

PEGASYSTEMS INC

FORM 10-K (Annual Report)

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

FORM 10-K

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

For the fiscal year ended December 31, 2015

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

Commission File No. 1-11859

PEGASYSTEMS INC.

(Exact name of Registrant as specified in its charter)

Massachusetts

(State or other jurisdiction of incorporation or organization)
(IRS Employer Identification No. 04-2787865)

One Rogers Street
Cambridge, MA
(Address of principal executive offices)

02142-1209
(zip code)

(617) 374-9600

(Registrant's telephone number, including area code)

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

Title of Each Class
Common Stock, \$0.01 par value per share

Name of Each Exchange on Which Registered
NASDAQ Global Select Market

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 Exchange 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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

Large accelerated filer Accelerated filer

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

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

The aggregate market value of the Registrant's common stock held by non-affiliates of the Registrant based on the closing price (as reported by NASDAQ) of such common stock on the last business day of the Registrant's most recently completed second fiscal quarter (June 30, 2015) was approximately \$826 million.

There were 76,271,224 shares of the Registrant's common stock, \$0.01 par value per share, outstanding on February 11, 2016.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive proxy statement related to its 2016 annual meeting of stockholders to be filed subsequently are incorporated by reference into Part III of this report.

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PART I

Forward-looking statements

This Annual Report on Form 10-K contains or incorporates forward-looking statements within the meaning of section 27A of the Securities Act of 1933 and section 21E of the Securities Exchange Act of 1934. These forward-looking statements are based on current expectations, estimates, forecasts, and projections about the industry and markets in which we operate and on management's beliefs and assumptions. Other written or oral statements that constitute forward-looking statements may be made by us or on our behalf. Words such as "expect," "anticipate," "intend," "plan," "believe," "could," "estimate," "may," "target," "strategy," "is intended to," "project," "guidance," or variations of such words and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties, and assumptions that are difficult to predict. We have identified certain risk factors included in Item 1A of this Annual Report on Form 10-K that we believe could cause our actual results to differ materially from the forward-looking statements we make. We do not intend to update publicly any forward-looking statements, whether as a result of new information, future events, or otherwise.

ITEM 1. Business

Pegasystems Inc. was incorporated in Massachusetts in 1983. Our stock is traded on the NASDAQ Global Select Market under the symbol PEGA. Our Website address is www.pegacom. We are not including the information contained on our Website as part of, or incorporating it by reference into, this Annual Report on Form 10-K. Unless the context otherwise requires, references in this Annual Report on Form 10-K to "the Company," "Pega," "we," "us," or "our" refer to Pegasystems Inc. and its subsidiaries.

Our business: Applications Engineered for Evolution

We believe business success requires that organizations become digital, and that a new generation of strategic applications can accelerate how organizations become modern digital enterprises. We develop, market, license, and support strategic software applications for marketing, sales and onboarding, customer service, and operations, in addition to licensing our Pega 7 platform for clients that wish to build and extend their own applications. Our software is designed to assist clients in building, deploying, and evolving strategic enterprise applications, creating an environment in which business and IT can collaborate to manage back-office operations, front office sales, marketing, and/or customer service needs.

Our strategic applications are built on Pega 7, our unified on-cloud and on-premises platform ("Pega 7" or "Pega 7 platform"). Pega 7 uses a comprehensive set of visual models to build applications: process models, predictive analytics, user experience ("UX") designs, decision logic, etc. This visual, model-based approach is designed to be faster in building, deploying, and evolving strategic applications than traditional programming, and to empower our clients to better engage their customers, simplify processes, and turn the power of change into a competitive advantage.

Our applications and platform intersect with and encompass several traditional software markets, including: Customer Relationship Management ("CRM"), Business Process Management ("BPM"), Business Rules Management Systems ("BRMS"), Dynamic Case Management ("DCM"), Decision Management, including Predictive and Adaptive analytics, and the Vertical Specific Software ("VSS") market of industry solutions and packaged applications.

We also provide consulting services and implementation support, training, and technical support services to help clients maximize the business value from our software. Our clients include Global 3000 companies and government agencies that seek to manage complex enterprise systems and customer service issues more nimbly and cost-effectively. Our strategy is to sell a client a series of licenses, each focused on a specific purpose or area of operations.

Our partners

We maintain alliances with global systems integrators and technology consulting firms that provide consulting services to our clients. Strategic partnerships with technology consulting firms and systems integrators are important to our sales efforts because they influence buying decisions, help us to identify sales opportunities, and complement our software with their domain expertise and services capabilities. These partners may deliver strategic business planning, consulting, project management, and implementation services to our clients. Currently, our partners include well respected, major firms such as Accenture PLC, Atos SE, Capgemini SA, Cognizant Technology Solutions Corporation, EY, Infosys Limited, Tech Mahindra Limited, PricewaterhouseCoopers LLP, Tata Consultancy Services Limited, Virtusa Corporation, and Wipro Limited.

Our products

Pega's applications help streamline business operations, connect enterprises to their customers in real-time across channels, and adapt to meet changing requirements. Our applications can be deployed in the cloud or on-premises, providing our clients with the flexibility to operate the software according to their own preferences.

Pega 7

Pega 7 is a unified platform that enables clients to build enterprise applications in a fraction of the time it would take using traditional programming technologies. Pega 7 is engineered to support complex, global enterprises, allowing for application development and deployment on a patented, layered architecture that supports reuse across lines of business, geographies, and customer segments. Our platform features a model-driven, visual, code-free approach to application development that enables business and IT to collaborate, using a visual "language" that models the requirements and design of the application through readily understandable metaphors. This agile approach facilitates continuous improvement methodologies, such as Lean Six Sigma, to effectively manage individual projects or help drive a complete enterprise transformation. All aspects of the application are captured in the model, including business strategy mapping, business processes, data models, case definitions, rules, decisions, reporting, interfaces, intelligent work management capabilities, business activity monitoring, and the UX across both web and mobile devices.

Once defined this way, the finished application and documentation are generated and ready for use. Our approach bypasses the error-prone and time-consuming process of manually translating requirements into code. The software application is created automatically and directly from the model, helping to close the costly gap between vision and execution. Changes to the code are made by changing the model, and application documentation is generated directly from the model. The Pega 7 platform is standards-based and can leverage a client's existing technology to create new business applications that cross technology silos and bridge front and back-office. Pega 7 was previously marketed as PegaRULES Process Commander and the Build for Change platform.

Strategic Applications

Pegasystems also offers purpose or industry-specific software applications built on the Pega 7 platform. These applications for Marketing, Sales and Onboarding, Customer Service, and Operations provide a best-practice starting point as well as industry-specific business processes. As they are built on the Pega 7 platform, these applications deliver flexibility beyond traditional "commercial off the shelf" products. We believe our applications allow our clients to offer differentiated service and value to their customers. Pega 7 enables organizations to implement new processes quickly, refine customer experiences, bring new offerings to market, and provide customized or specialized processing to help meet the needs of different customers, departments, geographies, or regulatory requirements.

Pega Customer Relationship Management Applications

Pega's Customer Relationship Management Applications are designed to evolve to meet changing business needs. Our applications offer process-driven, customer-centric CRM software that maximizes the lifetime value of customers and helps reduce the costs of serving customers. We provide marketing, sales and onboarding, and customer service applications to optimize sales processes and customer service interactions.

Pega Marketing helps enterprises manage customer relationships across inbound and outbound channels. It incorporates predictive and adaptive analytics and business rules in real time to evaluate the context of each customer interaction, and dynamically recommends the most relevant action, offer, content, and channel.

Pega Sales Automation automates and manages the sales process from prospecting to product fulfillment. Our software allows enterprises to capture best practices, and guides sales teams through the sales and customer onboarding processes.

Pega Customer Service provides a contact center desktop, case management for customer service, mobile field service, self-service, and industry specific processes and data models. It allows enterprises to deliver consistent interactions across channels, adapt to changing business requirements, and improve employee productivity.

Pega provides *Operations Applications* to support a variety of business needs including risk, fraud, and compliance management; exceptions and investigations; order fulfillment; claims processing; insurance underwriting; and product development.

These applications incorporate and leverage many common technical capabilities. Our case management and business process technology facilitates the fulfillment of customer requests, while our Next-Best-Action analytics predict and adapt to customer behavior to improve both business outcomes and the customer experience.

Real-time decision management is incorporated into these applications to guide actions and optimize process outcomes based on business objectives. Capabilities for cross-sell/up-sell, retention, service recommendations, and collections that can be changed with model-driven tools, help businesses deploy automated decision-making quickly. The predictive and adaptive analytics incorporated into these applications support the creation and refinement of decision models to improve outcomes.

Social listening, text analytics, and natural language processing capabilities are also available in our Pega Customer Relationship Management Applications. These allow our clients to collect social content in tweets, blogs, and posts on Facebook or in other social communities, and enrich it by detecting language, topic, taxonomy, and sentiment. Using this capability, our clients are able to monitor, triage, and respond to social content across multiple channels, and turn it into actionable social intelligence.

Our Pega Co-Browse collaboration technology enables users to provide fast service by simultaneously "co-browsing" web pages with their customers. The technology is designed to allow our clients to engage customers in real time, and can also be used to enable employees to collaborate on work across physical locations.

The Pega Mobility capabilities in our Pega 7 platform are designed to help clients efficiently build, manage, and deploy mobile applications as part of a unified Omni-channel experience. By using Pega Mobility, enterprises can deploy Pega applications as packaged, branded mobile applications and manage the complex elements of the mobile application lifecycle including security, integration, testing, and management of mobile applications and devices. Our mobile application development solutions help businesses to reduce the development time, deployment cost, and complexity associated with run-the-business mobile applications.

Pega Cloud®

Pega Cloud® allows clients to develop, test and deploy, on an accelerated basis, our strategic applications and Pega 7 platform using a secure, flexible Internet-based infrastructure. Pega Cloud provides production and development and testing (“Dev/Test”) services to accelerate the development and deployment of Pegasystems’s strategic applications and the Pega 7 platform. This allows our clients to minimize infrastructure cost while focusing on their core revenue generating competencies.

Our services and support

We offer services and support through our global customer success group, our global customer support group, and our PegaACADEMY training services group. We also utilize third party contractors to assist us in providing these services.

Global Customer Success

Our Global Customer Success group combines our sales and Pega consulting groups and provides guidance and implementation services to our clients and partners on how to best apply our technology and develop strong implementation expertise.

Global Customer Support

Our Global Customer Support group is responsible for technical support of our products. Support services include managing the online Support Community, proactive problem prevention through education and knowledge sharing, and problem tracking, prioritization, escalation, diagnosis, and resolution.

PegaACADEMY – Training Services

The success of our sales strategy for multiple follow-on sales to target clients depends on our ability to train a large number of partners and clients to implement our technology. We offer instructor-led and online training for our staff, clients, and partners. Instructor-led training is offered at our regional training facilities in North America, the United Kingdom, India, Australia, and at third-party facilities in numerous other locations, including client sites. Online training is a convenient and cost effective way to learn our software anytime, anywhere. We expect online training to continue to help expand the number of trained and certified experts globally. We have also partnered with universities to offer Pega courseware as part of the student curriculum, taught by Pega instructors and university professors to expand our ecosystem. Our courses are designed to meet the specific requirements of various project implementation roles to include both business and system architects, system administrators, and project leaders.

Our markets

Our target clients are industry-leading Global 3000 organizations that require strategic applications to differentiate them in the markets they serve by increasing business agility, driving growth, improving productivity, attracting and retaining customers, and reducing risk. We deliver applications tailored to our clients’ specific industry needs. We also enable enterprise transformation initiatives by providing an application development platform that digitizes end-to-end processes and allows for multi-channel customer interactions, all enhanced by Next-Best-Action analytics.

Our clients are Global 3000 organizations in the financial services, healthcare, insurance, communications and media, public sector, manufacturing, and life sciences markets.

Financial Services

Financial services organizations rely on software to market, onboard, cross-sell, retain, and service their customers as well as automate the operations that support these customer interactions. Our customer service, sales and new account onboarding, Know Your Customer (“KYC”), marketing, collections, and dispute management applications allow clients to be responsive to changing business requirements.

Healthcare

Healthcare organizations seek software that integrates their front and back-offices and helps them deliver personalized care and customer service while reducing cost, automating processes, and increasing operational efficiency. Our applications allow healthcare clients to address sales, service, operations, financial, administrative, and coverage requirements of healthcare consumerism and reform.

Insurance

Insurance companies, whether competing globally or nationally for customers and channels, need software to automate the key activities of distribution management, quoting, underwriting, claims, and policy servicing. Insurers are also becoming increasingly sensitive to ways to improve customer service and the overall customer experience. Our applications for insurance carriers help increase business value by delivering customer-focused experiences and personalized interactions that help drive higher sales, lower expense ratios, and mitigate risk.

Communications and Media

Communications and media organizations need to address high levels of customer churn, growing pressure to increase revenue, and an ability to respond quickly to changing market conditions. Our applications enable organizations to reshape the way they market and sell to customers, streamline onboarding and fulfillment operations, and bring new services and products to market.

Public Sector

Government agencies need to modernize legacy systems and processes to meet the growing demands for improved constituent service, lower costs, reduced fraud and greater levels of transparency. Our applications deliver advanced capabilities to streamline operations and optimize service delivery through an agile, omni-channel approach.

Manufacturing

Manufacturers worldwide are transforming their businesses to better engage customers and suppliers, as well as to directly manage the performance of their products—from the earliest designs and throughout the product life-cycle. Our manufacturing applications address field service; help reduce supplier risk; manage warranties, recalls, repairs, and returns; and extend existing enterprise resource planning system capabilities.

Life Sciences

Life sciences organizations are looking for solutions to improve customer engagement as well as increase efficiencies and transparency across the product development life-cycle. Our customer engagement, clinical, and pharmacovigilance applications are designed to deliver customer engagement, safety and risk management, and regulatory transparency.

Other Industries

We offer software to a broad range of other types of companies and industries. For example, we sell our applications and platform to clients in transportation, retail, travel, energy, utilities, and other services.

Competition

We compete in the CRM (which includes marketing, sales, and customer service), BPM, Case Management, Decision Management, co-browsing, social engagement, and mobile application development platform software markets, as well as in markets for the vertical applications we provide (e.g. KYC for Financial Services, Pharmacovigilance for Life Sciences). These markets are intensely competitive, rapidly changing, and highly fragmented, as current competitors expand their product offerings and new companies enter the market. Competitors vary in size and in the scope and breadth of the products and services they offer. We encounter competition from:

- BPM vendors, including Service-Oriented Architecture (“SOA”) middleware vendors such as IBM, Oracle Corporation, Software AG, and Tibco Software Inc., and other BPM vendors such as Appian Corporation and the Cordys division of Open Text;
- Case Management vendors such as the Documentum division of EMC Corporation, the FileNet division of IBM’s Information Management Group, and the BPM/Case Management division of Open Text;
- CRM application vendors such as Salesforce.com, the Siebel and RightNow divisions of Oracle, the Microsoft Dynamics CRM division of Microsoft, and IBM’s Unica Marketing product;
- Decision Management vendors including Business Rules Engine vendors such as the Operational Decision Management and SPSS divisions of IBM, the Blaze division of FICO, and Oracle Real-Time Decisions and vendors of solutions that leverage decision making in managing customer relationships including IBM Omni-Channel Marketing, SAS Customer Intelligence, Salesforce Marketing Cloud and Adobe Marketing Cloud;
- Companies that provide application specific software for the financial services, healthcare, insurance, and other specific markets such as Guidewire Software, Inc., the Detica NetReveal Division of BAE, SmartStream Technologies Ltd., SunGard, SAP, and the TriZetto division of Cognizant;
- Mobile application platform vendors including Kony, IBM, SAP and Red Hat, as well as open source mobile technologies, including the jQuery Mobile platform from the jQuery Foundation and Adobe PhoneGap;
- Co-browsing software providers, including Oracle’s RightNow Cobrowse Cloud Service;
- Social listening, text analytics, and natural language processing vendors, including Attensity, Visible Technologies, Conversocial, and Salesforce.com;
- Professional service organizations that develop their own products or create custom software in conjunction with rendering consulting services; and
- Clients’ in-house information technology departments, which may seek to modify their existing systems or develop their own proprietary systems.

We have been most successful competing for clients whose businesses are characterized by a high degree of change, complexity, or regulation. We believe that the principal competitive factors within our market include:

- Product adaptability, scalability, functionality, and performance;
- Proven success in delivering cost-savings and efficiency improvements;
- Proven success in enabling improved customer interactions;
- Ease-of-use for developers, business units, and end-users;
- Timely development and introduction of new products and product enhancements;
- Establishment of a significant base of reference clients;

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- Ability to integrate with other products and technologies;
- Customer service and support;
- Product price;
- Vendor reputation; and
- Relationships with systems integrators.

We believe we are competitively differentiated as our unified Pega 7 platform is designed to allow both client business and IT staff, using a single, intuitive user interface, to build and evolve enterprise applications in a fraction of the time it would take with the types of disjointed architectures and tools offered by our competitors. In addition, our applications, built on the Pega 7 platform, provide the same level of flexibility and ability to adapt to our clients' needs. We believe we compete favorably due to our expertise in our target industries and our long-standing client relationships. We believe we compete less favorably on the basis of some of these factors with respect to our larger competitors, many of which have greater sales, marketing, and financial resources, more extensive geographical presence, and greater name recognition than we do. In addition, we may be at a disadvantage with respect to our ability to provide expertise outside our target industries. See "Risk Factors—The market for our offerings is intensely and increasingly competitive, rapidly changing, and highly fragmented." in Item 1A of this Annual Report on Form 10-K.

Intellectual Property

We rely primarily on a combination of copyright, patent, trademark, and trade secrets laws, as well as confidentiality and intellectual property agreements to protect our proprietary rights. We have obtained patents relating to our system architecture and products in strategic global markets. We enter into confidentiality, intellectual property ownership, and license agreements with our employees, partners, clients, and other third parties and control access to and ownership of software, services, documentation, and other proprietary information as means to protect our proprietary rights.

Sales and marketing

We market our software and services primarily through a direct sales force. In addition, strategic partnerships with management consulting firms and major systems integrators are important to our sales efforts because they influence buying decisions, help us identify sales opportunities, and complement our software and services with their domain expertise and professional services capabilities. We also partner with technology providers and application developers.

To support our sales efforts, we conduct a broad range of marketing programs, including awareness advertising, client and industry-targeted solution campaigns, trade shows, including our PegaWORLD user conference, solution seminars and Webinars, industry analyst and press relations, Web and digital marketing, community development, social media, and other direct and indirect marketing efforts. Our consulting staff, business partners, and other third parties also conduct joint and separate marketing campaigns that generate sales leads.

Sales by geography

Sales to clients based outside of the United States of America ("U.S.") represented approximately 45% of our total revenue during each of the last three fiscal years. We have derived substantially all of our operating revenue from the sale and support of one group of similar products and services during each of the last three fiscal years. The majority of our long-lived assets were located within the U.S. at the end of each of the last three fiscal years. See Note 18, "Geographic Information and Major Clients," included in the Notes to Consolidated

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Financial Statements included in Item 8 of this Annual Report on Form 10-K. See “Risk Factors—We face risks from operations and clients based outside of the U.S.” in Item 1A of this Annual Report on Form 10-K.

Research and development

Our development organization is responsible for product architecture, core technology development, product testing, and quality assurance. Our product development priority is to continue expanding the capabilities of our technology. We intend to maintain and extend the support of our existing strategic applications, and we may choose to invest in additional strategic applications which incorporate the latest business innovations. We also intend to maintain and extend the support of popular hardware platforms, operating systems, databases, and connectivity options to facilitate easy and rapid deployment in diverse information technology infrastructures. Our goal with all of our products is to enhance product capabilities, ease of implementation, long-term flexibility, and the ability to provide improved client service.

During 2015, 2014, and 2013, research and development expenses were approximately \$126.4 million, \$108.6 million, and \$79.7 million, respectively. See Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” of this Annual Report on Form 10-K for further discussion. We expect that we will continue to commit significant resources to our product research and development in the future to maintain our leadership position.

Employees

As of January 31, 2016, we had 3,333 employees worldwide, of which 1,453 were based in North America, 663 were based in Europe, and 1,217 were based in Asia Pacific.

Backlog of license, maintenance, and services

As of December 31, 2015, we had software license, maintenance, cloud, and services agreements with clients expected to result in future revenue (“backlog”) of approximately \$580.9 million, of which we expect approximately \$336.9 million to be recognized in 2016. As of December 31, 2014, we had approximately \$540.3 million in backlog. Under some of these agreements, we must fulfill certain conditions prior to recognizing revenue, and there can be no assurance when, if ever, we will be able to satisfy all such conditions in each instance. Backlog may vary in any given period depending on the amount and timing of when arrangements are executed, as well as the mix between perpetual license, term license, and cloud arrangements. Business conditions could change and, therefore, backlog may not be a reliable indicator of future financial performance. See Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” of this Annual Report on Form 10-K for more detail regarding backlog.

Available Information

We make available our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, and amendments to these reports, free of charge through our Website (www.pega.com/about/investors) as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the Securities and Exchange Commission (“SEC”). The SEC maintains a Website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov. We make available on our Website reports filed by our executive officers and Directors on Forms 3, 4, and 5 regarding their ownership of our securities. Our Code of Conduct, and any amendments to our Code of Conduct, are also available on our Website.

ITEM 1A. RISK FACTORS

The following important factors could cause our actual business and financial results to differ materially from those contained in forward-looking statements made in this Annual Report on Form 10-K or elsewhere by management from time to time.

Factors relating to our financial results

The timing of our license revenue is difficult to predict accurately, which may cause our quarterly operating results to vary considerably. A change in the number or size of high value license arrangements, or a change in the mix between perpetual licenses, term licenses, and Pega Cloud® subscriptions can cause our revenues to fluctuate materially from quarter to quarter. In the event that our clients choose term licenses or Pega Cloud subscriptions, we recognize the revenue over the license term or Pega Cloud subscription term, which may adversely affect our profitability in any period due to sales commissions being paid at the time of signing and the corresponding revenue being recognized over time. Other factors which may influence the predictability of our license revenue include: changes in customer budgets and decision-making processes that could affect both the timing and size of transactions; the deferral of license revenue to future periods due to the timing of the execution of an agreement or our ability to deliver the products or services; changes in our business model; and/or our ability to execute on our marketing and sales strategies.

We budget for our selling and marketing, product development, and other expenses based on anticipated future revenue. If the timing or amount of revenue fails to meet our expectations in any given quarter, our financial performance is likely to be adversely affected because only small portions of expenses vary with revenue. As a result, period-to-period comparisons of our operating results are not necessarily meaningful and should not be relied upon to predict future performance. If our revenues and operating results do not meet the expectations of our investors or securities analysts or fall below guidance we may provide to the market or due to other factors discussed elsewhere in this section, the price of our common stock may decline.

The number of our license arrangements has been increasing, and we may not be able to sustain this growth unless we and our partners can provide sufficient high quality consulting services, training, and maintenance resources to enable our clients to realize significant business value from our software. Our clients typically request consulting services and training to assist them in implementing our products. Our clients also purchase maintenance on our products in almost all cases. As a result, an increase in the number of license arrangements is likely to increase demand for consulting services, training, and maintenance relating to our products. Given that the number of our license arrangements has been increasing, we will need to provide our clients with more consulting services, training, and maintenance to enable our clients to realize significant business value from our software. We have been increasingly enabling our partners and clients through training to create an expanded universe of people that are skilled in the implementation of our products. However, if we and our partners are unable to provide sufficient high quality consulting services, training, or maintenance resources to our clients, our clients may not realize sufficient business value from our products to justify follow-on sales, which could impact our future financial performance. In addition, the growth required to meet the increased demand for our consulting services could strain our ability to deliver our services engagements at desired levels of profitability, thereby impacting our overall profitability and financial results.

We frequently enter into a series of licenses that are focused on a specific purpose or area of operations. If we are not successful in obtaining follow-on business from these clients, our financial performance could be adversely affected. We frequently enter into a series of licenses with our new clients that are focused on a specific purpose or area of operations. Once a client has realized the value of our software, we work with the client to identify opportunities for follow-on sales. However, we may not be successful in demonstrating this value to some clients, for reasons relating to the performance of our products, the quality of the services and support we provide for our products, or external reasons. Also, certain of our smaller clients may have limited additional sales opportunities available. For any of these clients, we may not obtain follow-on sales or the follow-

on sales may be delayed, and our license revenue could be limited. This could lower the total value of all transactions and adversely affect our financial performance.

Our consulting services revenue is dependent to a significant extent on closing new license transactions with clients. We derive a substantial portion of our consulting services revenue from implementation of new software licenses with our clients, both from implementations that are led by our consulting services staff and from implementations where we provide consulting to our partners and clients to support their implementations. Accordingly, it is imperative that we close more license transactions with our clients if we are to maintain or grow our consulting services revenue.

If we are unable to maintain vendor-specific objective evidence (“VSOE”) of fair value of our time and materials (“T&M”) consulting services arrangements, we may be required to delay the recognition of a portion of our revenue to future periods . We have established VSOE of fair value of our T&M consulting services in the Americas, Europe, and certain regions of Asia, based on the price charged when these services are sold separately. Significant competition within our industry has created pricing pressure on consulting services provided by technology companies. If we elect to discount our T&M consulting services pricing or otherwise introduce variability in our T&M consulting services arrangements to attract or retain clients, this could lead to an insufficient number of consistently priced T&M consulting services arrangements for us to maintain VSOE. If we do not have VSOE of fair value of our T&M consulting services, we may be required to recognize all revenue for these consulting services arrangements, including any bundled license, maintenance, and other services revenue, ratably over the longer of the software maintenance period or the service period.

Our financial results may be adversely affected if we are required to change certain estimates, judgments, and/or positions relative to our income and other taxes. In the ordinary course of conducting our global business enterprise, we cannot be certain of the ultimate tax outcome related to many transactions and calculations. Some of these uncertainties arise as a consequence of positions we have taken regarding valuation of deferred tax assets, transfer pricing for transactions with our subsidiaries, and potential challenges to nexus and tax credit estimates. We estimate our exposure to unfavorable outcomes related to these uncertainties and estimate the probability of such outcomes. Future realization of our deferred tax assets ultimately depends on the existence of sufficient taxable income within the available carryback or carryforward periods. We record a valuation allowance to reduce our deferred tax assets to an amount we believe is more likely than not to be realized. If our taxable income is not consistent with our expectations or the timing of income is not within the applicable carryforward period, we may be required to establish a valuation allowance on all or a portion of these deferred tax assets. Changes in our valuation allowance impact income tax expense in the period of adjustment. Although we believe our estimates are reasonable, no assurance can be given that the final tax outcome of these matters or our current estimates regarding these matters will not be different from what is reflected in our historical income tax provisions, returns, and accruals. Such differences, or changes in estimates relating to potential differences, could have a material impact, unfavorable or favorable, on our income tax provisions, require us to change the recorded value of deferred tax assets, and adversely affect our financial results. We are also subject to non-income taxes such as payroll, sales, use, value-added, net worth, property, and goods and services taxes in the U.S. and in various foreign jurisdictions. We are regularly under audit by tax authorities with respect to these non-income taxes and may have exposure to additional non-income tax liabilities which could have an adverse effect on our results of operations and financial condition.

If it became necessary to repatriate any of our foreign cash balances to the United States, we may be subject to increased income taxes, other restrictions, and limitations. As of December 31, 2015, approximately \$53.5 million of our cash and cash equivalents is held in our foreign subsidiaries. If we are unable to reinvest this cash outside of the U.S., we may have to repatriate some of our foreign cash to the U.S. which would increase our income tax liability. If it became necessary to repatriate these funds, we may be required to pay U.S. tax, net of any applicable foreign tax credits, upon repatriation. We consider the earnings of our foreign subsidiaries to be permanently reinvested and, as a result, U.S. taxes on such earnings have not been provided. It is impractical to estimate the amount of U.S. tax we could have to pay upon repatriation due to the complexity of the foreign tax credit calculations and other factors.

We are investing heavily in sales and marketing and support in anticipation of a continued increase in license arrangements, and we may experience decreased profitability or losses if we are unsuccessful in increasing the value of our license arrangements in the future to balance our growth in expenses. We have been increasing our investment in sales and marketing to meet increasing demand for our software by hiring additional sales and marketing personnel. We anticipate that we will need to provide our clients with more maintenance support as a result of this increase in demand, and also have been hiring additional personnel in this area. These investments have resulted in increased fixed costs that do not vary with the level of revenue. If the increased demand for our products does not continue, we could experience decreased profitability or losses as a result of these increased fixed costs. Conversely, if we are unable to hire sales and marketing personnel to meet future demand, we may not be able to achieve our sales and profitability targets.

Factors relating to our products and markets

We will need to acquire or develop new products, evolve existing ones, address any defects or errors, and adapt to technology change. Technical developments, client requirements, programming languages, and industry standards change frequently in our markets. As a result, success in current markets and new markets will depend upon our ability to enhance current products, address any product defects or errors, acquire or develop and introduce new products that meet client needs, keep pace with technology changes, respond to competitive products, and achieve market acceptance. Product development requires substantial investments for research, refinement, and testing. We may not have sufficient resources to make necessary product development investments. We may experience technical or other difficulties that will delay or prevent the successful development, introduction, or implementation of new or enhanced products. We may also experience technical or other difficulties in the integration of acquired technologies into our existing platform and applications. Inability to introduce or implement new or enhanced products in a timely manner could result in loss of market share if competitors are able to provide solutions to meet customer needs before we do, give rise to unanticipated expenses related to further development or modification of acquired technologies as a result of integration issues, and adversely affect future financial performance.

The market for our offerings is intensely and increasingly competitive, rapidly changing, and highly fragmented. We compete in the CRM sector, which includes marketing, sales, customer service, BPM, Case Management, Decision Management, co-browsing, social engagement, and mobile application development platform software markets, as well as in markets for the vertical applications we provide (e.g. KYC for Financial Services, Pharmacovigilance for Life Sciences). The markets for our software and related implementation, consulting, and training services are intensely competitive, rapidly changing, and highly fragmented. We currently encounter significant competition from internal information systems departments of potential or existing clients that develop custom software. We also compete with companies that target the BPM, Case Management, Decision Management, co-browsing, social engagement, and mobile application development platform markets as well as professional service organizations that develop custom software in conjunction with rendering consulting services. Competition for market share and pressure to reduce prices and make sales concessions are likely to increase. Many of our competitors, such as IBM, Oracle, and SAP, are large and have far greater resources and may be able to respond more quickly and efficiently to new or emerging technologies, programming languages, or standards or to changes in client requirements or preferences. Competitors may also be able to devote greater managerial and financial resources to develop, promote, and distribute products and to provide related consulting and training services. There can be no assurance that we will be able to compete successfully against current or future competitors or that the competitive pressures faced by us will not materially adversely affect our business, operating results, and financial condition. See “Business—Competition” in Item 1 of this Annual Report on Form 10-K.

The continued uncertainties in international economies may negatively impact our sales to, and the collection of receivables from, our clients. Our sales to, and our collection of receivables from, our clients may be impacted by adverse changes in global economic conditions. Changes in global economic conditions could impact the ability and willingness of our clients to make investments in technology, which in turn may delay or

reduce the number of purchases of our software and services. These factors could also impact the ability and willingness of these clients to pay their trade obligations and honor their contractual commitments under their noncancellable term licenses. These clients may also become subject to increasingly restrictive regulatory requirements, which could limit or delay their ability to proceed with new technology purchases and may result in longer sales cycles, increased price competition, and reductions in sales of our products and services. The financial uncertainties facing many of our clients and the industries in which they operate could negatively impact our business, operating results, and financial condition.

We have historically sold to the financial services, healthcare, insurance, and communications markets, and rapid changes or consolidation in these markets could affect the level of demand for our products. We have historically derived a significant portion of our revenue from clients in the financial services, healthcare, insurance, and communications markets, and sales to these markets are important for our future growth. Competitive pressures, industry consolidation, decreasing operating margins, regulatory changes, and privacy concerns affect the financial condition of our clients and their willingness to buy. In addition, clients' purchasing patterns in these industries for large technology projects are somewhat discretionary. The financial services and insurance markets are undergoing intense domestic and international consolidation and financial turmoil, and consolidation has been occurring in the healthcare and communications markets. Consolidation may interrupt normal buying behaviors and increase the volatility of our operating results. In recent years, several of our clients have been merged or consolidated, and we expect this to continue in the near future. Future mergers or consolidations may cause a decline in revenues and adversely affect our future financial performance. All of these factors affect the level of demand for our products from clients in these industries, and could adversely affect our business, operating results, and financial condition.

We rely on certain third-party relationships. We have a number of relationships with third parties that are significant to sales, marketing and support activities, and to product development efforts, including Pega Cloud hosting facilities. We rely on software and hardware vendors, large system integrators, and technology consulting firms to provide marketing and sales opportunities for the direct sales force and to strengthen our products through the use of industry-standard tools and utilities. We also have relationships with third parties that distribute our products. There can be no assurance that these companies, most of which have significantly greater financial and marketing resources, will not develop or market products that compete with ours in the future or will not otherwise end or limit their relationships with us. Further, the use of third-party hosting facilities requires us to rely on data security as it is provided by such third parties, which despite our due diligence may be or become less than adequate.

We face risks from operations and clients based outside of the U.S. Sales to clients located outside of the U.S. represented approximately 45% of our total revenue in the last three fiscal years. We market products and render consulting and training services to clients based outside of the U.S. including clients based in Canada, Europe, Latin America, Asia, and Australia. We have established offices in North America, Europe (including Russia and Turkey), Asia (including India), and Australia. We believe that growth will necessitate expanded international operations, requiring a diversion of managerial attention and increased costs. We anticipate hiring additional personnel to accommodate international growth, and we may also enter into agreements with local distributors, representatives, or resellers. If we are unable to do one or more of these things in a timely manner, our growth, if any, in our foreign operations may be restricted, and our business, operating results, and financial condition could be materially and adversely affected.

In addition, we may not be able to maintain or increase international market demand for our products. Additional risks inherent in our international business activities generally include:

- laws and business practices favoring local competitors;
- compliance with multiple, conflicting and changing governmental laws and regulations, including employment, tax, privacy and data privacy and protection laws and regulations, increased tariffs and other trade barriers;

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- the costs of localizing products for local markets, including translation into foreign languages and associated expenses;
- longer payment cycles and credit and collectability risk on our foreign trade receivables;
- difficulties in enforcing contractual and intellectual property rights;
- heightened fraud and anti-bribery awareness risks;
- treatment of revenue from international sources and changes to tax codes, including being subject to foreign tax laws, being liable for paying withholding income or other taxes in foreign jurisdictions, and other potentially adverse tax consequences (including restrictions on repatriating earnings and the threat of “double taxation”);
- managing our international operations, including increased accounting and internal control expenses;
- heightened risks of political and economic instability; and
- foreign currency exchange rate fluctuations and controls.

There can be no assurance that one or more of these factors will not have a material adverse effect on our foreign operations, and, consequently, on our business, operating results, and financial condition.

We are exposed to fluctuations in currency exchange rates that could negatively impact our financial results and cash flows. Because a significant portion of our business is conducted outside the U.S., we face exposure to adverse movements in foreign currency exchange rates. Our international sales are usually denominated in foreign currencies. The operating expenses of our foreign operations are also primarily denominated in foreign currencies, which partially offset our foreign currency exposure on our international sales. Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the British pound, Euro, Australian dollar, and Indian rupee, as compared to the U.S. dollar. These exposures may change over time as business practices evolve, and they could have a material adverse impact on our financial results and cash flows. We use foreign currency forward contracts (“forward contracts”) to hedge our exposure to changes in foreign currency exchange rates associated with our foreign currency denominated cash, accounts receivable, and intercompany receivables and payables held by our U.S. operating company and Pegasystems Limited, its United Kingdom (“U.K.”) subsidiary. These forward contracts have terms not greater than six months and are intended to partially mitigate exposure to the foreign currency transaction gains and losses. We do not enter into any hedging contracts for trading or speculative purposes. Our realized gain or loss with respect to foreign currency fluctuations will generally depend on the size and type of cross-currency exposures that we enter into; the currency exchange rates associated with these exposures and changes in those rates; whether we have entered into forward contracts to offset these exposures; and other factors. All of these factors could materially impact our operating results, financial condition, and cash flows.

Factors relating to our internal operations and potential liabilities

We depend on certain key personnel, and must be able to attract and retain qualified personnel in the future. The business is dependent on a number of key, highly skilled technical, managerial, consulting, sales, and marketing personnel, including our Chief Executive Officer who is also our founder and majority stockholder. The loss of key personnel could adversely affect financial performance. We do not have any significant key-man life insurance on any officers or employees and do not plan to obtain any. Our success will depend in large part on the ability to hire and retain qualified personnel, and rapidly replace and ramp up new management. The number of potential employees who have the extensive knowledge of computer hardware and operating systems needed to develop, sell, and maintain our products is limited, and competition for their services is intense, and there can be no assurance that we will be able to attract and retain such personnel. If we are unable to do so, our business, operating results, and financial condition could be materially adversely affected.

We may not be able to achieve the key elements of our strategy and grow our business as anticipated. We currently intend to grow our business by pursuing strategic initiatives. Key elements of our strategy include utilizing our network of partner alliances to support our growth strategies and developing the talent and organizational structure capable of supporting our growth targets. We may not be able to achieve one or more of our key initiatives. Our success depends on our ability to appropriately manage our expenses as we grow our organization; successfully execute our marketing and sales strategies; successfully incorporate acquired technologies into our unified Pega 7 platform; and develop new products or product enhancements. If we are not able to execute on these actions, our business may not grow as we anticipated, and our operating results could be adversely affected.

We may experience significant errors or security flaws in our product and services, and could face privacy, product liability, and/or warranty claims as a result. Despite quality testing prior to their release, software products frequently contain errors or security flaws, especially when first introduced or when new versions are released. Errors in our software products could affect the ability of our products to work with other hardware or software products, or could delay the development or release of new products or new versions of products. Additionally, the detection and correction of any security flaws can be time consuming and costly. Errors or security flaws in our software could result in the inadvertent disclosure of confidential information or personal data relating to our clients, employees, or third parties. Software product errors and security flaws in our products or services could expose us to privacy, product liability, and/or warranty claims as well as harm our reputation, which could impact our future sales of products and services. Typically, we enter into license agreements that contain provisions intended to limit the nature and extent of our risk of product liability and warranty claims. There is a risk that a court might interpret these terms in a limited way or could hold part or all of these terms to be unenforceable. Also, there is a risk that these contract terms might not bind a party other than the direct client. Furthermore, some of our licenses with our clients are governed by non-U.S. law, and there is a risk that foreign law might give us less or different protection. Although we have not experienced any material product liability claims to date, a product liability suit or action claiming a breach of warranty, whether or not meritorious, could result in substantial costs and a diversion of management's attention and our resources.

We face risks related to intellectual property claims or appropriation of our intellectual property rights. We rely primarily on a combination of copyright, trademark, and trade secrets laws, as well as intellectual property and confidentiality agreements to protect our proprietary rights. We also try to control access to and distribution of our technologies and other proprietary information. We have obtained patents in strategically important global markets relating to the architecture of our systems. We cannot assure that such patents will not be challenged, invalidated, or circumvented or that rights granted thereunder or the claims contained therein will provide us with competitive advantages. Moreover, despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or to obtain the use of information that we regard as proprietary. Although we generally enter into intellectual property and confidentiality agreements with our employees and strategic partners, despite our efforts our former employees may seek employment with our business partners, customers, or competitors, and there can be no assurance that the confidential nature of our proprietary information will be maintained. In addition, the laws of some foreign countries do not protect our proprietary rights to as great an extent as do the laws of the U.S. There can be no assurance that our means of protecting our proprietary rights will be adequate or that our competitors will not independently develop similar technology.

Other companies or individuals have obtained proprietary rights covering a variety of designs, processes, and systems. There can be no assurance that third parties, including clients, will not claim infringement by us with respect to current or future products. Although we attempt to limit the amount and type of our contractual liability for infringement of the proprietary rights of third parties, and also assert ownership of work product and intellectual property rights as appropriate, there are often exceptions, and we cannot be assured that limitations will be applicable and enforceable in all cases. Even if limitations are found to be applicable and enforceable, our liability to our clients for these types of claims could be material in amount given the size of certain of our transactions. We expect that software product developers will increasingly be subject to infringement claims as

the number of products and competitors in our industry segment grows and the functionality of products in different industry segments overlaps. Any such claims, with or without merit, could be time-consuming, result in costly litigation, cause product shipment and delivery delays, require us to enter into royalty or licensing agreements, or be precluded from making and selling the infringing products, if such proprietary rights are found to be valid. Royalty or licensing agreements, if required, may not be available on terms acceptable to us or at all, which could have a material adverse effect upon our business, operating results, and financial condition.

We are subject to increasingly complex and burdensome U.S. and foreign laws and regulations, and any failure to comply with these laws and regulations could subject us to, among other things, penalties and legal expenses that could harm our reputation or have a material adverse effect on our business, financial condition and results of operations. We are subject to extensive federal, state, and foreign laws and regulations, including but not limited to the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, data privacy and security laws, and similar laws and regulations. The Foreign Corrupt Practices Act, the U.K. Bribery Act and similar foreign anti-bribery laws generally prohibit companies and their intermediaries from making improper payments for the purpose of obtaining or retaining business. Similar laws and regulations exist in many other countries throughout the world in which we do or intend to do business. Data privacy laws and regulations in Europe, Australia, Latin America and elsewhere are undergoing rapid transformation towards increased restrictions. For example, the European Court of Justice recently invalidated the U.S.-EU Safe Harbor framework that had been in place since 2000, which allowed companies to meet certain European legal requirements for the transfer of personal data from the European Economic Area to the United States. While other legal mechanisms to lawfully transfer such data remain, the invalidation of the U.S.-EU Safe Harbor framework may result in different European data protection regulators applying differing standards for the transfer of personal data.

We have developed and implemented a compliance program based on what we believe are current best practices, including the background checking of all of our current partners and of prospective clients and partners, but we cannot guarantee that we, our employees, our consultants, or our contractors are or will be in compliance with all federal, state, and foreign regulations, particularly as we expand our operations outside of the U.S. If we or our representatives fail to comply with any of these laws or regulations, a range of fines, penalties, and/or other sanctions could be imposed on us, which could have a material adverse effect on our business, financial condition, and results of operations. Even if we are determined not to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which could also have an adverse effect on our business, financial condition, and results of operations. In addition, regulation of data privacy and security laws is increasing worldwide, including various restrictions on cross-border access or transfer of data, including personal data of our employees, our clients, and customers of our clients. Compliance with such regulations may increase our costs and there is a risk of enforcement of such laws resulting in damage to our brand as well as financial penalties, which could be significant.

We face risks related to outages, data losses, and disruptions of our online services if we fail to maintain an adequate operations infrastructure. Our increasing user traffic for Pega Cloud services demands more computing power. It requires that we maintain an Internet connectivity infrastructure that is robust and reliable within competitive and regulatory constraints that continue to evolve. Inefficiencies or operational failures, including temporary or permanent loss of client data, power outages, or telecommunications infrastructure outages, could diminish the quality of our user experience resulting in contractual liability, claims by clients and other third parties, damage to our reputation, loss of current and potential clients, and harm to our operating results and financial condition.

Security of our systems and of global client data is a growing challenge on many fronts. Cyber-attacks and security breaches may expose us to significant legal and financial liabilities. Our Pega Cloud services involve the storage and transmission of clients' personal data and other proprietary information, and security breaches could expose us to a risk of loss of this information, litigation, and liability. High-profile security breaches at other companies have increased in recent years, and security industry experts and government

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officials have warned about the risks of hackers and cyber-attackers targeting information technology products and businesses. Threats to Information Technology (“IT”) security can take a variety of forms. Individual hackers, groups of hackers, and sophisticated organizations including state-sponsored organizations or nation-states themselves, may take steps that pose threats to our clients and to our IT structure.

Our security measures, and those of our clients, may be breached as a result of third-party actions, or that of employees, consultants, or others, including intentional misconduct by computer hackers, system error, human error, technical flaws in our products, or otherwise. Because the techniques used to obtain unauthorized access 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 preventative measures. While we have invested in the protection of our data and systems and of our clients’ data to reduce these risks, there can be no assurance that our efforts will prevent breaches. Security breaches could expose us and our clients to a risk of loss or misuse of this information. Any security breach could result in a loss of confidence in the security of our service, damage our reputation, disrupt our business, lead to legal liability, and negatively impact our future sales. We carry data breach insurance coverage to mitigate the financial impact of such potential legal liability, though this may prove insufficient in the event of a breach.

Additionally, our Pega Cloud computing service offering allows clients to create and deploy Pega 7-based applications using an Internet-based infrastructure. This offering involves the hosting of clients’ applications which may contain confidential information, including personal and financial data regarding their end customers, on the servers of a third-party technology provider. We also rely on third-party systems and technology including encryption, virtualized infrastructure, and support. Because we do not control the transmissions between our clients and our third-party technology providers, the processing of data on the servers of the third-party technology providers, or the internal controls maintained by the third-party technology providers that could prevent unauthorized access and provide appropriate data encryption, we cannot ensure the complete integrity or security of such transmissions processing, or controls. In addition, privacy and security concerns in some parts of the world may inhibit demand for our Pega Cloud offering or lead to requirements to provide our products or services in configurations that may increase the cost of serving such markets.

In order to defend against security threats, we need to continuously engineer more secure products and services; enhance security and reliability features; improve the deployment of software updates to address security vulnerabilities; develop mitigation technologies that help to secure clients from attacks; and maintain the digital security infrastructure that protects the integrity of our network, products, and services. The cost of these steps could negatively impact our operating margins.

The acquisition of other businesses and technologies may present new risks. In the past, we have undertaken acquisitions and we continue to evaluate and consider other potential strategic transactions, including domestic and international acquisitions of businesses, technologies, services, products, and other assets. These acquisitions, if undertaken, may involve significant new risks and uncertainties, including distraction of management attention away from our current business operations, insufficient new revenue to offset expenses, inadequate return on capital, integration challenges, new regulatory and/or legal requirements, new third-party intellectual property infringement claims related to the acquired technology and/or services, dilution of shareholder value, cross border legal issues, and issues not discovered in our due diligence process. No assurance can be given that such acquisitions will be successful and will not adversely affect our profitability or operations.

ITEM 1B. Unresolved Staff Comments

None.

ITEM 2. Properties

Our principal administrative, sales, marketing, support, and research and development operations are located in Cambridge, Massachusetts in an approximately 185,000 square foot leased facility. Our lease expires in 2023,

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subject to our option to extend for two additional five-year periods. We also lease space for our other offices in North America, Europe, and the Asia Pacific under leases that expire at various dates through 2021. We periodically evaluate the adequacy of existing facilities and additional facilities in new cities, and we believe that additional or alternative space will be available as needed in the future on commercially reasonable terms.

See Note 13 “Commitments and Contingencies,” in the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for more information about our lease commitments.

ITEM 3. Legal Proceedings

None.

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****Stock Split**

On March 6, 2014, our Board of Directors approved a two-for-one stock split of our common stock, effected in the form of a common stock dividend (the “Stock Split”). On April 1, 2014, each stockholder of record at the close of business on March 20, 2014 (the “Record Date”) received as a dividend, one additional share of common stock, par value \$0.01, for each share of common stock held on the Record Date. The number of common shares and per share amounts for all prior periods presented in this Annual Report on Form 10-K have been retroactively restated to reflect the Stock Split, except as otherwise noted.

Market Information

Our common stock is quoted on the NASDAQ Global Select Market (“NASDAQ”) under the symbol “PEGA.” The following table sets forth the range of high and low sales prices of our common stock on NASDAQ for each quarter in the years ended December 31:

	Common Stock Price ⁽¹⁾			
	2015		2014	
	High	Low	High	Low
First Quarter	\$23.44	\$19.20	\$24.85	\$17.07
Second Quarter	\$24.09	\$20.65	\$21.79	\$15.51
Third Quarter	\$27.91	\$22.26	\$23.38	\$19.10
Fourth Quarter	\$30.23	\$24.04	\$21.95	\$18.46

(1) The historical per share amounts presented above reflect the impact of the Stock Split. See “Stock Split” above.

Holders

As of February 11, 2016, we had approximately 23 stockholders of record and approximately 11,000 beneficial owners of our common stock.

Dividends

In July 2006, we began paying a quarterly cash dividend of \$0.03 per share of common stock. This represents \$0.015 per share of common stock giving effect to the Stock Split. On May 27, 2014, we announced an increase in our quarterly common stock cash dividend to \$0.03 per share. Quarterly cash dividends are expected to continue at \$0.03 per share, subject to change or elimination at any time by our Board of Directors.

Issuer Purchases of Equity Securities

The following table sets forth information regarding our repurchases of our common stock during the fourth quarter of 2015.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Share Repurchase Program (1)	Approximate Dollar Value of Shares That May Yet Be Purchased at Period End Under Publicly Announced Share Repurchased Programs (1) (in thousands)
10/1/2015 – 10/31/2015	99,948	\$ 25.86	99,948	\$ 43,485
11/1/2015 – 11/30/2015	41,290	\$ 29.04	41,290	\$ 42,286
12/1/2015 – 12/31/2015	62,459	\$ 28.04	62,459	\$ 40,534
Total	<u>203,697</u>	\$ 27.17		

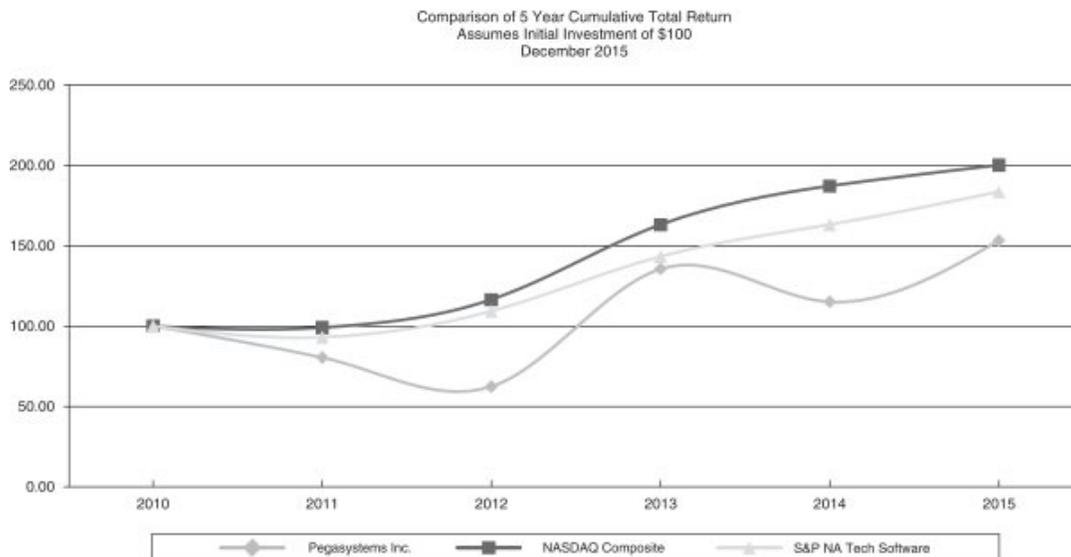
- (1) Since 2004, our Board of Directors has approved stock repurchase programs that have authorized the repurchase, in the aggregate, of up to \$169 million of our common stock.

On June 4, 2015, we announced that our Board of Directors extended the expiration date of the current stock repurchase program (the “Current Program”) to June 30, 2016 and authorized the Company to repurchase up to an additional \$50 million of our stock between June 4, 2015 and June 30, 2016. Under the Current Program, purchases may be made from time to time on the open market or in privately negotiated transactions. Shares may be repurchased in such amounts as market conditions warrant, subject to regulatory and other considerations. We have established a pre-arranged stock repurchase plan, intended to comply with the requirements of Rule 10b5-1 under the Securities Exchange Act of 1934, as amended, and Rule 10b-18 of the Exchange Act (the “10b5-1 Plan”). All share repurchases under the Current Program during closed trading window periods will be made pursuant to the 10b5-1 Plan.

We net settle the majority of our employee stock option exercises and restricted stock unit (“RSU”) vestings, which results in the withholding of shares to cover the option exercise price and the minimum statutory withholding tax obligations that we are required to pay in cash to the applicable taxing authorities on behalf of our employees. We do not consider these transactions to be common stock repurchases.

Stock Performance Graph and Cumulative Total Stockholder Return

The following performance graph represents a comparison of the cumulative total stockholder return (assuming the reinvestment of dividends) for a \$100 investment on December 31, 2010 in our common stock, the Total Return Index for the NASDAQ Composite (“NASDAQ Composite”), a broad market index, and the Standard & Poors (“S&P”) North American Technology Sector -Software Index™ (“S&P NA Tech Software”), a published industry index. We paid dividends of \$0.12 per share during 2015, \$0.09 per share during 2014, \$0.045 per share during 2013, \$0.075 per share during 2012, and \$0.06 per share during 2011, respectively. The graph lines merely connect measurement dates and do not reflect fluctuations between those dates.



	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015
Pegasystems Inc.	\$ 100.00	\$ 80.52	\$ 62.38	\$ 135.70	\$ 115.21	\$ 153.31
NASDAQ Composite	\$ 100.00	\$ 99.17	\$ 116.48	\$ 163.21	\$ 187.27	\$ 200.31
S&P NA Tech Software	\$ 100.00	\$ 93.15	\$ 109.38	\$ 143.40	\$ 163.30	\$ 183.70

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ITEM 6. Selected Financial Data

The selected financial data presented below has been derived from our audited consolidated financial statements. This data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations”, the consolidated financial statements, and accompanying notes.

(in thousands, except per share amounts)	Year Ended December 31,				
	2015	2014	2013	2012	2011
Consolidated Statements of Operations Data:					
Total revenue	\$ 682,695	\$ 590,004	\$ 508,954	\$ 461,710	\$ 416,675
Income from operations	64,661	51,539	58,097	31,426	10,494
Income before provision for income taxes	60,505	47,994	56,393	30,945	10,813
Net income	36,322	33,255	38,043	21,868	10,108
Earnings per share:					
Basic (1)	\$ 0.47	\$ 0.44	\$ 0.50	\$ 0.29	\$ 0.13
Diluted (1)	\$ 0.46	\$ 0.42	\$ 0.49	\$ 0.28	\$ 0.13
Cash dividends declared per common share	\$ 0.12	\$ 0.105	\$ 0.06	\$ 0.06	\$ 0.06

- (1) The number of common shares and per share amounts have been retroactively restated for all prior periods presented to reflect the two-for-one common stock split effected in the form of a common stock dividend distributed on April 1, 2014. See Item 5 “Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities—Stock Split” of this Annual Report on Form 10-K for further discussion of the Stock Split.

(in thousands)	Year Ended December 31,				
	2015	2014	2013	2012	2011
Consolidated Balance Sheet Data:					
Total cash, cash equivalents, and marketable securities	\$ 219,078	\$ 211,216	\$ 156,692	\$ 122,985	\$ 111,432
Working capital	191,677	163,448	157,823	123,885	89,716
Intangible assets, net of accumulated amortization	33,418	45,664	56,574	58,232	69,369
Goodwill	46,776	46,860	43,469	20,451	20,451
Total assets	627,758	587,801	536,480	439,492	381,711
Total stockholders’ equity	322,859	294,705	271,788	236,479	208,756

The following items impact the comparability of our consolidated financial data:

- Our acquisition of Antenna Software, Inc. in October 2013.
- Foreign currency transaction (losses) gains of \$(4.2) million, \$(3.8) million, \$(1.6) million, \$0.8 million, and \$(0.9) million, during the years ended December 31, 2015, 2014, 2013, 2012, and 2011, respectively. See Item 7A “Quantitative and Qualitative Disclosure about Market Risk” for further discussion of our foreign currency exchange rate risk.

ITEM 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations**BUSINESS OVERVIEW**

We develop, market, license, and support strategic software applications for marketing, sales and onboarding, customer service, and operations, in addition to licensing our Pega 7 platform for clients that wish to build and extend their own applications. Pega 7 assists our clients in building, deploying, and evolving enterprise applications, creating an environment in which business and IT can collaborate to manage back office operations, front office sales, marketing, and/or customer service needs. We also provide consulting services, maintenance, and training for our software, as well as a variety of applications. Our applications and Pega 7 can be deployed in the cloud or on-premises.

Pega 7 and our related applications are used by our clients in the financial services, healthcare, insurance, communications and media, public sector, manufacturing, life sciences, and other markets. We sell our software directly, and also through a network of business and technology alliances. Our partners include major systems integrators, management consulting firms, technology providers, and application developers.

Our clients include Global 3000 companies and government agencies that seek to manage complex enterprise systems and customer service issues more nimbly and cost-effectively. Our strategy is to sell a client a series of licenses, each focused on a specific purpose or area of operations.

In 2015, 2014, and 2013, sales to clients based outside of the United States of America (“U.S.”) represented approximately 45% of our total revenue. See Note 18, “Geographic Information and Major Clients,” included in the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for further detail on our geographic revenues.

Our license revenue is primarily derived from sales of our applications in the areas of marketing, sales and onboarding, customer service, and operations, as well our Pega 7 platform. Our consulting services revenue is primarily related to new license implementations. Our consulting services revenue may be lower in future periods as our clients become enabled and our partners lead more projects. We offer training for our staff, clients, and partners at our regional training facilities and at third-party facilities, including client sites. Our online training through PegaACADEMY provides an alternative way to learn our software in a virtual environment. We believe that this online training will continue to expand the number of trained experts at a faster pace.

We continue to invest heavily in research and development to improve our software. Our research and development operations are primarily located in the U.S., India, and Poland. We also regularly evaluate acquisitions or investment opportunities in complementary businesses, services and technologies, and intellectual property rights in an effort to expand and enhance our product offerings.

(Dollars in thousands, except per share amounts)	Year Ended December 31,			Increase (Decrease)		% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013	2015 vs. 2014	2014 vs. 2013
Total revenue	\$682,695	\$590,004	\$508,954	\$ 92,691	\$ 81,050	16%	16%
License revenue	\$275,588	\$232,336	\$191,876	\$ 43,252	\$ 40,460	19%	21%
Diluted earnings per share	\$ 0.46	\$ 0.42	\$ 0.49	\$ 0.04	\$ (0.07)	10%	(14)%
Cash flow provided by operating activities	\$ 62,528	\$ 99,889	\$ 80,703	\$ (37,361)	\$ 19,186	(37)%	24%

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In addition to the above key financial metrics, management also focuses on aggregate license and cloud backlog. We compute license and cloud backlog by adding billed deferred license and cloud revenue as recorded on the balance sheet and license and cloud commitments, which are not billed and not recorded on our balance sheet. License and cloud backlog may vary in any given period depending on the amount and timing of when arrangements are executed, as well as the mix between perpetual, term and cloud license arrangements.

<i>(Dollars in thousands)</i>	As of December 31,			% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Total billed deferred license and cloud revenue	\$ 63,412	\$ 63,048	\$ 64,267	1%	(2)%
Total off-balance sheet license and cloud commitments	356,388	301,409	283,099	18%	6%
Total license and cloud backlog	\$419,800	\$364,457	\$347,366	15%	5%

To grow our business, we intend to:

- Lead the platform market for strategic business applications with a focus on mobile, analytics, and cloud;
- Continue to grow market share with our leading, differentiated front-office applications: Marketing, Sales and Onboarding, and Customer Service;
- Execute new-market growth initiatives, further expanding coverage within the Global 3000; and
- Build out our digital platform and continue to invest in awareness marketing to support the way today's clients want to buy.

Whether or not we are successful depends, in part, on our ability to:

- Successfully execute our marketing and sales strategies;
- Appropriately manage our expenses as we grow our organization;
- Develop new products or product enhancements; and
- Successfully incorporate acquired technologies into our applications and unified Pega 7 platform.

RESULTS OF OPERATIONS

<i>(Dollars in thousands)</i>	Year Ended December 31,			% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Total revenue	\$682,695	\$590,004	\$508,954	16%	16%
Gross profit	469,249	404,910	351,548	16%	15%
Total operating expenses	404,588	353,371	293,451	14%	20%
Income from operations	64,661	51,539	58,097	25%	(11)%
Income before provision for income taxes	60,505	47,994	56,393	26%	(15)%

Revenue

Software license revenue

<i>(Dollars in thousands)</i>	Year Ended December 31,						% Change	
	2015		2014		2013		2015 vs. 2014	2014 vs. 2013
Perpetual licenses	\$ 166,305	60%	\$ 136,154	59%	\$ 122,644	64%	22%	11%
Term licenses	101,604	37%	88,813	38%	62,711	33%	14%	42%
Subscription	7,679	3%	7,369	3%	6,521	3%	4%	13%
Total software license revenue	\$275,588	100%	\$232,336	100%	\$191,876	100%	19%	21%

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The mix between perpetual and term license arrangements executed in a particular period varies based on client needs. A change in the mix between perpetual and term license arrangements executed may cause our revenues to vary materially from period to period. A higher proportion of term license arrangements executed would result in more license revenue being recognized over longer periods as payments become due or earlier if prepaid. Additionally, some of our perpetual license arrangements include extended payment terms or additional rights of use, which also result in the recognition of revenue over longer periods. The aggregate value of new license agreements executed also fluctuates quarter to quarter.

Subscription revenue primarily consists of the ratable recognition of license, maintenance, and bundled services revenue on license arrangements that include a right to successor products or unspecified future products. Subscription revenue does not include revenue from our Pega Cloud arrangements, which is included in services revenue. The timing of client scheduled payments under subscription arrangements may limit the amount of revenue recognized in a reporting period. Consequently, our subscription revenue may vary materially quarter to quarter.

2015 Compared to 2014

The aggregate value of new license arrangements executed during 2015 significantly increased compared to 2014, primarily due to a higher number and higher average value of arrangements executed in 2015. The higher average value was primarily due to three arrangements, each greater than \$10 million, executed in 2015 compared to only one executed in 2014. During 2015 and 2014, approximately 74% and 82%, respectively, of the value of new license arrangements were executed with existing clients.

The increase in perpetual license revenue was primarily due to revenue recognized from the higher volume and higher average value of arrangements executed in 2015 and the acceleration of the recognition of \$4.6 million in revenue from an existing license arrangement which was being recognized on a subscription basis. The aggregate value of payments due under noncancellable perpetual licenses was \$33.5 million as of December 31, 2015 compared to \$31.3 million as of December 31, 2014.

The increase in term license revenue was primarily due to prepayments of two arrangements executed in 2015. The aggregate value of payments due under noncancellable term licenses and our Pega Cloud arrangements grew to \$322.8 million as of December 31, 2015 compared to \$270.1 million as of December 31, 2014. See the table of future cash receipts in Liquidity and Capital Resources—Cash Provided by Operating Activities.

Subscription revenue is expected to decline in future periods due to the acceleration of the recognition of \$4.6 million in revenue discussed above.

2014 Compared to 2013

The aggregate value of new license arrangements executed during 2014 increased compared to 2013 due to a higher number of license arrangements executed in 2014. The increase in the aggregate value of license arrangements executed was primarily due to one perpetual license arrangement executed in the second quarter of 2014 for more than \$10 million, partially offset by a decrease in the value of new license arrangements executed in the fourth quarter of 2014. During 2014 and 2013, approximately 82% and 80%, respectively, of the value of new license arrangements were executed with existing clients.

The increase in perpetual license revenue was primarily due to the higher number and total value of license arrangements executed in 2014. The aggregate value of payments due under noncancellable perpetual licenses was \$31.3 million as of December 31, 2014 compared to \$30.7 million as of December 31, 2013.

The increase in term license revenue was primarily due to term license arrangements executed in 2014 and the second half of 2013. The aggregate value of payments due under noncancellable term licenses and our Pega

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Cloud arrangements grew to \$270.1 million as of December 31, 2014 compared to \$252.4 million as of December 31, 2013. See the table of future cash receipts in Liquidity and Capital Resources—Cash Provided by Operating Activities.

The increase in subscription revenue was primarily due to the timing of payments for a client arrangement.

Maintenance revenue

(Dollars in thousands)

	Year Ended December 31,			% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Maintenance	<u>\$202,802</u>	<u>\$186,239</u>	<u>\$157,309</u>	9%	18%

The increases in maintenance revenue were primarily due to the growth in the aggregate value of the installed base of our software and continued strong renewal rates.

Services revenue

(Dollars in thousands)

	Year Ended December 31,						% Change	
	2015		2014		2013		2015 vs. 2014	2014 vs. 2013
Consulting services	\$167,704	82%	\$149,628	87%	\$145,780	91%	12%	3%
Cloud	30,626	15%	16,614	10%	8,720	6%	84%	91%
Training	5,975	3%	5,187	3%	5,269	3%	15%	(2)%
Total services	<u>\$204,305</u>	<u>100%</u>	<u>\$171,429</u>	<u>100%</u>	<u>\$159,769</u>	<u>100%</u>	19%	7%

2015 Compared to 2014

Consulting services revenue represents revenue primarily from new license implementations. Our consulting services revenue may fluctuate in future periods depending on the mix of new implementation projects we perform as compared to those performed by our enabled clients or led by our partners. The increase in consulting services revenue was due to the higher number of projects and billable hours in 2015 compared to 2014.

Cloud revenue represents revenue from our Pega Cloud offerings. The increase in cloud revenue was primarily due to growth of our cloud client base.

2014 Compared to 2013

The increase in consulting services revenue was a result of revenue from Antenna and unusually low services revenue in the first quarter of 2013 mainly because many of our large fourth quarter 2012 license arrangements were for the purchase of additional usage, which did not require implementation services.

The increase in cloud revenue was primarily due to growth of our cloud client base and cloud revenue from Antenna.

Training revenue decreased slightly as a result of a higher number of clients taking courses through our PegaACADEMY self-service online training, which has a significantly lower average price per student as compared to our traditional instructor-led training.

[Table of Contents](#)**Gross Profit***(Dollars in thousands)*

	Year Ended December 31,			% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Software license	\$271,463	\$227,377	\$185,595	19%	23%
Maintenance	180,899	166,225	142,037	9%	17%
Services	16,887	11,308	23,916	49%	(53)%
Total gross profit	<u>\$469,249</u>	<u>\$404,910</u>	<u>\$351,548</u>	16%	15%
Total gross profit %	69%	69%	69%		
Software license gross profit %	99%	98%	97%		
Maintenance gross profit %	89%	89%	90%		
Services gross profit %	8%	7%	15%		

2015 Compared to 2014

The increase in total gross profit was primarily due to increases in software license and maintenance revenue.

The increase in services gross profit percent was primarily due to increased global professional services utilization rates in 2015 compared to 2014, partially offset by increased software license costs.

2014 Compared to 2013

The increase in total gross profit was primarily due to increases in software license and maintenance revenue.

The decrease in services gross profit percent was primarily due to increased subcontractor and employee-related costs associated with higher headcount, primarily related to Antenna. It was also due to two large implementation projects for which more revenue without any associated expenses was recognized in 2013 than in 2014. The associated expenses were incurred in prior periods. In addition, European professional services utilization rates declined 8% in 2014 compared to 2013, primarily due to the weakening overall economic conditions in Europe and the completion of a large project.

Operating expenses**Amortization of intangibles:***(Dollars in thousands)*

	Year Ended December 31,			% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Cost of revenue	\$ 5,392	\$ 6,017	\$ 6,443	(10)%	(7)%
Selling and marketing	6,127	6,022	5,174	2%	16%
General and administrative	683	1,770	396	(61)%	347%
	<u>\$12,202</u>	<u>\$13,809</u>	<u>\$12,013</u>	(12)%	15%

2015 Compared to 2014

The decreases were due to the full amortization in 2014 of acquired technology and other intangibles from our 2010 acquisition of Chordiant and our 2013 acquisition of Antenna.

[Table of Contents](#)*2014 Compared to 2013*

The increases were due to the amortization associated with \$10.4 million of intangibles acquired from Antenna in October 2013.

Selling and marketing

(Dollars in thousands)

	Year Ended December 31,			% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Selling and marketing	\$241,387	\$206,658	\$181,094	17%	14%
As a percent of total revenue	35%	35%	36%		
Selling and marketing headcount	750	661	598	13%	11%

Selling and marketing expenses include compensation, benefits, and other headcount-related expenses associated with our selling and marketing personnel as well as advertising, promotions, trade shows, seminars, and other programs. Selling and marketing expenses also include the amortization of customer related intangibles.

The increases in headcount reflect our efforts to increase our sales capacity to target new accounts in existing industries as well as to expand coverage in new industries and geographies, and to increase the number of our sales opportunities.

2015 Compared to 2014

The increase was primarily due to a \$14 million increase in compensation and benefit expenses associated with higher headcount, an \$11.4 million increase in sales and marketing programs expenses primarily related to our digital advertising and brand awareness campaigns, and a \$10 million increase in sales commissions associated with the higher value of new license arrangements executed in 2015 compared to 2014.

2014 Compared to 2013

The increase was primarily due to a \$14.2 million increase in compensation and benefit expenses associated with higher headcount, partially due to the Antenna acquisition, a \$5.6 million increase in marketing and sales program expenses primarily related to PegaWORLD, our annual user conference, a \$2.6 million increase in travel associated with the higher number of sales employees, and a \$0.8 million increase in amortization associated with our Antenna-customer related intangibles.

Effective January 1, 2014, we realigned the organizational structure of our product management and design team. As a result of this realignment, we changed the classification of this team's expenses from selling and marketing to research and development as the roles of the members of this team are now aligned with our research and development efforts. The decrease caused by this realignment partially offset the increase in headcount as well as the overall increase in selling and marketing expenses during 2014 compared to 2013.

Research and development

(Dollars in thousands)

	Year Ended December 31,			% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Research and development	\$126,374	\$108,591	\$79,726	16%	36%
As a percent of total revenue	19%	18%	16%		
Research and development headcount	1,222	1,085	913	13%	19%

Research and development expenses include compensation, benefits, contracted services, and other headcount-related expenses associated with the creation and development of our products as well as enhancements and engineering changes to existing products and integration of acquired technologies.

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The increases in headcount primarily reflect the growth in our India research facility. The increases in offshore headcount usually lower our average compensation expense per employee.

2015 Compared to 2014

The increase was primarily due to an \$11.9 million increase in compensation and benefit expenses associated with higher headcount, a \$1.4 million increase in outsourced hosting expenses, a \$1.4 million increase in expendable equipment and software license expenses, and an \$0.8 million increase in contracted professional services.

2014 Compared to 2013

The increase was primarily due to a \$20.9 million increase in compensation and benefit expenses associated with higher headcount, inclusive of the compensation and benefit expenses associated with Antenna and with our product management and design group included in research and development as a result of the 2014 realignment of our organizational structure, a \$2.3 million increase in computer and computer-related costs, and a \$1.8 million increase in contracted professional services.

General and administrative

(Dollars in thousands)

	Year Ended December 31,			% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
General and administrative	\$36,738	\$37,442	\$29,594	(2)%	27%
As a percent of total revenue	5%	6%	6%		
General and administrative headcount	353	310	271	14%	14%

General and administrative expenses include compensation, benefits, and other headcount-related expenses associated with finance, legal, corporate governance, and other administrative headcount. They also include accounting, legal, and other professional consulting and administrative fees.

The general and administrative headcount includes employees in human resources, information technology, and corporate services departments whose costs are allocated to our other functional departments.

2015 Compared to 2014

The decrease was primarily due to the recognition in the first quarter of 2015 of a \$1.8 million benefit from the settlement of our indemnification claims against the former Antenna shareholders and the \$1.6 million benefit from the settlement of certain indirect tax liabilities, partially offset by a \$2.2 million increase in compensation and benefit expenses associated with higher headcount.

2014 Compared to 2013

The increase was primarily due to a \$2.6 million increase in compensation and benefits associated with higher headcount, a \$2 million increase in professional fees primarily associated with legal and audit costs, and a \$1.4 million increase in amortization associated with our trademark and non-compete intangible assets.

Acquisition-related

Acquisition-related costs are expensed as incurred and include direct and incremental costs associated with an impending or completed acquisition. During 2015, 2014, and 2013, we incurred \$0.1 million, \$0.5 million, and \$1.3 million, respectively, of acquisition-related costs, consisting primarily of professional fees associated with our acquisition of Antenna and the acquisitions completed in 2014.

Restructuring

The restructuring expenses represent future lease payments and demising costs, net of estimated sublease income, for space acquired in connection with the Antenna acquisition. During the fourth quarter of 2013, we ceased use of some of this space as part of our integration of Antenna and recognized \$1.7 million in expenses. During the third quarter of 2014, we restructured the remaining space and revised our estimate of sublease income for the previously restructured space, recognizing \$0.2 million in restructuring expenses. See Note 12 “Accrued Restructuring” in the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for further discussion.

Stock-based compensation

We recognize stock-based compensation expense associated with equity awards in our consolidated statements of operations based on the fair value of these awards at the date of grant using the accelerated recognition method, while treating each vesting tranche as if it were an individual grant.

(Dollars in thousands)

	Year Ended December 31,			% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Stock-based compensation:					
Cost of revenues	\$ 8,772	\$ 5,335	\$ 4,085	64%	31%
Operating expenses	21,282	13,870	8,784	53%	58%
Total stock-based compensation before tax	30,054	19,205	12,869	56%	49%
Income tax benefit	(8,098)	(5,563)	(3,918)		

2015 Compared to 2014

The increase was primarily due to the higher value of the 2014 annual periodic equity grant compared to the 2013 grant, which occurred in March 2015 and 2014, respectively.

2014 Compared to 2013

The increase was primarily due to the timing of the 2013 and 2012 annual equity grants, which occurred in March 2014 and December 2012, respectively, as well as the higher value of the 2013 annual equity grant, executive new hire grants made since September 30, 2013, and awards granted in connection with the 2014 acquisitions.

See Note 15 “Stock-Based Compensation” in the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for further information on our stock-based awards.

Non-operating income and (expenses), net

(Dollars in thousands)

	Year Ended December 31,			% Change	
	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Foreign currency transaction loss	\$(4,168)	\$(3,769)	\$(1,593)	11%	137%
Interest income, net	1,056	683	524	55%	30%
Other expense, net	(1,044)	(459)	(635)	127%	(28)%
	<u>\$(4,156)</u>	<u>\$(3,545)</u>	<u>\$(1,704)</u>	17%	108%

We have historically used forward contracts to manage our exposure to changes in foreign currency exchange rates associated with cash, accounts receivable, and intercompany receivables and payables held by Pegasystems Inc., our U.S. operating company, in currencies other than the U.S. dollar.

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Effective April 1, 2015, our clients based outside the Americas began transacting with Pegasystems Limited, a U.K. subsidiary, which has the British pound as its functional currency. This reorganization resulted in increased cash, accounts receivable, and intercompany receivables and payables held by Pegasystems Limited in currencies other than the British pound.

We did not enter into any forward contracts between March 2014 and June 2015. In the third quarter of 2015, as a result of this operational reorganization, we implemented our revised hedging program, under which we hedge our non-functional currency exposures for Pegasystems Inc. and Pegasystems Limited, utilizing forward contracts with terms not greater than six months.

These forward contracts are not designated as hedging instruments. As a result, we record the fair value of the outstanding contracts at the end of the reporting period in our consolidated balance sheet, with any fluctuations in the value of these contracts recognized in other expense, net.

The total change in the fair value of our foreign currency forward contracts recorded in other expense, net, during 2015, 2014, and 2013 was a loss of \$1 million, \$0.5 million, and \$0.7 million, respectively.

See Note 4 “Derivative Instruments” in the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for discussion on our use of forward contracts.

Provision for income taxes

2015 Compared to 2014

The provision for income taxes represents current and future amounts owed for federal, state, and foreign taxes. During 2015 and 2014, we recorded a \$24.2 million and a \$14.7 million provision, respectively, which resulted in an effective tax rate of 40.0% and 30.7%, respectively.

Our effective income tax rate for 2015 increased above the statutory U.S. federal income tax rate primarily due to \$2.6 million of permanent differences related to nondeductible meals and entertainment expenses and foreign stock compensation and a \$0.5 million unfavorable impact related to losses generated in foreign jurisdictions that are subject to tax at a rate lower than the U.S. statutory tax rate.

Our effective income tax rate for 2014 was below the statutory U.S. federal income tax rate primarily due to a \$2.4 million benefit related to the current period domestic production activities deduction, a \$1.8 million benefit related to income generated in foreign jurisdictions that is subject to tax at a rate lower than the U.S. statutory tax rate, and a \$0.8 million benefit related to the 2014 federal research and experimentation (“R&E”) credit. These benefits were partially offset by \$1.8 million of permanent differences related to nondeductible meals and entertainment expenses and foreign stock compensation.

As of December 31, 2015, we had approximately \$24 million of total unrecognized tax benefits, which will decrease our effective tax rate if recognized. We expect that the changes in the unrecognized benefits within the next twelve months will be approximately \$0.5 million, all of which relate to the expiration of applicable statute of limitations and will reduce our effective tax rate if recognized.

2014 Compared to 2013

During 2014 and 2013, we recorded a \$14.7 million and an \$18.4 million provision, respectively, which resulted in an effective tax rate of 30.7% and 32.5%, respectively.

Our effective income tax rate for 2013 was below the statutory federal income tax rate due to a \$2.1 million benefit related to the current period domestic production activities deduction, a \$1.2 million benefit related to

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any applicable foreign tax credits, upon repatriation. We consider the earnings of our foreign subsidiaries to be permanently reinvested and, as a result, U.S. taxes on such earnings are not provided. It is impractical to estimate the amount of U.S. tax we could have to pay upon repatriation due to the complexity of the foreign tax credit calculations. There can be no assurance that changes in our plans or other events affecting our operations will not result in materially accelerated or unexpected expenditures.

Cash provided by operating activities

The primary drivers during 2015 were net income of \$36.3 million, and a \$17.7 million increase in deferred revenue primarily resulting from the difference in timing of billings and revenue recognition, partially offset by a \$62.2 million increase in accounts receivable primarily due to the timing of license and annual maintenance billings.

The primary drivers during 2014 were net income of \$33.3 million, a \$13.4 million increase in accounts payable and accrued expenses primarily due to the timing of income tax payments, and an \$11.2 million increase in deferred revenue primarily resulting from the difference in timing of billings and revenue recognition for annual maintenance.

The primary drivers during 2013 were net income of \$38 million and \$18.2 million in net inflows from operating asset and liability changes primarily due to the timing of payments for certain accrued expenses and additional tax liabilities associated with the Antenna acquisition.

Future Cash Receipts from License and Cloud Arrangements

Total contractual future cash receipts due from our existing license agreements was approximately \$356.4 million as of December 31, 2015; \$301.4 million as of December 31, 2014; and \$283.1 million as of December 31, 2013. The approximate timing of future cash receipts due as of December 31, 2015 are summarized as follows:

As of December 31, (in thousands)	Contractual payments for term licenses not recorded on the balance sheet ⁽¹⁾	Other contractual license payments not recorded on the balance sheet ⁽²⁾	Total
2016	\$ 116,617	\$ 20,379	\$ 136,996
2017	78,323	8,414	86,737
2018	63,043	4,128	67,171
2019	40,204	623	40,827
2020	24,657	—	24,657
Total	<u>\$ 322,844</u>	<u>\$ 33,544</u>	<u>\$ 356,388</u>

(1) These amounts include contractual future cash receipts related to our on-premises term licenses and hosted Pega Cloud service offerings. The timing of future revenue recognition may not coincide with the timing of the cash receipts.

(2) These amounts include contractual future cash receipts related to perpetual licenses with extended payment terms and/or additional rights of use.

Cash used in investing activities

During 2015, cash used in investing activities was primarily for purchases of marketable debt securities for \$75.7 million, partially offset by the proceeds received from sales, maturities and called marketable debt securities of \$43.9 million. In 2015, we paid additional cash consideration of \$1.1 million to the selling shareholders of one of the three companies acquired in 2014 and \$0.5 million to the selling shareholders of

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another one of the three companies acquired in 2014 based on the achievement of certain performance milestones. We also invested \$11 million primarily in leasehold improvements for the build-out of our office in Hyderabad, India and purchases of computer equipment for our U.S. and India offices.

During 2014, cash used in investing activities was primarily for purchases of marketable debt securities for \$55.5 million, partially offset by the proceeds received from the maturities and called marketable debt securities of \$33.2 million. We paid \$3.9 million for acquisitions for 2014, net of cash acquired. We also invested \$11.5 million primarily in leasehold improvements for the build-out of our new India offices and purchases of computer equipment for our U.S. and India offices.

During 2013, cash used in investing activities was primarily for purchases of marketable debt securities for \$60.6 million, partially offset by the proceeds received from the maturities and called marketable debt securities of \$27.8 million. We paid \$25.6 million to acquire Antenna, net of cash acquired and a preliminary working capital adjustment. We also invested \$5.6 million primarily in leasehold improvements and computer equipment for the build-out of our U.S. and India offices.

Cash used in financing activities

Net cash used in financing activities during 2015, 2014, and 2013 was primarily for repurchases of our common stock and the payment of our quarterly dividend. Since 2004, our Board of Directors has approved annual stock repurchase programs that have authorized the repurchase of up to \$169 million of our common stock. On June 4, 2015, we announced that our Board of Directors extended the expiration date of the current stock repurchase program to June 30, 2016 and authorized the Company to repurchase up to an additional \$50 million of our stock between June 4, 2015 and June 30, 2016 (the "Current Program"). As of December 31, 2015, approximately \$122.1 million had been repurchased, \$40.5 million remained available for repurchase, and \$6.4 million had expired. Purchases under these programs have been made on the open market.

Common stock repurchases

The following table is a summary of our repurchase activity under all of our stock repurchase programs:

<i>(Dollars in thousands)</i>	2015		Year ended December 31, 2014		2013	
	Shares	Amount	Shares	Amount	Shares	Amount
Prior year authorizations at January 1,		\$ 13,284		\$ 14,433		\$ 14,793
Authorizations		50,000		14,410		12,164
Repurchases paid	944,398	(22,530)	756,143	(15,264)	773,258	(12,370)
Repurchases unsettled	7,836	(220)	13,983	(295)	6,282	(154)
Authorized dollars remaining as of December 31,		<u>\$ 40,534</u>		<u>\$ 13,284</u>		<u>\$ 14,433</u>

In addition to the share repurchases made under our repurchase programs, we net settled the majority of our employee stock option exercises and RSU vestings, which resulted in the withholding of shares to cover the option exercise price and the minimum statutory tax withholding obligations.

During 2015, 2014, and 2013, option and RSU holders net settled a total of 1,821,000 shares; 1,193,000 shares; and 861,000 shares, respectively, of which only 932,000 shares; 641,000 shares; and 432,000 shares, respectively, were issued to the option and RSU holders. The balance of the shares were surrendered to us to pay for the exercise price with respect to stock options and the applicable taxes for both options and RSUs. During 2015, 2014, and 2013, instead of receiving cash from the equity holders, we withheld shares with a value of \$9.8 million, \$6.1 million, and \$7.4 million, respectively, for withholding taxes, and \$11.9 million, \$6.4 million, and \$9 million, respectively, for the exercise price.

[Table of Contents](#)*Dividends*

On May 27, 2014, we announced an increase in our quarterly cash dividend from \$0.015 to \$0.03 per share. We declared quarterly dividends totaling \$0.12 per share, \$0.105 per share, and \$0.06 per share for the years ended December 31, 2015, 2014, and 2013, respectively. Our Board of Directors authorized the acceleration of the payment of the dividend declared in the fourth quarter 2012, otherwise payable in January 2013, to December 2012. Therefore, there was no dividend payment in the first quarter of 2013. For the years ended December 31, 2015, 2014, and 2013, we paid cash dividends of \$9.2 million, \$6.9 million, and \$3.4 million, respectively. It is our current intention to pay a quarterly cash dividend of \$0.03 per share, however, the Board of Directors may terminate or modify this dividend program at any time without notice.

Contractual obligations

As of December 31, 2015, we had purchase obligations for customer support and marketing programs and payments under operating leases. Our lease arrangement for our office headquarters expires in 2023, subject to our option to extend for two additional five-year periods. We also lease space for our other offices under noncancellable operating leases that expire at various dates through 2021.

<i>(in thousands)</i>	Total	Payments due by period				
		2016	2017 & 2018	2019 & 2020	2021 & Thereafter	Other
Purchase obligations (1)	\$ 3,050	\$ 3,050	\$ —	\$ —	\$ —	\$ —
Liability for uncertain tax positions (2)	5,618	—	—	—	—	5,618
Operating lease obligations (3)	87,424	13,087	26,158	21,575	26,604	—
Total	<u>\$96,092</u>	<u>\$16,137</u>	<u>\$26,158</u>	<u>\$21,575</u>	<u>\$ 26,604</u>	<u>\$5,618</u>

- (1) Represents the fixed or minimum amounts due under purchase obligations for customer support and marketing programs.
- (2) As of December 31, 2015, our recorded liability for uncertain tax positions was approximately \$5.6 million. We are unable to reasonably estimate the timing of the cash outflow due to uncertainties in the timing of the effective settlement of tax positions.
- (3) Includes deferred rent of approximately \$1.6 million included in accrued expenses and approximately \$9.6 million in other long-term liabilities in the accompanying audited consolidated balance sheet as of December 31, 2015.

CRITICAL ACCOUNTING ESTIMATES AND SIGNIFICANT JUDGMENTS

Management's discussion and analysis of the financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the U.S. and the rules and regulations of the SEC for annual financial reporting. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We base our estimates and judgments on historical experience, knowledge of current conditions and beliefs of what could occur in the future given available information.

We believe that, of our significant accounting policies, which are described in Note 2, "Significant Accounting Policies," in the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K, the following accounting policies are most important to the portrayal of our financial condition and require the most subjective judgment. Accordingly, these are the policies we believe are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of operations. If actual results differ significantly from management's estimates and projections, there could be a material effect on our financial statements.

Revenue recognition

Our revenue is derived primarily from software licenses, maintenance fees related to our software licenses, and consulting services. Our license arrangements, whether involving a perpetual license or a term license, generally also contain multiple other elements, including consulting services, training, and software maintenance services.

Software revenue recognition requires judgment, including whether a software arrangement includes multiple elements, and if so, whether VSOE of fair value exists for those elements. The amount of consideration allocated to undelivered elements is based on the VSOE of fair value for those elements and is recognized as those elements are delivered. Any remaining portion of the total arrangement fee is allocated to the software license—the first element delivered. Revenue is recognized for each element when all of the revenue recognition criteria have been met. Changes in the mix of the elements in a software arrangement, the ability to identify VSOE for those elements, the fair value of the respective elements, and changes to a product’s estimated life cycle could materially impact the amount of earned and unearned revenue.

Perpetual software license fees are recognized as revenue when the software is delivered, any acceptance required by the contract that is not perfunctory is obtained, no significant obligations or contingencies exist related to the software, all other undelivered elements in a multiple element arrangement possess VSOE, and all other revenue recognition criteria are met.

Term software license fees are usually payable on a monthly, quarterly, or annual basis under license agreements that typically have a three to five-year term and may be renewed for additional terms at the client’s option. We recognize term license revenue over the term of the agreement as payments become due or earlier if prepaid, provided all other criteria for revenue recognition have been met.

Subscription revenue primarily consists of license, maintenance, and bundled services revenue recognized on our license arrangements that include a right to unspecified future products, which is recognized ratably over the term of the subscription period.

First-year maintenance typically is sold with the related software license and renewed on an annual basis thereafter. Maintenance revenue is deferred and recognized ratably over the term of the support period, which is generally one year and subject to annual renewals. Perpetual software maintenance obligations are based on separately stated renewal rates in the arrangement that are substantive and therefore represent VSOE of fair value. Term license arrangements include separately stated maintenance fees and we use stand-alone sales to determine VSOE of fair value.

Our services revenue is comprised of fees for consulting services, including software implementation, training, reimbursable expenses, and for sales of our Pega Cloud® as-a-platform offering (“Pega Cloud®”), which includes the Pega Cloud® Dev/Test environment and the Pega Cloud® Production environment. Consulting services may be provided on a “stand-alone” basis or bundled with a license and software maintenance services.

Revenue from training services and consulting services under time and materials contracts is recognized as services are performed. We have VSOE of fair value for our training services and consulting services under time and materials contracts in the Americas, Europe, and certain regions of Asia.

Consulting services may sometimes be provided on a fixed-price basis. We do not have VSOE of fair value for fixed-price services or time and materials services in certain geographical regions. When these services are part of a multiple element arrangement, and the services are not essential to the functionality of the software, and when services, including maintenance, are the only undelivered element, we recognize the revenue from the total arrangement ratably over the longer of the software maintenance period or the service period. Revenue from fixed-price services that are not bundled with a software license is generally recognized ratably over the service period, which is typically less than four months.

Revenue from stand-alone sales of the Pega Cloud[®] Dev/Test environment is recognized as services are performed because we have VSOE of fair value.

Revenue from stand-alone sales of the Pega Cloud[®] Production environment is recognized ratably over the term of the service. When implementation services are sold together with our Pega Cloud[®] offering and these services have stand-alone value to the client, we account for these services separately from this offering. Stand-alone value is established through the client's ability to buy these services from many trained partner system integrators and from transactions sold independently from the sale of Pega Cloud[®]. Since these multiple-element arrangements are not software license sales, we apply a selling price hierarchy to determine the fair value of each element in the arrangement. Under the selling price hierarchy, each element's fair value is determined based on its VSOE, if available. If VSOE does not exist, third-party evidence of fair value ("TPE") will be considered, and estimated selling price ("ESP") will be used if neither VSOE nor TPE is available. We generally do not have VSOE of our Pega Cloud[®] offering and are not able to determine TPE as our sales strategy is customized to the needs of our clients and our products or services are dissimilar to comparable products or services in the marketplace. In determining ESP, we apply significant judgment as we weigh a variety of factors, based on the facts and circumstances of the arrangement. We typically arrive at an ESP for a service without VSOE or TPE by considering company-specific factors such as geographies, competitive landscape, and pricing practices used to establish bundled pricing and discounting. While we believe we can make reliable estimates regarding these matters, these estimates are inherently subjective. Accordingly, any changes in our assumptions and judgments regarding our estimates of ESP could materially impact our financial statements.

Goodwill and Intangible Assets Impairment

Our goodwill and intangible assets result from our business acquisitions. Goodwill and intangible assets with indefinite useful lives are not amortized, but are tested for impairment at least annually or as circumstances indicate their value may no longer be recoverable. We do not carry any intangible assets with indefinite useful lives other than goodwill. We perform our annual goodwill impairment as of November 30th of each fiscal year. To assess if goodwill is impaired, we first perform a qualitative assessment to determine whether further impairment testing is necessary. If, as a result of the qualitative assessment, we consider it more-likely-than-not that the fair value of our reporting unit is less than its carrying amount, we perform a quantitative impairment test in a two-step process. For the first step, we screen for impairment, and if any possible impairment exists, we undertake a second step of measuring such impairment by performing discounted cash flow analysis. This analysis is based on cash flow assumptions that are consistent with the plans and estimates being used to manage our business. In the first step, we review the carrying amount of our reporting unit compared to the "fair value" of the reporting unit. An excess carrying value over fair value would indicate that goodwill may be impaired. If we determined that goodwill may be impaired, then we would compare the "implied fair value" to the carrying value of the goodwill. We periodically re-evaluate our business and have determined that we have one operating segment and one reporting unit. If our assumptions change in the future, we may be required to record impairment charges to reduce the carrying value of our goodwill. Changes in the valuation of goodwill could materially impact our operating results and financial position. We evaluate our intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. In evaluating potential impairment of these assets, we specifically consider whether any indicators of impairment are present, including, but not limited to:

- whether there has been a significant adverse change in the business climate that affects the value of an asset;
- whether there has been a significant change in the extent or manner in which an asset is used; and
- whether there is an expectation that the asset will be sold or disposed of before the end of its originally estimated useful life.

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If indicators of impairment are present, we compare the estimated undiscounted cash flows that the specific asset is expected to generate to its carrying value. The key assumptions of the cash flow model involve significant subjectivity. If such assets are considered to be impaired, the impairment recognized is measured by the amount by which the carrying amount of the asset exceeds its fair value.

As of December 31, 2015, we had \$46.8 million of goodwill and \$33.4 million of acquired intangible assets. If our estimates or the related assumptions change in the future, we may be required to record impairment charges to reduce the carrying value of these assets. Changes in the valuation of long-lived assets could materially impact our operating results and financial position. To date, there have been no impairments of goodwill or intangible assets.

Accounting for Income Taxes

We use the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on temporary differences between the financial statement and the tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Significant judgment is required in determining our provision for income taxes and income tax assets and liabilities, including evaluating uncertainties in the application of accounting principles and complex tax laws. Changes in tax laws or our interpretation of tax laws and the resolution of any tax audits could significantly impact our financial statements.

We regularly assess the need for a valuation allowance against our deferred tax assets. Future realization of our deferred tax assets ultimately depends on the existence of sufficient taxable income within the available carryback or carryforward periods. Sources of taxable income include taxable income in prior carryback years, future reversals of existing taxable temporary differences, tax planning strategies, and future taxable income. We record a valuation allowance to reduce our deferred tax assets to an amount we believe is more likely than not to be realized. Changes in our valuation allowance impact income tax expense in the period of adjustment. Our deferred tax valuation allowance requires significant judgment and uncertainties, including assumptions about future taxable income that are based on historical and projected information.

As of December 31, 2015, we had approximately \$108.2 million of acquired Chordiant federal NOLs that are subject to annual use limitations under section 382 of the Internal Revenue Code. Based on those limitations we anticipate using \$82.4 million of the remaining NOLs by 2029. In addition, we had \$0.4 million of deferred tax assets related to state NOLs as of December 31, 2015.

We acquired approximately \$39.6 million and \$58.1 million of federal and foreign NOLs, respectively, in the Antenna transaction. We anticipate that we may utilize \$7.5 million of the acquired Antenna federal NOLs under the applicable section 382 limitation, and these losses are scheduled to expire in 2031. A valuation allowance is recorded on the deferred tax assets in excess of the federal NOLs that are deemed recoverable under the preliminary limitation. With regard to the acquired foreign NOLs, a full valuation allowance has been recorded as of December 31, 2015 due to uncertainty regarding the availability of these NOLs to offset future income generated by the related foreign businesses due to limitations under local country change in control provisions. As of December 31, 2015, the Company had approximately \$38.9 million of acquired Antenna federal NOLs, which are subject to annual use limitations under section 382. Based on those limitations, the Company anticipates using \$6.6 million of the remaining NOLs by 2031.

We assess our income tax positions and record tax benefits based upon management's evaluation of the facts, circumstances, and information available at the reporting date. For those tax positions where it is more-likely-than-not that a tax benefit will be sustained, we record the largest amount of tax benefit with a greater than 50 percent likelihood of being realized upon ultimate settlement with a taxing authority having full knowledge of all relevant information. For those income tax positions where it is not more-likely-than-not that a tax benefit will be sustained, no tax benefit is recognized in the financial statements. We classify liabilities for uncertain tax

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positions as non-current liabilities unless the uncertainty is expected to be resolved within one year. We classify interest and penalties on uncertain tax positions as income tax expense.

As a global company, we use significant judgment to calculate and provide for income taxes in each of the tax jurisdictions in which we operate. In the ordinary course of our business, there are transactions and calculations undertaken whose ultimate tax outcome cannot be certain. Some of these uncertainties arise as a consequence of transfer pricing for transactions with our subsidiaries and nexus and tax credit estimates. In addition, the calculation of acquired tax attributes and the associated limitations are complex. We estimate our exposure to unfavorable outcomes related to these uncertainties and estimate the probability of such outcomes.

Although we believe our estimates are reasonable, no assurance can be given that the final tax outcome will not be different from what is reflected in our historical income tax provisions, returns, and accruals. Such differences, or changes in estimates relating to potential differences, could have a material impact on our income tax provision and operating results in the period in which such a determination is made.

See Note 16 “Income Taxes” in the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for further information.

NEW ACCOUNTING PRONOUNCEMENTS

New Accounting Pronouncements are detailed in Note 2, “Significant Accounting Policies,” in the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K.

ITEM 7A. Quantitative and Qualitative Disclosure about Market Risk

Market risk represents the risk of loss that may affect us due to adverse changes in financial market prices and rates. Our market risk exposure is primarily related to fluctuations in foreign exchange rates and interest rates.

Foreign currency exposure

Approximately 45% of our total revenue was derived from sales to clients based outside of the U.S. in the last three fiscal years. Our international sales are usually denominated in foreign currencies. However, the operating expenses of our foreign operations are also primarily denominated in foreign currencies, which partially offset our foreign currency exposure. A decrease in the value of foreign currencies, particularly the British pound, the Euro, the Australian dollar, and the Indian rupee relative to the U.S. dollar, as well as the Euro and the Australian dollar relative to the British pound, could adversely impact our revenues and operating results.

Historically, our U.S. operating company invoiced most of our foreign clients in foreign currencies, so it held cash and receivables denominated in these foreign currencies. Our U.S. operating company’s functional currency is the U.S. dollar. Therefore, when there are changes in the foreign currency exchange rates versus the U.S. dollar, we recognize a foreign currency transaction gain or (loss) in our consolidated statements of operations. In addition, we have intercompany accounts that are eliminated in consolidation, but that expose us to foreign currency exchange rate fluctuations which are recorded as foreign currency transaction gains or (losses) in our consolidated statements of operations.

Effective April 1, 2015, we restructured our operations with our clients based outside the Americas. These clients began transacting and contracting directly with Pegasystems Limited, a United Kingdom subsidiary of Pegasystems Inc., which has the British pound as its functional currency. This reorganization resulted in increased cash, accounts receivable, and intercompany receivables and payables held by Pegasystems Limited in currencies other than the British pound. As a result, our exposure to foreign currency exchange rate fluctuations in the U.S. dollar, the Euro, and the Australian dollar relative to the British pound increased, while our exposure

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to foreign currency exchange rate fluctuations in the Euro and the Australian dollar relative to the U.S. dollar decreased.

We have historically used forward contracts to manage our exposure to changes in foreign currency exchange rates associated with cash, accounts receivable, and intercompany receivables and payables held by Pegasystems Inc., our U.S. operating company, in currencies other than the U.S. dollar. We did not enter into any forward contracts between March 2014 and June 2015. In the third quarter of 2015, as a result of this operational reorganization, we implemented our revised hedging program, under which we hedge our non-functional currency exposures for Pegasystems Inc. and Pegasystems Limited, utilizing forward contracts with terms not greater than six months.

The forward contracts are not designated as hedging instruments. As a result, we record the fair value of these contracts at the end of each reporting period in the accompanying consolidated balance sheets as other current assets for unrealized gains and accrued expenses for unrealized losses, with any fluctuations in the value of these contracts recognized in other expense, net, in the accompanying consolidated statements of operations. The cash flows related to these forward contracts are classified as operating activities in the accompanying consolidated statements of cash flows. We do not enter into any hedging contracts for trading or speculative purposes.

As of December 31, 2015, the total notional amount of the Company's outstanding forward contracts was \$32.3 million, which included \$9.4 million in U.S. dollar notional forward contracts; the U.S. dollar notional equivalent of \$16.3 million in Euro forward contracts; and the U.S. dollar notional equivalent of \$6.6 million in Australian dollar forward contracts. The Company did not have any outstanding forward contracts as of December 31, 2014.

The fair value of the Company's outstanding forward contracts as of December 31, 2015 was as follows:

(in thousands)	Asset Derivatives		Liability Derivatives	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Foreign currency forward contracts	Other current assets	\$ 48	Accrued expenses	\$ 1,052

We entered into forward contracts with notional values as follows:

Foreign currency (in thousands)	Twelve Months Ended December 31,		
	2015	2014	2013
Euro	€ 55,850	€ 21,900	€ 102,300
British pound	£ 13,600	£ 26,500	£ 85,400
Australian dollar	A\$ 43,000	A\$ 12,900	A\$ 26,300
Indian rupee	Rs 1,100,000	Rs 204,000	Rs 690,000
United States dollar	\$ 77,900	\$ —	\$ —

The total change in the fair value of our forward contracts recorded in other expense, net, was as follows:

(in thousands)	Change in Fair Value in USD Twelve Months Ended December 31,		
	2015	2014	2013
Loss included in other expense, net	\$ (1,047)	\$ (532)	\$ (747)

The impact on net income of the gains and losses recorded on the foreign currency forward contracts, which is included in other expense, net, in the accompanying consolidated statements of operations, and the foreign currency transaction gains and losses recorded on the remeasurement and settlement of the foreign currency denominated assets, which is included in foreign currency transaction loss in the accompanying consolidated

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statements of operations, was a net loss of approximately \$5.2 million, \$4.3 million, and \$2.3 million for the years ended December 31, 2015, 2014 and 2013, respectively.

Fluctuations in foreign currencies impact the amount of total assets and liabilities that we report for our foreign subsidiaries upon the translation of these amounts into U.S. dollars. In particular, the amount of cash and cash equivalents that we report in U.S. dollars for a significant portion of the cash held by these subsidiaries is subject to translation variance caused by changes in foreign currency exchange rates as of the end of each reporting period, the offset of which is recorded to accumulated other comprehensive loss in the accompanying consolidated balance sheet. If overall foreign currency exchange rates in comparison to the U.S. dollar uniformly weakened by 10%, the amount of cash and cash equivalents we would report in U.S. dollars would decrease by approximately \$5.3 million, assuming constant foreign currency cash and cash equivalents balances.

Interest rate exposure

As of December 31, 2015, we had \$126.1 million of marketable debt securities, which consisted primarily of corporate and municipal bonds, with a weighted-average remaining maturity of 15 months. Due to the overall short-term remaining maturities of our marketable debt securities, our interest rate exposure is not significant. As of December 31, 2015, a 200 basis point increase in market interest rates would have reduced the fair value of our fixed rate marketable debt securities by approximately \$3 million.

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ITEM 8. Financial Statements and Supplementary Data

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Pegasystems Inc.
Cambridge, Massachusetts

We have audited the accompanying consolidated balance sheets of Pegasystems, Inc. and subsidiaries (the “Company”) as of December 31, 2015 and 2014, and the related consolidated statements of operations, comprehensive income, stockholders’ equity, and cash flows for each of the three years in the period ended December 31, 2015. We also have audited the Company’s internal control over financial reporting as of December 31, 2015, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company’s management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on these financial statements and an opinion on the Company’s internal control over financial reporting based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company’s internal control over financial reporting is a process designed by, or under the supervision of, the company’s principal executive and principal financial officers, or persons performing similar functions, and effected by the company’s board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Pegasystems Inc. and subsidiaries as of December 31, 2015 and 2014, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
February 25, 2016

PEGASYSTEMS INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share amounts)

	<u>As of December 31,</u>	
	<u>2015</u>	<u>2014</u>
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 93,026	\$ 114,585
Marketable securities	126,052	96,631
Total cash, cash equivalents, and marketable securities	219,078	211,216
Trade accounts receivable, net of allowance of \$4,631 and \$1,540	211,846	154,844
Deferred income taxes	12,380	12,974
Income taxes receivable	4,770	4,502
Other current assets	10,791	9,544
Total current assets	458,865	393,080
Property and equipment, net	31,319	30,156
Long-term deferred income taxes	53,350	69,258
Long-term other assets	4,030	2,783
Intangible assets, net	33,418	45,664
Goodwill	46,776	46,860
Total assets	<u>\$ 627,758</u>	<u>\$ 587,801</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 12,675	\$ 4,752
Accrued expenses	42,768	42,958
Accrued compensation and related expenses	55,872	47,250
Deferred revenue	155,873	134,672
Total current liabilities	267,188	229,632
Income taxes payable	5,618	24,896
Long-term deferred revenue	15,805	20,859
Other long-term liabilities	16,288	17,709
Total liabilities	<u>304,899</u>	<u>293,096</u>
Commitments and contingencies (Note 13)		
Stockholders' equity:		
Preferred stock, \$0.01 par value, 1,000 shares authorized; no shares issued and outstanding	—	—
Common stock, \$0.01 par value, 200,000 shares authorized; 76,488 shares and 76,357 shares issued and outstanding	765	764
Additional paid-in capital	145,418	141,495
Retained earnings	180,183	153,058
Accumulated other comprehensive loss:		
Net unrealized loss on available-for-sale marketable securities, net of tax	(150)	(65)
Foreign currency translation adjustments	(3,357)	(547)
Total stockholders' equity	<u>322,859</u>	<u>294,705</u>
Total liabilities and stockholders' equity	<u>\$ 627,758</u>	<u>\$ 587,801</u>

See notes to consolidated financial statements.

PEGASYSTEMS INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	Year ended December 31,		
	2015	2014	2013
Revenue:			
Software license	\$ 275,588	\$ 232,336	\$ 191,876
Maintenance	202,802	186,239	157,309
Services	204,305	171,429	159,769
Total revenue	<u>682,695</u>	<u>590,004</u>	<u>508,954</u>
Cost of revenue:			
Software license	4,125	4,959	6,281
Maintenance	21,903	20,014	15,272
Services	187,418	160,121	135,853
Total cost of revenue	<u>213,446</u>	<u>185,094</u>	<u>157,406</u>
Gross profit	<u>469,249</u>	<u>404,910</u>	<u>351,548</u>
Operating expenses:			
Selling and marketing	241,387	206,658	181,094
Research and development	126,374	108,591	79,726
General and administrative	36,738	37,442	29,594
Acquisition-related	89	488	1,306
Restructuring	—	192	1,731
Total operating expenses	<u>404,588</u>	<u>353,371</u>	<u>293,451</u>
Income from operations	64,661	51,539	58,097
Foreign currency transaction loss	(4,168)	(3,769)	(1,593)
Interest income, net	1,056	683	524
Other expense, net	(1,044)	(459)	(635)
Income before provision for income taxes	60,505	47,994	56,393
Provision for income taxes	24,183	14,739	18,350
Net income	<u>\$ 36,322</u>	<u>\$ 33,255</u>	<u>\$ 38,043</u>
Earnings per share:			
Basic	<u>\$ 0.47</u>	<u>\$ 0.44</u>	<u>\$ 0.50</u>
Diluted	<u>\$ 0.46</u>	<u>\$ 0.42</u>	<u>\$ 0.49</u>
Weighted-average number of common shares outstanding			
Basic	76,507	76,327	75,946
Diluted	79,043	78,531	77,974

See notes to consolidated financial statements.

PEGASYSTEMS INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)

	<u>Year ended December 31,</u>		
	<u>2015</u>	<u>2014</u>	<u>2013</u>
Net income	\$36,322	\$33,255	\$38,043
Other comprehensive (loss) gain, net:			
Unrealized loss on available-for-sale marketable securities, net of tax	(85)	(142)	(11)
Foreign currency translation adjustments	(2,810)	(4,103)	469
Total other comprehensive (loss) gain, net	(2,895)	(4,245)	458
Comprehensive income	<u>\$33,427</u>	<u>\$29,010</u>	<u>\$38,501</u>

See notes to consolidated financial statements.

PEGASYSTEMS INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except per share amounts)

	Common Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity
	Number of Shares	Amount				
Balance at January 1, 2013	75,890	\$ 758	\$ 138,197	\$ 94,349	\$ 3,175	\$ 236,479
Repurchase of common stock	(780)	(8)	(12,516)	—	—	(12,524)
Issuance of common stock for share-based compensation plans	1,149	14	(5,694)	—	—	(5,680)
Issuance of stock under Employee Stock Purchase Plan	38	—	545	—	—	545
Issuance of stock awards	27	—	—	—	—	—
Stock-based compensation expense	—	—	12,869	—	—	12,869
Tax benefit from exercise or vesting of equity awards, net of deferred tax asset deficiencies of \$435	—	—	6,164	—	—	6,164
Cash dividends declared (\$0.06 per share)	—	—	—	(4,566)	—	(4,566)
Other comprehensive income	—	—	—	—	458	458
Net income	—	—	—	38,043	—	38,043
Balance at December 31, 2013	76,324	\$ 764	\$ 139,565	\$ 127,826	\$ 3,633	\$ 271,788
Repurchase of common stock	(770)	(8)	(15,551)	—	—	(15,559)
Issuance of common stock for share-based compensation plans	742	8	(5,703)	—	—	(5,695)
Issuance of stock under Employee Stock Purchase Plan	32	—	568	—	—	568
Issuance of stock awards	29	—	—	—	—	—
Stock-based compensation expense	—	—	19,205	—	—	19,205
Tax benefit from exercise or vesting of equity awards, net of deferred tax asset deficiencies of \$77	—	—	3,411	—	—	3,411
Cash dividends declared (\$0.105 per share)	—	—	—	(8,023)	—	(8,023)
Other comprehensive loss	—	—	—	—	(4,245)	(4,245)
Net income	—	—	—	33,255	—	33,255
Balance at December 31, 2014	76,357	\$ 764	\$ 141,495	\$ 153,058	\$ (612)	\$ 294,705
Repurchase of common stock	(952)	(10)	(22,740)	—	—	(22,750)
Issuance of common stock for share-based compensation plans	1,028	11	(9,201)	—	—	(9,190)
Issuance of stock under Employee Stock Purchase Plan	24	—	550	—	—	550
Issuance of stock awards	31	—	—	—	—	—
Stock-based compensation expense	—	—	30,078	—	—	30,078
Tax benefit from exercise or vesting of equity awards, net of deferred tax asset deficiencies of \$105	—	—	5,236	—	—	5,236
Cash dividends declared (\$0.12 per share)	—	—	—	(9,197)	—	(9,197)
Other comprehensive loss	—	—	—	—	(2,895)	(2,895)
Net income	—	—	—	36,322	—	36,322
Balance at December 31, 2015	<u>76,488</u>	<u>\$ 765</u>	<u>\$ 145,418</u>	<u>\$ 180,183</u>	<u>\$ (3,507)</u>	<u>\$ 322,859</u>

See notes to consolidated financial statements.

PEGASYSTEMS INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	<u>Year ended December 31,</u>		
	<u>2015</u>	<u>2014</u>	<u>2013</u>
Operating activities:			
Net income	\$ 36,322	\$ 33,255	\$ 38,043
Adjustment to reconcile net income to cash provided by operating activities:			
Excess tax benefits from exercise or vesting of equity awards	(5,275)	(3,387)	(6,435)
Deferred income taxes	(2,099)	(13,896)	(7,008)
Depreciation and amortization	23,093	23,352	20,035
Amortization of investments	2,238	1,916	1,776
Stock-based compensation expense	30,054	19,205	12,869
Foreign currency transaction loss	4,168	3,769	1,593
Other non-cash	822	(747)	1,670
Change in operating assets and liabilities:			
Trade accounts receivable	(62,235)	6,209	(28,316)
Income taxes receivable and other current assets	3,223	2,776	7,076
Accounts payable and accrued expenses	16,572	13,356	5,794
Deferred revenue	17,668	11,173	26,362
Other long-term assets and liabilities	(2,023)	2,908	7,244
Cash provided by operating activities	<u>62,528</u>	<u>99,889</u>	<u>80,703</u>
Investing activities:			
Purchases of marketable securities	(75,702)	(55,520)	(60,648)
Proceeds from maturities and called marketable securities	42,026	33,244	27,814
Sales of marketable securities	1,915	—	—
Payments for acquisitions, net of cash acquired	(1,671)	(3,918)	(25,565)
Investment in property and equipment	(11,020)	(11,463)	(5,598)
Cash used in investing activities	<u>(44,452)</u>	<u>(37,657)</u>	<u>(63,997)</u>
Financing activities:			
Issuance of common stock for share-based compensation plans	1,136	1,001	2,210
Excess tax benefits from exercise or vesting of equity awards	5,275	3,387	6,435
Dividend payments to shareholders	(9,194)	(6,874)	(3,421)
Common stock repurchases for tax withholdings for net settlement of equity awards	(9,776)	(6,128)	(7,345)
Common stock repurchases under share repurchase programs	(22,825)	(15,418)	(12,446)
Cash used in financing activities	<u>(35,384)</u>	<u>(24,032)</u>	<u>(14,567)</u>
Effect of exchange rate on cash and cash equivalents	(4,251)	(3,846)	567
Net (decrease) increase in cash and cash equivalents	(21,559)	34,354	2,706
Cash and cash equivalents, beginning of year	114,585	80,231	77,525
Cash and cash equivalents, end of year	<u>\$ 93,026</u>	<u>\$ 114,585</u>	<u>\$ 80,231</u>
Supplemental disclosures:			
Income taxes paid	\$ 30,215	\$ 14,722	\$ 11,107
Non-cash investing and financing activity:			
Dividends payable	\$ 2,297	\$ 2,294	\$ 1,145

See notes to consolidated financial statements.

PEGASYSTEMS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. BASIS OF PRESENTATION

(a) *Business*

The Company develops, markets, licenses, and supports software to automate complex, changing business processes. The Company provides implementation, consulting, training, technical support, and hosting services to facilitate the use of its software.

(b) *Management estimates and reporting*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (“U.S.”) requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the periods presented. Actual results could differ from those estimates. Accounts with reported amounts based on significant estimates and judgments include revenue, deferred income taxes, income taxes payable, fair value of assets acquired and liabilities assumed, intangible assets, goodwill, deferred revenue, and stock-based compensation.

(c) *Principles of consolidation*

The consolidated financial statements include Pegasystems Inc. and its wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

(d) *Stock split*

On March 6, 2014, the Company’s Board of Directors approved a two-for-one stock split of the Company’s common stock, effected in the form of a stock dividend (the “Stock Split”). On April 1, 2014, each stockholder of record at the close of business on March 20, 2014 (the “Record Date”) received as a dividend, one additional share of common stock, par value \$.01, for each share of common stock held on the Record Date. All shares and amounts of common stock, additional paid-in capital, and per share amounts in the Company’s audited consolidated financial statements and in the accompanying notes for all periods presented have been restated to reflect the Stock Split, except for the number of authorized shares of common stock.

2. SIGNIFICANT ACCOUNTING POLICIES

(a) *Revenue recognition*

The Company’s revenue is derived primarily from software licenses, maintenance fees related to the Company’s software licenses, and consulting services. The Company’s license arrangements, whether involving a perpetual license or a term license, generally also contain multiple elements, including consulting services, training, and software maintenance services.

Software revenue recognition requires judgment, including whether a software arrangement includes multiple elements, and if so, whether vendor-specific objective evidence (“VSOE”) of fair value exists for those elements. The amount of arrangement consideration allocated to undelivered elements is based on the VSOE of fair value for those elements and recognized as those elements are delivered. Any remaining portion of the total arrangement fee is allocated to the software license—the first delivered element. Revenue is recognized for each element when all of the revenue recognition criteria have been met. Revenue is recognized net of any taxes collected from customers and subsequently remitted to governmental authorities.

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Changes in the mix of the elements in a software arrangement, the ability to identify VSOE for those elements, the fair value of the respective elements, and changes to a product's estimated life cycle could materially impact the amount of earned and unearned revenue.

Before the Company can recognize revenue, the following four basic criteria must be met:

- *Persuasive evidence of an arrangement* —As evidence of the existence of an arrangement, the Company uses a contract or purchase order signed by the client and the Company for software, including cloud, and maintenance, and a statement of work for consulting services. In the event the client is a reseller, the Company ensures a binding agreement exists between the reseller and end user of the software.
- *Delivery of product and services* —The Company delivers its software electronically and/or ships it via disc media. Services are considered delivered as the work is performed or, in the case of maintenance, over the contractual service period.
- *Fee is fixed or determinable* —The Company assesses whether a fee is fixed or determinable at the onset of the arrangement. In addition, the Company assesses whether contract modifications to an existing arrangement constitute a concession or whether extended payment terms exist. The Company's agreements do not include a right of return.
- *Collection of fee is probable* —The Company assesses the probability of collecting from each client at the onset of the arrangement based on a number of factors, including the client's payment history, its current creditworthiness, economic conditions in the client's industry and geographic location, and general economic conditions. If, in the Company's judgment, collection of a fee is not probable, revenue is recognized as cash is collected, provided all other conditions for revenue recognition have been met.

Software license revenues

Perpetual software license fees are recognized as revenue when the software is delivered, any acceptance required by the contract that is not perfunctory is obtained, no significant obligations or contingencies exist related to the software, all other undelivered elements in a multiple element arrangement possess VSOE, and all other revenue recognition criteria are met.

Term software license fees are usually payable on a monthly, quarterly, or annual basis under license agreements that typically have a three to five-year term and may be renewed for additional terms at the client's option. The Company recognizes term license revenue over the term of the agreement as payments become due or earlier if prepaid, provided all other criteria for revenue recognition have been met.

Subscription revenue primarily consists of license, maintenance, and bundled services revenue recognized on the Company's license arrangements that include a right to unspecified future products, which is recognized ratably over the term of the subscription period.

Maintenance revenues

First-year maintenance typically is sold with the related software license and renewed on an annual basis thereafter. Maintenance revenue is deferred and recognized ratably over the term of the support period, which is generally one year and subject to annual renewals. Perpetual software maintenance obligations are based on separately stated renewal rates in the arrangement that are substantive and therefore represent VSOE of fair value. Term license arrangements include separately stated maintenance fees and the Company uses stand-alone sales to determine VSOE of fair value.

Services revenues

The Company's services revenue is comprised of fees for consulting services including software implementation, training, reimbursable expenses, and for sales of its Pega Cloud[®] as-a-platform offering ("Pega Cloud[®]"), which includes the Pega Cloud[®] Dev/Test environment and the Pega Cloud[®] Production environment. Consulting services may be provided on a "stand-alone" basis or bundled with a license and software maintenance services.

Revenue from training services and consulting services under time and materials contracts is recognized as services are performed. The Company has VSOE of fair value for its training services and consulting services under time and materials contracts in the Americas, Europe, and certain regions of Asia.

Consulting services may sometimes be provided on a fixed-price basis. The Company does not have VSOE of fair value for fixed-price services or time and materials services in certain geographical regions. When these services are part of a multiple element arrangement, and the services are not essential to the functionality of the software, and when services, including maintenance, are the only undelivered element, the Company recognizes the revenue from the total arrangement ratably over the longer of the software maintenance period or the service period. Revenue from fixed-price services that are not bundled with a software license is generally recognized ratably over the service period, which is typically less than four months.

Revenue from stand-alone sales of the Pega Cloud[®] Dev/Test environment is recognized as services are performed because the Company has VSOE of fair value.

Revenue from stand-alone sales of the Pega Cloud[®] Production environment is recognized ratably over the term of the service. When implementation services are sold together with the Company's Pega Cloud[®] offering and these services have stand-alone value to the client, the Company accounts for these services separately from this offering. Stand-alone value is established through the client's ability to buy these services from many trained partner system integrators and from transactions sold independently from the sale of Pega Cloud[®]. Since these multiple-element arrangements are not software license sales, the Company applies a selling price hierarchy to determine the fair value of each element in the arrangement. Under the selling price hierarchy, each element's fair value is determined based on its VSOE, if available. If VSOE does not exist, third-party evidence of fair value ("TPE") will be considered, and estimated selling price ("ESP") will be used if neither VSOE nor TPE is available. The Company generally does not have VSOE of its Pega Cloud[®] offering and is not able to determine TPE as its sales strategy is customized to the needs of its clients and the Company's products and services are dissimilar to comparable products or services in the marketplace. In determining ESP, the Company applies significant judgment as it weighs a variety of factors, based on the facts and circumstances of the arrangement. The Company typically arrives at an ESP for a service without VSOE or TPE by considering company-specific factors such as geographies, competitive landscape, and pricing practices used to establish bundled pricing and discounting.

Deferred revenue

Deferred software license revenue typically results from client billings for which all of the criteria to recognize revenue have not been met. Deferred maintenance revenue represents software license updates and product support contracts that are typically billed in advance and are recognized ratably over the support periods. Deferred services revenue represents advanced billings for consulting, hosting, and training services that are recognized as the services are performed.

(b) *Fair value of financial instruments*

The principal financial instruments held by the Company consist of cash equivalents, marketable securities, derivative instruments, accounts receivable, and accounts payable, which are measured at fair value. See Note 3

“Marketable Securities”, Note 4 “Derivative Instruments”, and Note 5 “Fair Value Measurements” for further discussion of financial instruments that are carried at fair value on a recurring basis.

(c) *Derivative instruments*

The Company uses foreign currency forward contracts (“forward contracts”) to manage its exposures to changes in foreign currency exchange rates associated with its foreign currency denominated accounts receivable, intercompany receivables and payables, and cash. The foreign currency forward contracts utilized by the Company are not designated as hedging instruments and as a result, the Company records the fair value of these contracts at the end of each reporting period in its consolidated balance sheet as other current assets for unrealized gains and accrued expenses for unrealized losses, with any fluctuations in the fair value of these contracts recognized in other expense, net, in its consolidated statement of operations. The cash flows related to these foreign currency forward contracts are classified as operating activities in the Company’s consolidated statements of cash flows. The fluctuations in the value of these foreign currency forward contracts partially offset the gains and losses from the remeasurement or settlement of the foreign currency denominated cash, accounts receivable, and intercompany receivables and payables held by the U.S. operating company and its U.K. subsidiary, thus partly mitigating the volatility. Generally, the Company enters into foreign currency forward contracts with terms of six months or less.

(d) *Property and equipment*

Property and equipment are recorded at cost. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the assets, which are three years for computer equipment and five years for furniture and fixtures. Leasehold improvements are amortized over the lesser of the term of the lease or the useful life of the asset. Repairs and maintenance costs are expensed as incurred.

The Company capitalizes and amortizes certain direct costs associated with computer software developed or purchased for internal use incurred during the application development stage. Costs related to preliminary project activities and post implementation activities are expensed as incurred. The Company amortizes capitalized software costs generally over three to five years commencing on the date the software is placed into service. As of December 31, 2015, the Company had \$1.1 million of capitalized costs for computer software developed for internal use that was not yet in service. During 2014 and 2013, the Company did not capitalize any costs for computer software developed for internal use.

(e) *Goodwill*

Goodwill represents the residual purchase price paid in a business combination after the fair value of all identified assets and liabilities have been recorded. Goodwill is not amortized. The Company operates as a single reporting unit. The Company performed its qualitative assessment as of November 30, 2015, 2014, and 2013, and concluded it was not more likely than not that the fair value of its reporting unit was less than their carrying value.

(f) *Intangible and long-lived assets*

All of the Company’s intangible assets are amortized using the straight-line method over their estimated useful life. The Company evaluates its long-lived tangible and intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Impairment is assessed by comparing the undiscounted cash flows expected to be generated by the intangible asset to its carrying value. If impairment exists, the Company calculates the impairment by comparing the carrying value of the intangible asset to its fair value as determined by discounted expected cash flows. The Company did not record any impairments in 2015, 2014, or 2013.

(g) Business combinations

The Company uses its best estimates and assumptions to accurately assign fair value to the tangible and intangible assets acquired and liabilities assumed at the acquisition date. The Company's estimates are inherently uncertain and subject to refinement. During the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the fair value of these tangible and intangible assets acquired and liabilities assumed, with the corresponding offset to goodwill. In addition, uncertain tax positions and tax-related valuation allowances are initially established in connection with a business combination as of the acquisition date. The Company continues to collect information and reevaluates these estimates and assumptions quarterly and records any adjustments to the Company's preliminary estimates to goodwill provided that the Company is within the measurement period. Upon the conclusion of the measurement period or final determination of the fair value of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the Company's consolidated statements of operations.

(h) Research and development and software costs

Research and development costs are expensed as incurred. Capitalization of computer software developed for resale begins upon the establishment of technological feasibility, generally demonstrated by a working model or an operative version of the computer software product. Such costs have not been material to date as technological feasibility is established within a short time frame from the software's general availability and, as a result, no costs were capitalized in 2015, 2014, or 2013.

(i) Stock-based compensation

The Company recognizes stock-based compensation expense associated with equity awards based on the fair value of these awards at the grant date. Stock-based compensation is recognized over the requisite service period, which is generally the vesting period of the equity award, and is adjusted each period for anticipated forfeitures. See Note 15 "Stock-based Compensation" for discussion of the Company's key assumptions included in determining the fair value of its equity awards at grant date.

(j) Acquisition-related expenses

Acquisition-related costs are expensed as incurred and include direct and incremental costs associated with an impending or completed acquisition. During 2015, 2014, and 2013, \$0.1 million, \$0.5 million, and \$1.3 million, respectively, of acquisition-related costs were primarily professional fees associated with the Company's acquisition of Antenna Software, Inc. ("Antenna") and the acquisitions completed in 2014.

(k) Restructuring expenses

Restructuring expenses are recorded when a plan of restructuring is in place and management has committed to execution of the plan. To the extent that a restructuring plan provides employee benefits for services rendered in future periods beyond a minimum period, the costs are recognized over the requisite service period. In 2014 and 2013, restructuring costs include future lease payments and demising costs, net of estimated sublease income, for the elimination of space within one facility related to the integration of Antenna. See Note 12 "Accrued Restructuring" for further detail.

(l) Foreign currency translation

The translation of assets and liabilities for the majority of the Company's foreign subsidiaries are made at period-end exchange rates, while revenue and expense accounts are translated at the average exchange rates during the period transactions occurred. The resulting translation adjustments are reflected in accumulated other comprehensive income. The Company's India subsidiary, as well as all foreign Antenna subsidiaries, use the

U.S. dollar as its functional currency, therefore, its monetary assets and liabilities are remeasured at current rates and its non-monetary assets are recorded at historical exchange rates. Realized and unrealized exchange gains or losses from transactions and remeasurement adjustments are reflected in foreign currency transaction loss, in the accompanying consolidated statements of operations.

(m) Accounting for income taxes

The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on temporary differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The Company regularly assesses the need for a valuation allowance against its deferred tax assets. Future realization of the Company's deferred tax assets ultimately depends on the existence of sufficient taxable income within the available carryback or carryforward periods. Sources of taxable income include taxable income in prior carryback years, future reversals of existing taxable temporary differences, tax planning strategies, and future taxable income. The Company records a valuation allowance to reduce its deferred tax assets to an amount it believes is more-likely-than-not to be realized. Changes in the valuation allowance impacts income tax expense in the period of adjustment. The Company's deferred tax valuation allowance requires significant judgment and uncertainties, including assumptions about future taxable income that are based on historical and projected information. The Company recognizes excess tax benefits when they are realized, through a reduction in income taxes payable using the with-and-without stock option method.

The Company assesses its income tax positions and records tax benefits based upon management's evaluation of the facts, circumstances, and information available at the reporting date. For those tax positions where it is more-likely-than-not that a tax benefit will be sustained, the Company records the largest amount of tax benefit with a greater than 50 percent likelihood of being realized upon ultimate settlement with a taxing authority having full knowledge of all relevant information. For those income tax positions where it is not more-likely-than-not that a tax benefit will be sustained, no tax benefit is recognized in the financial statements. The Company classifies liabilities for uncertain tax positions as non-current liabilities unless the uncertainty is expected to be resolved within one year. The Company classifies interest and penalties on uncertain tax positions as income tax expense.

As a global company, the Company uses significant judgment to calculate and provide for income taxes in each of the tax jurisdictions in which it operates. In the ordinary course of the Company's business, there are transactions and calculations undertaken whose ultimate tax outcome cannot be certain. Some of these uncertainties arise as a consequence of transfer pricing for transactions with the Company's subsidiaries and nexus and tax credit estimates. In addition, the calculation of acquired tax attributes and the associated limitations are complex. See Note 16 "Income Taxes" for further information. The Company estimates its exposure to unfavorable outcomes related to these uncertainties and estimates the probability of such outcomes.

(n) Advertising expense

Advertising costs are expensed as incurred. Advertising costs were \$9.8 million, \$1.4 million, and \$0.3 million during the years ended December 31, 2015, 2014, and 2013, respectively.

(o) New accounting pronouncements

Balance Sheet Classification of Deferred Taxes: In November 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2015-17, "Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes." The guidance requires that deferred income tax liabilities and assets be classified as noncurrent in a classified balance sheet. ASU 2015-17 is effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted. The effective date for the Company will be January 1, 2017. The Company does not expect this ASU to have a material impact on its consolidated financial statements.

Simplifying the Accounting for Measurement-Period Adjustments: In September 2015, the FASB issued ASU No. 2015-16, “Simplifying the Accounting for Measurement-Period Adjustments”. This ASU amends guidance for business combinations to simplify the presentation of adjustments to the initial purchase price allocation identified during the measurement period of a business combination. ASU 2015-16 requires that an acquirer in a business combination recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amounts are determined, and eliminates the requirement to retrospectively account for adjustments made to provisional amounts recognized in a business combination. For public business entities, the amendments in the ASU are effective for fiscal years beginning after December 31, 2015, including interim periods with those fiscal years. The effective date for the Company was January 1, 2016. The Company does not expect the adoption of this ASU will have a material impact on its consolidated financial statements.

Revenue from Contracts with Customers: In May 2014, the FASB issued ASU No. 2014-09, “Revenue from Contracts with Customers (Topic 606)”. This ASU amends the guidance for revenue recognition to replace numerous, industry-specific requirements and converges areas under this topic with those of the International Financial Reporting Standards. This ASU implements a five-step process for customer contract revenue recognition that focuses on transfer of control, as opposed to transfer of risk and rewards. This ASU also requires enhanced disclosures regarding the nature, amount, timing and uncertainty of revenues and cash flows from contracts with customers. Other major provisions include ensuring the time value of money is considered in the transaction price, and allowing estimates of variable consideration to be recognized before contingencies are resolved in certain circumstances. This ASU originally had an effective date for the Company of January 1, 2017. In August 2015, the FASB issued ASU No. 2015-14, “Revenue from Contracts with Customers (Topic 606) Deferral of the Effective Date,” which defers the effective date by one year while providing the option to adopt the standard on the original effective date. The new effective date for the Company will be January 1, 2018. The Company has not yet selected a transition method and is currently evaluating the effect that this ASU will have on its consolidated financial statements and related disclosures.

3. MARKETABLE SECURITIES

(in thousands)

	December 31, 2015			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Marketable securities:				
Municipal bonds	\$ 57,394	\$ 7	\$ (66)	\$ 57,335
Corporate bonds	66,960	2	(147)	66,815
Certificates of deposit	1,903	—	(1)	1,902
Marketable securities	<u>\$ 126,257</u>	<u>\$ 9</u>	<u>\$ (214)</u>	<u>\$ 126,052</u>

(in thousands)

	December 31, 2014			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Marketable securities:				
Municipal bonds	\$ 27,820	\$ 52	\$ (17)	\$27,855
Corporate bonds	65,487	5	(144)	65,348
Certificates of deposit	3,428	2	(2)	3,428
Marketable securities	<u>\$ 96,735</u>	<u>\$ 59</u>	<u>\$ (163)</u>	<u>\$96,631</u>

The Company considers debt securities with maturities of three months or less from the purchase date to be cash equivalents. Interest is recorded when earned. All of the Company’s investments are classified as available-for-sale and are carried at fair value with unrealized gains and losses considered to be other than temporary in nature recorded as a component of accumulated other comprehensive loss, net of related income taxes. The Company reviews all investments for reductions in fair value that are other-than-temporary. When such

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reductions occur, the cost of the investment is adjusted to fair value through recording a loss on investments in the consolidated statements of operations. Gains and losses on investments are calculated on the basis of specific identification. As of December 31, 2015, the Company did not hold any investments with unrealized gains and losses considered to be other than temporary.

As of December 31, 2015, remaining maturities of marketable debt securities ranged from January 2016 to January 2019, with a weighted-average remaining maturity of approximately 15 months.

4. DERIVATIVE INSTRUMENTS

The Company has historically used forward contracts to manage its exposure to changes in foreign currency exchange rates associated with its foreign currency denominated cash, accounts receivable, and intercompany receivables and payables held by its U.S. operating company.

Effective April 1, 2015, the Company restructured its operations with its clients based outside the Americas. These clients began transacting with Pegasystems Limited, a United Kingdom subsidiary of Pegasystems Inc., which has the British pound as its functional currency. This reorganization resulted in increased cash, accounts receivable, and intercompany receivables and payables held by Pegasystems Limited in currencies other than the British pound. As a result, the Company's exposure to foreign currency exchange rate fluctuations in the U.S. dollar, the Euro, and the Australian dollar relative to the British pound increased, while its exposure to foreign currency exchange rate fluctuations in the Euro and the Australian dollar relative to the U.S. dollar decreased.

The Company did not enter into any forward contracts between March 2014 and June 2015. In July 2015, as a result of its operational reorganization, the Company implemented its revised hedging program under which it hedges its non-functional currency exposures for Pegasystems Inc. and Pegasystems Limited.

As of December 31, 2015, the total notional amount of the Company's outstanding forward contracts was \$32.3 million. The Company did not have any outstanding forward contracts as of December 31, 2014.

The fair value of the Company's outstanding forward contracts as of December 31, 2015 was as follows:

(in thousands)	Asset Derivatives		Liability Derivatives	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Foreign currency forward contracts	Other current assets	\$ 48	Accrued expenses	\$ 1,052

The Company entered into forward contracts with notional values as follows:

Currency (in thousands)	Year Ended December 31,		
	2015	2014	2013
Euro	€ 55,850	€ 21,900	€ 102,300
British pound	£ 13,600	£ 26,500	£ 85,400
Australian dollar	A\$ 43,000	A\$ 12,900	A\$ 26,300
Indian rupee	Rs 1,100,000	Rs 204,000	Rs 690,000
United States dollar	\$ 77,900	\$ —	\$ —

(in thousands)	Change in Fair Value in USD		
	Year Ended December 31,		
	2015	2014	2013
Loss from the change in the fair value of forward contracts included in other expense, net	\$(1,047)	\$ (532)	\$ (747)
Foreign currency transaction losses from the remeasurement of foreign currency assets and liabilities	(4,168)	(3,769)	(1,593)

5. FAIR VALUE MEASUREMENTS

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The Company records its marketable securities and forward contracts at fair value on a recurring basis. Fair value is an exit price, representing the amount that would be received from the sale of an asset or paid to transfer a liability in an orderly transaction between market participants based on assumptions that market participants would use in pricing an asset or liability. As a basis for classifying the fair value measurements, a three-tier fair value hierarchy, which classifies the fair value measurements based on the inputs used in measuring fair value, was established as follows: (Level 1) observable inputs such as quoted prices in active markets for identical assets or liabilities; (Level 2) significant other inputs that are observable either directly or indirectly; and (Level 3) significant unobservable inputs on which there is little or no market data, which require the Company to develop its own assumptions. This hierarchy requires the Company to use observable market data, when available, and to minimize the use of unobservable inputs when determining fair value.

The Company's money market funds are classified within Level 1 of the fair value hierarchy. The Company's investments classified within Level 2 of the fair value hierarchy are valued based on a market approach using quoted prices, when available, or matrix pricing compiled by third party pricing vendors, using observable market inputs such as interest rates, yield curves, and credit risk. The Company's foreign currency forward contracts which are all classified within Level 2 of the fair value hierarchy are valued based on the notional amounts and rates under the contracts and observable market inputs such as currency exchange rates and credit risk. If applicable, the Company will recognize transfers into and out of levels within the fair value hierarchy at the end of the reporting period in which the actual event or change in circumstance occurs. There were no transfers of investments between Level 1 and Level 2 during the year ended December 31, 2015.

The Company's assets and liabilities measured at fair value on a recurring basis consisted of the followings:

(in thousands)	December 31, 2015	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)
Fair Value Assets:			
Money market funds	\$ 573	\$ 573	\$ —
Marketable securities:			
Municipal bonds	\$ 57,335	\$ —	\$ 57,335
Corporate bonds	66,815	—	66,815
Certificates of deposit	1,902	—	1,902
Total marketable securities	\$ 126,052	\$ —	\$ 126,052
Foreign currency forward contracts	\$ 48	\$ —	\$ 48
Fair Value Liabilities:			
Foreign currency forward contracts	\$ 1,052	\$ —	\$ 1,052
(in thousands)	December 31, 2014	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)
Fair Value Assets:			
Money market funds	\$ 2,295	\$ 2,295	\$ —
Marketable securities:			
Municipal bonds	\$ 27,855	\$ —	\$ 27,855
Corporate bonds	65,348	—	65,348
Certificates of deposit	3,428	—	3,428
Total marketable securities	\$ 96,631	\$ —	\$ 96,631
	\$ 98,926	\$ 2,295	\$ 96,631

[Table of Contents](#)*Assets Measured at Fair Value on a Nonrecurring Basis*

Assets recorded at fair value on a nonrecurring basis, such as property and equipment, and intangible assets are recognized at fair value when they are impaired. During 2015, 2014, and 2013, the Company did not recognize any impairments on its assets measured at fair value on a nonrecurring basis.

6. TRADE ACCOUNTS RECEIVABLE, NET OF ALLOWANCE

Unbilled trade accounts receivable primarily relates to services earned under time and materials arrangements and to license, maintenance, and cloud arrangements that have commenced or been delivered in excess of scheduled invoicing.

(in thousands)	December 31,	
	2015	2014
Trade accounts receivable	\$ 190,820	\$ 128,757
Unbilled accounts receivable	25,657	27,627
Total accounts receivable	216,477	156,384
Allowance for sales credit memos	(4,631)	(1,540)
	<u>\$ 211,846</u>	<u>\$ 154,844</u>

The Company records an allowance for estimates of potential sales credit memos when the related revenue is recorded and reviews this allowance periodically. The following reflects the activity of the allowance for sales credit memos:

(in thousands)	Year Ended December 31,		
	2015	2014	2013
Balance at beginning of year	\$ 1,540	\$ 1,997	\$ 963
Provision for credit memos	8,005	2,164	5,374
Credit memos issued	(4,914)	(2,621)	(4,340)
	<u>\$ 4,631</u>	<u>\$ 1,540</u>	<u>\$ 1,997</u>

7. PROPERTY AND EQUIPMENT

(in thousands)	December 31,	
	2015	2014
Leasehold improvements	\$ 29,501	\$ 27,672
Computer equipment	18,369	15,295
Furniture and fixtures	5,211	5,321
Computer software purchased	5,847	3,750
Computer software developed for internal use	721	721
Fixed assets in progress	2,173	918
	<u>61,822</u>	<u>53,677</u>
Less: accumulated depreciation and amortization	(30,503)	(23,521)
Property and equipment, net	<u>\$ 31,319</u>	<u>\$ 30,156</u>

Depreciation expense was approximately \$10.6 million, \$9.3 million, and \$8.2 million, for the years ended December 31, 2015, 2014, and 2013, respectively.

8. ACQUISITIONS

Acquisitions completed in 2014:

The Company completed three acquisitions during the year ended December 31, 2014, which were determined to be immaterial, both individually and in the aggregate, for \$6.3 million in cash consideration, inclusive of \$2.1 million in cash acquired, and \$1.1 million in additional cash consideration which was paid in 2015. During 2015, the Company also paid \$0.5 million in additional cash consideration to the selling shareholders of another one of the three companies acquired in 2014 and up to \$0.8 million may be payable based on the achievement of certain performance milestones through the end of 2016.

Acquisitions completed in 2013:

Antenna

On October 9, 2013, the Company acquired Antenna, a leading provider of mobile application development platforms. The Company acquired all of the outstanding capital stock of Antenna in a cash merger for \$27.1 million, including the final working capital adjustment to the purchase price, which was paid by the Company in the first quarter of 2014. During 2014 and 2013, the Company incurred direct and incremental expenses associated with the transaction of \$0.3 million and \$1.3 million, respectively, which were primarily professional fees. The Company has included the financial results of Antenna in its consolidated financial statements from the date of acquisition.

As of December 31, 2014, as a result of the final purchase price allocation, the Company recognized \$23 million of goodwill, which is nondeductible for tax purposes. A summary of the final purchase price allocation for the acquisition of Antenna is as follows:

(in thousands)	
Total purchase consideration:	
Cash	<u>\$ 27,141</u>
Allocation of the purchase consideration:	
Cash	\$ 783
Accounts receivable, net of allowance	4,184
Other assets	3,951
Property and equipment	655
Deferred tax assets, net	2,638
Identifiable intangible assets	10,355
Goodwill	23,018
Accounts payable	(1,396)
Accrued liabilities	(12,861)
Deferred revenue	(4,186)
Net assets acquired	<u>\$ 27,141</u>

Pro forma Information (Unaudited)

The following pro forma financial information presents the combined results of operations of the Company and Antenna as if the acquisition had occurred on January 1, 2013 after giving effect to certain pro forma adjustments. The pro forma adjustments reflected herein include only those adjustments that are directly attributable to the Antenna acquisition, factually supportable, and expected to have a continuing impact on the Company. These pro forma adjustments include a net increase in amortization expense to eliminate historical amortization of Antenna intangible assets and to record amortization expense for the \$10.4 million of acquired identifiable intangibles, a decrease in interest income as a result of the cash paid for the acquisition, a decrease in

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interest expense as a result of the repayment of all Antenna outstanding debt in connection with the acquisition, and the elimination of approximately \$1.3 million of acquisition-related costs, including transaction costs incurred by the Company and Antenna. The pro forma financial information does not reflect any adjustments for anticipated synergies resulting from the acquisition and is not necessarily indicative of the operating results that would have actually occurred had the transaction been consummated on January 1, 2013.

	Pro Forma Year Ended December 31, 2013
(in thousands, except per share amounts)	
Revenue	\$ 532,978
Net income	\$ 35,814
Net income per basic share (1)	<u>\$ 0.47</u>
Net income per diluted share (1)	<u>\$ 0.46</u>

- (1) The per share amounts have been retroactively restated for all prior periods presented to reflect the Company's two-for-one common stock split effected in the form of a common stock dividend distributed on April 1, 2014. See Note 1 "Basis of Presentation" (d) for further discussion of the Stock Split.

9. GOODWILL AND OTHER INTANGIBLE ASSETS

As discussed in Note 18 "Geographic Information and Major Clients", the Company operates in one reportable segment, Digital Enterprise Business Solutions, and has one reporting unit.

The following table presents the changes in the carrying amount of goodwill:

(in thousands)	Year Ended December 31,		
	2015	2014	2013
Balance as of January 1,	\$46,860	\$43,469	\$20,451
Purchase price adjustments to goodwill retroactively applied (1)	—	—	6,006
Goodwill acquired during the year	—	3,431	17,012
Translation adjustments	(84)	(40)	—
Balance as of December 31,	<u>\$46,776</u>	<u>\$46,860</u>	<u>\$43,469</u>

- (1) The purchase price adjustments identified during 2014 have been retroactively applied as of December 31, 2013.

Intangible assets are recorded at cost and are amortized using the straight-line method over their estimated useful lives.

(in thousands)	Range of Useful Lives	Cost	Accumulated Amortization	Net book value
December 31, 2015				
Customer related intangibles	4-9 years	\$ 49,546	\$ (30,465)	\$19,081
Technology	3-9 years	48,342	(34,282)	14,060
Other intangibles	3 years	5,361	(5,084)	277
Total		<u>\$103,249</u>	<u>\$ (69,831)</u>	<u>\$33,418</u>
December 31, 2014				
Customer related intangibles	4-9 years	\$ 49,590	\$ (24,338)	\$25,252
Technology	3-9 years	48,342	(28,890)	19,452
Other intangibles	1-3 years	5,361	(4,401)	960
Total		<u>\$103,293</u>	<u>\$ (57,629)</u>	<u>\$45,664</u>

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Amortization expense of acquired intangibles was reflected in the Company's consolidated statements of operations as follows:

(in thousands)	Year Ended December 31,		
	2015	2014	2013
Amortization expense:			
Cost of revenue	\$ 5,392	\$ 6,017	\$ 6,443
Selling and marketing	6,127	6,022	5,174
General and administrative	683	1,770	396
Total amortization expense	<u>\$12,202</u>	<u>\$13,809</u>	<u>\$12,013</u>

As of December 31, 2015, future estimated amortization expense is as follows:

(in thousands)	Future estimated amortization expense
2016	\$ 11,517
2017	9,818
2018	8,819
2019	3,027
2020 and thereafter	237
	<u>\$ 33,418</u>

10. ACCRUED EXPENSES

(in thousands)	December 31,	
	2015	2014
Partner commissions	\$ 3,319	\$ 2,441
Other taxes	10,070	10,970
Employee reimbursable expenses	1,426	1,474
Dividends payable	2,297	2,294
Professional services contractor fees	4,580	2,297
Self-insurance health and dental claims	2,129	2,115
Professional fees	2,937	2,444
Short-term deferred rent	1,600	1,446
Income taxes payable	5,464	8,966
Acquisition-related expenses and merger consideration	834	2,702
Restructuring	394	461
Marketing and sales program expenses	1,397	1,914
Cloud hosting expenses	1,370	516
Foreign currency forward contracts	1,052	—
Fixed assets in progress	1,632	144
Other	2,267	2,774
	<u>\$42,768</u>	<u>\$42,958</u>

11. DEFERRED REVENUE

(in thousands)	December 31,	
	2015	2014
Software license	\$ 40,886	\$ 38,961
Maintenance	95,262	83,467
Cloud	8,948	4,209
Services	10,777	8,035
Current deferred revenue	155,873	134,672
Software license	12,389	19,878
Maintenance and services	2,227	981
Cloud	1,189	—
Long-term deferred revenue	15,805	20,859
	<u>\$ 171,678</u>	<u>\$ 155,531</u>

12. ACCRUED RESTRUCTURING

During the fourth quarter of 2013, in connection with the Company's evaluation of its combined facilities with Antenna, the Company approved a plan to eliminate space within one facility. The Company ceased use of this space during the fourth quarter of 2013 and recognized \$1.7 million of restructuring expenses. During the third quarter of 2014, the Company restructured the remaining space within the same facility, revised its restructuring estimate, and recognized \$0.2 million in additional restructuring expense. These restructuring expenses represent future lease payments and demising costs, net of estimated sublease income for this space. The lease expires in 2021.

A summary of the restructuring activity is as follows:

(in thousands)	Antenna personnel and facilities restructuring	Total
Balance as of January 1, 2013	\$ —	\$ 441
Restructuring costs	1,731	1,731
Cash payments	—	(441)
Other	(140)	(140)
Balance as of December 31, 2013	<u>\$ 1,591</u>	<u>\$ 1,591</u>
Restructuring costs	192	192
Cash payments	(476)	(476)
Other	(128)	(128)
Balance as of December 31, 2014	<u>\$ 1,179</u>	<u>\$ 1,179</u>
Restructuring costs	—	—
Cash payments	(186)	(186)
Balance as of December 31, 2015	<u>\$ 993</u>	<u>\$ 993</u>

(in thousands)	December 31,	
	2015	2014
Reported as:		
Accrued expenses	\$394	\$ 461
Other long-term liabilities	599	718
	<u>\$993</u>	<u>\$1,179</u>

13. COMMITMENTS AND CONTINGENCIES

Commitments

The Company leases space for its offices under noncancellable operating leases that expire at various dates through 2023.

As of December 31, 2015, the Company's future minimum rental payments required under operating leases with noncancellable terms in excess of one year were as follows:

(in thousands)	Operating Leases
<u>For the calendar year</u>	<u>(1)</u>
2016	\$ 13,087
2017	13,101
2018	13,057
2019	11,281
2020	10,294
2021 & Thereafter	26,604
	<u>\$ 87,424</u>

- (1) Operating leases include future minimum rent payments, net of estimated sublease income for facilities that the Company has vacated pursuant to its restructuring activities, as discussed in Note 12.

Rent expense under operating leases is recognized on a straight-line basis to account for scheduled rent increases and landlord tenant allowances. In connection with the Company's amended lease for its office headquarters dated November 11, 2014, the Company has a landlord tenant allowance totaling approximately \$9.4 million, of which \$8.4 million was used and reimbursed to the Company as of December 31, 2012 and will be amortized as a reduction to rent expense on a straight-line basis over the term of the lease. Total rent expense under operating leases was approximately \$12.3 million, \$12.5 million, and \$11.7 million for the years ended December 31, 2015, 2014 and 2013, respectively.

Contingencies

The Company is a party in various contractual disputes, litigation and potential claims arising in the ordinary course of business. The Company does not believe that the resolution of these matters will have a material adverse effect on its financial position or results of operations.

14. STOCKHOLDERS' EQUITY

(a) Preferred stock

The Company has authorized 1,000,000 shares of preferred stock, which may be issued from time to time in one or more series. The Board of Directors has the authority to issue the shares of preferred stock in one or more series, to establish the number of shares to be included in each series, and to fix the designation, powers, preferences and rights of the shares of each series and the qualifications, limitations or restrictions thereof, without any further vote or action by the stockholders. The issuance of preferred stock could decrease the amount of earnings and assets available for distribution to holders of common stock, and may have the effect of delaying, deferring or defeating a change in control of the Company. The Company had not issued any shares of preferred stock through December 31, 2015.

(b) Common stock

The Company has 200,000,000 authorized shares of common stock, \$0.01 par value per share, of which 76,488,000 shares were issued and outstanding at December 31, 2015.

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Since 2004, the Company's Board of Directors has approved stock repurchase programs that have authorized the Company to repurchase in the aggregate up to \$169 million of its common stock. On June 4, 2015, the Company announced that its Board of Directors extended the expiration date of the current stock repurchase program to June 30, 2016 and authorized the Company to repurchase up to an additional \$50 million of its stock between June 4, 2015 and June 30, 2016. Purchases under these programs have been made on the open market. The following table is a summary of the Company's repurchase activity under all of the Company's repurchase programs for the years ended December 31:

(Dollars in thousands)	2015		Year Ended December 31, 2014		2013	
	Shares	Amount	Shares	Amount	Shares	Amount
Prior year authorizations at January 1,		\$ 13,284		\$ 14,433		\$ 14,793
Authorizations		50,000		14,410		12,164
Repurchases paid	944,398	(22,530)	756,143	(15,264)	773,258	(12,370)
Repurchases unsettled	7,836	(220)	13,983	(295)	6,282	(154)
Authorized dollars remaining as of December 31,		<u>\$ 40,534</u>		<u>\$ 13,284</u>		<u>\$ 14,433</u>

(c) Dividends

On May 27, 2014, the Company announced an increase in its quarterly common stock cash dividend from \$0.015 to \$0.03 per share, on a post-split basis. The Company declared quarterly dividends totaling \$0.12 per share, \$0.105 per share, and \$0.06 per share, on a post-split basis, for the years ended December 31, 2015, 2014, and 2013, respectively. The Company's Board of Directors authorized the acceleration of the payment of the dividend declared in the fourth quarter 2012, otherwise payable in January 2013, to December 2012. Therefore, there was no dividend payment in the first quarter of 2013. For the years ended December 31, 2015, 2014, and 2013, the Company paid cash dividends of \$9.2 million, \$6.9 million, and \$3.4 million, respectively. It is the Company's current intention to pay a quarterly cash dividend of \$0.03 per share, however, the Board of Directors may terminate or modify this dividend program at any time without notice.

15. STOCK-BASED COMPENSATION

The majority of the Company's stock-based compensation arrangements vest over either a four or five year vesting schedule and the Company's stock options have a ten-year term. The Company recognizes stock-based compensation using the accelerated recognition method, treating each vesting tranche as if it were an individual grant.

The Company periodically grants stock options and restricted stock units ("RSUs") for a fixed number of shares upon vesting to employees and non-employee Directors. The exercise price for stock options is greater than or equal to the fair market value of the shares at the grant date. RSUs deliver to the recipient a right to receive a specified number of shares of the Company's common stock upon vesting. Unlike stock options, there is no cost to the employee at share issuance. The Company values its RSUs at the fair value of its common stock on the grant date, which is the closing price of its common stock on the grant date, less the present value of expected dividends, as the employee is not entitled to dividends during the requisite service period. Upon vesting of the RSUs, the Company withholds shares of common stock in an amount sufficient to cover the minimum statutory tax withholding obligations and issues shares of its common stock for the remaining amount.

Employees may elect to receive 50% of their target incentive compensation under the Company's Corporate Incentive Compensation Plan (the "CICP") in the form of RSUs instead of cash. If elected by an employee, the

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equity amount is equal in value on the date of grant to 50% of his or her target incentive opportunity, based on the employee's base salary. The number of RSUs granted is determined by dividing 50% of the employee's target incentive opportunity by 85% of the closing price of its common stock on the grant date, less the present value of expected dividends. If elected, the award vests 100% on the CICIP payout date of the following year for all participants. Vesting is conditioned upon the performance conditions of the CICIP and on continued employment; if threshold funding does not occur, the equity grant will be cancelled. The Company considers vesting to be probable on the grant date and recognizes the associated stock-based compensation expense over the requisite service period beginning on the grant date and ending on the vest date.

The Company grants options that allow for the settlement of vested stock options on a net share basis ("net settled stock options"). With net settled stock options, the employee does not surrender any cash or shares upon exercise. Rather, the Company withholds the number of shares to cover the option exercise price and the minimum statutory tax withholding obligations from the shares that would otherwise be issued upon exercise. The exercise of stock options on a net share basis results in fewer shares issued by the Company.

Share-Based Compensation Plans:

(a) Amended and Restated 2004 Long-Term Incentive Plan

In 2004, the Company adopted the 2004 Long-Term Incentive Plan (the "2004 Plan") to provide employees, non-employee Directors, and consultants with opportunities to purchase stock through incentive stock options and non-qualified stock options. In addition to options, eligible participants under the 2004 Plan may be granted stock purchase rights and other stock-based awards. In July 2011, the Company's stockholders approved the Pegasystems Inc. Amended and Restated 2004 Long-Term Incentive Plan (the "Restated 2004 Plan"), which increased the number of shares authorized for issuance under the plan to 24,000,000, giving effect to the Stock Split, and extended the term of the plan to 2021. Since 2006, the Company has granted to each non-employee director of the Company unrestricted shares of common stock on an annual basis in consideration of their board service. The number of unrestricted shares granted to each non-employee director was equal to \$119,000, \$95,000, and \$70,000, divided by the fair market value of the Company's common stock on the grant dates, for 2015, 2014, and 2013, respectively. As of December 31, 2015, approximately 9,130,000 shares were subject to outstanding options and stock-based awards under the Restated 2004 Plan.

(b) 2006 Employee Stock Purchase Plan

In 2006, the Company adopted the 2006 Employee Stock Purchase Plan (the "2006 ESPP") pursuant to which the Company's employees are entitled to purchase up to an aggregate of 1,000,000 shares, giving effect to the Stock Split, of common stock at a price equal to at least 85% of the fair market value of the Company's common stock on either the commencement date or completion date for offerings under the plan, whichever is less, or such higher price as the Company's Board of Directors may establish from time to time. Until the Company's Board of Directors determines otherwise, the Board has set the purchase price at 95% of the fair market value on the completion date of the offering period. As a result, the 2006 ESPP is non-compensatory and is tax qualified. Therefore, as of December 31, 2015, no compensation expense related to shares issued under the plan had been recognized. In October 2012, the Company's Board of Directors amended the term of the 2006 ESPP such that it will continue until there are no shares remaining to be issued under the plan or until the plan is terminated by the Board of Directors, whichever occurs first. As of December 31, 2015, approximately 331,000 shares had been issued thereunder.

Shares reserved

As of December 31, 2015, there were approximately 6,880,000 shares remaining for issuance for future equity grants under the Company's stock plans, consisting of approximately 6,211,000 shares under the Restated 2004 Plan and approximately 669,000 shares under the 2006 ESPP.

Equity grants, assumptions and activity

During 2015, the Company issued approximately 1,053,000 shares to its employees under the Company's share-based compensation plans and approximately 31,000 shares to the non-employee members of its Board of Directors.

The following table presents the stock-based compensation expense included in the Company's consolidated statements of operations:

(in thousands)	Year ended December 31,		
	2015	2014	2013
Stock-based compensation expense:			
Cost of revenues	\$ 8,772	\$ 5,335	\$ 4,085
Operating expenses	21,282	13,870	8,784
Total stock-based compensation before tax	30,054	19,205	12,869
Income tax benefit	(8,098)	(5,563)	(3,918)

Stock Options

The Company estimates the fair value of stock options using a Black-Scholes option valuation model. Key inputs used to estimate the fair value of stock options include the exercise price of the award, the expected term of the option, the expected volatility of the Company's common stock over the option's expected term, the risk-free interest rate over the option's expected term, and the Company's expected annual dividend yield. The amount of stock-based compensation recognized during a period is based on the value of the awards that are ultimately expected to vest. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Ultimately, the Company recognizes the actual expense over the vesting period only for the shares that vest. The weighted-average grant-date fair value for stock options granted in 2015, 2014, and 2013, was \$7.62, \$7.58 and \$6.72 per share, respectively.

The weighted-average assumptions used in the Black-Scholes option valuation model are as follows:

	Year ended December 31,		
	2015	2014	2013
Expected annual volatility (1)	45%	47%	49%
Expected term in years (2)	4.5	4.4	4.5
Risk-free interest rate (3)	1.34%	1.33%	1.02%
Expected annual dividend yield (4)	0.68%	0.44%	0.42%

- (1) The expected annual volatility for each grant is determined based on the average of historical daily price changes of the Company's common stock over a period of time which approximates the expected option term.
- (2) The expected option term for each grant is determined based on the historical exercise behavior of employees and post-vesting employment termination behavior.
- (3) The risk-free interest rate is based on the yield of U.S. Treasury securities with a maturity that is commensurate with the expected option term at the time of grant.
- (4) The expected annual dividend yield is based on the weighted-average of the dividend yield assumptions used for options granted during the applicable period. The expected annual dividend has historically been based on the expected dividend of \$0.06 per share, per year (\$0.015 per share, per quarter times 4 quarters), on a post-split basis, divided by the average stock price. On May 27, 2014, the Company announced an increase in its quarterly cash dividend from \$0.015 to \$0.03 per share. Thus, for grants made after this date, the expected annual dividend is based on the expected dividend of \$0.12 per share, per year (\$0.03 per share, per quarter times 4 quarters), divided by the average stock price.

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The Company elected to adopt the alternative transition method (“short cut method”) in calculating its historical pool of windfall tax benefits in regards to its share-based compensation.

The following table summarizes the combined stock option activity under the Company’s stock option plans for the year ended December 31, 2015:

	<u>Shares (in thousands)</u>	<u>Weighted-average exercise price</u>	<u>Weighted-average remaining contractual term (in years)</u>	<u>Aggregate intrinsic value (in thousands)</u>
Options outstanding as of January 1, 2015	6,100	\$ 12.99		
Granted	2,265	20.99		
Exercised	(1,255)	9.95		
Forfeited/Cancelled	(547)	16.79		
Options outstanding as of December 31, 2015	<u>6,563</u>	\$ 16.01		
Vested and expected to vest as December 31, 2015	<u>5,405</u>	\$ 9.49	7.2	\$ 97,357
Exercisable as of December 31, 2015	<u>2,418</u>	\$ 12.48	5.7	\$ 36,317

The aggregate intrinsic value of stock options exercised (i.e., the difference between the market price at exercise and the price paid by the employee at exercise) in 2015, 2014, and 2013 was \$18.6 million, \$13.2 million and \$20.6 million, respectively. The aggregate intrinsic value of stock options outstanding and exercisable as of December 31, 2015 is based on the difference between the closing price of the Company’s stock of \$27.50 on December 31, 2015 and the exercise price of the applicable stock options.

As of December 31, 2015, the Company had unrecognized stock-based compensation expense related to the unvested portion of stock options of approximately \$10.7 million that is expected to be recognized as expense over a weighted-average period of approximately 2.2 years.

RSUs

The weighted-average grant-date fair value for RSUs granted in 2015, 2014, and 2013 was \$20.49, \$19.88, and \$16.06, respectively. The following table summarizes the combined RSU activity for periodic grants and the CICP under the Restated 2004 Plan for the year ended December 31, 2015:

	<u>Shares (in thousands)</u>	<u>Weighted-Average Grant-Date Fair Value</u>	<u>Aggregate Intrinsic Value (in thousands)</u>
Nonvested as of January 1, 2015	1,718	\$ 18.90	
Granted	1,868	20.49	
Vested	(662)	18.72	
Forfeited	(317)	19.36	
Nonvested as of December 31, 2015	<u>2,607</u>	\$ 20.03	\$ 71,684
Expected to vest as of December 31, 2015	<u>1,970</u>	\$ 20.03	\$ 54,169

The RSUs associated with periodic grants vest over five years with 20% vesting after one year and the remaining 80% vesting in equal quarterly installments over the remaining four years. Approximately 256,000 RSUs granted in connection with the 2015 CICP are expected to vest 100% in March 2016.

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The fair value of RSUs vested in 2015, 2014, and 2013 was \$14.9 million, \$8.0 million, and \$7.3 million, respectively. The aggregate intrinsic value of RSUs outstanding and expected to vest as of December 31, 2015 is based on the closing price of the Company's stock of \$27.50 on December 31, 2015.

As of December 31, 2015, the Company had approximately \$19.9 million of unrecognized stock-based compensation expense related to all unvested RSUs that is expected to be recognized as expense over a weighted-average period of approximately 2.1 years.

16. INCOME TAXES

Effective tax rate

The components of income before provision for income taxes are as follows for the years ended December 31:

(in thousands)	2015	2014	2013
Domestic	\$63,124	\$36,485	\$47,054
Foreign	(2,619)	11,509	9,339
Total income before provision	<u>\$60,505</u>	<u>\$47,994</u>	<u>\$56,393</u>

The components of the provision for income taxes are as follows for the years ended December 31:

(in thousands)	2015	2014	2013
Current:			
Federal	\$17,864	\$ 22,488	\$20,277
State	4,565	2,952	2,054
Foreign	3,853	3,195	3,027
Total current provision	<u>26,282</u>	<u>28,635</u>	<u>25,358</u>
Deferred:			
Federal	2,075	(11,972)	(6,069)
State	(466)	(1,209)	(634)
Foreign	(3,708)	(715)	(305)
Total deferred expense (benefit)	<u>(2,099)</u>	<u>(13,896)</u>	<u>(7,008)</u>
Total provision	<u>\$24,183</u>	<u>\$ 14,739</u>	<u>\$18,350</u>

The effective income tax rate differed from the statutory federal income tax rate due to the following:

	2015	2014	2013
Statutory federal income tax rate	35.0%	35.0%	35.0%
Valuation allowance	0.7	0.5	—
Transaction costs	—	—	0.4
State income taxes, net of federal benefit and tax credits	4.6	1.8	1.4
Permanent differences	1.1	1.3	1.0
Domestic production activities	(3.1)	(4.9)	(3.8)
Federal research and experimentation credits	(1.2)	(1.7)	(2.8)
Tax effects of foreign activities	2.0	(2.2)	(1.9)
Tax-exempt income	(0.1)	(0.1)	(0.1)
Provision to return adjustments	0.3	—	0.8
Non-deductible compensation	3.3	2.5	1.2
Provision for uncertain tax positions	(2.6)	(0.7)	1.5
Other	—	(0.8)	(0.2)
Effective income tax rate	<u>40.0%</u>	<u>30.7%</u>	<u>32.5%</u>

Deferred income taxes

Deferred income taxes reflect the tax attributes and tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of net deferred tax assets and liabilities are as follows:

(in thousands)	2015	2014
Deferred tax assets:		
Net operating loss carryforwards	\$ 65,601	\$ 86,770
Accruals and reserves	30,322	24,393
Software revenue	6,608	13,199
Depreciation	5,327	4,655
Tax credit carryforwards	6,686	6,028
Other	58	38
Total deferred tax assets	114,602	135,083
Less valuation allowances	(35,509)	(35,620)
Total net deferred tax assets	<u>\$ 79,093</u>	<u>\$ 99,463</u>
Deferred tax liabilities:		
Intangibles	\$ (13,363)	\$ (17,231)
Total deferred tax liabilities	(13,363)	(17,231)
Total net deferred income taxes	<u>\$ 65,730</u>	<u>\$ 82,232</u>
Reported as:		
Current net deferred tax asset	\$ 12,380	\$ 12,974
Long-term net deferred income tax assets	53,350	69,258
Total net deferred income taxes	<u>\$ 65,730</u>	<u>\$ 82,232</u>

The Company regularly assesses the need for a valuation allowance against its deferred tax assets. In making that assessment, the Company considers both positive and negative evidence related to the likelihood of realization of the deferred tax assets to determine, based on the weight of available evidence, whether it is more-likely-than-not that some or all of the deferred tax assets will not be realized. This determination requires significant judgment, including assumptions about future taxable income that are based on historical and projected information. There were no material adjustments to the Company's valuation allowance position during 2015 and 2014. The \$0.1 million net change in the valuation allowance during the period primarily relates to a \$0.5 million decrease for movements in foreign exchange rates, partially offset by a \$0.4 million increase in the assessment regarding the utilization of state tax credits.

The Company acquired approximately \$39.6 million and \$58.1 million of federal and foreign net operating losses ("NOLs"), respectively, in the Antenna acquisition. The Company has determined that it may utilize \$7.5 million of the acquired Antenna federal NOLs under the applicable section 382 limitation, and these losses are scheduled to expire through 2031. A valuation allowance is recorded on the deferred tax assets in excess of the federal NOLs that are deemed recoverable under the limitation. With regard to the acquired foreign NOLs, a full valuation allowance has been recorded as of December 31, 2015 due to uncertainty regarding the availability of these NOLs to offset future income generated by the related foreign businesses due to limitations under local country change in control provisions. As of December 31, 2015, the Company had approximately \$38.9 million of acquired Antenna federal NOLs, which are subject to annual use limitations under section 382. Based on those limitations, the Company anticipates using \$6.6 million of the remaining NOLs by 2031.

As of December 31, 2015, the Company had approximately \$108.2 million of acquired Chordiant federal NOLs, which are subject to annual use limitations under section 382. Based on those limitations, the Company

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anticipates using \$82.4 million of the remaining NOLs by 2029. In addition, the Company has \$0.4 million of deferred tax assets related to state NOLs as of December 31, 2015.

As of December 31, 2015, the Company had available \$7 million of state tax research and experimentation (“R&E”) credits expiring in the years 2016 through 2030 and \$0.4 million of investment tax credits, which have an unlimited carryover.

The Company’s India subsidiary is a development center in an area designated as a Special Economic Zone (“SEZ”) and is entitled to a tax holiday in India. The tax holiday reduces or eliminates income tax in that country and is scheduled to expire in 2022. For the years ended December 31, 2015, 2014, and 2013, the effect of the income tax holiday was to reduce the overall income tax provision by approximately \$0.9 million, \$0.8 million, and \$0.5 million, respectively. The benefit of the tax holiday on net income per share (diluted) was \$0.01 for each of the years ended December 31, 2015, 2014, and 2013.

In 2015, the Company reduced its income tax payable by \$5.3 million for the tax benefit realized from the exercise, sale or vesting of equity awards.

Undistributed earnings of the Company’s foreign subsidiaries amounted to approximately \$27.9 million as of December 31, 2015. The Company has not provided any additional federal or state income taxes or foreign withholding taxes on the undistributed earnings as such earnings have been indefinitely reinvested in the business. It is impractical to estimate the amount of tax the Company could have to pay upon repatriation due to the complexity of foreign tax credit calculations and because the Company considers its earnings permanently reinvested.

Uncertain tax benefits and other considerations

A reconciliation of the beginning and ending balances of the total amounts of gross unrecognized tax benefits is as follows:

(in thousands)	2015	2014	2013
Balance as of January 1,	\$ 43,396	\$40,929	\$26,317
Additions based on tax positions related to the current year	817	4,041	4,320
Additions for tax positions of prior years	183	285	350
(Reductions) Additions for acquired uncertain tax benefits	—	(716)	10,268
Reductions for tax positions of prior years	(19,855)	(853)	(50)
Reductions for a lapse of the applicable statute of limitations	(569)	(290)	(276)
Balance as of December 31,	<u>\$ 23,972</u>	<u>\$43,396</u>	<u>\$40,929</u>

As of December 31, 2015, the Company had approximately \$24 million of total unrecognized tax benefits, which would decrease the Company’s effective tax rate if recognized. The \$19.9 million reduction for tax positions of prior years primarily relates to the release of limitations on acquired NOLs, which did not impact the Company’s effective tax rate in 2015. The Company expects that the changes in the unrecognized benefits within the next twelve months will be approximately \$0.5 million, all of which relate to the expiration of applicable statute of limitations and would reduce the Company’s effective tax rate if recognized.

For the years ended December 31, 2015, 2014, and 2013, the reductions for tax positions of prior years were related to the lapse in the applicable statute of limitations, revision of purchase accounting estimates, settlements of audits, and the impact for foreign currency exchange rates.

The Company recognizes interest accrued and penalties related to unrecognized tax benefits in the income tax provision. For the year ended December 31, 2015, the Company recognized a reduction of interest expense of

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approximately \$0.6 million. For each of the years ended December 31, 2014 and 2013, the Company recognized interest expense of approximately \$0.3 million. For the years ended December 31, 2015, 2014, and 2013, the Company did not recognize any significant penalties. As of December 31, 2015, 2014 and 2013, the Company had accrued approximately \$1.2 million, 1.5 million, and \$1.1 million, respectively, for interest and penalties.

The Company files income tax returns in the U.S. and in foreign jurisdictions. Generally, the Company is no longer subject to U.S. federal, state, local, or foreign income tax examinations by tax authorities for years before 2014. The Company is generally not subject to U.S. federal, state, or local, or foreign income tax examinations by tax authorities for the years before 2012. With few exceptions, the statute of limitations remains open in all jurisdictions for the tax years 2012 to the present.

17. EARNINGS PER SHARE

Basic earnings per share is computed using the weighted-average number of common shares outstanding during the applicable period. Diluted earnings per share is computed using the weighted-average number of common shares outstanding during the applicable period, plus the dilutive effect of outstanding options and RSUs, using the treasury stock method and the average market price of the Company's common stock during the applicable period. Certain shares related to some of the Company's outstanding stock options and RSUs were excluded from the computation of diluted earnings per share because they were antidilutive in the periods presented, but could be dilutive in the future.

(in thousands, except per share amounts)	Year Ended December 31,		
	2015	2014	2013
Basic			
Net income	\$36,322	\$33,255	\$38,043
Weighted-average common shares outstanding	76,507	76,327	75,946
Earnings per share, basic	\$ 0.47	\$ 0.44	\$ 0.50
Diluted			
Net income	\$36,322	\$33,255	\$38,043
Weighted-average common shares outstanding	76,507	76,327	75,946
Weighted-average effect of dilutive securities:			
Stock options	1,601	1,698	1,626
RSUs	935	506	402
Effect of assumed exercise of stock options and RSUs	2,536	2,204	2,028
Weighted-average common shares outstanding, assuming dilution	79,043	78,531	77,974
Earnings per share, diluted	\$ 0.46	\$ 0.42	\$ 0.49
Outstanding options, warrants and RSUs excluded as impact would be antidilutive	182	98	226

18. GEOGRAPHIC INFORMATION AND MAJOR CLIENTS

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker ("CODM") in deciding how to allocate resources and in assessing performance.

The Company develops and licenses its strategic software applications and Pega 7 platform, and provides consulting services, maintenance, and training related to its offerings. The Company derives substantially all of its revenue from the sale and support of one group of similar products and services—software that provides

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business process solutions in the enterprise applications market. To assess performance, the Company's CODM, who is the chief executive officer, reviews financial information on a consolidated basis. Therefore, the Company determined it has one reportable segment—Digital Enterprise Business Solutions, and one reporting unit.

The Company's international revenue is from clients based outside of the U.S. The Company derived its revenue from the following geographic areas:

(Dollars in thousands)	Year ended December 31,					
	2015		2014		2013	
U.S.	\$379,936	56%	\$327,154	55%	\$278,945	55%
Other Americas	57,892	8%	32,642	6%	18,942	4%
United Kingdom	96,314	14%	93,923	16%	83,134	16%
Other EMEA (1)	87,240	13%	87,050	15%	82,743	16%
Asia Pacific	61,313	9%	49,235	8%	45,190	9%
	<u>\$682,695</u>	<u>100%</u>	<u>\$590,004</u>	<u>100%</u>	<u>\$508,954</u>	<u>100%</u>

(1) Includes Europe other than the UK, the Middle East and Africa, ("Other EMEA").

Long-lived assets related to the Company's U.S. and international operations were as follows:

(Dollars in thousands)	December 31,			
	2015		2014	
U.S.	\$17,600	56%	\$18,276	61%
India	10,530	34%	8,943	29%
International, other	3,189	10%	2,937	10%
	<u>\$31,319</u>	<u>100%</u>	<u>\$30,156</u>	<u>100%</u>

There were no clients accounting for 10% or more of the Company's total revenue in 2015, 2014, and 2013. There was one client accounting for 10% or more of the Company's total outstanding trade receivables as of December 31, 2015, as listed below. The Company's financial services, healthcare, and insurance clients as a group represent a significant amount of the Company's revenues and receivables. However, the Company determined this concentration did not have a material impact on its allowance for sales credit memos as of December 31, 2015.

(Dollars in thousands)	December 31,	
	2015	2014
Trade receivables, net of allowances	\$211,846	\$154,844
Client A	10%	n/a

Marketable securities are another financial instrument that potentially subject the Company to a concentration of credit risk. See Note 3 "Marketable Securities" and Note 5 "Fair Value Measurements" for further discussion.

19. EMPLOYEE BENEFIT PLANS

The Company sponsors a 401(k) defined contribution retirement plan for qualifying employees pursuant to which the Company makes discretionary matching contributions. The Company's expense under the plan totaled approximately \$4.1 million in 2015, \$3.4 million in 2014, and \$2.9 million in 2013. In addition, the Company has defined contribution plans for qualifying international employees and contributions expensed under those plans totaled approximately \$6.4 million in 2015, \$5.1 million in 2014, and \$3.7 million in 2013.

20. SELECTED QUARTERLY INFORMATION (UNAUDITED)

	2015			
(in thousands, except per share amounts)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Revenue	\$ 153,918	\$ 162,019	\$ 162,403	\$ 204,355
Gross profit	103,859	107,238	106,962	151,190
Income from operations	11,909	5,250	10,711	36,791
Income before provision for income taxes	9,260	4,501	10,246	36,498
Net income	5,935	3,104	6,325	20,958
Net earnings per share, basic	\$ 0.08	\$ 0.04	\$ 0.08	\$ 0.27
Net earnings per share, diluted	\$ 0.08	\$ 0.04	\$ 0.08	\$ 0.26

	2014			
(in thousands, except per share amounts)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Revenue	\$ 140,464	\$ 142,985	\$ 137,631	\$ 168,924
Gross profit	94,551	96,294	91,249	122,816
Income from operations	14,627	2,222	4,997	29,693
Income before provision for income taxes	14,541	2,387	2,352	28,714
Net income	9,765	1,504	1,882	20,104
Net earnings per share, basic	\$ 0.13	\$ 0.02	\$ 0.02	\$ 0.27
Net earnings per share, diluted	\$ 0.12	\$ 0.02	\$ 0.02	\$ 0.26

ITEM 9. Changes In and Disagreements with Accountants on Accounting and Financial Disclosure

None.

ITEM 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures.

Our management, with the participation of our Chief Executive Officer, or CEO, and Chief Accounting Officer, or CAO, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act) as of December 31, 2015. In designing and evaluating our disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and our management necessarily applied its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on this evaluation, our CEO and CAO concluded that our disclosure controls and procedures were effective as of December 31, 2015.

(b) Management's Report on and Changes in Internal Control over Financial Reporting.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act. Under the supervision and with the participation of our management, including our CEO and CAO, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2015 based on the framework in the updated *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) on May 14, 2013. Based on this evaluation, management has concluded that (i) our disclosure controls and procedures were effective as of December 31, 2015 and (ii) no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act) occurred during the quarter ended December 31, 2015 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Deloitte & Touche LLP, our independent registered public accounting firm which also audited our consolidated financial statements, has issued an attestation report on our internal control over financial reporting, which is included on page 44 in Item 8 Financial Statements and Supplementary Data.

ITEM 9B. Other Information

None.

PART III

ITEM 10. Directors, Executive Officers, and Corporate Governance

Except as set forth below, the information required by this Item is contained in our proxy statement for our 2016 annual stockholders meeting (the “2016 proxy statement”) under the heading “Election of Directors,” and is incorporated herein by reference. Information relating to certain filings on Forms 3, 4, and 5 is contained in our 2016 proxy statement under the heading “Section 16(a) Beneficial Ownership Reporting Compliance,” and is incorporated herein by reference. Information required by this item pursuant to Items 407(c) (3), 407(d) (4), and 407(d) (5) of Regulation S-K relating to an audit committee financial expert, the identification of the audit committee of our Board of Directors and procedures of security holders to recommend nominees to our Board of Directors is contained in the 2016 proxy statement under the heading “Corporate Governance” and is incorporated herein by reference.

We have adopted a written code of conduct that applies to our Board of Directors and all of our employees, including our principal executive officer, principal financial officer, principal accounting officer, or persons performing similar functions. A copy of our code of conduct can be found on our Website, www.pega.com. We intend to satisfy the disclosure requirements under Item 5.05 of Form 8-K and under the applicable the NASDAQ Global Select Market rules by posting such information on our Website in accordance with such requirements.

EXECUTIVE OFFICERS

The names of our executive officers and certain information about them are set forth below as of February 1, 2016:

Alan Trefler, age 59, a founder of Pegasystems, serves as Chief Executive Officer and Chairman and has been a Director since we organized in 1983. Prior to 1983, he managed an electronic funds transfer product for TMI Systems Corporation, a software and services company. Mr. Trefler holds a B.A. degree in Economics and Computer Science from Dartmouth College.

Efstathios Kouninis, age 54, joined Pegasystems in April 2008 as Vice President of Finance. The Board of Directors appointed Mr. Kouninis as the Company’s Chief Accounting Officer in May 2008 and Treasurer in January 2014. From February 2006 to April 2008, Mr. Kouninis served as Chief Financial Officer and Treasurer of Tasker Products Corporation, a publicly traded manufacturer of antimicrobial chemicals. From November 2004 to February 2006, Mr. Kouninis served on the Staff of the Division of Corporation Finance of the U. S. Securities and Exchange Commission. Mr. Kouninis holds a B.S. from the University of Massachusetts, a Post Baccalaureate in Accounting, and a M.S. in taxation from Bentley College.

Douglas Kra, age 53, joined Pegasystems in November 2004 as Vice President of Global Services. In January 2010, Mr. Kra was promoted to Senior Vice President of Global Services. In July 2014, the Company re-organized its sales and consulting services functions under one responsibility for specific geographic regions, and Mr. Kra was promoted to Senior Vice President of Global Customer Success for international regions. From 2002 to 2004, Mr. Kra served as Vice President at eLoyalty Corp., a consulting company specializing in customer relationship management. From 2000 to 2001, Mr. Kra served as President of Zefer Corp., an internet consulting firm. Prior to Zefer, Mr. Kra spent ten years at Cambridge Technology Partners Inc. in a variety of senior roles. He holds a B.A. in Computer Science from Brandeis University and an M.B.A. in finance from the New York University Stern School of Business.

Michael Pyle, age 61, joined Pegasystems in 1985 and has served as Senior Vice President of Engineering since August 2000. Including his positions with Pegasystems, Mr. Pyle’s professional background encompasses more than thirty years of software development and managerial experience throughout Europe and the U.S. Mr. Pyle completed his B.C.S. specializing in Computer Science and Systems Programming at the Civil Service College in London.

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Leon Trefler, age 55, joined Pegasystems in April 1998 as an Account Executive for Strategic Business Development. Since then he has held various senior sales management positions across the Company and in Channel Sales. In 2002, he launched the commercialization of PegaRULES Process Commander, the predecessor to Pega 7. From April 2007 to January 2010, Mr. Trefler served as Vice President of Sales, North America and in January 2010, Mr. Trefler was promoted to Senior Vice President of Sales. In July 2014, the Company re-organized its sales and consulting services functions under one responsibility for specific geographic regions, and Mr. Trefler was promoted to Senior Vice President of Global Customer Success for the Americas region. Mr. Trefler holds a B.A. degree from Dartmouth College.

Alan Trefler and Leon Trefler are brothers. There are no other family relationships among any of our executive officers or Directors.

ITEM 11. Executive Compensation

The information required by this item is contained in the 2016 proxy statement under the headings “Director Compensation”, “Compensation Discussion and Analysis”, and “Executive Compensation” and is incorporated herein by reference.

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

Information required by this item with respect to stock ownership of certain beneficial owners and management is contained in the 2016 proxy statement under the heading “Security Ownership of Certain Beneficial Owners and Management” and is incorporated herein by reference.

Equity Compensation Plan Information

The following table provides certain information with respect to our equity compensation plans in effect as of December 31, 2015:

	(a) Number of shares of common stock to be issued upon exercise of outstanding stock options and vesting of RSUs (3)	(b) Weighted-average exercise price per share of outstanding stock options (4)	(c) Number of shares of Common stock Remaining available For future issuance (excluding those in Column (a)) (5)
(In thousands, except per share amounts)			
Equity compensation plans approved by stockholders (1)	9,130	\$ 16.04	6,880
Equity compensation plans not approved by stockholders (2)	40	\$ 11.28	—

(1) We currently maintain two equity compensation plans: the Amended and Restated 2004 Long-Term Incentive Plan (the “Restated 2004 Plan”) and the 2006 Employee Stock Purchase Plan as amended, (the “2006 ESPP”). In addition to the issuance of stock options, the Restated 2004 Plan allows for the issuance of stock purchase rights and other stock-based awards, including RSUs. Since 2006, the Company has granted unrestricted shares of its common stock to its non-employee directors under the Restated 2004 Plan. Our stockholders previously approved each of these plans and all amendments that were subject to stockholder approval. See Note 15 “Stock-Based Compensation” included in the Notes to Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for further information and description of our equity compensation plans.

(2) These stock options were assumed in connection with our acquisition of Chordiant in 2010 and were originally granted under the Chordiant Software, Inc. 2005 Equity Incentive Plan (the “2005 Plan”). No additional awards were or may be granted under the 2005 Plan following the date of acquisition. This plan

was not approved by our stockholders since it was adopted on the date of acquisition. In connection with our acquisition of Chordiant, all outstanding equity awards issued under the 2005 Plan with an exercise price of \$3.00, on a post-split basis, or lower were assumed by us and converted into the right to receive 0.13 shares of Pegasystems common stock for every one share of Chordiant common stock covered by such awards. All other outstanding equity awards issued under the 2005 Plan were cancelled.

The 2005 Plan was approved by Chordiant's stockholders and provided for the grant of incentive stock options, nonstatutory stock options, stock purchase awards, RSAs, RSUs, and other forms of equity compensation. Awards granted under the 2005 Plan generally expire four to ten years after the grant date and generally become exercisable over a period of two to four years, with either yearly or monthly vesting.

- (3) The number of shares of common stock issued upon exercise of vested stock options and vesting of RSUs will be less than 9,170,000 because of the "net settlement" feature of most of these stock options and RSUs. This feature enables the employee to satisfy the cost to exercise (in the case of stock options) and, if applicable, taxes due (in the case of stock options and RSUs) by surrendering shares to the Company based on the fair value of the shares at the exercise date (in the case of stock options) or vesting date (in the case of RSUs), instead of selling all of the shares on the open market to satisfy these obligations. The settlement of vested stock options and vested RSUs on a net share basis will result in fewer shares issued by the Company. During 2015, stock option and RSU holders net settled stock options and RSUs representing the right to purchase a total of 1,821,000 shares, of which only 932,000 were issued to the stock option and RSU holders and the balance of the shares were surrendered to the Company to pay for the exercise price and the applicable taxes.
- (4) The weighted-average exercise price does not take into account the shares issuable upon vesting of outstanding RSUs, which have no exercise price.
- (5) Includes approximately 669,000 shares remaining available for issuance as of December 31, 2015 under the 2006 ESPP.

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

The information required by this item is contained in the 2016 proxy statement under the headings "Certain Relationships and Related Transactions" and "Determination of Independence" and is incorporated herein by reference.

ITEM 14. Principal Accounting Fees and Services

The information required by this item is contained in the 2016 proxy statement under the heading "Independent Registered Public Accounting Firm Fees and Services" and is incorporated herein by reference.

PART IV

ITEM 15. Exhibits, Financial Statement Schedules

(a) The following are filed as part of this Annual Report on Form 10-K:

(1) Financial Statements

The following consolidated financial statements are included in Item 8:

	Page
Consolidated Balance Sheets as of December 31, 2015 and 2014	45
Consolidated Statements of Operations for the years ended December 31, 2015, 2014, and 2013	46
Consolidated Statements of Comprehensive Income for the years ended December 31, 2015, 2014, and 2013	47
Consolidated Statements of Stockholders' Equity for the years ended December 31, 2015, 2014, and 2013	48
Consolidated Statements of Cash Flows for the years ended December 31, 2015, 2014, and 2013	49

(b) Exhibits

The exhibits listed in the Exhibit Index immediately preceding such exhibits are filed as part of this Annual Report on Form 10-K.

(c) Financial Statement Schedules

All financial statement schedules are omitted because the required information is not present or not present in sufficient amounts to require submission of the schedule or because the information is reflected in the consolidated financial statements or notes thereto.

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
2.1	Agreement and Plan of Merger, dated as of October 9, 2013, by and among Pegasystems Inc., Aries Merger Sub, Inc., Antenna Software, Inc. and Shareholder Representative Services LLC, solely in its capacity as representative of Stockholders thereunder. (Filed as Exhibit 2.1 to the Registrant's October 11, 2013 Form 8-K and incorporated herein by reference.)
3.1	Restated Articles of Organization of the Registrant and Amendments thereto. (Filed as Exhibit 3.1 to the Registrant's September 30, 2014 Form 10-Q and incorporated herein by reference.)
3.2	Amended and Restated Bylaws of Pegasystems Inc. (Filed as Exhibit 3.1 to the Registrant's December 17, 2013 Form 8-K and incorporated herein by reference.)
4.1	Specimen Certificate Representing the Common Stock. (Filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 (Registration No. 333-03807) or an amendment thereto and incorporated herein by reference.)
10.1++	Amended and Restated 2004 Long-Term Incentive Plan, dated May 18, 2011 (Filed as Appendix A within the Registrant's 2011 Proxy Statement, filed May 23, 2011 and incorporated herein by reference.)
10.2++	Form of Employee Stock Option Agreement, as amended on December 15, 2009. (Filed as Exhibit 10.8 to the Registrant's 2009 Form 10-K and incorporated herein by reference.)
10.3++	Form of Restricted Stock Unit Agreement, as amended on December 15, 2009. (Filed as Exhibit 10.9 to the Registrant's 2009 Form 10-K and incorporated herein by reference.)
10.4++	Form of Non-Employee Director Stock Option Agreement. (Filed as Exhibit 10.2 to the Registrant's September 30, 2004 Form 10-Q and incorporated herein by reference.)
10.5++	Offer Letter between the Registrant and Douglas I. Kra dated October 19, 2004. (Filed as Exhibit 10.20 to the Registrant's 2004 Form 10-K and incorporated herein by reference.)
10.6	Form of Director Indemnification Agreement. (Filed as Exhibit 99.1 to the Registrant's April 11, 2005 Form 8-K and incorporated herein by reference.)
10.7++	Amendment to Stock Option Agreement between the Registrant and Richard H. Jones dated December 29, 2006. (Filed as Exhibit 99.1 to the Registrant's January 4, 2007 Form 8-K and incorporated herein by reference.)
10.8	Lease Agreement, dated June 29, 2011 between Charles Park One, LLC and Pegasystems Inc. for premises at One Charles Park (Filed as Exhibit 99.1 to the Registrant's Form 8-K/A filed on July 6, 2011 and incorporated herein by reference.)
10.9++	2006 Employee Stock Purchase Plan, as amended on October 25, 2012. (Filed as Exhibit 10.24 to the Registrant's 2012 Form 10-K and incorporated herein by reference.)
10.10++	2014 Section 16 Officer/FLT Member Corporate Incentive Compensation Plan. (Filed as Exhibit 99.1 to the Registrant's February 18, 2014 Form 8-K and incorporated herein by reference.)
10.11++	2014 Section 16 Executive Officers Base Salaries and Target Bonus Payments. (Filed as Exhibit 99.2 to the Registrant's February 18, 2014 Form 8-K and incorporated herein by reference.)
10.12++	Compensation program for non-employee members of the Registrant's Board of Directors. (Filed as Exhibit 10.1 to the Registrant's June 30, 2014 Form 10-Q and incorporated herein by reference.)
10.13++	2015 Section 16 Officer/FLT Member Corporate Incentive Compensation Plan. (Filed as Exhibit 99.1 to the Registrant's February 3, 2015 Form 8-K and incorporated herein by reference.)

EXHIBIT INDEX—(CONTINUED)

<u>Exhibit No.</u>	<u>Description</u>
10.14++	2015 Section 16 Executive Officers Base Salaries and Target Bonus Payments. (Filed as Exhibit 99.2 to the Registrant's February 3, 2015 Form 8-K and incorporated herein by reference.)
10.15++	Compensation program for non-employee members of the Registrant's Board of Directors, effective August 6, 2015. (Filed as Exhibit 10.1 to the Registrant's September 30, 2015 Form 10-Q and incorporated herein by reference.)
10.16	First Amendment to Lease Agreement dated November 11, 2014 between Charles Park One, LLC and Pegasystems Inc. (Filed as Exhibit 10.1 to the Registrant's September 30, 2015 Form 10-Q and incorporated herein by reference.)
+21.1	Subsidiaries of the Registrant.
+23.1	Consent of Independent Registered Public Accounting Firm—Deloitte & Touche LLP.
+31.1	Certification pursuant to Exchange Act Rules 13a-14 and 15d-14 of the Chief Executive Officer.
+31.2	Certification pursuant to Exchange Act Rules 13a-14 and 15d-14 of the Chief Accounting Officer.
+32	Certification pursuant to 18 U.S.C. Section 1350 of the Chief Executive Officer and the Chief Accounting Officer.
101.INS**	XBRL Instance document.
101.SCH**	XBRL Taxonomy Extension Schema Document.
101.CAL**	XBRL Taxonomy Calculation Linkbase Document.
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB**	XBRL Taxonomy Label Linkbase Document.
101.PRE**	XBRL Taxonomy Presentation Linkbase Document.

++ Management contracts and compensatory plan or arrangements required to be filed pursuant to Item 15(b) of Form 10-K.

+ Filed herewith

** Submitted electronically herewith

Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Balance Sheets as of December 31, 2015 and December 31, 2014, (ii) Consolidated Statements of Operations for the years ended December 31, 2015, 2014 and 2013, (iii) Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2015, 2014 and 2013, (iv) Consolidated Statements of Stockholders' Equity (v) Consolidated Statements of Cash Flows for the years ended December 31, 2015, 2014 and 2013, and (vi) Notes to Consolidated Financial Statements.

SUBSIDIARIES OF PEGASYSTEMS INC.

<u>Name of Subsidiary</u>	<u>State or Jurisdiction of Entity</u>
Antenna Canada, Inc.	Canada
Antenna Software India Private Ltd.	India
Antenna Software, LLC	Delaware
Antenna Volantis Ltd.	United Kingdom
Antenna Volantis Mobile Systems Private Ltd.	India
Antenna Volantis, Inc.	Oregon
Pegasystems AG	Switzerland
Pegasystems Bermuda Limited	Bermuda
Pegasystems Bilgi Teknolojileri Anonim Şirketi	Turkey
Pegasystems BV	Netherlands
Pegasystems Canada Inc.	Canada
Pegasystems France, S.A.R.L.	France
Pegasystems GmbH	Germany
Pegasystems Investment Inc.	Massachusetts
Pega Japan K.K.	Japan
Pegasystems Limited	United Kingdom
Pegasystems Mauritius	Mauritius
Pegasystems PTE Limited	Singapore
Pegasystems PTY Limited	Australia
Pegasystems Rus LLC	Russia
PEGASYSTEMS Software (Beijing) Co., Limited	China
Pegasystems Sp. Z o.o.	Poland
Pegasystems Spain, S.L.	Spain
Pegasystems Worldwide Inc.	Massachusetts
Pegasystems Worldwide India Private Limited	India
RPA Antenna Inc.	New Jersey
Pegasystems Thailand Limited	Thailand

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statements Nos. 333-09305, 333-53746, 333-89707, 333-104788, 333-116660, 333-135596, 333-166287, 333-166544 and 333-176810 on Form S-8 of our report dated February 26, 2015, relating to the financial statements and financial statement schedules of Pegasystems Inc., and the effectiveness of Pegasystems Inc.'s internal control over financial reporting, appearing in this Annual Report on Form 10-K of Pegasystems Inc. for the year ended December 31, 2015.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts

February 25, 2016

CERTIFICATION

I, Alan Trefler, certify that:

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

Dated: February 25, 2016

/s/ ALAN TREFLER

Alan Trefler
Chairman and Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION

I, Efstathios Kouninis, certify that:

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

Dated: February 25, 2016

/s/ EFSTATHIOS KOUNINIS

Efstathios Kouninis
Vice President of Finance and Chief Accounting Officer
(Principal Accounting Officer)

**CERTIFICATION PURSUANT TO SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Pegasystems Inc. (the Company) on Form 10-K for the year ended December 31, 2015 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Alan Trefler, Chairman and Chief Executive Officer of Pegasystems Inc., and Efstathios Kouninis, Vice President of Finance and Chief Accounting Officer of Pegasystems Inc., each certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ ALAN TREFLER

Alan Trefler
Chairman and Chief Executive Officer
(Principal Executive Officer)

/s/ EFSTATHIOS KOUNINIS

Efstathios Kouninis
Vice President of Finance and Chief Accounting Officer
(Principal Accounting Officer)

Dated: February 25, 2016