3%
Stock-based expense	15,107	12,495	2,612	20.9
Depreciation expense	5,025	3,263	1,762	54.0
Total general and administrative expense	$ 85,013	$ 68,814	$ 16,199	23.5%

General and administrative: General and administrative expense, excluding stock-based expense and depreciation expense, increased $11.8 million during the year ended December 31, 2016, as compared to the same period in 2015. Personnel expense increased $6.2 million between the periods, primarily driven by incremental headcount from our acquisition activity and investments to support our continued growth. The relocation of our corporate headquarters and data center during 2016 drove an increase in facilities expense of $1.0 million. An increase in sales tax obligations of $2.3 million and changes in the fair value of our acquisition-related obligations of $2.8 million also contributed to higher general and administrative expense. These increases were partially offset by a decrease in professional expense of $1.7 million due to higher legal fees in 2015.

General and administrative expense as a percentage of total revenue increased from 14.7% to 15.0% during the year ended December 31, 2016, as compared to the same period in 2015. The increase in this ratio was driven by the year-over-year decrease in gains related to changes in the fair value of our acquisition-related obligations and was partially offset by lower professional fees in 2016 and benefits realized from our cost containment strategies.

Impairment of Identified Intangible Assets: During the first quarter of 2015, we completed the integration of the InstaManager and Kigo platforms into a single solution marketed under the Kigo name. Subsequent to this integration, we discontinued the use of the InstaManager trade name to market or identify the software. Due to this change in circumstance, we evaluated the InstaManager trade name for impairment and concluded an impairment in the amount of $0.5 million existed at March 31, 2015.

In connection with the preparation of our third quarter 2015 financial statements, we identified indicators requiring the assessment of certain indefinite-lived trade names for impairment, primarily associated with our 2011 acquisition of MyNewPlace. Identified indicators included declines in actual and anticipated lead-generation revenues and a change in our long-term marketing strategy. As a result, we analyzed these intangible assets and recorded a $20.3 million impairment charge during the third quarter of 2015, representing the amount by which the carrying value of the indefinite-lived trade names exceeded their estimated fair value. Given the change in our long-term marketing strategy and anticipated use of the trade names, we reclassified the remaining balance to finite-lived intangible assets as of September 30, 2015, and it is being amortized on a straight-line basis over an estimated useful life of seven years.

As noted in the previous section, we recognized an impairment of $0.8 million in the third quarter of 2016 in connection with the sale of certain assets associated with our senior living referral services.

Stock-based Expense

	Year Ended December 31,			
	2016	2015	Change	% Change
	(in thousands)			
Stock-based expense	$ 36,852	$ 38,122	$ (1,270)	(3.3)%

Stock-based expense for the year ended December 31, 2016, decreased $1.3 million as compared to 2015. This decrease is primarily attributable to the impact of forfeitures and awards which became fully vested during the year ended December 31, 2016, partially offset by incremental expense from awards granted during the same period.

Depreciation and Amortization Expense

	Year Ended December 31,			
	2016	2015	Change	% Change
	(in thousands)			
Depreciation expense	$ 24,566	$ 20,514	$ 4,052	19.8%
Amortization expense	30,268	25,377	4,891	19.3
Total depreciation and amortization expense	$ 54,834	$ 45,891	$ 8,943	19.5%

Depreciation and amortization expense increased $8.9 million year-over-year from 2015 to 2016. The increase in depreciation expense during these periods was primarily due to incremental depreciation expense from our acquisition activity and expense arising from the relocation of our corporate headquarters and data center. Amortization expense increased during these periods primarily due to the addition of finite-lived intangible assets in connection with our acquisition activity.

Interest Expense and Other, Net

	As of December 31,	
	2016	2015
	(in thousands)	
Interest income	$ 1	$ —
Interest expense	(3,826)	(1,367)
Other income (expense)	67	(82)
	$ (3,758)	$ (1,449)

Interest expense and other for the year ended December 31, 2016, increased $2.3 million as compared to the same period in 2015. This increase is primarily due to a year-over-year increase in interest expense, attributable to higher average outstanding borrowings in 2016 as a result of our $125.0 million Term Loan entered into in February 2016.

Provision for Income Taxes

For the year ended December 31, 2016, we recognized a consolidated tax expense of $10.8 million on income before income taxes of $27.5 million, resulting in an effective tax rate of 39.4%. We recognized a domestic income tax expense of $10.4 million, with an effective tax rate of 43.9%, resulting from the statutory federal tax rate and the effect of non-deductible expenses, state income tax rates, and other adjustments. We incurred foreign income tax expense of $0.4 million with an effective rate of 10.6%. Our foreign effective tax rate is lower than foreign statutory rates primarily because a significant portion of our foreign operations in India and the Philippines occur in tax advantaged economic zones or are subject to statutory tax holidays.

Quarterly Results of Operations

The following table presents our unaudited consolidated quarterly results of operations for the eight fiscal quarters ended December 31, 2017. This information is derived from our unaudited condensed consolidated financial statements, and includes all adjustments that we consider necessary for the fair statement of our financial position and operating results for the quarters presented. Operating results for individual periods are not necessarily indicative of the operating results for a full year. Historical results are not necessarily indicative of the results to be expected in future periods. You should read this data together with our Consolidated Financial Statements and the related notes to these financial statements included elsewhere in this filing.

	Three Months Ended,							
	December 31, 2017	**September 30, 2017**	**June 30, 2017**	**March 31, 2017**	**December 31, 2016**	**September 30, 2016**	**June 30, 2016**	**March 31, 2016**
	(in thousands, except per share amounts)							
Revenue:								
On demand	$ 180,104	$ 161,578	$ 154,727	$ 146,213	$ 141,627	$ 140,883	$ 136,610	$ 123,411
On premise	662	648	659	675	695	682	687	772
Professional and other	6,914	6,832	5,920	6,031	6,749	6,390	5,422	4,200
Total revenue	187,680	169,058	161,306	152,919	149,071	147,955	142,719	128,383
Cost of revenue	73,513	69,348	67,544	63,042	61,364	64,111	62,078	54,748
Gross profit	114,167	99,710	93,762	89,877	87,707	83,844	80,641	73,635
Operating expenses:								
Product development	25,890	21,885	21,290	20,387	18,714	18,743	18,878	17,272
Sales and marketing	48,114	42,583	39,235	35,147	34,025	33,860	35,129	32,199
General and administrative	30,350	31,004	27,370	24,251	23,058	21,677	21,932	18,346
Impairment of identified intangible assets	—	—	—	—	—	750	—	—
Total operating expenses	104,354	95,472	87,895	79,785	75,797	75,030	75,939	67,817
Operating income	9,813	4,238	5,867	10,092	11,910	8,814	4,702	5,818
Interest expense and other, net	(6,220)	(4,677)	(2,786)	(1,086)	(912)	(1,064)	(1,074)	(708)
Income (loss) before income taxes	3,593	(439)	3,081	9,006	10,998	7,750	3,628	5,110
Income tax expense (benefit)	24,458	(7,273)	(3,132)	811	3,637	3,540	1,545	2,114
Net (loss) income	$ (20,865)	$ 6,834	$ 6,213	$ 8,195	$ 7,361	$ 4,210	$ 2,083	$ 2,996
Net (loss) income per share attributable to common stockholders								
Basic	$ (0.26)	$ 0.09	$ 0.08	$ 0.10	$ 0.09	$ 0.05	$ 0.03	$ 0.04
Diluted	$ (0.26)	$ 0.08	$ 0.08	$ 0.10	$ 0.09	$ 0.05	$ 0.03	$ 0.04

The following table sets forth our results of operations for the specified periods as a percentage of our revenue for those periods. The period-to-period comparison of financial results is not necessarily indicative of future results.

	Three Months Ended,							
	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017	December 31, 2016	September 30, 2016	June 30, 2016	March 31, 2016
	(as a percentage of total revenue)							
Revenue:								
On demand	96.0 %	95.6%	95.9%	95.6%	95.0%	95.2%	95.7%	96.1%
On premise	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6
Professional and other	3.6	4.0	3.7	3.9	4.5	4.3	3.8	3.3
Total revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cost of revenue	39.2	41.0	41.9	41.2	41.2	43.3	43.5	42.6
Gross profit	60.8	59.0	58.1	58.8	58.8	56.7	56.5	57.4
Operating expenses:								
Product development	13.8	12.9	13.2	13.3	12.6	12.7	13.2	13.5
Sales and marketing	25.6	25.2	24.3	23.0	22.8	22.9	24.6	25.1
General and administrative	16.2	18.3	17.0	15.9	15.4	14.7	15.4	14.3
Impairment of identified intangible assets	—	—	—	—	—	0.5	—	—
Total operating expenses	55.6	56.4	54.5	52.2	50.8	50.8	53.2	52.9
Operating income	5.2	2.6	3.6	6.6	8.0	5.9	3.3	4.5
Interest expense and other, net	(3.3)	(2.9)	(1.7)	(0.7)	(0.6)	(0.7)	(0.8)	(0.6)
Income (loss) before income taxes	1.9	(0.3)	1.9	5.9	7.4	5.2	2.5	3.9
Income tax expense (benefit)	13.0	(4.3)	(1.9)	0.5	2.4	2.4	1.1	1.6
Net (loss) income	(11.1)%	4.0%	3.8%	5.4%	5.0%	2.8%	1.4%	2.3%

Reconciliation of Quarterly Non-GAAP Financial Measures

The following table presents a reconciliation of net (loss) income to Adjusted EBITDA for the eight fiscal quarters ended December 31, 2017:

	Three Months Ended,							
	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017	December 31, 2016	September 30, 2016	June 30, 2016	March 31, 2016
	(in thousands)							
Net (loss) income	$ (20,865)	$ 6,834	$ 6,213	$ 8,195	$ 7,361	$ 4,210	$ 2,083	$ 2,996
Acquisition-related and other deferred revenue adjustments	710	698	945	705	(187)	(161)	(258)	(343)
Depreciation, asset impairment, and loss on disposal of assets	6,817	7,331	6,929	6,675	6,635	7,119	6,563	5,496
Amortization of intangible assets	14,567	9,335	8,227	7,789	7,573	7,847	7,737	7,111
Acquisition-related expense (income)	2,508	485	1,354	1,210	695	(266)	(9)	(57)
Costs related to the Hart-Scott-Rodino review process	2,310	5,993	2,228	481	—	—	—	—
Interest expense and other, net	6,335	4,813	2,804	1,120	937	1,079	1,090	719
Income tax expense (benefit)	24,458	(7,273)	(3,132)	811	3,637	3,540	1,545	2,114
Headquarters relocation costs	—	—	—	—	—	1,353	1,174	1,025
Stock-based expense	10,103	11,764	13,876	10,092	9,469	8,255	10,737	8,391
Adjusted EBITDA	$ 46,943	$ 39,980	$ 39,444	$ 37,078	$ 36,120	$ 32,976	$ 30,662	$ 27,452

Liquidity and Capital Resources

Our primary sources of liquidity as of December 31, 2017, consisted of $69.3 million of cash and cash equivalents, $150.0 million available under our Revolving Facility, defined below, amounts available under the Credit Facility's Accordion Feature, defined below, (reduced by the Delayed Draw Term Loan, defined below), and $23.0 million of working capital (excluding $69.3 million of cash and cash equivalents and $116.6 million of deferred revenue).

Our principal uses of liquidity have been to fund our operations, working capital requirements, capital expenditures and acquisitions, and to service our debt obligations. We expect that working capital requirements, capital expenditures, acquisitions, and debt service will continue to be our principal needs for liquidity over the near term. We made capital expenditures of $49.8 million during the year ended December 31, 2017. Due to anticipated expenditures related to our international growth, our recent acquisitions, investments related to those acquisitions, and data content and analytics investments, we expect capital expenditures to be between 6% and 7% of total revenue during the year ending December 31, 2018. We expect our capital expenditure rate to decrease to 5% of total revenue over the next few years. In addition, we have made several acquisitions in which a portion of the cash purchase price is payable at various times through 2021. We expect to fund these obligations from cash provided by operating activities or funds available under our Credit Facility.

We believe that our existing cash and cash equivalents, working capital (excluding deferred revenue and cash and cash equivalents), and our cash flows from operations are sufficient to fund our operations, working capital requirements, and planned capital expenditures; and to service our debt obligations for at least the next twelve months. Our future working capital requirements will depend on many factors, including our rate of revenue growth, the timing and size of future acquisitions, the expansion of our sales and marketing activities, the timing and extent of spending to support product development efforts, the timing of introductions of new solutions and enhancements to existing solutions, and the continuing market acceptance of our solutions. We may enter into acquisitions of complementary businesses, applications, or technologies in the future that could require us to seek additional equity or debt financing. Additional funds may not be available on terms favorable to us, or at all.

The following table sets forth cash flow data for the periods indicated therein:

	Year Ended December 31,		
	2017	2016	2015
		(in thousands)	
Net cash provided by operating activities	$ 137,327	$ 136,216	$ 96,012
Net cash used in investing activities	(709,274)	(145,141)	(78,361)
Net cash provided by (used in) financing activities	536,349	82,943	(13,339)

Changes in Cash and Cash Equivalents during the year ended December 31, 2017:

Net Cash Provided by Operating Activities

During 2017, net cash provided by operating activities consisted of net income of $0.4 million and net non-cash adjustments to net income of $135.3 million. Non-cash adjustments to net income primarily consisted of depreciation and amortization expense of $67.1 million, stock-based expense of $45.8 million, income tax-related items of $13.8 million, and amortization of debt discount and issuance costs of $7.3 million.

Net changes in working capital contributed $1.7 million to operating cash flows during the year ended December 31, 2017. Cash flows from working capital in 2016 benefited from the receipt of payments of $19.0 million from the tenant improvement allowance related to our new corporate headquarters. Amounts due under this allowance were all received in 2016. Changes in working capital during 2017 included net cash inflows from deferred revenue of $17.1 million, and accounts payable and accrued liabilities of $3.7 million. These items were partially offset by net cash outflows related to accounts receivable of $18.7 million, which is reflective of our revenue growth during the year ended December 31, 2017.

Net Cash Used in Investing Activities

In 2017, our investing activities resulted in a net cash outflow of $709.3 million. The completion of our 2017 acquisitions was the primary driver of our investing activities during the year. We used $225.3 million to acquire On-Site, $298.0 million to acquire LRO, and $136.0 million in our acquisitions of Axiometrics, AUM, and PEX. We also used $49.8 million for capital expenditures during the period, which primarily included capitalized software development costs and expenditures to support our information technology infrastructure.

Net Cash Provided by Financing Activities

The net cash provided by our financing activities primarily consisted of proceeds from the issuance of the Convertible Notes of $304.2 million, net of the purchase of the Note Hedges, proceeds from the issuance of the Warrants, and related issuance costs. The net cash inflow was also a result of the receipt of proceeds, net of payments, of $195.8 million and $50.0 million from our Term Loans and Revolving Facility, respectively. These items were partially offset by payments of acquisition-related consideration of $8.5 million.

Changes in Cash and Cash Equivalents during the year ended December 31, 2016:

Net Cash Provided by Operating Activities

During 2016, net cash provided by operating activities consisted of net income of $16.7 million, net adjustments to net income of $94.4 million and a net inflow of cash from changes in working capital of $25.1 million. Adjustments to net income primarily consisted of depreciation and amortization expense of $54.8 million, stock-based expense of $36.9 million, income tax-related items of $2.4 million, and charges recognized in net income of $1.2 million related to the disposition and impairment of our long-lived assets.

Changes in working capital included net cash inflows from accounts payable and accrued liabilities of $5.8 million and from changes in other current assets of $21.0 million, primarily related to the receipt of payments from our tenant improvement allowance for our new corporate headquarters. Net inflows from changes in other current and long-term liabilities of $6.0 million and deferred revenue of $4.5 million also contributed to the increase from changes in working capital. These items were partially offset by net cash outflows related to accounts receivable of $12.2 million.

Net Cash Used in Investing Activities

In 2016, our investing activities resulted in a net cash outflow of $145.1 million. We used $71.4 million in our acquisitions of NWP, AssetEye, and eSupply and $70.7 million for capital expenditures. Capital expenditures during the period were primarily to support our strategy of consolidating our real estate footprint, capitalized software development costs, and to support our information technology infrastructure and were reduced by the proceeds from the sale of certain assets associated with our senior living referral services. Additionally, in the third quarter of 2016, we purchased a minority interest in an unrelated company that specializes in the aggregation of commercial lease data for $3.0 million.

Net Cash Provided by Financing Activities

The net cash provided by our financing activities consisted largely of proceeds of $122.4 million from the Term Loan we entered into in February 2016, net of payments during the year ended December 31, 2016, of $2.3 million. Concurrent with the receipt of the Term Loan, we repaid $40.0 million of the outstanding Revolving Facility. Other significant uses of cash during the period included treasury stock purchases of $21.2 million under our share repurchase program, payments of acquisition-related consideration of $5.7 million, and other expenditures totaling $1.1 million consisting of financing costs related to the Term Loan and payments under our capital lease obligations. Finally, activity under our stock-based compensation plans resulted in net inflows of $28.5 million, of which $6.0 million was related to excess tax benefits from stock-based compensation.

Changes in Cash and Cash Equivalents during the year ended December 31, 2015:

Net Cash Provided by Operating Activities

In 2015, we generated $96.0 million of net cash from operating activities, representing an increase compared to 2014 of $26.0 million. Our net cash from operating activities consisted of a net loss of $9.2 million, net adjustments to the net loss of $99.0 million, and cash inflows from working capital of $6.2 million.

Adjustments to the net loss consisted of a loss on disposal and impairment of assets in the amount of $23.9 million, primarily related to the impairment of certain indefinite-lived trade names associated with our 2011 acquisition of MyNewPlace; amortization and depreciation expense of $45.9 million; and stock-based expense of $38.1 million. These items were partially offset by net adjustments related to income tax items of $5.6 million and changes in the fair value of our acquisition-related liabilities of $3.3 million.

The net inflow from changes in working capital during 2015 was primarily the result of an increase in deferred revenue of $10.8 million and a net increase in accounts payable and accrued liabilities of $3.1 million, largely related to an increase in variable compensation. These changes were partially offset by a decrease in net cash flows related to accounts receivable of $8.7 million.

Net Cash Used in Investing Activities

In 2015, our investing activities resulted in a net cash outflow of $78.4 million. This outflow was principally attributable to expenditures of $45.3 million related to our acquisitions of Indatus and VRX. Capital expenditures, net of proceeds from disposals, of $33.1 million also contributed to the net cash outflow. These capital expenditures chiefly related to the development of new and enhancement of existing solutions combined with investments in our data processing infrastructure.

Net Cash Used in Financing Activities

Financing activities resulted in a net cash outflow of $13.3 million during 2015. This outflow consisted primarily of repurchases of our common stock under our stock repurchase program of $35.1 million, payments of acquisition-related liabilities of $3.7 million, and payments on capital lease obligations of $0.6 million. These outflows were partially offset by

proceeds from our Revolving Facility, net of payments, of $20.0 million, which were used to finance our acquisition of Indatus, and net activity of $6.1 million related to our stock-based compensation plans.

Contractual Obligations, Commitments, and Contingencies

The following table summarizes, as of December 31, 2017, our minimum payments, including interest when applicable, for long-term debt and other obligations for the next five years and thereafter:

	Payments Due by Period				
	Total	Less Than 1 year	1-3 years	3-5 years	More Than 5 years
			(in thousands)		
Convertible Notes [1]	$ 370,228	$ 5,175	$ 10,350	$ 354,703	$ —
Term Loans [2]	360,887	24,047	65,249	271,591	—
Revolving Facility [3]	57,699	1,690	3,777	52,232	—
Operating lease obligations	107,122	15,344	25,401	20,256	46,121
Acquisition-related liabilities [4]	51,788	37,621	13,167	1,000	—
	$ 947,724	$ 83,877	$ 117,944	$ 699,782	$ 46,121

(1) Represents the aggregate principal amount of $345.0 million and anticipated coupon interest payments related to our Convertible Notes and excludes the unamortized discount and debt issuance costs reflected in our Consolidated Balance Sheets.

(2) Represents the contractually required principal payments for our Term Loan and Delayed Draw Term Loan and excludes unamortized debt issuance costs reflected in our Consolidated Balance Sheets. These amounts also include the future interest obligations of our Term Loans, which were estimated using a LIBOR forward rate curve and include the related effects of our interest rate swap agreements.

(3) Represents the $50.0 million of principal amount outstanding and excludes unamortized debt issuance costs reflected in our Consolidated Balance Sheets. These amounts also include the anticipated interest obligations of our Revolving Facility, which were estimated using a LIBOR forward rate curve.

(4) Represents undiscounted amounts payable for our deferred cash obligations, excluding potential reductions related to the seller's indemnification obligations, and the estimated fair value for our contingent consideration obligations.

Credit Facility

On September 30, 2014, we entered into an agreement for a secured credit facility to refinance our outstanding revolving loans. The credit facility agreement was subsequently amended in February 2016 and in February, April, May, and August of 2017 (inclusive of these amendments, the "Credit Facility"). The Credit Facility matures on February 27, 2022, and includes the following:

Revolving Facility

The Credit Facility provides an aggregate principal amount of up to $200.0 million of revolving loans, with sublimits of $10.0 million for the issuance of letters of credit and $20.0 million for swingline loans ("Revolving Facility"). Advances under the Revolving Facility may be voluntarily prepaid and re-borrowed. All outstanding principal and accrued but unpaid interest under the Revolving Facility is due at maturity.

Term Loan

In February 2016, we originated a term loan in the original principal amount of $125.0 million under the Credit Facility ("Term Loan"). We make quarterly principal payments of $0.8 million, which will increase to $1.5 million beginning on June 30, 2018, and to $3.1 million beginning on June 30, 2020. We may prepay the Term Loan in whole or in part at any time, without premium or penalty. Any remaining principal and accrued but unpaid interest under the Term Loan is due on the Credit Facility's maturity date.

Delayed Draw Term Loan

The Credit Facility provides for an incremental $200.0 million delayed draw term loan ("Delayed Draw Term Loan") that was available to be drawn until December 31, 2017. The Delayed Draw Term Loan was drawn for the $200.0 million of funds available on December 5, 2017. Subsequent to disbursal of the Delayed Draw Term Loan funds, we began making quarterly principal payments of $1.3 million on December 31, 2017. The quarterly principal payments increase to $2.5 million beginning on June 30, 2018, and to $5.0 million beginning on June 30, 2020. We may prepay the Delayed Draw Term Loan in whole or in part at any time, without premium or penalty. Any remaining principal and accrued but unpaid interest under the Delayed Draw Term Loan is due on the Credit Facility's maturity date.

Accordion Feature

The Credit Facility also allows us, subject to certain conditions, to request additional term loans or revolving commitments up to an aggregate principal amount of $150.0 million, plus an amount that would not cause our Senior Leverage Ratio, as defined below, to exceed 3.25 to 1.00. The addition of the Delayed Draw Term Loan to the Credit Facility reduced the amount available under this increase option.

At our option, amounts outstanding under the Credit Facility accrue interest at a per annum rate equal to either LIBOR, plus a margin ranging from 1.25% to 2.25%, or the Base Rate, plus a margin ranging from 0.25% to 1.25% ("Applicable Margin"). The base LIBOR is, at our discretion, equal to either one, two, three, or six month LIBOR. The Base Rate is defined as the greater of Wells Fargo's prime rate, the Federal Funds Rate plus 0.50%, or one month LIBOR plus 1.00%. In each case, the Applicable Margin is determined based upon our Net Leverage Ratio, as defined below. Accumulated interest on amounts outstanding under the Credit Facility is due and payable quarterly, in arrears, for loans bearing interest at the Base Rate and at the end of the applicable interest period in the case of loans bearing interest at the adjusted LIBOR.

Certain of our existing and future material domestic subsidiaries are required to guarantee our obligations under the Credit Facility, and the obligations under the Credit Facility are secured by substantially all of our assets and the assets of the subsidiary guarantors. The Credit Facility contains customary covenants, subject in each case to customary exceptions and qualifications, which limit our and certain of our subsidiaries' ability to, among other things, incur additional indebtedness or guarantee indebtedness of others; create liens on our assets; enter into mergers or consolidations; dispose of assets; prepay certain indebtedness or make changes to our governing documents and certain of our agreements; pay dividends and make other distributions on our capital stock and redeem and repurchase our capital stock; make investments, including acquisitions; and enter into transactions with affiliates. Our covenants also include a requirement that we comply with certain financial ratios, as described below.

Consolidated Net Leverage Ratio: The Consolidated Net Leverage Ratio ("Net Leverage Ratio") is the ratio of consolidated funded indebtedness, as defined in the Credit Facility, on the last day of each fiscal quarter to the sum of the four previous consecutive fiscal quarters' consolidated EBITDA, as defined in the Credit Facility, and generally may not exceed 4.00 to 1.00. Under the terms of the Credit Facility, the Net Leverage Ratio was automatically increased to 5.00 to 1.00 upon our acquisition of On-Site in September 2017. The Net Leverage Ratio stayed at this level through December 31, 2017, and it will be incrementally stepped down until it returns to 4.00 to 1.00 on September 30, 2019. This automatic increase may not occur again during the term of the Credit Facility.

Consolidated Interest Coverage Ratio: The Consolidated Interest Coverage Ratio ("Interest Coverage Ratio") is the ratio of the four previous fiscal quarters' consolidated EBITDA to our interest expense for the same period, excluding non-cash interest attributable to the Convertible Notes, as defined below. The Interest Coverage Ratio may not be less than 3.00 to 1.00 on the last day of each fiscal quarter.

Consolidated Senior Secured Net Leverage Ratio: The Consolidated Senior Secured Net Leverage Ratio ("Senior Leverage Ratio") is the ratio of consolidated senior secured indebtedness, as defined in the Credit Facility, on the last day of each fiscal quarter to the four previous consecutive fiscal quarters' consolidated EBITDA and may not be greater than 3.50 to 1.00. At our option, this ratio may be increased to 3.75 to 1.00 for a period of one year following the completion of an acquisition having aggregate consideration greater than $50.0 million. This option may not be exercised more than one time during any consecutive eight quarter period. At December 31, 2017, we had not exercised our option to increase the permissible Senior Leverage Ratio.

The Credit Facility contains customary events of default, subject to customary cure periods for certain defaults, that include, among others, non-payment defaults, covenant defaults, material judgment defaults, bankruptcy and insolvency defaults, cross-defaults to certain other material indebtedness, defaults for non-compliance with the Employee Retirement Income Security Act ("ERISA"), inaccuracy of representations and warranties and a change in control default. In the event of a default, the obligations under the Credit Facility could be accelerated, the applicable interest rate under the Credit Facility could be increased, the loan commitments could be terminated, our subsidiaries that have guaranteed the Credit Facility could be required to pay the obligations in full and our lenders would be permitted to exercise remedies with respect to all of the collateral that is securing the Credit Facility, including substantially all of our and our subsidiary guarantors' assets. Any such default that is not cured or waived could have a material adverse effect on our liquidity and financial condition.

Convertible Notes

In May 2017, we completed a private offering of Convertible Notes with an aggregate principal amount of $345.0 million. The net proceeds from this offering were $304.2 million, after adjusting for debt issue costs, including the underwriting discount and the net cash used to purchase the Note Hedges and sell the Warrants. The Convertible Notes accrue interest at an annual rate of 1.50%, which is payable semi-annually on May 15 and November 15 of each year beginning in November 2017. The Convertible Notes mature on November 15, 2022, and may not be redeemed by us prior to their maturity. The Convertible

Notes were issued under an indenture dated May 23, 2017 ("Indenture"), by and between us and Wells Fargo Bank, N.A., as Trustee.

The holders may convert their notes to shares of our common stock, at their option, on or after May 15, 2022, and through the second scheduled trading day preceding the maturity date. Prior to May 15, 2022, holders may only convert their notes under certain circumstances specified in the Indenture. The Convertible Notes are convertible at an initial rate of 23.84 shares per $1,000 of principal (equivalent to an initial conversion price of approximately $41.95 per share of our common stock), subject to customary adjustments described in the Indenture. Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock, or a combination of cash and shares of our common stock, at our election. It is our stated intention to settle the principal balance of the Convertible Notes in cash and any conversion obligation in excess of the principal portion in shares of our common stock.

In conjunction with the Convertible Notes offering, we purchased Note Hedges and issued Warrants for approximately 8.2 million shares of our common stock. We paid $62.5 million to purchase the Note Hedges and received proceeds of $31.5 million from the issuance of the Warrants. The Note Hedges have an exercise price of $41.95 per share, consistent with the conversion price of the Convertible Notes, and expire in November 2022. The Note Hedges are generally expected to reduce the potential dilution to our common stock (or, in the event the conversion is settled in cash, to reduce our cash payment obligation) in the event that at the time of conversion our stock price exceeds the conversion price under the Convertible Notes. The Warrants have a strike price of $57.58 per share and expire in ratable portions on a series of expiration dates commencing on February 15, 2023.

Refer to Note 7 of the accompanying Condensed Consolidated Financial Statements for a complete discussion of these transactions and their accounting implications.

Share Repurchase Program

In May 2014, our board of directors approved a share repurchase program authorizing the repurchase of up to $50.0 million of our outstanding common stock for a period of up to one year after the approval date. Shares repurchased under the plan are retired. Our board of directors approved a one year extension of this program in both 2015 and 2016. On April 28, 2017, our board of directors again approved a one year extension of the share repurchase program. The terms of this extension permit the repurchase of up to $50.0 million of our common stock during the period commencing on the extension day and ending on May 4, 2018.

Repurchase activity during the years ended December 31, 2016 and 2015 is detailed in the table below. No shares were acquired under the repurchase program during the year ended December 31, 2017.

	Year Ended December 31,	
	2016	2015
Number of shares repurchased	1,012,823	1,798,199
Weighted-average cost per share	$ 20.98	$ 19.51
Total cost of shares repurchased, in thousands	$ 21,244	$ 35,083

Other Contractual Obligations

In addition to the contractual obligations discussed above, certain of our business acquisitions include provisions for the payment of deferred and contingent cash obligations. Deferred cash obligations are generally subject to adjustments specified in the underlying acquisition agreement related to the seller's indemnification obligations, and payment of contingent cash obligations is dependent upon the acquired business achieving agreed-upon operational or financial targets in the post-acquisition period. We had deferred cash obligations, net of unamortized discounts and sellers' indemnification obligations, of $47.0 million and $14.0 million and contingent cash obligations of $0.4 million and $0.5 million at December 31, 2017 and 2016, respectively. Deferred and contingent cash obligations related to our acquisitions have payment dates extending through 2021.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet financing arrangements, and we do not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in interest rates. We do not hold or issue financial instruments for trading purposes.

We had cash and cash equivalents of $69.3 million and $104.9 million at December 31, 2017 and 2016, respectively. We hold cash and cash equivalents for working capital purposes. We do not have material exposure to market risk with respect to investments, as our investments consist primarily of highly liquid investments purchased with original maturities of three months or less.

We had $120.4 million and $198.8 million outstanding under our Term Loan and Delayed Draw Term Loan, respectively, at December 31, 2017. The Term Loan and Delayed Draw Term Loan are reflected net of unamortized debt issuance costs of $0.4 million and $1.3 million, respectively, in the accompanying Consolidated Balance Sheets. At December 31, 2017, we had a $50.0 million balance outstanding under our Revolving Facility, and we had no outstanding balance as of December 31, 2016. At our option, amounts borrowed under the Credit Facility accrue interest at a per annum rate equal to either LIBOR, plus a margin ranging from 1.25% to 2.25%, or the Base Rate, plus a margin ranging from 0.25% to 1.25%. The base LIBOR rate is, at our discretion, equal to either one, two, three, or six month LIBOR. The Base Rate is defined as the greater of Wells Fargo's prime rate, the Federal Funds Rate plus 0.50%, or one month LIBOR plus 1.00%. If the applicable variable interest rates changed by 50 basis points, our interest expense for the year ended December 31, 2017, as reported in the accompanying Consolidated Statements of Operations, would change by approximately $0.3 million.

On March 31, 2016, we entered into two interest rate swap agreements to eliminate variability in interest payments on a portion of the Term Loan. For that portion, the swap agreements replace the term note's variable rate with a blended fixed rate of 0.89%. We do not use derivative financial instruments for speculative or trading purposes; however, we may adopt additional specific hedging strategies in the future.

Item 8. Financial Statements and Supplementary Data

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of RealPage, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of RealPage, Inc. (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and the financial statement schedule listed in the Index under Item 15(c) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated 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 28, 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 2004.

Dallas, Texas

February 28, 2018

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of RealPage, Inc.

Opinion on Internal Control over Financial Reporting

We have audited RealPage, Inc.'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) (the COSO criteria). In our opinion, RealPage, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

As indicated in the accompanying "Management's Report on Internal Control over Financial Reporting," management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Axiometrics LLC (Axiometrics), American Utility Management (AUM), On-Site Manager, Inc. (On-Site), and Lease Rent Options (LRO), which are included in the 2017 consolidated financial statements of the Company. Axiometrics constituted approximately 5% and 2% of total assets and total revenues, respectively, as of December 31, 2017. AUM constituted approximately 5% and 3% of total assets and total revenues, respectively, as of December 31, 2017. On-Site constituted approximately 17% and 2% of total assets and total revenues, respectively, as of December 31, 2017. LRO represented 20% and less than 1% of total assets and total revenues, respectively, as of December 31, 2017. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Axiometrics, AUM, On-Site, and LRO.

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 operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and the financial statement schedule listed in the Index under Item 15(c) and our report dated February 28, 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 Report on Internal Control over Financial Reporting." Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP

Dallas, Texas

February 28, 2018

RealPage, Inc.

Consolidated Balance Sheets
(in thousands, except per share and share amounts)

	December 31,	
	2017	2016
Assets		
Current assets:		
Cash and cash equivalents	$ 69,343	$ 104,886
Restricted cash	96,002	83,654
Accounts receivable, less allowance for doubtful accounts of $3,951 and $2,468 at December 31, 2017 and 2016, respectively	124,505	92,367
Prepaid expenses	12,107	10,836
Other current assets	6,622	5,712
Total current assets	308,579	297,455
Property, equipment, and software, net	148,428	130,428
Goodwill	751,052	259,938
Identified intangible assets, net	252,337	74,976
Deferred tax assets, net	44,887	15,665
Other assets	11,010	9,636
Total assets	$ 1,516,293	$ 788,098
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 26,733	$ 21,421
Accrued expenses and other current liabilities	79,379	50,464
Current portion of deferred revenue	116,622	89,583
Current portion of term loans	14,116	5,469
Customer deposits held in restricted accounts	96,057	83,590
Total current liabilities	332,907	250,527
Deferred revenue	5,538	6,308
Revolving facility	50,000	—
Term loans, net	303,261	116,657
Convertible notes, net	281,199	—
Other long-term liabilities	41,513	29,843
Total liabilities	1,014,418	403,335
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, $0.001 par value: 10,000,000 shares authorized and zero shares issued and outstanding at December 31, 2017 and 2016, respectively	—	—
Common stock, $0.001 par value: 125,000,000 shares authorized, 87,153,085 and 86,062,191 shares issued and 83,180,401 and 81,087,353 shares outstanding at December 31, 2017 and 2016, respectively	87	86
Additional paid-in capital	637,851	534,348
Treasury stock, at cost: 3,972,684 and 4,974,838 shares at December 31, 2017 and 2016, respectively	(61,260)	(30,358)
Accumulated deficit	(75,046)	(119,260)
Accumulated other comprehensive income (loss)	243	(53)
Total stockholders' equity	501,875	384,763
Total liabilities and stockholders' equity	$ 1,516,293	$ 788,098

See accompanying notes

RealPage, Inc.

Consolidated Statements of Operations
(in thousands, except per share amounts)

	Year Ended December 31,		
	2017	2016	2015
Revenue:			
On demand	$ 642,622	$ 542,531	$ 450,962
On premise	2,644	2,836	2,970
Professional and other	25,697	22,761	14,588
Total revenue	670,963	568,128	468,520
Cost of revenue	273,447	242,301	198,613
Gross profit	397,516	325,827	269,907
Operating expenses:			
Product development	89,452	73,607	68,799
Sales and marketing	165,079	135,213	123,108
General and administrative	112,975	85,013	68,814
Impairment of identified intangible assets	—	750	20,801
Total operating expenses	367,506	294,583	281,522
Operating income (loss)	30,010	31,244	(11,615)
Interest expense and other, net	(14,769)	(3,758)	(1,449)
Income (loss) before income taxes	15,241	27,486	(13,064)
Income tax expense (benefit)	14,864	10,836	(3,846)
Net income (loss)	$ 377	$ 16,650	$ (9,218)
Net income (loss) per share attributable to common stockholders:			
Basic	$ 0.00	$ 0.22	$ (0.12)
Diluted	$ 0.00	$ 0.21	$ (0.12)
Weighted average shares used in computing net income (loss) per share attributable to common stockholders:			
Basic	79,433	76,854	76,689
Diluted	82,398	77,843	76,689

See accompanying notes

RealPage, Inc.

Consolidated Statements of Comprehensive Income (Loss)
(in thousands)

	Year Ended December 31,		
	2017	2016	2015
Net income (loss)	$ 377	$ 16,650	$ (9,218)
Gain on interest rate swaps, net	241	536	—
Foreign currency translation adjustment, net	55	(43)	(337)
Comprehensive income (loss)	$ 673	$ 17,143	$ (9,555)

See accompanying notes

RealPage, Inc.

Consolidated Statements of Stockholders' Equity
(in thousands)

	Common Stock		Additional Paid-in	Accum. Other Comprehensive	Accumulated	Treasury Stock		Total Stockholders'
	Shares	Amount	Capital	Income (Loss)	Deficit	Shares	Amount	Equity
Balance as of January 1, 2015	83,212	$ 83	$ 437,664	$ (209)	$ (75,360)	(4,174)	$ (33,398)	$ 328,780
Issuance of common stock	848	1	12,112	—	—	—	—	12,113
Issuance of restricted stock	1,624	2	—	—	—	—	—	2
Treasury stock purchased, at cost	—	—	—	—	—	(2,716)	(41,544)	(41,544)
Retirement of treasury stock	(2,765)	(3)	(14,764)	—	(35,837)	2,765	50,604	—
Stock-based expense	—	—	38,122	—	—	—	—	38,122
Net tax deficiency from stock-based compensation	—	—	(1,466)	—	—	—	—	(1,466)
Foreign currency translation	—	—	—	(337)	—	—	—	(337)
Net loss	—	—	—	—	(9,218)	—	—	(9,218)
Balance as of December 31, 2015	82,919	83	471,668	(546)	(120,415)	(4,125)	(24,338)	326,452
Issuance of common stock	1,569	2	28,487	—	—	—	—	28,489
Issuance of restricted stock	2,587	2	(1)	—	—	—	—	1
Treasury stock purchased, at cost	—	—	—	—	—	(1,863)	(27,264)	(27,264)
Retirement of treasury stock	(1,013)	(1)	(5,748)	—	(15,495)	1,013	21,244	—
Stock-based expense	—	—	36,688	—	—	—	—	36,688
Net tax benefit from stock-based compensation	—	—	3,254	—	—	—	—	3,254
Interest rate swap agreements	—	—	—	400	—	—	—	400
Foreign currency translation	—	—	—	(43)	—	—	—	(43)
Reclassification of realized gain on cash flow hedge to earnings, net of tax	—	—	—	136	—	—	—	136
Net income	—	—	—	—	16,650	—	—	16,650
Balance as of December 31, 2016	86,062	86	534,348	(53)	(119,260)	(4,975)	(30,358)	384,763
Cumulative effect of adoption of ASU 2016-09	—	—	6	—	43,837	—	—	43,843
Issuance of common stock	991	1	27,013	—	—	354	—	27,014
Issuance of restricted stock	100	—	(2)	—	—	1,795	2	—
Treasury stock purchased, at cost	—	—	—	—	—	(1,147)	(30,904)	(30,904)
Stock-based expense	—	—	46,146	—	—	—	—	46,146
Interest rate swap agreements	—	—	—	318	—	—	—	318
Foreign currency translation	—	—	—	55	—	—	—	55
Reclassification of realized loss on cash flow hedge to earnings, net of tax	—	—	—	(77)	—	—	—	(77)
Equity component of convertible notes, net of issuance costs and deferred tax	—	—	61,390	—	—	—	—	61,390
Purchases of convertible note hedges	—	—	(62,549)	—	—	—	—	(62,549)
Issuance of warrants	—	—	31,499	—	—	—	—	31,499
Net income	—	—	—	—	377	—	—	377
Balance as of December 31, 2017	87,153	$ 87	$ 637,851	$ 243	$ (75,046)	(3,973)	$ (61,260)	$ 501,875

See accompanying notes

RealPage, Inc.

Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,		
	2017	2016	2015
Cash flows from operating activities:			
Net income (loss)	$ 377	$ 16,650	$ (9,218)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	67,146	54,834	45,891
Amortization of debt discount and issuance costs	7,296	443	271
Deferred taxes	13,791	8,386	(5,219)
Stock-based expense	45,835	36,852	38,122
Excess tax benefit from stock-based compensation	—	(5,998)	(357)
Impairment of identified intangible assets	—	750	20,801
Loss on disposal and impairment of other long-lived assets	524	497	3,070
Acquisition-related consideration	684	(877)	(3,268)
Changes in assets and liabilities, net of assets acquired and liabilities assumed in business combinations:			
Accounts receivable	(18,702)	(12,239)	(8,701)
Prepaid expenses and other current assets	945	20,973	1,391
Other assets	(717)	(187)	(814)
Accounts payable	268	652	(806)
Accrued compensation, taxes, and benefits	3,438	5,220	3,888
Deferred revenue	17,114	4,452	10,791
Other current and long-term liabilities	(672)	5,808	170
Net cash provided by operating activities	137,327	136,216	96,012
Cash flows from investing activities:			
Purchases of property, equipment, and software	(49,752)	(75,241)	(33,384)
Proceeds from disposal of property, equipment, and software	—	4,500	305
Acquisition of businesses, net of cash acquired	(659,322)	(71,400)	(45,282)
Purchase of cost method investments	(200)	(3,000)	—
Net cash used in investing activities	(709,274)	(145,141)	(78,361)
Cash flows from financing activities:			
Proceeds from term loans	199,400	124,688	—
Payments on term loans	(3,551)	(2,345)	—
Proceeds from revolving facility	50,000	—	51,500
Payments on revolving facility	—	(40,000)	(31,500)
Proceeds from borrowings on convertible senior notes	345,000	—	—
Purchase of convertible senior note hedges	(62,549)	—	—
Proceeds from issuance of warrants	31,499	—	—
Deferred financing costs	(10,734)	(392)	(8)
Payments on capital lease obligations	(335)	(548)	(574)
Payments of acquisition-related consideration	(8,491)	(5,684)	(3,685)
Issuance of common stock	27,014	28,490	12,115
Excess tax benefit from stock-based compensation	—	5,998	357
Purchase of treasury stock related to stock-based compensation	(30,904)	(6,020)	(6,461)
Purchase of treasury stock under share repurchase program	—	(21,244)	(35,083)
Net cash provided by (used in) financing activities	536,349	82,943	(13,339)
Net (decrease) increase in cash and cash equivalents	(35,598)	74,018	4,312
Effect of exchange rate on cash	55	(43)	(337)
Cash and cash equivalents:			
Beginning of period	104,886	30,911	26,936
End of period	$ 69,343	$ 104,886	$ 30,911

RealPage, Inc.

Consolidated Statements of Cash Flows, continued
(in thousands)

	Year Ended December 31,		
	2017	2016	2015
Supplemental cash flow information:			
Cash paid for interest	$ 6,754	$ 2,833	$ 1,086
Cash paid for income taxes, net of refunds	$ 1,855	$ 1,961	$ 693
Non-cash investing activities:			
Accrued property, equipment, and software	$ 5,777	$ 3,993	$ 3,424

See accompanying notes

1. The Company

RealPage, Inc., a Delaware corporation (together with its subsidiaries, the "Company" or "we" or "us"), is a leading global provider of software and data analytics to the real estate industry. Our platform of data analytics and software solutions enables the rental real estate industry to manage property operations (such as marketing, pricing, screening, leasing, and accounting), identify opportunities through market intelligence, and obtain data-driven insight for better operational and financial decision-making. Our integrated, on demand platform provides a single point of access and a massive repository of real-time lease transaction data, including prospect, renter, and property data. By leveraging data as well as integrating and streamlining a wide range of complex processes and interactions among the rental real estate ecosystem (owners, managers, prospects, renters, service providers, and investors), our platform helps our clients improve financial and operational performance and prudently place and harvest capital.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying Consolidated Financial Statements and footnotes have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). The Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). The Consolidated Financial Statements include the accounts of RealPage, Inc. and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Segment and Geographic Information

Our chief operating decision maker is our Chief Executive Officer, who reviews financial information presented on a company-wide basis. As a result, we determined that the Company has a single reporting segment and operating unit structure.

Principally, all of our revenue for the years ended December 31, 2017, 2016, and 2015 was earned in the United States. Net property, equipment, and software located in the United States amounted to $140.0 million and $125.3 million at December 31, 2017 and 2016, respectively. Net property, equipment, and software located in our international subsidiaries amounted to $8.4 million and $5.1 million at December 31, 2017 and 2016, respectively. Substantially all of the net property, equipment, and software held in our international subsidiaries was located in the Philippines, Spain, and India at both December 31, 2017 and 2016.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires our management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. Significant estimates include the allowance for doubtful accounts; the useful lives of intangible assets and the recoverability or impairment of tangible and intangible asset values; fair value measurements; contingent commissions related to the sale of insurance products; valuation of net assets acquired and contingent consideration in connection with business combinations; revenue and deferred revenue and related reserves; stock-based expense; and our effective income tax rate and the recoverability of deferred tax assets, which are based upon our expectations of future taxable income and allowable deductions. Actual results could differ from these estimates.

The Company is self-insured for the cost of claims made under its employee medical programs. These costs include an estimate for expected settlements of pending claims and an estimate for claims incurred but not reported. These significant estimates are based on management's assessment of outstanding claims, historical analyses, and current payment trends.

Concentrations of Credit Risk

Our cash accounts are maintained at various financial institutions and may, from time to time, exceed federally insured limits. The Company has not experienced any losses in such accounts.

Concentrations of credit risk with respect to accounts receivable result from substantially all of our clients being in the residential rental housing market. Our clients, however, are dispersed across different geographic areas. We do not require collateral from clients. We maintain an allowance for doubtful accounts based upon the expected collectability of accounts receivable.

No single client accounted for 10% or more of our revenue or accounts receivable for the years ended December 31, 2017, 2016, or 2015. Revenues for our largest client were 6.2%, 5.7%, and 4.6% of our total revenues for the years ended December 31, 2017, 2016, and 2015, respectively.

Cash and Cash Equivalents

We consider all highly liquid investments with a maturity date, when purchased, of three months or less to be cash equivalents.

Restricted Cash

Restricted cash consists of cash collected from tenants that will be remitted primarily to our clients.

Accounts Receivable

Accounts receivable primarily represent trade receivables from clients that we present net of an allowance for doubtful accounts. For several of our solutions, we invoice clients prior to the period in which service is provided. For certain transactions, we have met the requirements to recognize revenue in advance of invoicing the client. In these instances, we record unbilled receivables for the amount that will be due from the client upon invoicing. We maintain an allowance for doubtful accounts for estimated losses resulting from the inability of clients to make required payments, or the client canceling prior to the service being rendered. As a result, a portion of our allowance is for services not yet rendered and, therefore, classified as an offset to deferred revenue. In evaluating the sufficiency of the allowance for doubtful accounts we consider the current financial condition of the client, the specific details of the client account, the age of the outstanding balance, the current economic environment, and historical credit trends. Any change in the assumptions used in analyzing a specific account receivable might result in an additional allowance for doubtful accounts being recognized in the period in which the change occurs.

Accounts receivable are written off upon determination of non-collectability following established Company policies based on the aging from the accounts receivable invoice date. In the case of balances relating to services not yet rendered, the balance is written off when the client cancels the service or when we determine that the invoiced service will no longer be provided, whichever occurs first. During the years ended December 31, 2017, 2016, and 2015, we incurred bad debt expense of $3.2 million, $2.4 million, and $2.0 million, respectively.

Accounts receivable includes commissions due to the Company related to the sale of insurance products to individuals and commissions which are contingent based upon the activity in the underlying policies. Contingent commissions are determined based on a calculation that considers earned agent commissions, a percent of premium retained by our underwriting partner, incurred losses, and profit retained by our underwriting partner during the time period. Contingent commissions receivables are recorded at their estimated net realizable value, based on estimates and considerations which include, but are not limited to, the historical and projected loss rates incurred by the underlying policies.

Inventory

Inventories are stated at the lower of net realizable value or cost, determined on a first-in, first-out basis. The Company establishes inventory allowances for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the estimated realizable values based on assumptions about forecasted demand, open purchase commitments, and market conditions. Inventories consist primarily of parts and supplies relating to our sub-metering services.

Property, Equipment, and Software

Property, equipment, and software are recorded at cost less accumulated depreciation and amortization, which are computed using the straight-line method over the following estimated useful lives:

Data processing and communications equipment	3 - 5 years
Furniture, fixtures, and other equipment	3 - 5 years
Software	3 - 5 years

Software includes both purchased and internally developed software. Leasehold improvements are depreciated over the shorter of the lease term or twelve years. Gains and losses from asset disposals are included in the line “General and administrative” in the Consolidated Statements of Operations.

Capitalized Product Development Costs

We capitalize specific product development costs, including costs to develop software products or the software components of our solutions to be marketed to external users, as well as software programs to be used solely to meet our internal needs. The costs incurred in the preliminary stages of development related to research, project planning, training, maintenance, general and administrative activities, and overhead costs are expensed as incurred. The costs of relatively minor upgrades and enhancements to the software are also expensed as incurred. Once an application has reached the development stage, internal and external costs incurred in the performance of application development stage activities, including costs of materials, services, and payroll and payroll-related costs for employees, are capitalized, if direct and incremental, until the software is substantially complete and ready for its intended use. Capitalization ceases upon completion of all substantial

testing. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality.

Capitalized costs are recorded as part of property, equipment, and software. Internal use software is amortized on a straight-line basis over its estimated useful life, generally five years. Our management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.

Impairment of Long-Lived Assets

We perform an impairment review of long-lived assets held and used whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important that could trigger an impairment review include, but are not limited to, significant under-performance relative to current and historical or projected future operating results, significant changes in the manner of our use of the asset, or significant changes in our overall business and/or product strategies. When we determine that the carrying value of a long-lived asset may not be recoverable based upon the existence of one or more of these indicators, we determine the recoverability by comparing the carrying amount of the asset or asset group to net future undiscounted cash flows that the asset is expected to generate. If the asset or asset group fails this recoverability test, we would recognize an impairment charge equal to the excess of the asset's carrying value over its fair market value.

Business Combinations

The Company applies the guidance contained in ASC Topic 805, *Business Combinations* ("ASC 805") in determining whether an acquisition transaction constitutes a business combination. ASC 805 defines a business as consisting of inputs and processes applied to those inputs that have the ability to create outputs. The acquisition transactions in Note 3 were determined to constitute business combinations and were accounted for under ASC 805.

Purchase consideration includes assets transferred, liabilities assumed, and/or equity interests issued by us, all of which are measured at their fair value as of the date of acquisition. Our business combination transactions may be structured to include an up-front cash payment and deferred and/or contingent cash payments to be made at specified dates subsequent to the date of acquisition. Deferred cash payments are included in the acquisition consideration based on their fair value as of the acquisition date. The fair value of these obligations is estimated based on the present value, as of the date of acquisition, of the anticipated future payments. The future payments are discounted using a rate that considers an estimate of the return expected by a market-participant and a measurement of the risk inherent in the cash flows, among other inputs. Deferred cash payments are generally subject to adjustments specified in the underlying purchase agreement related to the seller's indemnification obligations. Contingent cash payments are obligations to make future cash payments to the seller, the payment of which is contingent upon the achievement of stipulated operational or financial targets in the post-acquisition period. Contingent cash payments are included in the purchase consideration at their fair value as of the acquisition date. The fair value of these payments is estimated using a probability weighted discount model based on the achievement of the specified targets. The fair value of these liabilities is re-evaluated on a quarterly basis, and any change is reflected in the line "General and administrative" in the accompanying Consolidated Statements of Operations. These estimates are inherently uncertain and unpredictable. Unanticipated events and circumstances may occur that would affect the accuracy or validity of these estimates.

The total purchase consideration is allocated to the assets acquired and liabilities assumed based on their estimated fair values. Any excess consideration is classified as goodwill. Acquired intangibles are recorded at their estimated fair value based on the income approach using market-based estimates. Acquired intangibles generally include developed product technologies, which are amortized over their useful life on a straight-line basis, and client relationships, which are amortized over their useful life proportionately to the expected discounted cash flows derived from the asset. When trade names acquired are not classified as indefinite-lived, they are amortized on a straight-line basis over their expected useful life.

Acquisition costs are expensed as incurred and are included in the line "General and administrative" in the accompanying Consolidated Statements of Operations. We include the results of operations from acquired businesses in our Consolidated Financial Statements from the effective date of the acquisition.

Goodwill and Identified Intangible Assets with Indefinite Lives

We test goodwill and identified intangible assets with indefinite lives for impairment separately on an annual basis in the fourth quarter of each year. Additionally, we test these assets in the interim if events and circumstances indicate they may be impaired. The events and circumstances that we consider include, but are not limited to, significant under-performance relative to current and historical or projected future operating results and significant changes in our overall business and/or product strategies. If an event or circumstance occurs that would cause us to revise our estimates and assumptions used in analyzing the value of our goodwill and identified intangible assets with indefinite lives, the revision could result in a non-cash impairment charge that could have a material impact on our financial results.

We evaluate impairment of goodwill by first performing a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. If it is concluded that this is the case, it is necessary

to perform the two-step goodwill impairment test. The first step involves a comparison of the fair value of a reporting unit with its carrying amount. If the carrying amount of the reporting unit exceeds its fair value, the second step involves a comparison of the implied fair value and carrying amount of the goodwill of that reporting unit to determine the impairment charge, if any.

We quantitatively evaluate identified intangible assets with indefinite lives by estimating the fair value of those assets based on estimated future earnings derived from the assets using the income approach model. Assets with indefinite lives that have been determined to be inseparable due to their interchangeable use are grouped into single units of accounting for purposes of testing for impairment. If the carrying amount of an identified intangible asset with an indefinite life exceeds its fair value, we would recognize an impairment loss equal to the excess of carrying value over fair value.

Identified Intangible Assets with Finite Lives

Identified intangible assets with finite lives consist of acquired developed technologies, client relationships, vendor relationships, non-competition agreements and trade names. Our intangible assets also include building photography. We record intangible assets at fair value and amortize those with finite lives over the shorter of the contractual life or the estimated useful life. We estimate the useful lives of acquired developed product technologies and client relationships based on factors that include the planned use of each developed product technology and the expected pattern of future cash flows to be derived from each developed product technology and existing client relationships. Estimated useful lives for identified intangible assets with finite lives consist of the following:

Developed technologies	3 - 7 years
Client relationships	3 - 10 years
Vendor relationships	7 years
Trade names	1 - 7 years
Non-competition agreements	5 - 10 years

We include amortization of acquired developed technologies in “Cost of revenue” and amortization of acquired client relationships, vendor relationships, non-competition agreements and trade names in “Sales and marketing” expenses in our Consolidated Statements of Operations.

Derivative Financial Instruments

The Company is exposed to interest rate risk related to our variable rate debt. The Company manages this risk through a program that includes the use of interest rate derivatives, the counterparties to which are major financial institutions. Our objective in using interest rate derivatives is to add stability to interest cost by reducing our exposure to interest rate movements. We do not use derivative instruments for trading or speculative purposes.

Our interest rate derivatives are designated as cash flow hedges and are carried in the Consolidated Balance Sheets at their fair value. Unrealized gains and losses resulting from changes in the fair value of these instruments are classified as either effective or ineffective. The effective portion of such gains or losses is recorded as a component of accumulated other comprehensive income (“AOCI”), while the ineffective portion is recorded as a component of interest expense in the period of change. Amounts reported in AOCI related to interest rate derivatives are reclassified into interest expense as interest payments are made on our variable-rate debt. If an interest rate derivative agreement is terminated prior to its maturity, the amounts previously recorded in AOCI are recognized into earnings over the period that the forecasted transactions impact earnings. If the hedging relationship is discontinued because it is probable that the forecasted transactions will not occur according to our original strategy, any related amounts previously recorded in AOCI are recognized in earnings immediately.

Other Current and Long-Term Liabilities

Accrued expenses and other current liabilities consisted of the following at December 31, 2017 and 2016:

	December 31,	
	2017	2016
	(in thousands)	
Accrued compensation, payroll taxes, and benefits	$ 25,677	$ 21,161
Sales tax obligations	4,930	4,625
Current portion of liabilities related to acquisitions	34,430	13,084
Lease-related liabilities	2,288	1,605
Other current liabilities	12,054	9,989
Total accrued expenses and other current liabilities	$ 79,379	$ 50,464

Other long-term liabilities consisted of the following at December 31, 2017 and 2016:

	December 31,	
	2017	2016
	(in thousands)	
Accrued lease liability	$ 27,760	$ 28,086
Liabilities related to acquisitions	13,000	1,607
Other long-term liabilities	753	150
Total other long-term liabilities	$ 41,513	$ 29,843

The accrued lease liability at December 31, 2017 and 2016 primarily consisted of deferred rent amounts related to our corporate headquarters in Richardson, Texas. See Note 9 for additional information regarding this lease.

Deferred Revenue

Deferred revenue primarily consists of billings or payments received in advance of revenue recognition from our subscription services described above and is recognized as the revenue recognition criteria are met. For several of our solutions, we invoice our clients in annual, monthly, or quarterly installments in advance of the commencement of the service period. Accordingly, the deferred revenue balance does not represent the total contract value of annual subscription agreements.

Revenue Recognition

We derive our revenue from three primary sources: on demand software solutions, on premise software solutions, and professional services. We commence revenue recognition when all of the following conditions are met:

- there is persuasive evidence of an arrangement;
- the solution and/or service has been provided to the client;
- the collection of the fees is probable; and
- the amount of fees to be paid by the client is fixed or determinable.

If the fees are not fixed or determinable, we recognize revenues as payments become due from clients or when amounts owed are collected, provided all other conditions for revenue recognition have been met. Accordingly, this may materially affect the timing of our revenue recognition and results of operations.

When arrangements with clients include multiple software solutions and/or services, we allocate arrangement consideration to each deliverable based on its relative selling price. In such circumstances, we determine the relative selling price for each deliverable based on vendor specific objective evidence of selling price (“VSOE”), if available, or our best estimate of selling price (“BESP”). We have determined that third-party evidence of selling price is not available as our solutions and services are not largely interchangeable with those of other vendors. Our process for determining BESP considers multiple factors, including prices charged by us for similar offerings when sold separately, pricing and discount strategies, and other business objectives.

Taxes collected from clients and remitted to governmental authorities are presented on a net basis.

On Demand Revenue

Our on demand revenue consists of license and subscription fees, transaction fees related to certain of our software-enabled value-added services, and commissions derived from our selling certain risk mitigation services.

License and subscription fees are composed of a charge billed at the initial order date and monthly or annual subscription fees for accessing our on demand software solutions. The license fee billed at the initial order date is recognized as revenue on a straight-line basis over the longer of the contractual term or the period in which the client is expected to benefit, which we consider to be three years. Recognition starts once the product has been activated. Revenue from monthly and annual subscription fees is recognized on a straight-line basis over the access period.

We recognize revenue from transaction fees derived from certain of our software-enabled value-added services as the related services are performed.

As part of our risk mitigation services to the rental housing industry, we act as an insurance agent and derive commission revenue from the sale of insurance products to individuals. The commissions are based upon a percentage of the premium that the insurance company charges to the policyholder and are subject to forfeiture in instances where a policyholder cancels prior to the end of the policy. Our contract with our underwriting partner provides for contingent commissions to be paid to us in accordance with the agreement. This agreement provides for a calculation that considers, on the policies sold by us, earned premiums less i) earned agent commissions; ii) a percent of premium retained by our underwriting partner; iii) incurred losses; and iv) profit retained by our underwriting partner during the time period. Our estimate of contingent commission revenue

considers historical loss experience on the policies sold by us. If the policy is cancelled, our commissions are forfeited as a percent of the unearned premium. As a result, we recognize commissions related to these services as earned ratably over the policy term.

On Premise Revenue

Sales of our on premise software solutions consist of an annual term license, which includes maintenance and support. Clients can renew their annual term license for additional one-year terms at renewal price levels. We recognize revenue for the annual term license and support services on a straight-line basis over the contract term.

We also derive on premise revenue from multiple element arrangements that include perpetual licenses with maintenance and other services to be provided over a fixed term. Revenue is recognized for delivered items using the residual method when we have VSOE of fair value for the undelivered items and all other criteria for revenue recognition have been met. When VSOE has not been asserted for the undelivered items, we recognize the arrangement fees ratably over the longer of the client support period or the period during which professional services are rendered.

Professional and Other Revenue

Professional services and other revenue are recognized as the services are rendered for time and materials contracts. Training revenues are recognized after the services are performed.

Cost of Revenue

Cost of revenue consists primarily of salaries and related personnel expenses of our operations and support personnel, including training and implementation services; expenses related to the operation of our data centers; fees paid to third-party providers; allocations of facilities overhead costs; depreciation; amortization of acquired technologies; and amortization of capitalized software.

Stock-Based Expense

The Company recognizes compensation expense related to stock options and shares of restricted stock based on the estimated fair value of the awards on the date of grant. The Company generally grants time-based stock options and restricted stock awards, which vest over a specified period of time; market-based awards, which become eligible to vest only after the achievement of a condition based upon the trading price of the Company's common stock and vest over a specified period of time thereafter; and performance-based awards, which become eligible to vest upon the achievement of a specific performance condition, after which they vest over a specified period of time.

For time-based stock options and time-based restricted stock awards, expense is recognized on a straight-line basis over the requisite service period. Expense associated with market-based awards is recognized over the requisite service period using the graded-vesting attribution method.

Advertising Expenses

Advertising costs are expensed as incurred and totaled $22.8 million, $19.4 million, and $16.3 million for the years ended December 31, 2017, 2016, and 2015, respectively.

Income Taxes

Income taxes are provided based on the liability method, which results in income tax assets and liabilities arising from temporary differences. Temporary differences are differences between the tax basis of assets and liabilities and their reported amounts in the financial statements that will result in taxable or deductible amounts in future years. The liability method requires the effect of tax rate changes on current and accumulated deferred income taxes to be reflected in the period in which the rate change was enacted.

The liability method also requires that deferred tax assets be reduced by a valuation allowance unless it is more likely than not that the assets will be realized. We establish valuation allowances when necessary to reduce deferred tax assets to the amounts expected to be realized. We evaluate the need for, and the adequacy of, valuation allowances based on the expected realization of our deferred tax assets. The factors used to assess the likelihood of realization include historical earnings, our latest forecast of taxable income, and available tax planning strategies that could be implemented to realize the net deferred tax assets.

We may recognize a tax benefit from uncertain tax positions only if it is at least more likely than not that the tax position will be sustained upon examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon settlement with the taxing authorities. There were no identified tax benefits that were considered uncertain positions at December 31, 2017 and 2016.

The Tax Reform Act signed into law in the U.S. on December 31, 2017 contains significant changes to the U.S. federal income tax laws, the full consequences of which have not yet been determined. In preparing our income tax provision for 2017,

we have made reasonable estimates of the effect, among other things, of the reduction in the U.S. federal income tax rate from 35% to 21% and of the effect of the deemed repatriation of foreign earnings on our tax provision for the year. Because of the complexity of the new law, the timing of its enactment, and the fact that portions of it may be subject to interpretation or clarifications yet to be set forth, we consider our accounting for the change in the new law to be provisional as of December 31, 2017. We will make any adjustments of this provisional accounting in 2018 as the uncertainties are resolved.

Leases

Some of the operating lease agreements entered into by the Company contain provisions for future rent increases, rent free periods, periods in which rent payments are reduced (abated), or lease incentives. The total amount of rental payments due over the lease term is charged to rent expense on the straight-line method over the term of the lease. The difference between rent expense recorded and the amount paid is credited or charged to “Accrued lease liability,” which is included in “Accrued expenses and other current liabilities” or “Other long-term liabilities” in the accompanying Consolidated Balance Sheets, depending upon when the liability is expected to be relieved.

Fair Value Measurements

Certain assets and liabilities are carried at fair value under GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

Legal Contingencies

We review the status of each legal matter and record a provision for a liability when we consider that it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. We review these provisions quarterly and make adjustments where needed as additional information becomes available. If either or both of the criteria are not met, we assess whether there is at least a reasonable possibility that a loss, or additional losses beyond those already accrued, may be incurred. If there is a reasonable possibility that a material loss (or additional material loss in excess of any accrual) may be incurred, we disclose an estimate of the amount of loss or range of losses, either individually or in the aggregate, as appropriate, if such an estimate can be made, or disclose that an estimate of loss cannot be made.

Recently Adopted Accounting Standards

On March 30, 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-09, *Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. This guidance simplifies accounting for stock-based compensation. Under the new guidance, excess tax benefits and tax deficiencies are now recognized as income tax expense or benefit in the income statement in the period they occur, regardless of whether the benefit reduces taxes payable in the current period. Previously, GAAP required tax benefits in excess of compensation cost to be recorded as additional paid-in capital to the extent taxes payable were reduced and tax deficiencies to be recorded in equity to the extent of previous accumulated excess tax benefit and then recorded to the income statement. The ASU also requires excess tax benefits to be reflected as operating cash flows and allows the Company to elect to either estimate the number of awards that are expected to vest or account for forfeitures as they occur.

We adopted ASU 2016-09 in the first quarter of 2017. As a result of our adoption of this ASU, we recorded a deferred tax asset of $43.8 million, net of a $0.3 million valuation allowance, related to excess stock-based compensation deductions that arose but were not recognized in prior years. Additionally, we elected to account for forfeitures as they occur using a modified retrospective transition method that required us to record an immaterial cumulative-effect adjustment to accumulated deficit. We elected to account for the change in presentation of excess tax benefits in the statements of cash flows prospectively, and as a result, no prior periods were adjusted. We began to account for all excess tax benefits and deficits arising from current period stock transactions as income tax benefit or expense effective January 1, 2017. The remaining amendments to this standard did not have a material impact on our Consolidated Financial Statements.

Recently Issued Accounting Standards

In August 2017, the FASB issued ASU 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*, which expands an entity’s ability to apply hedge accounting for nonfinancial and financial risk components and allows for a simplified approach for fair value hedging of interest rate risk. This ASU eliminates the need to separately measure and report hedge ineffectiveness and generally requires the entire change in fair value of a hedging instrument to be presented in the same income statement line as the hedged item. Additionally, this ASU simplifies the hedge documentation and effectiveness assessment requirements under the previous guidance. ASU 2017-12 is effective for annual reporting periods beginning after December 15, 2018, including interim periods within those fiscal years, and early adoption is permitted. The changes in this ASU will be applied on a modified retrospective basis through a cumulative effect adjustment to the opening balance of retained earnings as of the initial application date.

While we are continuing to assess all potential impacts of ASU 2017-12 on our consolidated financial statements, its most immediate effect will be the initial recognition of the entire change in the fair value of our interest rate swaps in other

comprehensive income. Similar to our current treatment of the effective portion of a change in fair value, the ineffective portion will be reclassified into interest expense as interest payments are made on our variable rate debt. Under our current practice, the ineffective portion is initially recorded as a component of interest expense in the period of change. We have not yet selected an adoption date and do not expect the changes in the ASU will have a material impact on our consolidated financial statements.

In July 2017, the FASB issued ASU 2017-11, *Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480), Derivatives and Hedging (Topic 815)*. The amendments of this ASU allow companies to exclude a down round feature when determining whether a financial instrument (or embedded conversion feature) is considered indexed to the entity's own stock. As a result, financial instruments (or embedded conversion features) with down round features may no longer be required to be accounted for as derivative liabilities. A company will recognize the value of a down round feature only when it is triggered and the strike price has been adjusted downward. For equity-classified freestanding financial instruments, an entity will treat the value of the effect of the down round as a dividend and a reduction of income available to common shareholders in computing basic earnings per share. For convertible instruments with embedded conversion features containing down round provisions, entities will recognize the value of the down round as a beneficial conversion discount to be amortized to earnings. ASU 2017-11 is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted, and the guidance is to be applied using a full or modified retrospective approach. We are currently evaluating the impact of adopting ASU 2017-11 on our consolidated financial statements.

In May 2017, the FASB issued ASU 2017-09, *Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting*, which provides clarification on when modification accounting should be used for changes to the terms or conditions of a share-based payment award. This ASU does not change the accounting for modifications but clarifies that modification accounting guidance should only be applied if there is a change to the fair value, vesting conditions, or award classification (as equity or liability) and would not be required if the changes are considered non-substantive. The changes in ASU 2017-09 are required to be implemented on a prospective basis and are applicable for annual reporting periods beginning after December 15, 2017, including interim periods therein. Early application is permitted. We will adopt ASU 2017-09 effective January 1, 2018, and do not expect the adoption will have a significant impact on our consolidated financial statements.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business* to assist entities with evaluating whether a set of transferred assets and activities (a "set") is a business. Under the new guidance, an entity first determines whether substantially all of the fair value of the set is concentrated in a single identifiable asset or a group of similar identifiable assets. If this threshold is met, the set is not a business. If the threshold is not met, the entity evaluates whether the set meets the requirements that a business include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs. The ASU requires the changes to be implemented on a prospective basis and is applicable for annual reporting periods beginning after December 15, 2017, including interim periods therein. Early application is permitted. We plan to adopt the changes contained in ASU 2017-01 effective January 1, 2018 and, as required by the ASU, will apply the new guidance on a prospective basis. We do not expect this ASU will have a significant impact on our classification of businesses and complementary technologies acquired.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows - Restricted Cash*, which requires entities to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. This standard is effective for fiscal years beginning after December 15, 2017, including interim periods within, and must be applied retrospectively. Early adoption of this ASU is permitted, including adoption in an interim period, but any adjustments must be reflected as of the beginning of the fiscal year that includes that interim period.

We will adopt ASU 2016-18 effective January 1, 2018. After adoption, changes in customer deposits held in restricted accounts will result in an increase or reduction in our cash flows from operating activities. Under current rules, such changes are largely offset by the corresponding change in restricted cash and have a minimal impact on our statement of cash flows.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The amendments in this ASU replace the incurred loss impairment methodology in current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. ASU 2016-13 is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted in fiscal years beginning after December 15, 2018. The amendments in this ASU are to be applied through a cumulative-effect adjustment to retained earnings as of the first reporting period in which the ASU is effective. We have not yet selected a transition date and are currently evaluating the impact of adopting ASU 2016-13 on our consolidated financial statements.

On February 25, 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The new guidance requires lessees to recognize the assets and liabilities arising from all leases, with a lease term of more than 12 months, including those classified as operating leases under previous accounting guidance, on the balance sheet. It also requires disclosure of key information about leasing arrangements to increase transparency and comparability among organizations.

ASU 2016-02 is effective for interim and annual periods beginning after December 15, 2018, early adoption is permitted. We expect to adopt this ASU on January 1, 2019. The new standard must be adopted using a modified retrospective transition, and provides for certain practical expedients. Transition will require application of the new guidance to the beginning of the earliest comparative period presented. We have formed a team to identify and analyze our existing lease agreements and are in the process of implementing changes to our systems, processes, disclosures and internal controls in conjunction with such review.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*. ASU 2014-09, as amended by certain supplementary ASU's released in 2016, will replace all current GAAP guidance on this topic and eliminate all industry-specific guidance. The new revenue recognition standard provides a unified model to determine when and how revenue is recognized. The core principle is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration for which the entity expects to be entitled in exchange for those goods or services. In doing so, companies will need to use more judgment and make more estimates than under current guidance. These may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price, and allocating the transaction price to each separate performance obligation. In August 2015, the FASB issued ASU 2015-14, *Topic 606 - Deferral of Effective Date*. ASU 2015-14 permitted public business entities to defer the adoption of ASU 2014-09 until interim and annual reporting periods beginning after December 15, 2017. We will adopt ASU 2014-09 in the first quarter of 2018 on a modified retrospective basis. Under this method of adoption, we will recognize the cumulative effect of initially applying the standard as an adjustment to the opening balance of retained earnings in the period of initial adoption. Comparative prior year periods will not be adjusted.

Based on our analysis, commissions paid to our direct sales force will qualify as incremental costs of obtaining a contract and will be capitalized and subsequently amortized over the customer benefit period. In addition, certain client accommodations currently recognized in the period granted instead will be estimated and will reduce the amount of revenue recognized as related performance obligations are satisfied. Finally, our allocation of contract transaction prices will result in slightly more contract value allocated to implementation and consulting services. The changes noted above will not result in material changes to our annual revenues.

The standard requires new revenue disclosures in our consolidated financial statements relating to, among other items, the disaggregation of revenue and contract backlog. We have developed expanded disclosures to meet the new requirements. We have also identified and designed additional controls and updated our accounting policies to support our implementation and ongoing compliance with the new standard.

3. Acquisitions

Current Acquisition Activity

Lease Rent Options

In February 2017, we entered into an agreement with The Rainmaker Ventures, LLC ("Rainmaker") to acquire substantially all of the assets and liabilities that comprised Rainmaker's multifamily revenue optimization business ("LRO"). We completed the acquisition when the transaction closed in December 2017. LRO is a revenue management solution that empowers optimized pricing for multifamily housing communities. This acquisition extended our revenue management footprint, augmented our repository of real-time lease transaction data, and increased our data science talent and capabilities. We also expect the acquisition of LRO to increase the market penetration of our YieldStar Revenue Management solution and drive revenue growth in our other asset optimization solutions.

We acquired LRO for a purchase price of $299.9 million. The purchase price consisted of a cash payment of $298.0 million, a deferred cash obligation of up to $1.6 million, which had a fair value of $1.5 million on the date of acquisition, and the assumption of certain liabilities totaling $0.4 million. Subject to any indemnification claims made, the deferred cash obligation will be released on the first anniversary of the closing date. The acquisition of LRO was financed using funds available under our Credit Facility, as defined in Note 7, and cash on hand.

The acquired identified intangible assets consisted of developed technology, client relationships, and trade names. These intangible assets were assigned estimated useful lives of seven, ten, and two years, respectively. Preliminary goodwill recognized of $203.3 million is primarily comprised of anticipated synergies from leveraging LRO's repository of lease transaction data and data science talent with our existing platform of pricing, demand, and credit optimization tools. Goodwill and the acquired identified intangible assets are deductible for tax purposes. Accounts receivable acquired had a gross contractual value of $4.6 million at acquisition, of which $0.2 million was estimated to be uncollectible. Acquisition costs associated with this transaction, totaled $13.8 million, including $10.7 million incurred related to the Hart-Scott-Rodino Antitrust Improvements Act review process, and were expensed as incurred.

PEX Software

In October 2017, the Company acquired all of the issued and outstanding shares of PEX Software Limited ("PEX"). PEX is a rental housing solution provider based in the United Kingdom that helps companies transform work practices and service delivery models, create and leverage competitive advantage, reduce costs, and scale businesses. PEX's platform serves market-leading clients in the United Kingdom, European Union, and Australia. The acquisition of PEX will help us to secure a leading market position in the private rental segment of the United Kingdom's housing market and facilitate our expansion into the European Union and other international markets.

We acquired PEX for a purchase price of $6.0 million. The purchase price consisted of a cash payment of $5.1 million at closing, net of cash acquired of $0.1 million, and a deferred cash obligation of up to $1.0 million. The deferred cash obligation is payable over a period of 24 months and its fair value was $0.9 million at the date of acquisition. This acquisition was financed using cash on hand, which included a portion of the net offering proceeds from the issuance of the Convertible Notes.

The acquired identified intangible assets consisted of developed technology, client relationships, and trade names. These intangible assets were assigned estimated useful lives of seven, nine, and six years, respectively. Preliminary goodwill recognized of $3.2 million is chiefly attributable to the presence we gained in international markets and anticipated synergies from combining PEX's consumer facing solutions with our platform of property management, accounting, and asset optimization solutions. Goodwill and the acquired identified intangible assets are not deductible for tax purposes. Acquisition costs associated with this transaction totaled $0.4 million and were expensed as incurred.

On-Site

In September 2017, we acquired certain discrete assets of On-Site Manager, Inc., including its ownership interest in its majority-owned subsidiary, DepositIQ & RentersIQ Insurance Agency, LLC ("DIQ") (collectively, "On-Site"). We also acquired the remaining minority interest in DIQ. On-Site is a leasing platform for property managers and renters that assimilates leads from any source and converts them into signed leases for both the multifamily and single family housing industries. The acquisition of On-Site increased the footprint of our screening services and added incremental consumer-oriented data that benefits our data analytics solutions. Additionally, we anticipate On-Site will improve the integration of our leasing solutions into other major property management systems.

We acquired On-Site, including the minority interest in DIQ, for an aggregate purchase price of $253.4 million. The purchase price consisted of a cash payment of $225.3 million at closing, net of cash acquired of $1.7 million, and a deferred cash obligation of up to $29.6 million. The fair value of the deferred cash obligation was $28.1 million at the date of acquisition. Subject to any indemnification claims made, the deferred cash obligation will be paid over a period of 36 months, with the majority due approximately twelve months following the acquisition date. This acquisition was financed using cash on hand, which included a portion of the net offering proceeds from the issuance of the Convertible Notes.

The acquired identifiable intangible assets consisted of trade names, developed technologies, and client relationships, which will be amortized over estimated useful lives of two, five, and ten years, respectively. Preliminary goodwill recognized of $184.5 million primarily arises from anticipated synergies from leveraging our existing cost structure and integrated sales force. Goodwill and the acquired identified intangible assets arising from the acquisition of On-Site Manager are deductible for tax purposes; those arising from the acquisition of DIQ are not. Accounts receivable acquired had a gross contractual value of $5.6 million at acquisition, of which $0.9 million was estimated to be uncollectible. Acquisition costs associated with this transaction, including those related to the Hart-Scott-Rodino Antitrust Improvements Act review process, totaled $1.8 million and were expensed as incurred.

Subsequent to the acquisition date, management continued to review information relating to events and circumstances that existed at the acquisition date. This review resulted in certain adjustments to the provisional amounts initially reported in the third quarter of 2017. The net effect of these measurement period adjustments resulted in a decrease in goodwill of $21.8 million, primarily consisting of an increase in the assessed fair value of identified intangible assets of $25.1 million. This increase was partially offset by a decrease in the estimated fair value of acquired property and equipment and accounts receivable in the amount of $3.7 million and $0.9 million, respectively.

American Utility Management

In June 2017, RealPage acquired substantially all of the assets of American Utility Management ("AUM"), a provider of utility and energy management services for the multifamily housing industry. AUM helps maximize cost recovery, reduces energy usage and expense, and provides the tools operators of rental real estate need to manage their utilities more effectively. Additionally, AUM's platform includes tools that enable operators to benchmark energy cost and consumption against their peers. The acquired assets will be integrated with our existing resident utility management platform and our data analytics tools.

We acquired AUM for a purchase price of $69.4 million. The purchase price consisted of a cash payment of $64.8 million at closing, net of cash acquired of $0.1 million, and a deferred cash obligation of up to $5.1 million. The fair value of the

deferred cash obligation was $4.6 million at the date of acquisition, and is payable over a period of four years following the date of acquisition. This acquisition was financed using cash on hand, which included a portion of the net offering proceeds from the issuance of the Convertible Notes.

The acquired identifiable intangible assets consisted of trade names, developed technology, non-compete agreements, and client relationships, which will be amortized over estimated useful lives of two, three, five, and ten years, respectively. Goodwill recognized of $45.9 million primarily arises from anticipated synergies from integrating the acquired assets with our existing resident utility management system and leveraging the energy cost and consumption benchmarking capabilities and data acquired. Goodwill and the acquired identified intangible assets are deductible for tax purposes. Accounts receivable acquired had a gross contractual value of $2.4 million at acquisition, of which $0.3 million was estimated to be uncollectible. Acquisition costs associated with this transaction totaled $0.3 million and were expensed as incurred.

Subsequent to the acquisition date, management continued to review information relating to events and circumstances that existed at the acquisition date. This review resulted in certain adjustments to the provisional amounts initially reported in the second quarter of 2017. The net effect of these measurement period adjustments resulted in an increase in goodwill of $0.6 million. This increase primarily consisted of an increase in accounts payable and accrued liabilities of $0.5 million, a decrease in customer deposits held in restricted accounts of $1.7 million, and a decrease in restricted cash of $1.7 million.

Axiometrics LLC

In January 2017, we acquired substantially all of the assets of Axiometrics LLC ("Axiometrics"). Axiometrics provides its customers with timely market intelligence on apartment markets accumulated from survey and research data. Axiometrics also provides tools to analyze the data at an asset level by multiple variables such as asset class, age, and specific competitive floor plans. The acquisition of Axiometrics expanded our multifamily data analytics platform and was integrated with MPF Research, our market research database, to form Data Analytics.

We acquired Axiometrics for a purchase price of $73.8 million. The purchase price consisted of a cash payment of $66.1 million at closing; deferred cash obligations of up to $7.5 million, payable over a period of two years following the date of acquisition; and contingent cash obligations of up to $5.0 million if certain revenue targets are achieved during the twelve-month period ending December 31, 2018. The fair value of the deferred and contingent cash obligations was $6.9 million and $0.8 million, respectively, at the date of acquisition. This acquisition was financed using cash on hand.

The acquired identified intangible assets consisted of developed technology, client relationships, and trade names. These intangible assets were assigned estimated useful lives of five, ten, and three years, respectively. We recognized goodwill in the amount of $54.2 million related to this acquisition, which is primarily comprised of anticipated synergies with our existing multifamily data analytics platform. Goodwill and the acquired identified intangible assets are deductible for tax purposes. Acquisition costs associated with this transaction totaled $0.3 million and were expensed as incurred.

We have adjusted our initial purchase price allocation reported in the first quarter of 2017 based on management's ongoing review of information available at the acquisition date. These measurement period adjustments resulted in an increase in goodwill, deferred revenue, and other liabilities of $1.3 million, $0.4 million, and $0.9 million, respectively.

Purchase Price Allocation

The estimated fair values of assets acquired and liabilities assumed presented below are provisional and are based primarily on the information available as of the acquisition dates. We believe that information provides a reasonable basis for estimating the fair values of assets acquired and liabilities assumed, but the Company is awaiting additional information necessary to finalize those values. Therefore, the provisional measurements of fair value are subject to change, and such changes could be significant. We expect to finalize the valuation of these assets and liabilities as soon as practicable, but no later than one year from the acquisition dates. The preliminary allocation of each purchase price, including the effects of measurement period adjustments recorded as of December 31, 2017, was as follows:

	Axiometrics	AUM	On-Site	PEX	LRO
			(in thousands)		
Restricted cash	$ —	$ 5,954	$ 3,458	$ —	$ —
Accounts receivable	1,620	2,409	4,718	174	4,425
Property, equipment, and software	400	319	789	8	1,507
Intangible assets:					
Developed product technologies	15,500	10,800	16,960	2,360	42,000
Client relationships	6,830	7,470	41,360	600	49,000
Trade names	3,200	208	7,000	210	666
Non-compete agreements	—	3,920	—	—	
Goodwill	54,190	45,929	184,534	3,172	203,254
Other assets	273	828	826	78	475
Accounts payable and accrued liabilities	(367)	(2,150)	(952)	(242)	(533)
Client deposits held in restricted accounts	—	(5,954)	(3,458)	—	—
Deferred revenue	(7,115)	(321)	(565)	(221)	(871)
Other long-term liabilities	(774)	—	—	—	—
Deferred tax liability	—	—	(1,240)	(108)	—
Total purchase price	$ 73,757	$ 69,412	$ 253,430	$ 6,031	$ 299,923

At December 31, 2017, deferred cash obligations related to acquisitions completed in 2017 totaled $44.8 million, and were carried net of a discount and indemnified obligations of $2.3 million in the Consolidated Balance Sheets. The aggregate fair value of contingent cash obligations related to these acquisitions was $0.2 million at December 31, 2017. During the year ended December 31, 2017, we recognized a gain of $0.6 million from changes in the fair value of contingent cash obligations related to these acquisitions. There were no payments of deferred or contingent cash obligations made related to these acquisitions during the year ended December 31, 2017.

Deferred tax liabilities established as part of our allocation of purchase price were subsequently remeasured as a result of the Tax Cuts and Jobs Act ("Tax Reform Act"), which was signed into law in December 2017. See Note 11 for additional discussion of the Tax Reform Act.

2016 Acquisitions

eSupply Systems, LLC

In June 2016, we acquired substantially all of the assets of eSupply Systems, LLC ("eSupply") and those of certain entities related to eSupply. eSupply is an e-procurement software and group purchasing service which augmented our Spend Management solutions.

We acquired eSupply for a purchase price of $7.0 million, consisting of a cash payment of $5.5 million at closing and a deferred cash obligation of up to $1.6 million, payable over 18 months after the acquisition date. The fair value of the deferred cash obligation on the date of acquisition was $1.5 million. We made the first deferred cash payment in July 2017.

The acquired identified intangible assets primarily consisted of developed technology and client relationships. These intangible assets were assigned estimated useful lives of three and ten years, respectively. We recognized goodwill in the amount of $3.2 million related to this acquisition, which is primarily comprised of anticipated synergies with our existing Spend Management solutions. Goodwill and the acquired identified intangible assets are deductible for tax purposes. This acquisition was financed using proceeds from the Term Loan issued in February 2016.

AssetEye, Inc.

In May 2016, we acquired all of the issued and outstanding stock of AssetEye, Inc. ("AssetEye"). AssetEye is a data aggregation, reporting, and collaboration platform for institutions holding multiple real estate asset classes. This solution provides asset and portfolio managers with a solution to evaluate performance, trends, and operations across a portfolio with transparency into property-level data. The acquisition of AssetEye expanded the Company's on demand solutions to serve all asset classes, including: commercial, hospitality, multifamily, single family, senior living, and student housing.

We acquired AssetEye's issued and outstanding stock for a purchase price of $4.9 million. The purchase price consisted of a cash payment of $3.6 million at closing, net of cash acquired of $0.8 million; deferred cash obligations of $1.0 million, payable over a period of two years following the date of acquisition; contingent cash payments of up to $1.0 million if certain revenue targets were achieved during the three-month period ended September 30, 2017; and additional cash payments of $0.2 million due to former shareholders of AssetEye. The fair value of the deferred and contingent cash obligations was $0.9 million and $0.2 million, respectively, at the date of acquisition. In the first quarter of 2018, we paid the contingent consideration obligation and the first deferred cash payment.

The acquired identified intangible assets primarily included developed technology and client relationships having useful lives of five and ten years, respectively. We recognized goodwill in the amount of $3.2 million related to this acquisition, which is primarily comprised of anticipated synergies between the AssetEye solution and our existing complementary solutions as well as our sales and marketing infrastructure. Goodwill and identified intangible assets recognized in connection with this transaction are not deductible for tax purposes. This acquisition was financed with proceeds from the Term Loan issued in February 2016.

NWP Services Corporation

In March 2016, we acquired all of the issued and outstanding stock of NWP Services Corporation ("NWP"). NWP provides a full range of utility management services, including: resident billing; payment processing; utility expense management; analytics and reporting; sub-metering and maintenance; and regulatory compliance. The primary products offered by NWP include Utility Logic, Utility Smart, Utility Genius, SmartSource, and NWP Sub-meter. We have integrated NWP into our resident services product family. The integrated platform enables property owners and managers to increase the collection of rental utilities and energy recovery. Goodwill arising from this acquisition consists of anticipated synergies from the integration of NWP into our existing structure.

We acquired NWP's issued and outstanding stock for an initial purchase price of $68.2 million. The purchase price consisted of a cash payment of $59.0 million at closing, net of cash acquired of $0.1 million; deferred cash obligations of $7.2 million, payable over a period of three years following the date of acquisition; and other amounts totaling $3.2 million, consisting of payments to certain employees and former shareholders of NWP. The acquisition-date fair value of the deferred cash obligations was $6.0 million. We made deferred cash payments aggregating to $1.0 million during the year ended December 31, 2017.

The acquired identified intangible assets were comprised of developed technologies, trade name, and client relationships having useful lives of five, three, and ten years, respectively. Goodwill and identified intangible assets acquired in this business combination, valued at $35.3 million and $16.3 million in our initial purchase price allocation, have carryover tax bases of $0.7 million and $11.0 million, respectively, which are deductible for tax purposes. Goodwill and identified intangible assets recognized in excess of those carryover tax basis amounts are not deductible for tax purposes. Accounts receivable acquired had a gross contractual value of $11.3 million at acquisition, of which $3.4 million was estimated to be uncollectible.

We assigned approximately $10.2 million of value to deferred tax assets in our initial purchase price allocation, consisting primarily of $9.9 million of federal and state net operating losses ("NOL"). This NOL amount reflects the tax benefit from approximately $27.3 million of NOLs we expect to realize after considering various limitations and restrictions on NWP's pre-acquisition NOLs. This acquisition was financed with proceeds from the Term Loan issued in February 2016. Acquisition costs associated with this transaction totaled $0.3 million and were expensed as incurred.

In connection with the acquisition of NWP, we recorded an indemnification asset of $1.2 million, which represents the selling security holders' obligation under the purchase agreement to indemnify the Company for the outcome of certain accrued obligations. The indemnification asset was recognized on the same basis as the corresponding liability, which is based on its estimated fair value as of the date of acquisition. The indemnification asset, and the corresponding liability, decreased in the amount of $0.9 million as of December 31, 2017 due to payments made after management's review of certain obligations which were accrued for as of the acquisition date.

Subsequent to the acquisition date, management continued to review information relating to events and circumstances that existed at the acquisition date. This review resulted in measurement period adjustments to the provisional amounts recorded at the acquisition date related to deferred cash obligations paid to the sellers and deferred tax assets associated with the transaction. These measurement period adjustments resulted in a change in a decrease in goodwill and the deferred cash

obligation of $1.8 million and $0.8 million, respectively, partially offset by an increase in the deferred tax asset of $1.0 million. These adjustments were made in the fourth quarter of 2016.

Purchase Price Allocation

The allocation of each purchase price was as follows:

	NWP	AssetEye	eSupply
		(in thousands)	
Restricted cash	$ 4,960	$ —	$ —
Accounts receivable	7,902	90	287
Property, equipment, and software	3,194	—	—
Intangible assets:			
Developed product technologies	2,740	1,638	2,160
Client relationships	12,900	1,041	1,390
Trade names	709	6	35
Goodwill	33,520	3,154	3,194
Deferred tax assets, net	11,173	—	—
Other assets, net of other liabilities	3,065	8	53
Accounts payable and accrued liabilities	(6,962)	—	(44)
Client deposits held in restricted accounts	(5,018)	—	—
Deferred revenue	—	(16)	(29)
Deferred tax liabilities, net	—	(1,010)	—
Total purchase price	$ 68,183	$ 4,911	$ 7,046

At December 31, 2017 and 2016, deferred cash obligations related to acquisitions completed in 2016 totaled $6.9 million and $8.7 million, and are carried net of a discount of $2.6 million and $1.2 million, respectively. The aggregate fair value of contingent cash obligations related to these acquisitions was $0.2 million and $0.5 million at December 31, 2017 and 2016, respectively. During the years ended December 31, 2017 and 2016, we recognized a gain of $0.3 million and a loss of $0.3 million, respectively, due to changes in the fair value of contingent cash obligations related to these acquisitions.

We made deferred cash payments of $1.8 million and $0.1 million during the years ended December 31, 2017 and 2016, respectively, related to these acquisitions. During the same periods, we made payments totaling $0.1 million and $3.3 million, respectively, related to amounts due to certain employees and former shareholders of the acquired businesses described above. There were no payments of contingent cash obligations made related to these acquisitions during the years ended December 31, 2017 and 2016.

Deferred tax assets and liabilities established as part of our allocation of purchase price were subsequently remeasured as a result of the Tax Cuts and Jobs Act (“Tax Reform Act”), which was signed into law in December 2017. See Note 11 for additional discussion of the Tax Reform Act.

2015 Acquisitions

Indatus

In June 2015, we acquired certain assets from ICIM Corporation, including the Answer Automation, Call Tracker, and Zip Digital products, marketed under the name Indatus. The Indatus offerings are software-as-a-service (“SaaS”) products that provide automated answering services, marketing spend analysis tools, and other features which enhance the ability of managers of multifamily properties to communicate with their residents. We have integrated the Indatus assets with our existing contact center and maintenance products, which increases the features of these existing solutions.

We acquired the Indatus assets for a purchase price of $49.4 million, consisting of a cash payment of $43.8 million at closing; deferred cash payments of up to $5.0 million, payable over nineteen months after the acquisition date; and contingent cash payments of up to $2.0 million, in the aggregate, if certain revenue targets were met for the twelve months ended June 30, 2016 and 2017. The fair value of the deferred and contingent cash payments was $4.7 million and $0.9 million, respectively, as of the acquisition date. The outstanding contingent and deferred cash obligations were settled in 2017.

The acquired identified intangible assets were comprised of developed product technologies and client relationships, and have useful lives of three and ten years, respectively. The trade name acquired was amortized over a useful life of one year, based on our anticipated use of the asset. Goodwill and identified intangible assets associated with the acquisition are deductible for tax purposes. Goodwill arising from the acquisition consisted largely of synergies from the integration of Indatus

with our pre-existing products and from leveraging our existing client base and sales staff. Direct acquisition costs were $0.3 million and the acquisition was financed using proceeds from our Revolving Facility.

VRX

In June 2015, we acquired certain assets from RJ Vacations, LLC and Switch Development Corporation, including the VRX product ("VRX"). VRX is a SaaS application which allows vacation rental management companies to manage the cleaning and turning of units, accounting, and document management. We integrated VRX with our Kigo vacation rental solution.

We acquired the VRX assets for a purchase price of $2.0 million, consisting of a cash payment of $1.5 million at closing and a contingent cash payment of up to $0.5 million. Payment of the contingent cash obligation was dependent upon the achievement of certain subscription or booking activity targets and was subject to adjustments specified in the acquisition agreement related to the sellers' indemnification obligations. The contingent cash obligation had a fair value of $0.5 million, as of the acquisition date, and was due fifteen months after the date of acquisition.

The acquisition agreement also provided for the sellers to receive additional contingent cash payments of up to $3.0 million. Payment of the additional contingent cash obligations is dependent upon the achievement of certain revenue targets during the twelve month periods ending December 31, 2016, 2017, and 2018, and the sellers providing certain services during a specified period following the acquisition date. Due to this post-acquisition service requirement, the Company concluded that the additional contingent cash obligations represent post-acquisition compensation; therefore, these amounts were excluded from the purchase consideration. The revenue targets for the first and second contingent cash payment were not met. Additionally, one of the sellers separated from the Company prior to completing the required service period. As a result of this separation, the maximum potential payout of the remaining contingent cash payments is $1.5 million. This acquisition was financed using cash flows from operations.

The acquired identified intangible assets primarily consisted of developed product technologies and have an estimated useful life of three years. The estimated fair value of the client relationships acquired was immaterial and these intangible assets were expensed as of the acquisition date. Goodwill arising from the acquisition consisted largely of synergies from the integration of VRX with our Kigo vacation rental solution. Goodwill and identified intangible assets associated with the acquisition are deductible for tax purposes.

Purchase Price Allocation

The allocation of each purchase price was as follows:

	Indatus	VRX
	(in thousands)	
Accounts receivable	$ 646	$ —
Intangible assets:		
Developed product technologies	13,400	794
Client relationships	9,770	11
Trade names	83	—
Goodwill	25,575	1,186
Other liabilities, net of other assets	(57)	—
Total purchase price	$ 49,417	$ 1,991

At December 31, 2016, deferred cash obligations related to acquisitions completed in 2015 totaled $2.5 million, and were carried net of a discount of $0.1 million. There were no outstanding deferred cash obligations related to these acquisition at December 31, 2017. We made deferred cash payments of $2.4 million during each of the years ended December 31, 2017 and 2016.

Outstanding contingent cash obligations related to these acquisitions were immaterial at December 31, 2016. During the year ended December 31, 2017, we recognized a loss of $0.7 million and made a payment in the same amount, as final resolution of the outstanding contingent cash obligations related to our 2015 acquisitions. During the year ended December 31, 2016, we recognized a gain of $0.8 million related to the change in fair value of these obligations.

Acquisition Activity prior to 2015

We completed acquisitions in the years prior to 2015 for which deferred and contingent consideration obligations were included in the purchase consideration. The aggregate carrying value of deferred cash obligations related to these acquisitions was $0.1 million and $4.1 million at December 31, 2017 and 2016, respectively. During the years ended December 31, 2017 and 2016, the Company paid deferred cash obligations related to these acquisitions totaling $4.0 million and $3.4 million, respectively.

The Company made no payments and recognized no gains or losses related to changes in the fair value of contingent consideration obligations related to acquisitions completed prior to 2015 during the years ended December 31, 2017 and 2016. There were no outstanding contingent cash obligations related these acquisitions at December 31, 2017.

Pro Forma Results of Acquisitions

The following table presents unaudited pro forma results of operations for the years ended December 31, 2017 and 2016, as if the aforementioned acquisitions had occurred at the beginning of 2016. The pro forma information includes the business combination accounting effects resulting from these acquisitions, including interest expense, tax benefit, and additional amortization resulting from the valuation of amortizable intangible assets. We prepared the pro forma financial information for the combined entities for comparative purposes only, and it is not indicative of what actual results would have been if the acquisitions had occurred at the beginning of 2016, or of future results.

	Year Ended December 31,	
	2017 Pro Forma	**2016 Pro Forma**
	(in thousands, except per share amounts) (unaudited)	
Total revenue	$ 763,534	$ 703,654
Net loss	$ (5,254)	$ (16,570)
Net loss per share:		
Basic and Diluted	$ (0.07)	$ (0.22)

4. Accounts Receivable

Accounts receivable consisted of the following at December 31, 2017 and 2016:

	December 31,	
	2017	**2016**
	(in thousands)	
Trade receivables from clients	$ 115,354	$ 82,094
Insurance commissions receivable	13,102	12,741
Accounts receivable, gross	128,456	94,835
Less: Allowance for doubtful accounts	(3,951)	(2,468)
Accounts receivable, net	$ 124,505	$ 92,367

Trade receivables include amounts billed to our clients, primarily under our on demand subscription solutions. Trade receivables also includes amounts invoiced to clients prior to the period in which the service is provided and amounts for which we have met the requirements to recognize revenue in advance of invoicing the client. Insurance commissions receivable consists of commissions derived from the sale of insurance products to individuals and contingent commissions related to those policies.

5. Property, Equipment, and Software

Property, equipment, and software consisted of the following at December 31, 2017 and 2016:

	December 31, 2017	December 31, 2016
	(in thousands)	
Leasehold improvements	$ 59,179	$ 51,242
Data processing and communications equipment	83,922	76,773
Furniture, fixtures, and other equipment	28,752	26,513
Software	107,924	86,983
Property, equipment, and software, gross	279,777	241,511
Less: Accumulated depreciation and amortization	(131,349)	(111,083)
Property, equipment, and software, net	$ 148,428	$ 130,428

Depreciation and amortization expense for property, equipment, and purchased software was $27.2 million, $24.5 million, and $20.6 million for the years ended December 31, 2017, 2016, and 2015, respectively.

The gross amount of capitalized software development costs was $73.4 million and $55.4 million and was carried net of accumulated amortization of $27.8 million and $19.8 million at December 31, 2017 and 2016, respectively. The weighted average amortization period for capitalized software development costs was 4.8 years at December 31, 2017. During the years ended December 31, 2017, 2016, and 2015, we capitalized $18.0 million, $13.7 million, and $10.5 million of software development costs, respectively. Amortization expense related to capitalized software development costs totaled $8.0 million, $5.8 million, and $3.3 million during the years ended December 31, 2017, 2016, and 2015, respectively.

We review in-progress software development projects on a periodic basis to ensure completion is assured and the development work will be placed into service as a new product or significant product enhancement. During the year ended December 31, 2015, we identified certain projects for which software development work had ceased and it was determined the projects would be discontinued. Our analysis of the capitalized costs resulted in the conclusion that they had no value outside of the respective projects for which they were originally incurred. As a result, we recognized a loss of $1.4 million during the year ended December 31, 2015, related to the disposal of these assets. No impairments associated with software development projects were identified during 2017 and 2016.

During the years ended December 31, 2016 and 2015, we modified or terminated certain operating lease agreements for office space prior to the end of the applicable lease term. We recognized an impairment charge of $1.5 million during the year ended December 31, 2015, related to leasehold improvements associated with a modified lease. No impairments of leasehold improvements associated with a modified lease were identified during 2016 and 2017. Related to these lease modifications, we also disposed of fixed assets with a net carrying value of $0.5 million, $0.6 million and $1.3 million, and recognized a net loss on disposal of $0.5 million, $0.6 million and $0.2 million during 2017, 2016 and 2015, respectively.

The above loss and impairment charge are included in the line “General and administrative” in the accompanying Consolidated Statements of Operations.

6. Goodwill and Identified Intangible Assets

Changes in the carrying amount of goodwill during the years ended December 31, 2017 and 2016, were as follows, in thousands:

Balance at January 1, 2016	$ 220,097
Goodwill acquired	39,890
Other	(49)
Balance at December 31, 2016	259,938
Goodwill acquired	491,079
Other	35
Balance at December 31, 2017	$ 751,052

There was no impairment of goodwill recorded in 2017, 2016, or 2015.

Changes in identified intangible assets during the years ended December 31, 2017 and 2016 were as follows:

	December 31, 2016	Additions	Dispositions	Impairments	Transfers / Other	December 31, 2017
			(in thousands)			
Finite-lived intangible assets:						
Developed technologies	$ 75,924	$ 92,271	$ —	$ —	$ 618	$ 168,813
Client relationships	108,468	105,260	—	—	—	213,728
Vendor relationships	5,650	—	—	—	—	5,650
Trade names	5,899	11,284	—	—	373	17,556
Total finite-lived intangible assets	195,941	208,815	—	—	991	405,747
Less: Accumulated amortization	(133,467)	(31,892)	—	—	(188)	(165,547)
Indefinite-lived intangible assets:						
Trade names	12,502	—	—	—	(365)	12,137
Intangible assets, net	$ 74,976	$ 176,923	$ —	$ —	$ 438	$ 252,337

	December 31, 2015	Additions	Dispositions	Impairments	Transfers / Other	December 31, 2016
			(in thousands)			
Finite-lived intangible assets:						
Developed technologies	$ 69,379	$ 6,538	$ —	$ —	$ 7	$ 75,924
Client relationships	96,523	15,331	(3,386)	—	—	108,468
Vendor relationships	5,650	—	—	—	—	5,650
Trade names	5,149	750	—	—	—	5,899
Total finite-lived intangible assets	176,701	22,619	(3,386)	—	7	195,941
Less: Accumulated amortization	(110,882)	(24,489)	1,904	—	—	(133,467)
Indefinite-lived intangible assets:						
Trade names	15,461	—	(2,212)	(750)	3	12,502
Intangible assets, net	$ 81,280	$ (1,870)	$ (3,694)	$ (750)	$ 10	$ 74,976

Amortization expense for finite-lived intangible assets totaled $31.9 million, $24.5 million, and $22.0 million during the years ended December 31, 2017, 2016, and 2015, respectively.

The following table sets forth the estimated amortization of intangible assets for the years ending December 31, in thousands:

2018	$ 52,059
2019	47,118
2020	37,998
2021	31,941
2022	23,164

In March 2015, the Company completed the integration of the InstaManager and Kigo platforms into a single solution marketed under the Kigo name. Subsequent to this integration, the Company discontinued the use of the InstaManager trade name to market or identify the software. Due to this change in circumstance, the Company evaluated the InstaManager trade name for impairment and concluded an impairment in the amount of $0.5 million existed at March 31, 2015.

In connection with the preparation of the third quarter 2015 financial statements, the Company identified indicators requiring the assessment of certain indefinite-lived trade names for impairment, primarily associated with the Company's 2011 acquisition of MyNewPlace. Identified indicators included declines in actual and anticipated lead-generation revenues and a change in the Company's long-term marketing strategy. As a result, the Company analyzed these intangible assets and recorded a $20.3 million impairment charge during the third quarter of 2015, representing the amount by which the carrying value of the indefinite-lived trade names exceeded their estimated fair value. Given the change in the Company's long-term marketing strategy and anticipated use of the trade names, the remaining balance was reclassified to finite-lived intangible assets as of September 30, 2015. The trade names were assigned an estimated useful life of seven years, amortized on a straight-line basis.

In the fourth quarter of 2016, we sold certain assets associated with our senior living referral services with a net carrying value of $3.7 million. Based on the status of the sale negotiations at the end of the third quarter, we determined there was a possibility that certain of the assets could be impaired and performed an impairment analysis. As a result of that analysis we recorded an impairment of the associated trade names at September 30, 2016, in the amount of $0.8 million, the amount by which the carrying value of the trade names exceeded their estimated fair value on the date of analysis.

The above impairment charges are included in "Impairment of identified intangible assets" in the accompanying Consolidated Statements of Operations. See Note 12 for discussion of the methodology and inputs utilized by the Company to estimate the fair value of these indefinite-lived trade names.

7. Debt

On September 30, 2014, we entered into an agreement for a secured revolving credit facility (as amended by the amendments discussed below, the "Credit Facility") to refinance our outstanding revolving loans. The Credit Facility provides for an aggregate principal amount of up to $200.0 million of revolving loans, with sublimits of $10.0 million for the issuance of letters of credit and $20.0 million for swingline loans ("Revolving Facility"). Additionally, the Credit Facility allows us, subject to certain conditions, to request additional term loans or revolving commitments up to an aggregate principal amount of $150.0 million, plus an amount that would not cause our Senior Leverage Ratio, as defined below, to exceed 3.25 to 1.00 ("Accordion Feature"). Under the First Amendment, discussed below, we used availability provided by the Accordion Feature to add a term loan in an original principal amount of $125.0 million ("Term Loan") to the Credit Facility. In February 2017, we used borrowing capacity under the Accordion Feature to add a delayed draw term loan with an original principal amount of up to $200.0 million ("Delayed Draw Term Loan"). At our option, amounts outstanding under the Credit Facility accrued interest, prior to the amendments described below, at a per annum rate equal to either LIBOR, plus a margin ranging from 1.25% to 1.75%, or the Base Rate, plus a margin ranging from 0.25% to 0.75% ("Applicable Margin"). The base LIBOR is, at our discretion, equal to either one, two, three, or six month LIBOR. The Base Rate is defined as the greater of Wells Fargo's prime rate, the Federal Funds Rate plus 0.50%, or one month LIBOR plus 1.00%. In each case, the Applicable Margin is determined based upon our Net Leverage Ratio, as defined below. As amended, the Credit Facility matures on February 27, 2022.

Certain of our existing and future material domestic subsidiaries are required to guarantee our obligations under the Credit Facility, and the obligations under the Credit Facility are secured by substantially all of our assets and the assets of the subsidiary guarantors. The Credit Facility contains customary covenants, subject in each case to customary exceptions and qualifications. Our covenants include, among other limitations, a requirement that we comply with a maximum Consolidated Net Leverage Ratio, a minimum Consolidated Interest Coverage Ratio, and a maximum Consolidated Senior Secured Net Leverage Ratio.

Consolidated Net Leverage Ratio: The Consolidated Net Leverage Ratio ("Net Leverage Ratio") is the ratio of consolidated funded indebtedness, as defined in the Credit Facility, on the last day of each fiscal quarter to the sum of the four previous consecutive fiscal quarters' consolidated EBITDA, as defined in the Credit Facility. The Net Leverage Ratio generally may not exceed 4.00 to 1.00, but automatically increases to 5.00 to 1.00 following an acquisition having aggregate consideration equal to or greater than $150.0 million and occurring within a specified time period following an unsecured debt issuance equal to or greater than $225.0 million. The automatic increase may occur once during the term of the Credit Facility and lasts for two consecutive fiscal quarters, after which it is incrementally reduced until the ratio returns to 4.00 to 1.00. The automatic increase was triggered by our acquisition of On-Site in September 2017. As a result, the maximum Net Leverage Ratio was 5.00 to 1.00 at December 31, 2017, after which it will be incrementally reduced until it returns to 4.00 to 1.00 on September 30, 2019.

Consolidated Interest Coverage Ratio: The Consolidated Interest Coverage Ratio ("Interest Coverage Ratio") is the ratio of the sum of our four previous fiscal quarters' consolidated EBITDA to our aggregate interest expense for the same period. The Interest Coverage Ratio must not be less than 3.00 to 1.00 on the last day of each fiscal quarter. The Interest Coverage Ratio was modified by the Fourth Amendment to exclude non-cash interest attributable to the Convertible Notes, as defined below.

Consolidated Senior Secured Net Leverage Ratio: The Consolidated Senior Secured Net Leverage Ratio ("Senior Leverage Ratio") is the ratio of consolidated senior secured indebtedness, as defined in the Credit Facility, on the last day of each fiscal quarter to the sum of the four previous consecutive fiscal quarters' consolidated EBITDA and may not exceed 3.50 to 1.00. At our option, this ratio may be increased to 3.75 to 1.00 for a period of one year following the completion of an acquisition having aggregate consideration greater than $50.0 million. We are not permitted to exercise this option more than one time during any consecutive eight quarter period. As of December 31, 2017, we had not exercised our option to increase the Senior Leverage Ratio.

As of December 31, 2017, we were in compliance with the covenants under our Credit Facility.

Since it was first entered into, the Credit Facility has been amended as follows:

First Amendment: In February 2016, we entered into an amendment to the Credit Facility ("First Amendment"). The First Amendment provided for the Term Loan, which is coterminous with the existing Credit Facility. The Term Loan reduced the amount available for additional term loans and revolving commitments available under the Accordion Feature. Under the terms of the First Amendment, an additional pricing tier was added to the Applicable Margin which modified the range to 1.25% to 2.00% for LIBOR loans, and 0.25% to 1.00% for Base Rate loans. The Term Loan's amortization schedule was subsequently amended by the Third Amendment, defined below. Under the amended amortization schedule, we began making quarterly principal payments with respect to the Term Loan of $0.8 million on June 30, 2017. The quarterly principal payments will increase to $1.5 million on June 30, 2018, and to $3.1 million on June 30, 2020. Any remaining principal balance on the Term Loan is due on the maturity date. We incurred debt issuance costs in the amount of $0.7 million in conjunction with the execution of the First Amendment.

Second and Third Amendments: In February 2017, we entered into the second ("Second Amendment") and third amendments ("Third Amendment") to the Credit Facility. Among other changes, the Second Amendment replenished the amount available under the Accordion Feature, previously reduced through the issuance of the Term Loan, to $150.0 million, plus an amount that would not cause our Senior Leverage Ratio to exceed 3.25 to 1.00. The Third Amendment provided for a delayed draw term loan, which was initially available to be drawn until May 31, 2017 ("Delayed Draw Term Loan"). The Delayed Draw Term Loan reduced the amount available for additional term loans and revolving commitments available under the Accordion Feature. We incurred debt issuance costs in the amount of $1.3 million in conjunction with the execution of the Second and Third amendments.

Fourth Amendment: On April 3, 2017, we entered into the fourth amendment to the Credit Facility ("Fourth Amendment"). The Fourth Amendment modified certain terms of the Credit Facility to, among other things, increase the maximum Net Leverage Ratio, provide for the maximum Senior Leverage Ratio, and provide for an additional pricing tier for interest rates and fees if the Company's Net Leverage Ratio equals or exceeds 4.00 to 1.00, resulting in a new Applicable Margin range of 1.25% to 2.25% for LIBOR loans and 0.25% to 1.25% for Base Rate loans.

Fifth and Sixth Amendments: The availability period of the Delayed Draw Term Loan was extended through August 31, 2017, under the fifth amendment to the Credit Facility, which was executed in May 2017. In August 2017, the availability period of the Delayed Draw Term Loan was further extended through December 31, 2017, under the sixth amendment to the Credit Facility.

The Delayed Draw Term Loan was drawn for the $200.0 million of funds available on December 5, 2017. These funds were used to finance our acquisition of LRO, which was completed in December 2017. Subsequent to disbursal of the Delayed Draw Term Loan funds, we began making quarterly principal payments of $1.3 million on December 31, 2017. The quarterly principal payments increase to $2.5 million beginning on June 30, 2018, and to $5.0 million beginning on June 30, 2020. Any remaining principal balance on the Delayed Draw Term Loan is due on the maturity date.

Revolving loans under the Credit Facility may be voluntarily prepaid and re-borrowed. Principal payments on the Term Loan and Delayed Draw Term Loan (collectively, the "Term Loans") are due in quarterly installments, as described above, and may not be re-borrowed. Accumulated interest on amounts outstanding under the Credit Facility is due and payable quarterly, in arrears, for loans bearing interest at the Base Rate and at the end of the applicable interest period in the case of loans bearing interest at the adjusted LIBOR. All outstanding principal and accrued but unpaid interest is due on the maturity date. The Term Loans are subject to mandatory repayment requirements in the event of certain asset sales or if certain insurance or condemnation events occur, subject to customary reinvestment provisions. The Company may prepay the Term Loans in whole or in part at any time, without premium or penalty, with prepayment amounts to be applied to remaining scheduled principal amortization payments as specified by the Company.

As of December 31, 2017, we had $150.0 million of available credit under our Revolving Facility plus additional amounts under the Accordion Feature of the Credit Facility. We incur commitment fees on the unused portion of the Revolving Facility. The weighted-average interest rates of short-term borrowings during the years ended December 31, 2017 and 2016, were 3.14% and 1.75%, respectively.

Principal outstanding, and unamortized debt issuance costs for the Term Loans, were as follows at December 31, 2017 and 2016:

	December 31, 2017			December 31, 2016	
	Term Loan	Delayed Draw Term Loan	Revolving Facility	Term Loan	Revolving Facility
			(in thousands)		
Principal outstanding	$ 120,356	$ 198,750	$ 50,000	$ 122,657	$ —
Unamortized issuance costs	(233)	(821)	—	(295)	—
Unamortized discount	(185)	(490)	—	(236)	—
Carrying value	$ 119,938	$ 197,439	$ 50,000	$ 122,126	$ —

Unamortized debt issuance costs for the Revolving Facility were $0.6 million and $0.8 million at December 31, 2017 and 2016, respectively, and are included in the line "Other assets" in the Consolidated Balance Sheets.

Future maturities of principal under the Term Loans are as follows for the years ending December 31, in thousands:

	Term Loans
2018	$ 14,116
2019	16,133
2020	28,232
2021	32,266
Thereafter	228,359
	$ 319,106

Convertible Notes

In May 2017, the Company issued convertible senior notes with aggregate principal of $345.0 million (including the underwriters' exercise in full of their over-allotment option of $45.0 million) which mature on November 15, 2022 ("Convertible Notes"). The Convertible Notes were issued under an indenture dated May 23, 2017 ("Indenture"), by and between the Company and Wells Fargo Bank, N.A., as Trustee. We received net proceeds from the offering of approximately $304.2 million after adjusting for debt issuance costs, including the underwriting discount, the net cash used to purchase the Note Hedges and the proceeds from the issuance of the Warrants which are discussed below.

The Convertible Notes accrue interest at a rate of 1.50%, payable semi-annually on May 15 and November 15 of each year beginning on November 15, 2017. On or after May 15, 2022, and until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their Convertible Notes at their option. The Convertible Notes are convertible at an initial rate of 23.84 shares per $1,000 of principal (equivalent to an initial conversion price of approximately $41.95 per share of our common stock). The conversion rate is subject to customary adjustments for certain events as described in the Indenture. Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. It is the Company's current intent to settle conversions of the Convertible Notes through combination settlement, which involves repayment of the principal portion in cash and any excess of the conversion value over the principal amount in shares of our common stock.

Holders may convert their Convertible Notes, at their option, prior to May 15, 2022 only under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending on June 30, 2017 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;
- during the five business day period after any five consecutive trading day period (the "Measurement Period") in which the trading price per $1,000 principal amount of the Convertible Notes for each trading day of the Measurement Period was less than 98% of the product of the last reported sales price of our common stock and the conversion rate on each such trading day; or
- upon the occurrence of specified corporate events, as defined in the Indenture.

We may not redeem the Convertible Notes prior to their maturity date, and no sinking fund is provided for them. If we undergo a fundamental change, as described in the Indenture, subject to certain conditions, holders may require us to

repurchase for cash all or any portion of their Convertible Notes. The fundamental change repurchase price is equal to 100% of the principal amount of the Convertible Notes to be repurchased, plus accrued and unpaid interest up to, but excluding, the fundamental change repurchase date. If holders elect to convert their Convertible Notes in connection with a make-whole fundamental change, as described in the Indenture, the Company will, to the extent provided in the Indenture, increase the conversion rate applicable to the Convertible Notes.

The Convertible Notes are senior unsecured obligations and rank senior in right of payment to any of our indebtedness that is expressly subordinated in right of payment to the Convertible Notes and equal in right of payment to any of our existing and future unsecured indebtedness that is not subordinated. The Convertible Notes are effectively junior in right of payment to any of our secured indebtedness (to the extent of the value of assets securing such indebtedness) and structurally junior to all existing and future indebtedness and other liabilities, including trade payables, of our subsidiaries. The Indenture does not limit the amount of debt that we or our subsidiaries may incur. The Convertible Notes are not guaranteed by any of our subsidiaries.

The Indenture does not contain any financial or operating covenants or restrictions on the payment of dividends, the incurrence of indebtedness, or the issuance or repurchase of securities by us or any of our subsidiaries. The Indenture contains customary events of default with respect to the Convertible Notes and provides that upon certain events of default occurring and continuing, the Trustee may, and the Trustee at the request of holders of at least 25% in principal amount of the Convertible Notes shall, declare all principal and accrued and unpaid interest, if any, of the Convertible Notes to be due and payable. In case of certain events of bankruptcy, insolvency or reorganization, involving us or a significant subsidiary, all of the principal of and accrued and unpaid interest on the Convertible Notes will automatically become due and payable.

In accounting for the issuance of the Convertible Notes, the Company separated the Convertible Notes into liability and equity components. We allocated $282.5 million of the Convertible Notes to the liability component, and $62.5 million to the equity component. The excess of the principal amount of the liability component over its carrying amount is amortized to interest expense over the term of the Convertible Notes using the effective interest method. The equity component will not be remeasured as long as it continues to meet the conditions for equity classification.

We incurred issuance costs of $9.8 million related to the Convertible Notes. Issuance costs were allocated to the liability and equity components based on their relative values. Issuance costs attributable to the liability component are being amortized to interest expense over the term of the Convertible Notes, and issuance costs attributable to the equity component are included along with the equity component in stockholders' equity.

The net carrying amount of the Convertible Notes at December 31, 2017, was as follows, in thousands:

Liability component:		
Principal amount	$	345,000
Unamortized discount		(56,557)
Unamortized debt issuance costs		(7,244)
	$	281,199
Equity component, net of issuance costs and deferred tax:	$	61,390

The following table sets forth total interest expense related to the Convertible Notes for the year ended December 31, 2017, in thousands:

Contractual interest expense	$	3,119
Amortization of debt discount		5,991
Amortization of debt issuance costs		766
	$	9,876
Effective interest rate of the liability component		5.87%

Convertible Note Hedges and Warrants

On May 23, 2017, we entered into privately negotiated transactions to purchase hedge instruments (“Note Hedges”), covering approximately 8.2 million shares of our common stock at a cost of $62.5 million. The Note Hedges are subject to anti-dilution provisions substantially similar to those of the Convertible Notes, have a strike price of approximately $41.95 per share, are exercisable by us upon any conversion under the Convertible Notes, and expire on November 15, 2022.

The Note Hedges are generally expected to reduce the potential dilution to our common stock (or, in the event the conversion is settled in cash, to reduce our cash payment obligation) in the event that at the time of conversion our stock price

exceeds the conversion price under the Convertible Notes. The cost of the Note Hedges is expected to be tax deductible as an original issue discount over the life of the Convertible Notes, as the Convertible Notes and the Note Hedges represent an integrated debt instrument for tax purposes. The cost of the Note Hedges was recorded as a reduction of our additional paid-in capital in the accompanying Consolidated Financial Statements.

On May 23, 2017, the Company also sold warrants for the purchase of up to 8.2 million shares of our common stock for aggregate proceeds of $31.5 million ("Warrants"). The Warrants have a strike price of $57.58 per share and are subject to customary anti-dilution provisions. The Warrants will expire in ratable portions on a series of expiration dates commencing on February 15, 2023. The proceeds from the issuance of the Warrants were recorded as an increase to our additional paid-in capital in the accompanying Consolidated Financial Statements.

The Note Hedges are transactions that are separate from the terms of the Convertible Notes and the Warrants, and holders of the Convertible Notes and the Warrants have no rights with respect to the Note Hedges. The Warrants are similarly separate in both terms and rights from the Note Hedges and the Convertible Notes. As of December 31, 2017, no Note Hedges or Warrants had been exercised.

8. Stock-based Expense

Our Amended and Restated 1998 Stock Incentive Plan ("Stock Incentive Plan") provided for awards which could be granted in the form of incentive stock options, non-qualified stock options, restricted stock, stock appreciation rights, and performance restricted stock. In August 2010, we discontinued issuance of new awards under the Stock Incentive Plan and concurrently adopted the 2010 Equity Incentive Plan ("Equity Incentive Plan"). The Equity Incentive Plan, as amended, provides for awards which may be granted in the form of incentive stock options, non-statutory stock options, restricted stock, restricted stock units, stock appreciation rights, performance units, and performance shares under substantially the same terms as the Stock Incentive Plan.

We also grant awards to our directors in accordance with the Board of Directors Policy ("Board Plan"). Prior to 2010, these awards were generally in the form of stock options. Beginning in 2010, the awards granted to our directors are generally in the form of restricted stock. The awards granted to directors generally vest ratably over a period of four quarters; however, should a director leave the board, we have the right to repurchase shares as if the awards vested on a pro rata basis.

Our board of directors periodically approves increases to the number of shares of common stock reserved for issuance under the Equity Incentive Plan. At both December 31, 2017 and 2016, there were 27,634,259 shares of the Company's common stock reserved for awards under the Equity Incentive Plan. The Plan permits the exercise of stock options and grants of restricted stock to be fulfilled through the issuance of previously authorized but unissued common stock shares, or the reissuance of shares held in treasury. Beginning in March 2017, we began to primarily utilize treasury shares when stock options are exercised or restricted stock is granted. Prior to this date, we have historically utilized unissued common stock shares to satisfy these items.

Total compensation expense related to our stock-based expense plans was $45.8 million, $36.9 million, and $38.1 million for the years ended December 31, 2017, 2016, and 2015, respectively. Total unrecognized compensation expense related to our stock-based expense plans was $48.2 million at December 31, 2017, and is expected to be recognized over a weighted average period of 2.0 years. Cash proceeds related to stock-based expense transactions totaled $27.0 million, $28.5 million, and $12.1 million during the years ended December 31, 2017, 2016, and 2015, respectively.

Stock Option Awards

Stock options granted prior to February 2014 generally vest over a period of sixteen quarters, with 75% vesting ratably over fifteen quarters and the remaining 25% vesting in the sixteenth quarter. Beginning in February 2014, stock options granted generally vest ratably over a period of twelve quarters. Expense is recognized over the requisite service period in a manner that reflects the vesting of the related awards. Awards under the plan generally expire ten years from the date of the grant. All outstanding options were granted at exercise prices equal to or exceeding our estimate of the fair market value of our common stock at the date of grant.

The following table summarizes stock option transactions under our Stock Incentive Plan, Equity Incentive Plan, Board Plan, and MTS Plan:

	Number of Shares	Range of Exercise Prices	Weighted Average Exercise Price
Balance as of January 1, 2015	5,566,888	$ 0.91 – $ 29.50	$ 18.89
Granted	2,434,198	18.79 – 23.10	19.81
Exercised	(809,303)	0.91 – 21.60	14.97
Forfeited/cancelled	(1,389,910)	5.04 – 29.50	20.54
Balance at December 31, 2015	5,801,873	0.91 – 29.50	19.43
Exercised	(1,568,699)	1.68 – 27.18	18.16
Forfeited/cancelled	(625,431)	4.28 – 29.50	21.77
Expired	(654)	0.91 – 0.91	0.91
Balance at December 31, 2016	3,607,089	2.55 – 29.50	19.58
Exercised	(1,344,569)	5.04 – 29.50	20.09
Forfeited/cancelled	(61,892)	15.19 – 25.70	19.66
Expired	(163)	2.55 – 2.82	2.73
Balance at December 31, 2017	2,200,465	4.28 – 29.50	19.26

The below table provides information regarding outstanding stock options which were fully vested and expected to vest and exercisable options at December 31:

	2017		2016	
	Options Fully Vested and Expected to Vest	Options Exercisable	Options Fully Vested and Expected to Vest	Options Exercisable
Number of options	2,200,465	1,999,278	3,606,462	2,477,474
Weighted-average remaining contractual term (in years)	5.5	5.3	6.5	5.9
Weighted-average exercise price	$ 19.26	$ 19.16	$ 19.58	$ 19.24
Aggregate intrinsic value, in thousands	$ 55,106	$ 50,257	$ 37,581	$ 26,659

The aggregate intrinsic value of options exercised during the years ended December 31, 2017, 2016, and 2015, was $25.1 million, $11.3 million, and $5.0 million, respectively.

The fair value of each stock option grant was estimated as of the date of grant using the Black Scholes option-pricing model with the following weighted-average assumptions and resulting weighted-average fair value per share for the year ended December 31, 2015. There were no stock options awarded during the years ended December 31, 2017 and 2016.

	2015
Risk-free interest rate	1.5%
Expected option life (in years)	4.6
Expected volatility	42.3%
Weighted-average grant date fair value	$ 7.42

Risk-free interest rate. This is the average U.S. Treasury rate (having a term that most closely approximates the expected life of the option) for the period in which the option was granted.

Expected option life. This is the period of time that the options granted are expected to remain outstanding. This estimate is primarily based on the historical experience of the plans.

Forfeiture rate. This is the projected annual rate at which we expect awards to be forfeited in the future. We used a forfeiture rate of zero to value the awards granted during 2015 due to the timing of when our shares vest and the expense is recorded.

Expected volatility. Volatility is a measure of the amount by which a financial variable, such as a share price, has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. We estimate expected volatility based on the Company’s historic and expected volatility.

Dividend yield. This metric indicates how much the Company is expected to pay out in dividends relative to its share price during a period. We utilized a dividend yield of zero in estimating the fair value of stock options awarded in 2015, as we did not anticipate paying dividends in the foreseeable future.

Restricted Stock Awards

Restricted stock awards entitle the holder to receive shares of our common stock as the award vests. Grants of restricted stock are classified as time-based, market-based, or performance-based depending on the vesting criteria of the award.

Time-based restricted stock awards:

Time-based restricted stock awards granted prior to February 2014, generally vest ratably over sixteen quarters following the date of grant. Awards granted during 2014 and 2015, generally vest ratably over a period of twelve quarters beginning on the first day of the quarter immediately following the grant date. Beginning in 2016, awards granted generally vest ratably over a period of twelve quarters beginning on the first day of the second calendar quarter immediately following the grant date. The fair value of time-based restricted stock awards is based on the closing price of our common stock on the date of grant. Compensation expense for time-based restricted stock awards is recognized over the vesting period on a straight-line basis.

During the years ended December 31, 2017, 2016, and 2015, the aggregate grant date fair value of time-based restricted shares that vested during the year was $22.6 million, $16.9 million, and $21.5 million, respectively.

A summary of time-based restricted stock award activity is presented in the table below.

	Number of Shares	Weighted Average Grant-Date Fair Value
Non-vested shares at January 1, 2015	1,624,519	$ 20.01
Granted	913,077	19.84
Vested	(1,077,102)	19.78
Forfeited/cancelled	(391,788)	18.65
Non-vested shares at December 31, 2015	1,068,706	20.05
Granted	1,793,257	20.79
Vested	(841,983)	20.14
Forfeited/cancelled	(386,479)	20.21
Non-vested shares at December 31, 2016	1,633,501	20.78
Granted	1,359,578	36.25
Vested	(953,749)	23.73
Forfeited/cancelled	(283,342)	28.01
Non-vested shares at December 31, 2017	1,755,988	30.05

Market-based restricted stock awards:

Market-based restricted stock awards become eligible for vesting upon on the achievement of specific market-based conditions based on the per share price of the Company's common stock. Shares that become eligible to vest, if any, become Eligible Shares. Eligible Shares generally vest ratably over a period of four quarters, beginning on the first day of the quarter immediately after they become Eligible Shares. Vesting is conditional upon the recipient remaining a service provider, as defined in the plan document, to the Company through each applicable vesting date.

A summary of market-based restricted stock award activity is presented in the table below.

	Number of Shares	Weighted Average Grant-Date Fair Value
Balance as of January 1, 2015	520,000	$ 11.26
Granted	691,165	11.59
Forfeited/cancelled	(196,070)	9.39
Balance at December 31, 2015	1,015,095	11.85
Granted	794,025	13.58
Vested	(51,250)	12.52
Forfeited/cancelled	(193,710)	11.61
Balance at December 31, 2016	1,564,160	12.73
Granted	535,441	28.18
Vested	(1,407,133)	13.69
Forfeited/cancelled	(2,303)	13.34
Balance at December 31, 2017	690,165	22.76

We estimate the fair value of market-based restricted stock awards using a discrete model to analyze the fair value of the subject shares. The discrete model utilizes multiple stock price-paths, through the use of Monte Carlo simulation, which are then analyzed to determine the fair value of the subject shares. The weighted average of assumptions used to value awards granted during 2017, 2016, and 2015 were as follows:

	2017	2016	2015
Risk-free interest rate	1.8%	1.1%	1.1%
Expected volatility	31.6%	41.5%	38.7%

Risk-free interest rate. We estimated the risk-free rate from the three year U.S. Treasury strip note yield curve as of the valuation date.

Expected volatility. Similar to the methodology for stock options described above, the Company estimates expected volatility based on the Company's historic and expected volatility rate.

Expense related to the market-based restricted stock awards is recognized over the requisite service period using the graded-vesting attribution method. The requisite service period is a measure of the expected time to achieve the specified market condition plus the time-based vesting period. The expected time to achieve the market condition is estimated utilizing a Monte Carlo simulation, considering only those stock price-paths in which the market condition was achieved. The estimated requisite service period for market-based restricted stock shares issued in 2017 ranged from five to seven quarters. Market-based restricted stock awards granted in 2016 had requisite service periods ranging between seven to nine quarters.

Performance-based restricted stock awards:

The Company has also granted performance-based restricted stock awards. These awards become eligible to vest if specified performance targets are achieved prior to the performance deadline. Subsequent to achievement of the performance target the awards vest quarterly over a one-year service period. The performance-based restricted stock awards are forfeited if the performance targets are not achieved prior to the performance deadline. Compensation expense for performance-based restricted stock awards is recognized on a straight-line basis over the requisite service period, which includes both the performance period and the subsequent time-based vesting period. Expense is only recognized if it is determined that achievement of the performance condition is probable. The fair value of performance-based restricted stock awards is based on the closing price of our common stock on the date of grant.

A summary of performance-based restricted stock award activity is presented in the table below:

	Number of Shares	Weighted Average Grant-Date Fair Value
Non-vested shares at January 1, 2015	—	$ —
Granted	20,000	18.79
Non-vested shares at December 31, 2015	20,000	18.79
Forfeited/cancelled	(20,000)	18.79
Non-vested shares at December 31, 2016	—	—
Granted	—	—
Non-vested shares at December 31, 2017	—	—

9. Commitments and Contingencies

Lease Commitments

The Company leases office facilities and equipment for various terms under long-term, non-cancellable operating lease agreements. The leases expire at various dates through 2028 and provide for renewal options. The agreements generally require the Company to pay for executory costs such as real estate taxes, insurance, and repairs.

In connection with our 2017 acquisitions, the Company assumed non-cancellable operating leases for office space. The office leases acquired include locations in Addison, Texas; Lombard, Illinois; Campbell, California; Alpharetta, Georgia; and London, United Kingdom. The office leases expire at various dates through 2026 and have terms substantially similar to our other office leasing arrangements.

In May 2015, the Company entered into a lease agreement for office space located in Richardson, Texas to serve as our new corporate headquarters and data center. The lease is for a term of twelve years, beginning in 2016, and includes optional extension periods. The lease agreement contains provisions for rent escalations over the term of the lease and leasehold improvement incentives. In July 2015, the Company entered into an amendment to the lease agreement which increased the amount of leased space. The lease was again amended in July 2016, which permitted an increase in our tenant improvement allowance. In October 2017, the Company entered into the third amendment to the lease agreement, which further increased the amount of leased space for our corporate headquarters. We completed the move of our corporate headquarters and data center to this new facility in the third quarter of 2016. Our lease for our previous corporate headquarters expired in December 2016.

Rent expense was $13.8 million, $14.7 million, and $10.9 million for the years ended December 31, 2017, 2016, and 2015, respectively.

Minimum annual rental commitments under non-cancellable operating leases, net of sublease income amounts, were as follows at December 31, 2017:

	Minimum Lease Commitments
	(in thousands)
2018	$ 15,344
2019	13,798
2020	11,603
2021	10,920
2022	9,336
Thereafter	46,121
	$ 107,122

Guarantor Arrangements

We have agreements whereby we indemnify our officers and directors for certain events or occurrences while the officer or director is or was serving at our request in such capacity. The term of the indemnification period is for the officer or director's lifetime. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited; however, we have a director and officer insurance policy that limits our exposure and enables us to recover a portion of any future amounts paid. As a result of our insurance policy coverage, we believe the estimated fair value of these indemnification agreements is minimal. Accordingly, we had no liabilities recorded for these agreements as of December 31, 2017 or 2016.

In the ordinary course of our business, we include standard indemnification provisions in our agreements with our clients. Pursuant to these provisions, we indemnify our clients for losses suffered or incurred in connection with third-party claims that our products infringed upon any U.S. patent, copyright, trademark, or other intellectual property right. Where applicable, we generally limit such infringement indemnities to those claims directed solely to our products and not in combination with other software or products. With respect to our products, we also generally reserve the right to resolve such claims by designing a non-infringing alternative, by obtaining a license on reasonable terms, or by terminating our relationship with the client and refunding the client's fees.

The potential amount of future payments to defend lawsuits or settle indemnified claims under these indemnification provisions is unlimited in certain agreements; however, we believe the estimated fair value of these indemnification provisions is minimal, and, accordingly, we had no liabilities recorded for these agreements as of December 31, 2017 or 2016.

Litigation

From time to time, in the normal course of our business, we are a party to litigation matters and claims. Litigation can be expensive and disruptive to normal business operations. Moreover, the results of complex legal proceedings are difficult to predict and our view of these matters may change in the future as the litigation and events related thereto unfold. We expense legal fees as incurred. Insurance recoveries associated with legal costs incurred are recorded when they are deemed probable of recovery.

As previously disclosed, in March 2015, we were named in a purported class action lawsuit in the United States District Court for the Eastern District of Pennsylvania, styled *Stokes v. RealPage, Inc.*, Case No. 2:15-cv-01520. The claims in this purported class action relate to alleged violations of the Fair Credit Reporting Act ("FCRA") in connection with background screens of prospective tenants of our clients.

As previously disclosed, in November 2014, we were named in a purported class action lawsuit in the United States District Court for the Eastern District of Virginia, styled *Jenkins v. RealPage, Inc.*, Case No. 3:14cv758. The claims in this purported class action relate to alleged violations of the FCRA in connection with background screens of prospective tenants of our clients.

Following various procedural motions, on June 19, 2017, the court in both the *Stokes* case and *Jenkins* case consolidated the cases for purposes of settlement. On June 30, 2017, the parties signed a Settlement Agreement and Release covering both cases and the plaintiffs in the consolidated cases filed an uncontested motion for preliminary approval of the class action settlement and the notice to the class. On August 3, 2017, the court issued a written order preliminarily approving the proposed class settlement. Following the final approval hearing on February 6, 2018, the court entered an order granting final approval of the settlement.

On February 23, 2015, we received from the Federal Trade Commission ("FTC") a Civil Investigative Demand consisting of interrogatories and a request to produce documents relating to our compliance with the FCRA. We responded to the request and requests for additional information by the FTC. On November 2, 2017, the FTC staff informed us of its belief that there is a basis for claims that could include monetary and injunctive relief against us for failing to follow reasonable procedures to assure maximum possible accuracy of our tenant screening reports. We are continuing to assess the matter and plan to have further discussions with the FTC. We believe that our business practices did not, and do not, violate the FCRA or any other laws, and we intend to vigorously defend our position. However, we are unable to predict the outcome of this matter at this time.

At December 31, 2017 and 2016, we had accrued amounts for estimated settlement losses related to legal matters. The Company does not believe there is a reasonable possibility that a material loss exceeding amounts already recognized may have been incurred as of the date of the balance sheets presented herein.

We are involved in other litigation matters not described above that are not likely to be material either individually or in the aggregate based on information available at this time. Our view of these matters may change as the litigation and events related thereto unfold.

10. Net Income (Loss) per Share

Basic net income (loss) per share is computed by dividing the net income (loss) by the weighted average number of common shares outstanding during the period. Diluted net income (loss) per share is computed by using the weighted average number of common shares outstanding, including potential dilutive shares of common stock assuming the dilutive effect of outstanding stock options and restricted stock using the treasury stock method. Weighted average shares from common share equivalents in the amount of 193,274, 220,473, and 912,257 were excluded from the dilutive shares outstanding because their effect was anti-dilutive for the years ended December 31, 2017, 2016, and 2015, respectively.

For purposes of considering the Convertible Notes in determining diluted net income (loss) per share, it is the current intent of the Company to settle conversions of the Convertible Notes through combination settlement, which involves repayment of the principal portion in cash and any excess of the conversion value over the principal amount (the "conversion

premium") in shares of our common stock. Therefore, only the impact of the conversion premium will be included in total dilutive weighted average shares outstanding using the treasury stock method. The dilutive effect of the conversion premium is shown in the table below.

The Warrants sold in connection with the issuance of the Convertible Notes will not be considered in calculating the total dilutive weighted average shares outstanding until the price of the Company's common stock exceeds the strike price of $57.58 per share, as described in Note 7. When the price of the Company's common stock exceeds the strike price of the Warrants, the effect of the additional shares that may be issued upon exercise of the Warrants will be included in total dilutive weighted average shares outstanding using the treasury stock method. The Note Hedges purchased in connection with the issuance of the Convertible Notes are considered to be anti-dilutive and therefore do not impact the Company's calculation of diluted net income (loss) per share. Refer to Note 7 for further discussion regarding the Convertible Notes.

As discussed in Note 2, the Company adopted ASU 2016-09 on January 1, 2017. As a result, the weighted average effect of dilutive securities for the year ended December 31, 2017, was calculated without including consideration of windfall tax benefits, resulting in the repurchase of fewer hypothetical shares and a greater dilutive effect. This change was applied on a prospective basis, and dilutive securities for the same period in 2016 have not been adjusted.

The following table presents the calculation of basic and diluted net income (loss) per share attributable to common stockholders:

	Year Ended December 31,		
	2017	2016	2015
	(in thousands, except per share amounts)		
Numerator:			
Net income (loss)	$ 377	$ 16,650	$ (9,218)
Denominator:			
Basic:			
Weighted average shares used in computing basic net income (loss) per share:	79,433	76,854	76,689
Diluted:			
Weighted average shares used in computing basic net income (loss) per share:	79,433	76,854	76,689
Add weighted average effect of dilutive securities:			
Stock options and restricted stock	2,884	989	—
Convertible Notes	81	—	—
Weighted average shares used in computing diluted net income (loss) per share:	82,398	77,843	76,689
Net income (loss) per share attributable to common stockholders:			
Basic	$ 0.00	$ 0.22	$ (0.12)
Diluted	$ 0.00	$ 0.21	$ (0.12)

11. Income Taxes

The domestic and foreign components of income (loss) before income taxes were as follows:

	Year Ended December 31,		
	2017	2016	2015
		(in thousands)	
Domestic	$ 12,424	$ 23,817	$ (15,777)
Foreign	2,817	3,669	2,713
Total	$ 15,241	$ 27,486	$ (13,064)

Our income tax expense (benefit) consisted of the following components:

	Year Ended December 31,		
	2017	2016	2015
		(in thousands)	
Current:			
Federal	$ 36	$ 401	$ 162
State	578	756	797
Foreign	313	449	414
Total current income tax expense	927	1,606	1,373
Deferred:			
Federal	14,620	9,055	(5,075)
State	(900)	235	156
Foreign	217	(60)	(300)
Total deferred income tax expense (benefit)	13,937	9,230	(5,219)
Total income tax expense (benefit)	$ 14,864	$ 10,836	$ (3,846)

The reconciliation of our income tax expense (benefit) computed at the U.S. federal statutory tax rate to the actual income tax expense (benefit) is as follows:

	Year Ended December 31,		
	2017	2016	2015
		(in thousands)	
Expense derived by applying the Federal income tax rate to income (loss) before income taxes	$ 5,335	$ 9,620	$ (4,572)
State income tax, net of federal benefit	135	735	561
Foreign income tax	(631)	(922)	(813)
Nondeductible expenses	1,606	545	418
Fair value adjustment on stock acquisition	(17)	150	(52)
Stock-based expense	(19,080)	285	209
Reduction in available Federal NOL	—	255	350
Federal income tax rate reduction	25,070	—	—
Deemed repatriation of foreign earnings	2,211	—	—
Other	235	168	53
Total income tax expense (benefit)	$ 14,864	$ 10,836	$ (3,846)

Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of our assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred tax assets and liabilities are as follows:

	December 31,	
	2017	2016
	(in thousands)	
Deferred tax assets:		
Reserves, deferred revenue and accrued liabilities	$ 16,443	$ 22,518
Stock-based expense	8,912	17,184
Net operating loss carryforwards and tax credits	42,119	16,193
Deferred tax assets before valuation allowance	67,474	55,895
Valuation allowance	(517)	—
Total deferred tax assets, net of valuation allowance	66,957	55,895
Deferred tax liabilities:		
Property, equipment, and software	(15,378)	(25,626)
Intangible assets	(3,940)	(10,514)
Other	(2,752)	(4,090)
Total deferred tax liabilities	(22,070)	(40,230)
Net deferred tax assets	$ 44,887	$ 15,665

As a result of our adoption of ASU 2016-09, on January 1, 2017 we recorded a deferred tax asset of $43.8 million, net of a $0.3 million valuation allowance, with a corresponding increase to retained earnings. The deferred tax asset consisted of excess stock-based compensation deductions that arose but were not recognized in prior years. See additional discussion of our adoption of ASU 2016-09 in Note 2.

The acquisition of the stock of PEX Software Ltd and its subsidiary PEX Australia Ltd in October 2017 resulted in an additional net deferred tax liability of approximately $0.1 million.

The acquisition of the stock of an On-Site subsidiary, in connection with the acquisition of certain discrete assets of On-Site Manager, Inc. in September 2017, resulted in additional deferred tax liabilities of $1.2 million, primarily related to intangibles.

The acquisition of the stock of NWP in March 2016 resulted in an additional net deferred tax asset of $11.2 million. This net asset includes approximately $9.6 million related to additional deferred tax assets from federal NOLs and $0.3 million related to state NOLs; $3.3 million related to property, equipment, and software; inventory and accrued expenses; and $2.0 million of deferred tax liability related to intangibles.

The acquisition of the stock of AssetEye in May 2016 resulted in additional deferred tax liabilities of $0.9 million related to intangibles. The company had no federal or state NOL carryovers related to the AssetEye acquisition.

On December 22, 2017, the Tax Reform Act was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a federal corporate tax rate decrease from 35% to 21% effective for tax years beginning after December 31, 2017, the transition of U.S international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of cumulative foreign earnings as of December 31, 2017. As a result of the Tax Reform Act, we recorded $25.1 million of additional income tax expense in the fourth quarter of 2017, the period in which the legislation was enacted, to reduce the carrying value of our net deferred tax assets to reflect the lower U.S. federal corporate tax rate. We also recognized tax expense of $2.2 million as a result of the deemed repatriation of foreign earnings.

Also on December 22, 2017, the SEC issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of US GAAP in situations where a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Reform Act. In accordance with SAB 118, we have determined that the $25.1 million of deferred tax expense recorded in connection with the remeasurement of our net deferred tax assets and the $2.2 million of tax expense recorded in connection with the transition tax on the mandatory deemed repatriation of foreign earnings are provisional amounts and are reasonable estimates at December 31, 2017. Additional work is necessary for a more detailed analysis of our deferred tax assets and liabilities and our historical foreign earnings as well as potential correlative adjustments. Any subsequent adjustment to these amounts will be recorded to current tax expense during 2018 when the analysis is complete.

Because of the deemed repatriation discussed above, all of our estimated foreign earnings have been subjected to U.S. federal income tax. Under the Tax Reform Act, the U.S. is moving away from a worldwide tax system and closer to a territorial tax system for foreign corporation earnings to the extent those earnings are neither Subpart F income, nor subject to a new minimum tax called the global intangible low-taxed income ("GILTI"). Foreign earnings generated after December 31, 2017, that are distributed to RealPage, Inc. as a dividend would receive a 100% dividends received deduction for federal income tax purposes, provided the Subpart F income and GILTI rules do not apply.

We periodically evaluate the realizability of our deferred tax assets. If we determine that it is more likely than not that all or a portion of such assets are not realizable, we provide a valuation allowance against the assets. The determination of the level of valuation allowance, if any, required at any time is based on a forecast of future taxable income that includes many judgments and assumptions. Accordingly, it is at least reasonably possible that future changes in one or more assumptions may lead to a change in judgment regarding the level of valuation allowance required in future periods. We had no valuation allowance at December 31, 2016. In 2017, we recognized a $0.3 million valuation allowance against our state NOLs in connection with the adoption of ASU 2016-09, as discussed above, and recorded an additional valuation allowance of $0.2 million against the NOLs of one of our foreign subsidiaries.

Our tax-effected federal, state, and international NOL carryforwards of $36.2 million, $3.9 million, and $0.2 million, respectively, and our combined federal and state tax credits of $1.8 million comprise a major component of our deferred tax assets. If not used, the underlying gross federal NOLs totaling $172.5 million will begin to expire in 2024 and the underlying state NOLs totaling $60.2 million will begin to expire in 2018, with approximately $19.1 million expiring in the next five years. Approximately $0.1 million of our credits expire in 2026, and the balance has no expiration date. Approximately $1.3 million of our tax credits will be fully realizable by 2021.

Net operating losses that we have generated are not currently subject to the Section 382 limitation; however, $30.4 million of net operating losses generated by our subsidiaries prior to our acquisition of them are subject to the Section 382 limitation. The limitation on these pre-acquisition net operating loss carryforwards will fully expire in 2035. A cumulative change in ownership among material shareholders, as defined in Section 382 of the Internal Revenue Code, during a three year period also may limit utilization of the federal net operating loss carryforwards.

As a result of our adoption of ASU 2016-09, we began to account for all excess tax benefits and deficits arising from current period stock transactions as part of our income tax provision effective January 1, 2017. During the year ended December 31, 2017, our tax provision was reduced by approximately $19.1 million as a result of excess stock compensation deductions from the vesting of restricted stock and the exercise of stock options during the year. Prior to the adoption of ASU 2016-09, we used the "with-and-without" method, as described in ASC 740, for purposes of determining when excess tax benefits had been realized. In 2016 and 2015, we recognized excess stock compensation benefits from NOLs of $3.1 million and $0.4 million, respectively, and these benefits were recognized as additions to paid-in capital and, thus, did not benefit our tax provision for those years.

Our subsidiary in Hyderabad, India benefited from a tax holiday granted under the Software Technology Parks of India program that began upon commencement of business operations in 2008 and continued through March 31, 2011. During this holiday period, we were required to pay a minimum alternative tax which was available to reduce our post-holiday tax liability. Effective July 8, 2013, this subsidiary began to benefit from a tax holiday under the Special Economic Zone program. This benefit was initially granted for a five years period and applies to a portion of our operations in this location. The expiration of this tax holiday will increase our effective income tax rate. As a result of this tax holiday, the Company realized tax savings of $0.4 million, $0.2 million, and $0.4 million for the years ended December 31, 2017, 2016, and 2015, respectively.

Our subsidiary in Manila, Philippines has benefited from Philippines income tax holiday incentives pursuant to registration with the Philippine Economic Zone Authority ("PEZA"). We have four PEZA projects that have their own income tax holiday. The tax holiday of one of the projects expired on November 30, 2016. The remaining projects, if not renewed, will expire in 2018 and 2019. Tax savings realized under the Philippine tax holiday incentives were $0.2 million, $0.4 million, and $0.3 million for the years ended December 31, 2017, 2016, and 2015, respectively.

Uncertain Tax Positions

At December 31, 2017 and 2016, we had no unrecognized tax benefits. Our policy is to include interest and penalties related to unrecognized income tax benefits in income tax expense, and as of December 31, 2017 and 2016, there were no accrued interest and penalties.

We file consolidated and separate tax returns in the U.S. federal jurisdiction and five foreign jurisdictions. We are no longer subject to U.S. federal income tax examinations for years before 2014 and are no longer subject to state and local income tax examinations by tax authorities for years before 2013; however, net operating losses from all years continue to be subject to examinations and adjustments for at least three years following the year in which the attributes are used.

Our subsidiary, RealPage India Private Limited ("RealPage India"), is currently undergoing an income tax examination for the fiscal years beginning April 1, 2011, April 1, 2012, and April 1, 2013. The India income tax authorities have assessed RealPage India additional tax and interest of $0.9 million as a result of these examinations. We believe the assessments are incorrect and have appealed the decisions to the India Commissioner of Income Tax. RealPage India is also under audit for the financial year beginning April 1, 2014, but no assessment has been made at this time.

In July 2015, the Company filed amended 2012 and 2013 income tax returns for selected states to correct certain items that were improperly deducted, as determined by the Company subsequent to the initial filings. The primary effect of the amended returns was an immaterial increase in our current state income tax liability and a reduction of our state net operating loss deferred tax asset, net of federal benefit, of approximately $0.6 million.

12. Fair Value Measurements

The Company records certain financial liabilities at fair value on a recurring basis. The Company determines fair values based on the price it would receive to sell an asset or pay to transfer a liability in an orderly transaction between market participants at the measurement date and in the principal or most advantageous market for that asset or liability.

The prescribed fair value hierarchy is as follows:

Level 1 - Inputs are quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs are quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable, and market-corroborated inputs which are derived principally from or corroborated by observable market data.

Level 3 - Inputs are derived from valuation techniques in which one or more of the significant inputs or value drivers are unobservable.

The categorization of an asset or liability within the fair value hierarchy is based on the inputs described above and does not necessarily correspond to the Company's perceived risk of that asset or liability. Moreover, the methods used by the Company may produce a fair value calculation that is not indicative of the net realizable value or reflective of future fair values. Furthermore, although the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments and non-financial assets and liabilities could result in a different fair value measurement at the reporting date.

Assets and liabilities measured at fair value on a recurring basis:

Interest rate swap agreements: The fair value of the Company's interest rate derivatives are determined using widely accepted valuation techniques including discounted cash flow analysis on the expected cash flows of the derivatives. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves. The Company incorporates credit valuation adjustments to appropriately reflect both its own nonperformance risk and the respective counterparty's nonperformance risk in the fair value measurements.

Although the Company has determined that the majority of the inputs used to value its derivatives fall within Level 2 of the fair value hierarchy, the credit valuation adjustments associated with its derivatives utilize Level 3 inputs, such as estimates of current credit spreads, to evaluate the likelihood of default by the Company and its counterparties. The Company has assessed the significance of the impact of the credit valuation adjustments on the overall valuation of its derivative positions and has determined that the credit valuation adjustments are not significant to the overall valuation of its interest rate swaps. As a result, the Company determined that its interest rate swap valuation in its entirety is classified in Level 2 of the fair value hierarchy.

Contingent consideration obligations: Contingent consideration obligations consist of potential obligations related to our acquisition activity. The amount to be paid under these obligations is contingent upon the achievement of stipulated operational or financial targets by the business subsequent to acquisition. The fair value of contingent consideration obligations is estimated using a probability weighted discount model which considers the achievement of the conditions upon which the respective contingent obligation is dependent. The probability of achieving the specified conditions is assessed by applying a Monte Carlo weighted-average model. Inputs into the valuation model include a discount rate specific to the acquired entity, a measure of the estimated volatility, and the risk free rate of return.

In addition to the inputs described above, the fair value estimates consider the projected future operating or financial results for the factor upon which the respective contingent obligation is dependent. The fair value estimates are generally sensitive to changes in these projections. We develop the projected future operating results based on an analysis of historical results, market conditions, and the expected impact of anticipated changes in our overall business and/or product strategies.

Significant unobservable inputs used in the contingent consideration fair value measurements included the following at December 31, 2017 and 2016:

	2017	2016
Discount rates	16.3%	14.8 - 27.8%
Volatility rates	24.0%	29.9%
Risk free rate of return	1.6%	0.7%

The following tables disclose the assets and liabilities measured at fair value on a recurring basis as of December 31, 2017 and 2016, by the fair value hierarchy levels as described above:

	Fair value at December 31, 2017			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Interest rate swap agreements	$ 1,329	$ —	$ 1,329	$ —
Liabilities:				
Contingent consideration related to the acquisition of:				
AssetEye	247	—	—	247
Axiometrics	167	—	—	167
Total liabilities measured at fair value	$ 414	$ —	$ —	$ 414

	Fair value at December 31, 2016			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Interest rate swap agreements	$ 1,098	$ —	$ 1,098	$ —
Liabilities:				
Contingent consideration related to the acquisition of:				
Indatus	2	$ —	$ —	$ 2
AssetEye	539	—	—	539
Total liabilities measured at fair value	$ 541	$ —	$ —	$ 541

There were no transfers between Level 1 and Level 2, or between Level 2 and Level 3 measurements during the years ended December 31, 2017 and 2016.

Changes in the fair value of Level 3 measurements for the reporting periods were as follows during the years ended December 31, 2017 and 2016, in thousands:

Balance at January 1, 2016	$ 841
Initial contingent consideration	245
Net gain on change in fair value	(545)
Balance at December 31, 2016	541
Initial contingent consideration	812
Net gain on change in fair value	(939)
Balance at December 31, 2017	$ 414

Gains and losses resulting from changes in the fair value of the above liabilities are included in "General and administrative" expense in the accompanying Consolidated Statements of Operations.

Assets and liabilities measured at fair value on a non-recurring basis:

In October 2016, the Company entered into an agreement with A Place for Mom whereby we sold certain assets associated with our senior living referral services, including certain indefinite-lived trade names. Based on the status of the negotiations, we concluded there was a possibility that the negotiated assets could be impaired and performed an impairment analysis as of September 30, 2016. We estimated the aggregate fair value of the negotiated assets to be $5.0 million at September 30, 2016, based on the price at which they were sold in October 2016 in an arms-length transaction with an unrelated party. The method utilized incorporated significant unobservable inputs and the Company concluded that the measurement should be classified within Level 3. The Company believes that the method used to determine the fair value of the assets was reasonable. See Note 6 for further discussion of these impairments.

There were no assets measured at fair value on a non-recurring at December 31, 2017. There were no liabilities measured at fair value on a non-recurring basis at December 31, 2017 and 2016.

Financial Instruments

The financial assets and liabilities that are not measured at fair value in our Consolidated Balance Sheets primarily consist of cash and cash equivalents, restricted cash, accounts receivable, cost-method investments, accounts payable and accrued expenses, acquisition-related deferred cash obligations, obligations under the Term Loans, obligations under the Revolving Facility, and the Convertible Notes.

The carrying values of cash and cash equivalents; restricted cash; accounts receivable; and accounts payable and accrued expenses reported in our Consolidated Balance Sheets approximates fair value due to the short term nature of these instruments. Acquisition-related deferred cash obligations are recorded on the date of acquisition at their estimated fair value, based on the present value of the anticipated future cash flows. The difference between the amount of the deferred cash obligation to be paid and its estimated fair value on the date of acquisition is accreted over the obligation period. As a result, the carrying value of acquisition-related deferred cash obligations approximates their fair value. Due to its short-term nature and market-indexed interest rates, we concluded that the carrying value of the Revolving Facility approximated its fair value at December 31, 2017.

Revolving Facility: The fair value of the Revolving Facility was estimated by discounting future cash flows using prevailing market interest rates on debt with similar creditworthiness, terms, and maturities, and an estimate of our future payments. We concluded that this fair value measurement should be categorized within Level 3.

Term Loans: The fair value of the Term Loans was estimated by discounting future cash flows using prevailing market interest rates on debt with similar creditworthiness, terms, and maturities. We concluded that this fair value measurement should be categorized within Level 2.

Convertible Notes: We estimated the fair value of the Convertible Notes based on quoted market prices as of the last trading day for the year ended December 31, 2017; however, the Convertible Notes have only a limited trading volume and as such this fair value estimate is not necessarily the value at which the Convertible Notes could be retired or transferred. We concluded this measurement should be classified within Level 2.

The fair value and carrying value of the Revolving Facility, Term Loans, and Convertible Notes were as follows at December 31, 2017 and 2016:

	December 31, 2017		December 31, 2016	
	Fair Value	Carrying Value	Fair Value	Carrying Value
	(in thousands)			
Revolving Facility	$ 49,427	$ 50,000	$ —	$ —
Term Loans	303,806	317,377	122,532	122,126
Convertible Notes	430,301	281,199	—	—

The carrying value of the Term Loans and Convertible Notes are reflected net of unamortized discount and issuance costs in our Consolidated Balance Sheets.

13. Stockholders' Equity

On May 6, 2014, our board of directors approved a share repurchase program authorizing the repurchase of up to $50.0 million of our outstanding common stock for a period of up to one year after the approval date. Shares repurchased under the plan are retired. Our board of directors approved a one year extension of this program in both 2015 and 2016. On April 28, 2017, our board of directors again approved a one year extension of the share repurchase program. The terms of this extension permit the repurchase of up to $50.0 million of our common stock during the period commencing on the extension day and ending on May 4, 2018.

Repurchase activity during the years ended December 31, 2016 and 2015 is detailed in the table below. No shares were acquired under the repurchase program during the year ended December 31, 2017.

	Year Ended December 31,	
	2016	2015
Number of shares repurchased	1,012,823	1,798,199
Weighted-average cost per share	$ 20.98	$ 19.51
Total cost of shares repurchased, in thousands	$ 21,244	$ 35,083

14. Derivative Financial Instruments

On March 31, 2016, the Company entered into two interest rate swap agreements (collectively the "Swap Agreements"), which are designed to mitigate our exposure to interest rate risk associated with a portion of our variable rate debt. The Swap Agreements cover an aggregate notional amount of $75.0 million from March 2016 to September 2019 by replacing the obligation's variable rate with a blended fixed rate of 0.89%. The Company designated the Swap Agreements as cash flow hedges of interest rate risk.

The effective portion of changes in the fair value of the Swap Agreements is recorded in accumulated other comprehensive income and is subsequently reclassified into earnings in the period that the hedged forecasted transaction affects earnings. The ineffective portion of the change in the fair value of the Swap Agreements is recognized directly in earnings. Amounts reported in accumulated other comprehensive income related to the Swap Agreements will be reclassified to interest expense as interest payments are made on our variable rate debt. The Company estimates that an additional $0.7 million will be reclassified as a decrease to interest expense during the twelve-month period ending December 31, 2018.

As of December 31, 2017, the Swap Agreements were still outstanding. The table below presents the notional and fair values of the Swap Agreements as well as their classification on the Consolidated Balance Sheets as of December 31, 2017 and 2016:

	Balance Sheet Location	Notional	Fair Value
		(in thousands)	
Derivatives designated as cash flow hedging instruments:			
Swap agreements as of December 31, 2017	Other assets	$ 75,000	$ 1,329
Swap agreements as of December 31, 2016	Other assets	$ 75,000	$ 1,098

As of December 31, 2017, the Company has not posted any collateral related to the Swap Agreements. If the Company had breached any of the Swap Agreement's default provisions at December 31, 2017, it could have been required to settle its obligations under the Swap Agreements at their termination value of $1.3 million.

The table below presents the amount of gains and/or losses related to the effective and ineffective portions of the Swap Agreements and their location on the Consolidated Statements of Operations for the fiscal years ended December 31, 2017 and 2016:

	Effective Portion			Ineffective Portion	
Derivatives Designated as Cash Flow Hedges	Gain (Loss) Recognized in OCI	Location of Gain (Loss) Recognized in Income	Gain (Loss) Recognized in Income	Location of Gain (Loss) Recognized in Income	Gain (Loss) Recognized in Income
			(in thousands)		
Year Ended December 31, 2017:					
Swap agreements, net of tax	$ 318	Interest expense and other	$ (77)	Interest expense and other	$ (54)
Year Ended December 31, 2016:					
Swap agreements, net of tax	$ 400	Interest expense and other	$ 136	Interest expense and other	$ 152

15. Comprehensive Income (Loss)

The following table presents the changes, and related tax effects, of each component of accumulated other comprehensive income (loss) for the fiscal years ended December 31, 2017, 2016, and 2015:

	Foreign Currency	Swap Agreements	Total
		(in thousands)	
Balance as of January 1, 2015	$ (209)	$ —	$ (209)
Other comprehensive loss, net	(337)	—	(337)
Balance at December 31, 2015	(546)	—	(546)
Other comprehensive (loss) income, net	(43)	720	677
Reclassification into earnings	—	226	226
Income tax provision	—	(410)	(410)
Balance at December 31, 2016	(589)	536	(53)
Other comprehensive income, net	55	427	482
Reclassification into earnings	—	(141)	(141)
Income tax provision	—	(45)	(45)
Balance at December 31, 2017	$ (534)	$ 777	$ 243

16. Customer Deposits Held in Restricted Accounts

In connection with our payment processing services, we collect tenant funds and subsequently remit these tenant funds to our clients after varying holding periods. These funds are settled through our Originating Depository Financial Institution ("ODFI") custodial accounts at major banks. The ODFI custodial account balance was $74.8 million and $76.4 million, and the related client deposit liability was $74.9 million and $76.4 million at December 31, 2017 and 2016, respectively. The ODFI custodial account balances are included in our Consolidated Balance Sheets as restricted cash. The corresponding liability for these custodial balances is reflected as client deposits. In connection with the timing of our payment processing services, we are exposed to credit risk in the event of nonperformance by other parties, such as returned checks. We utilize credit analysis and other controls to manage the credit risk exposure. We have not experienced any material credit losses to date. Any expected losses are included in our allowance for doubtful accounts. The ODFI custodial accounts are in the name of RealPage Payment Processing Services, Inc. ("RPPS"), a bankruptcy-remote, special-purpose entity, that is a wholly owned subsidiary of the Company. We provide processing and administrative services to RPPS through a services agreement. The obligations of RPPS under the ODFI custodial account agreements are guaranteed by us.

We offer invoice processing services to our clients as part of our overall utility management solution. This service includes the collection of invoice payments from our clients and remitting the payments to the utility company. We had $14.6 million and $5.8 million in restricted cash and $14.6 million and $5.7 million in client deposits related to these services at December 31, 2017 and 2016, respectively.

In connection with our renter insurance products, we collect premiums from policy holders and subsequently remit the premium, net of our commission, to the underwriter. We maintain separate accounts for these transactions. We had $6.6 million and $1.5 million in restricted cash related to these renter insurance products at December 31, 2017 and 2016, respectively. Related to these renter insurance products, we had $6.6 million and $1.5 million in client deposits at December 31, 2017 and 2016, respectively.

17. Employee Benefit Plans

In 1998, our board of directors approved a defined contribution plan that provides retirement benefits under the provisions of Section 401(k) of the Internal Revenue Code. Our 401(k) Plan ("Plan") covers substantially all employees who meet a minimum service requirement. Contributions of $2.9 million, $2.4 million, and $1.9 million were made by us under the Plan for the years ended December 31, 2017, 2016, and 2015, respectively.

The Company sponsors various retirement plans for its non-U.S. employees. Accrued liabilities related to obligations under these plans totaled $1.2 million, $0.9 million, and $0.7 million as of December 31, 2017, 2016, and 2015, respectively, and are included in current liabilities in the accompanying Consolidated Balance Sheets.

18. Cost Method Investments

In August 2016, we acquired a minority interest in Compstak, Inc. ("Compstak"), which is an unrelated company that specializes in the aggregation of commercial lease data. The shares we acquired represent an ownership interest of less than 20%. We evaluated our relationship with Compstak and determined we do not have significant influence over its operations nor is it economically dependent upon us. The carrying value of this investment at December 31, 2017 and 2016, was $3.0 million and is included in "Other assets" in the accompanying Consolidated Balance Sheets.

19. Selected Quarterly Financial Data (unaudited)

The following is unaudited quarterly financial information for the years ended December 31, 2017 and 2016 (in thousands, except per share amounts).

	Three Months Ended							
	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017	December 31, 2016	September 30, 2016	June 30, 2016	March 31, 2016
Revenue:								
On demand	$ 180,104	$ 161,578	$ 154,727	$ 146,213	$ 141,627	$ 140,883	$ 136,610	$ 123,411
On premise	662	648	659	675	695	682	687	772
Professional and other	6,914	6,832	5,920	6,031	6,749	6,390	5,422	4,200
Total revenue	187,680	169,058	161,306	152,919	149,071	147,955	142,719	128,383
Gross profit	114,167	99,710	93,762	89,877	87,707	83,844	80,641	73,635
Net (loss) income	(20,865)	6,834	6,213	8,195	7,361	4,210	2,083	2,996
Net (loss) income per share attributable to common stockholders								
Basic	$ (0.26)	$ 0.09	$ 0.08	$ 0.10	$ 0.09	$ 0.05	$ 0.03	$ 0.04
Diluted	(0.26)	0.08	0.08	0.10	0.09	0.05	0.03	0.04

The above quarterly financial information should be read in conjunction with the Consolidated Financial Statements and notes thereto included herein.

20. Subsequent Events

In January 2018, we paid $2.0 million in cash in return for a convertible promissory note ("Note") from WayBlazer, Inc. ("WayBlazer"), which is an unrelated company that specializes in an artificial intelligence platform for the travel industry. The Note bears interest at 8% per annum and matures in January 2021. The Note is convertible into WayBlazer's common stock shares upon a qualified financing event, as defined in the Note. If converted, the shares would represent an ownership interest of approximately 8%.

We also entered into a strategic development agreement ("Development Agreement") with WayBlazer for the development of property management applications. Under the terms of the Development Agreement, we will pay direct development costs and a license fee to use any property management applications developed. The initial license has a term of five years. At the end of the license term, and under certain other circumstances, the Company has the right to purchase a perpetual license for the applications.

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

Pursuant to Rule 13a-15(b) and Rule 15d-15(b) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), we carried out an evaluation, with the participation of our management, and under the supervision of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined under Rule 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective in ensuring that information required to be disclosed in the reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Management's assessment of the

effectiveness of our disclosure controls and procedures is expressed at the level of reasonable assurance because management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives.

Management's Report on Internal Control over Financial Reporting and Attestation Report of the Independent Registered Public Accounting Firm

Our internal controls over financial reporting are 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 in the United States. Management is responsible for establishing and maintaining adequate internal control over financial reporting. 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 or compliance with the policies or procedures may deteriorate.

Under supervision and with participation of management, including the Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of internal control over financial reporting as of December 31, 2017. In conducting this evaluation, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control — Integrated Framework (2013 framework). Management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of certain businesses which we acquired during 2017 (i.e. Axiometrics, American Utility Management, On-Site, and Lease Rent Options), which businesses are included in the 2017 Consolidated Financial Statements of the Company.

- Axiometrics constituted approximately 5% of our consolidated total assets as of December 31, 2017, and 2% of our consolidated total revenues for the year then ended.
- American Utility Management constituted approximately 5% of our consolidated total assets as of December 31, 2017, and 3% of our consolidated total revenues for the year then ended.
- On-Site constituted approximately 17% of our consolidated total assets as of December 31, 2017, and 2% of our consolidated total revenues for the year then ended.
- Lease Rent Options constituted approximately 20% of our consolidated total assets as of December 31, 2017, and less than 1% of our consolidated total revenues for the year then ended.

Based on our evaluation using criteria set by COSO, management concluded internal control over financial reporting was effective as of December 31, 2017.

The effectiveness of internal control over financial reporting as of December 31, 2017 has been audited by Ernst & Young LLP, our independent registered public accounting firm, which is stated in their report included in Part II Item 8 of this Annual Report on Form 10-K.

Changes in Internal Controls

There were no significant changes in our internal control over financial reporting during the three months ended December 31, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations of Internal Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal controls will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

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 to RealPage's Proxy Statement for its 2018 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2017.

Item 11. Executive Compensation

The information required by this item is incorporated by reference to RealPage's Proxy Statement for its 2018 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2017.

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

The information required by this item is incorporated by reference to RealPage's Proxy Statement for its 2018 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2017.

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

The information required by this item is incorporated by reference to RealPage's Proxy Statement for its 2018 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2017.

Item 14. Principal Accounting Fees and Services

The information required by this item is incorporated by reference to RealPage's Proxy Statement for its 2018 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2017.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) Financial Statements

(1) The financial statements filed as part of this Annual Report on Form 10-K are listed on the index to financial statements.

(2) Any financial statement schedules required to be filed as part of this Annual Report on Form 10-K are set forth in section (c) below.

(b) Exhibits

See Exhibit Index at the end of this Annual Report on Form 10-K, which is incorporated by reference.

(c) Financial Statement Schedules

The following schedule is filed as part of this Annual Report on Form 10-K:

All other schedules have been omitted because the information required to be presented in them is not applicable or is shown in the financial statements or related notes.

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS

REALPAGE, INC.

December 31, 2017

(in thousands)

Allowance for Doubtful Accounts

	Balance at Beginning of Year	Additions Charged to Income	Deductions [1]	Balance at End of Year
Year ended December 31:				
2015	$ 2,363	$ 3,377	$ (3,422)	$ 2,318
2016	2,318	4,786	(4,636)	2,468
2017	2,468	4,458	(2,975)	3,951

(1) Uncollectible accounts written off, net of recoveries, and administrative corrections

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Richardson, State of Texas, on this 28th day of February, 2018.

REALPAGE, INC.

By: /s/ Stephen T. Winn

Stephen T. Winn
Chairman of the Board of Directors, Chief Executive Officer, President and Director

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Stephen T. Winn Stephen T. Winn	Chairman of the Board of Directors, Chief Executive Officer, President and Director (Principal Executive Officer)	2/28/2018
/s/ W. Bryan Hill W. Bryan Hill	Executive Vice President, Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	2/28/2018
/s/ Alfred R. Berkeley Alfred R. Berkeley	Director	2/28/2018
/s/ Peter Gyenes Peter Gyenes	Director	2/28/2018
/s/ Scott S. Ingraham Scott S. Ingraham	Director	2/28/2018
/s/ Charles F. Kane Charles F. Kane	Director	2/28/2018
/s/ Jeffrey T. Leeds Jeffrey T. Leeds	Director	2/28/2018
/s/ Jason A. Wright Jason A. Wright	Director	2/28/2018

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated by Reference			Included Herewith
		Form	Date	Number	
2.1	Asset Purchase Agreement dated February 27, 2017 between the Registrant and The Rainmaker Group Holdings, Inc., a Georgia corporation, The Rainmaker Group Ventures, LLC, a Delaware limited liability company, The Rainmaker Group Real Estate, LLC, a Georgia limited liability company, The Rainmaker Group - Rent Jungle LLC, a Georgia limited liability company, and The Rainmaker Group Data, LLC, a Georgia limited liability company, Bruce Barfield, an individual, Tamara Farley, an individual, The Bruce Allen Barfield Trust, dated December 27, 2011, The Tamara Tanner Farley Trust, dated December 27, 2011, and John C. Alexander, an individual**	10-Q	5/8/2017	2.1	
2.2	First Amendment dated May 11, 2017, to Asset Purchase Agreement dated February 27, 2017 between the Registrant and The Rainmaker Group Holdings, Inc., a Georgia corporation, The Rainmaker Group Ventures, LLC, a Delaware limited liability company, The Rainmaker Group Real Estate, LLC, a Georgia limited liability company, The Rainmaker Group - Rent Jungle LLC, a Georgia limited liability company, and The Rainmaker Group Data, LLC, a Georgia limited liability company, Bruce Barfield, an individual, Tamara Farley, an individual, The Bruce Allen Barfield Trust, dated December 27, 2011, The Tamara Tanner Farley Trust, dated December 27, 2011, and John C. Alexander, an individual	10-Q	11/7/2017	2.2	
2.3	Second Amendment dated August 1, 2017, to Asset Purchase Agreement dated February 27, 2017 between the Registrant and The Rainmaker Group Holdings, Inc., a Georgia corporation, The Rainmaker Group Ventures, LLC, a Delaware limited liability company, The Rainmaker Group Real Estate, LLC, a Georgia limited liability company, The Rainmaker Group - Rent Jungle LLC, a Georgia limited liability company, and The Rainmaker Group Data, LLC, a Georgia limited liability company, Bruce Barfield, an individual, Tamara Farley, an individual, The Bruce Allen Barfield Trust, dated December 27, 2011, The Tamara Tanner Farley Trust, dated December 27, 2011, and John C. Alexander, an individual	10-Q	11/7/2017	2.3	
2.4	Third Amendment dated December 4 2017, to Asset Purchase Agreement dated February 27, 2017 between the Registrant and The Rainmaker Group Holdings, Inc., a Georgia corporation, The Rainmaker Group Ventures, LLC, a Delaware limited liability company, The Rainmaker Group Real Estate, LLC, a Georgia limited liability company, The Rainmaker Group - Rent Jungle LLC, a Georgia limited liability company, and The Rainmaker Group Data, LLC, a Georgia limited liability company, Bruce Barfield, an individual, Tamara Farley, an individual, The Bruce Allen Barfield Trust, dated December 27, 2011, The Tamara Tanner Farley Trust, dated December 27, 2011, and John C. Alexander, an individual **				X

Exhibit Number	Exhibit Description	Incorporated by Reference Form	 Date	 Number	Included Herewith
2.5	Asset Purchase Agreement dated July 28, 2017 between the Registrant, RP Newco XXII LLC, a Delaware limited liability company and wholly owned subsidiary of Registrant, and On-Site Manager, Inc., a California corporation, Relocation Services, Inc., a Wyoming corporation and wholly owned subsidiary of On-Site, On-Site Data, Inc., a Wyoming corporation and wholly owned subsidiary of On-Site, and certain other affiliated parties and significant stockholders of On-Site**	10-Q	11/7/2017	2.1	
3.1	Amended and Restated Certificate of Incorporation of the Registrant	S-1/A	7/26/2010	3.2	
3.2	Amended and Restated Bylaws of the Registrant	S-1/A	7/26/2010	3.4	
4.1	Form of Common Stock certificate of the Registrant	S-1/A	7/26/2010	4.1	
4.2	Shareholders' Agreement among the Registrant and certain stockholders, dated December 1, 1998, as amended July 16, 1999 and November 3, 2000	S-1	4/29/2010	4.2	
4.3	Second Amended and Restated Registration Rights Agreement among the Registrant and certain stockholders, dated February 22, 2008	S-1	4/29/2010	4.3	
4.4	Indenture between the Registrant and Wells Fargo Bank, National Association, dated May 23, 2017	10-Q	8/4/2017	4.4	
4.5	Form of Global Note to represent the 1.50% Convertible Senior Notes due 2022, of the Registrant	10-Q	8/4/2017	4.5	
4.6	Form of Warrant Confirmation in connection with 1.50% Convertible Senior Notes due 2022, of the Registrant	10-Q	8/4/2017	4.6	
4.7	Form of Call Option Confirmation in connection with 1.50% Convertible Senior Notes due 2022, of the Registrant	10-Q	8/4/2017	4.7	
10.1	Form of Indemnification Agreement entered into between the Registrant and each of its directors and officers	S-1	4/29/2010	10.1	
10.2	Amended and Restated 1998 Stock Incentive Plan (June 2010)+	S-1	6/7/2010	10.2G	
10.3	Forms of Stock Option Agreements and Restricted Share Agreements approved for use under the 1998 Stock Incentive Plan+	S-1	4/29/2010	10.2A, 10.2B, 10.2C, 10.2D	
10.4	Forms of Stock Option Agreements and Restricted Share Agreements approved for use under the 1998 Stock Incentive Plan+	S-1	6/7/2010	10.2E, 10.2F, 10.2H	
10.5	Form of Director's Nonqualified Stock Option Agreement+	S-1	4/29/2010	10.3	
10.6	Form of Notice of Grant of Restricted Shares (Outside Directors)+	S-1	6/7/2010	10.49	
10.7	2010 Equity Incentive Plan, as Amended and Restated June 4, 2014+	DEF-14A	4/17/2014	Appendix A	
10.8	First Amendment to the Amended and Restated 2010 Equity Incentive Plan+	8-K	1/21/2015	10.1	
10.9	Second Amendment to the Amended and Restated 2010 Equity Incentive Plan+	8-K	4/7/2015	10.1	
10.10	Third Amendment to the Amended and Restated 2010 Equity Incentive Plan+	10-Q	5/6/2016	10.1	
10.11	Fourth Amendment to the RealPage, Inc. 2010 Equity Incentive Plan, as amended and restated, dated February 16, 2017+	10-Q	5/8/2017	10.5	

Exhibit Number	Exhibit Description	Incorporated by Reference			Included Herewith
		Form	Date	Number	
10.12	Forms of Stock Option Award Agreements and Restricted Stock Award Agreements approved for use under the 2010 Equity Incentive Plan+	S-8	8/17/2010	4.6, 4.7, 4.8, 4.9	
10.13	Stand-Alone Stock Option Agreement between the Registrant and Peter Gyenes, dated February 25, 2010+	S-1	4/29/2010	10.7	
10.14	Form of Stock Bonus Agreement between the Registrant and Stephen T. Winn, dated as of February 24, 2014+	8-K	2/24/2014	10.2	
10.15	Amendment No. 1 to Stock Bonus Agreement between the Registrant and Stephen T. Winn, dated as of July 31, 2014+	8-K	8/4/2014	10.1	
10.16	Form of Stock Bonus Agreement between the Registrant and each of W. Bryan Hill and William Chaney, dated as of July 31, 2014+	8-K	8/4/2014	10.2	
10.17	Form of Stock Option Award Agreement between the Registrant and Stephen T. Winn approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	8-K	3/5/2015	10.1	
10.18	Form of Stock Option Award Agreement between the Registrant and certain executive officers approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	8-K	3/5/2015	10.2	
10.19	Form of Restricted Stock Award Agreement for time-based awards between the Registrant and Stephen T. Winn approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	8-K	3/5/2015	10.3	
10.20	Form of Restricted Stock Award Agreement for time-based awards between the Registrant and certain executive officers approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	8-K	3/5/2015	10.4	
10.21	Form of Restricted Stock Award Agreement for market-based awards between the Registrant and Stephen T. Winn approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	8-K	3/5/2015	10.5	
10.22	Form of Restricted Stock Award Agreement for market-based awards between the Registrant and certain executive officers approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	8-K	3/5/2015	10.6	
10.23	Form of Restricted Stock Award Agreement for time-based awards between the Registrant and certain executive officers approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	10-Q	5/6/2016	10.4	
10.24	Form of Restricted Stock Award Agreement for market-based awards between the Registrant and certain executive officers approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	10-Q	5/6/2016	10.5	
10.25	Form of Restricted Stock Award Agreement for market-based awards between the Registrant and Stephen T. Winn approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	10-Q	5/6/2016	10.6	
10.26	Form of 2017 Management Incentive Plan+	10-Q	5/8/2017	10.4	
10.27	RealPage, Inc. Management Incentive Plan+	DEF-14A	4/17/2014	Appendix B	
10.28	Employment Agreement between the Registrant and W. Bryan Hill, dated March 24, 2014+	8-K	3/24/2014	10.1	
10.29	Amended and Restated Employment Agreement between the Registrant and Stephen T. Winn dated as of March 1, 2015+	8-K	3/5/2015	10.11	

Exhibit Number	Exhibit Description	Incorporated by Reference			Included Herewith
		Form	Date	Number	
10.30	Amended and Restated Employment Agreement between the Registrant and Stephen T. Winn dated as of October 26, 2016+	8-K	10/31/2016	10.1	
10.31	Amended and Restated Employment Agreement between the Registrant and W. Bryan Hill dated as of March 1, 2015+	8-K	3/5/2015	10.12	
10.32	Amended and Restated Employment Agreement between the Registrant and William Chaney dated as of March 1, 2015+	8-K	3/5/2015	10.13	
10.33	Employment Agreement between the Registrant and David Monk, dated May 1, 2015+	10-Q	8/7/2015	10.18	
10.34	Employment Agreement between the Registrant and Ashley Chaffin Glover, dated August 3, 2016+	10-Q	11/8/2016	10.2	
10.35	Exhibit I to the Employment Agreement between the Registrant and Ashley Glover referenced herein as Exhibit 10.34+	8-K	3/5/2015	10.4	
10.36	Exhibit II to the Employment Agreement between the Registrant and Ashley Glover referenced herein as Exhibit 10.34+	8-K	3/5/2015	10.6	
10.37	Employment Agreement between Registrant and Andrew Blount, dated December 11, 2015+	10-Q	5/8/2017	10.6	
10.38	Amendment to Employment Agreement between Registrant and Andrew Blount, dated January 4, 2016+	10-Q	5/8/2017	10.7	
10.39	Lease Agreement dated June 2, 2015 by and between the Registrant and Lakeside Campus Partners, LP	8-K	6/4/2015	10.1	
10.40	First Amendment to the Lease Agreement dated July 27, 2015 by and between the Registrant and Lakeside Campus Partners, LP	10-Q	8/7/2015	10.20	
10.41	Second Amendment to the Lease Agreement dated July 8, 2016 by and between the Registrant and Lakeside Campus Partners, LP	10-Q	11/8/2016	10.1	
10.42	Credit Agreement by and among the Registrant, the lenders from time to time party thereto and Wells Fargo Bank, National Association, as administrative agent, dated September 30, 2014	10-Q	11/10/2014	10.1	
10.43	First Amendment to Credit Agreement and Incremental Amendment among the Registrant, certain subsidiaries of the Registrant party thereto, the lenders party thereto, and Wells Fargo Bank, National Association, as administrative agent, dated February 26, 2016	10-Q	5/6/2016	10.2	
10.44	Second Amendment to Credit Agreement among the Registrant, certain subsidiaries of the Registrant party thereto, the lenders party thereto, and Wells Fargo Bank, National Association, as administrative agent, dated February 15, 2017	10-Q	5/8/2017	10.1	
10.45	Third Amendment to Credit Agreement among the Registrant, certain subsidiaries of the Registrant party thereto, the lenders party thereto, and Wells Fargo Bank, National Association, as administrative agent, dated February 27, 2017	10-Q	5/8/2017	10.2	
10.46	Fourth Amendment to Credit Agreement among the Registrant, certain subsidiaries of the Registrant party thereto, the lenders party thereto, and Wells Fargo Bank, National Association, as administrative agent, dated April 3, 2017	10-Q	5/8/2017	10.3	

Exhibit Number	Exhibit Description	Incorporated by Reference			Included Herewith
		Form	Date	Number	
10.47	Fifth Amendment to Credit Agreement among the Registrant, certain subsidiaries of the Registrant party thereto, the lenders party thereto, and Wells Fargo Bank, National Association, as administrative agent, dated May 11, 2017	10-Q	8/4/2017	10.2	
10.48	Sixth Amendment to Credit Agreement among the Registrant, certain subsidiaries of the Registrant party thereto, the lenders party thereto, and Wells Fargo Bank, National Association, as administrative agent, dated August 14, 2017	10-Q	11/7/2017	10.1	
10.49	Collateral Agreement by and among the Registrant, certain of its subsidiaries from time to time party thereto, and Wells Fargo Bank, National Association, as administrative agent, dated as of September 30, 2014	10-Q	11/10/2014	10.2	
10.50	Guaranty Agreement made by certain domestic subsidiaries of Registrant in favor of Wells Fargo Bank, National Association, as administrative agent, dated as of September 30, 2014	10-Q	11/10/2014	10.3	
21.1	Subsidiaries of the Registrant				X
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm				X
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) or 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				X
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) or 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				X
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*				X
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*				X
101.INS	Instance				X
101.SCH	Taxonomy Extension Schema				X
101.CAL	Taxonomy Extension Calculation				X
101.LAB	Taxonomy Extension Labels				X
101.PRE	Taxonomy Extension Presentation				X
101.DEF	Taxonomy Extension Definition				X

\+ Indicates management contract or compensatory plan or arrangement.

* Furnished herewith.

** Exhibits and schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K and will be furnished to the Securities and Exchange Commission upon request.

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Board of Directors

Stephen T. Winn
Chairman, Chief Executive Officer & President

Alfred R. Berkeley, III
Chairman
Princeton Capital Management, Inc.

Peter Gyenes
Non-Executive Chairman
Sophos Group PLC

Scott S. Ingraham
Principal
Zuma Capital

Charles F. Kane
Adjunct Professor
MIT Sloan Graduate Business
School of Managment

Jeffrey T. Leeds
President and Co-Founder
Leeds Equity Partners

Jason A. Wright
Partner
Apax Partners

Management Team

Stephen T. Winn
Chairman, Chief Executive Officer & President

W. Bryan Hill
Executive Vice President
Chief Financial Officer & Treasurer

Andrew Blount
Executive Vice President
Chief Innovation Officer

William P. Chaney
Executive Vice President
Chief Product Officer

Ashley Glover
Executive Vice President
Chief Operating Officer

David G. Monk
Executive Vice President
Chief Legal Officer & Secretary

Stockholder Information

Information about RealPage, Inc. and a copy of this 2017 Annual Report can be found online at http://investor.realpage.com, and a copy of the 2017 Annual Report may be obtained from RealPage at no charge, by request to Investor Relations at our corporate office, by phone at 972-820-3773 or by email to ir@realpage.com.

RealPage has filed with the Securities and Exchange Commission the Chief Executive Officer and Chief Financial Officer certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 as exhibits to its Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

Transfer Agent & Registrar
Computershare Trust Company, N.A.
462 South 4th Street
Suite 1600
Louisville, KY 40202

(800) 962-4284
https://www.computershare.com/us

Independent Registered Public Accounting Firm
Ernst & Young LLP

Annual Shareholder Meeting
June 5, 2018, 10:00 AM CDT
2201 Lakeside Blvd.
Richardson, Texas 75082

Corporate Headquarters

Headquarters
2201 Lakeside Blvd.
Richardson, Texas 75082
Toll-Free 1-87-REALPAGE
www.realpage.com

Stock Listing

NASDAQ Global Select Market
Symbol: RP

This document contains certain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on our management’s current expectations and are subject to uncertainty and changes in circumstances. Actual results may differ materially from these expectations due to certain factors, including those set forth under the caption “Risk Factors” contained herein.

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