



Inovalon Holdings, Inc., 2018 Annual Report



Driving improvements in healthcare through advanced cloud-based analytics and data-driven intervention platforms informed by more than:

42,900,000,000

Medical Events*

264,000,000

Unique Patients

964,000

Physicians

519,000

Clinical Facilities

98.8%

U.S. Counties

*Medical Events represent discrete entries relating to patient interactions, medical procedures or changes in patients' medical conditions.
Figures as of December 31, 2018



'Nova' conjures images of great energy and passion bursting forth, intensity of light, and a source of life.

'Valor' conveys our bold determination and integrity.

'Innovation' is not an occasional formulation for us, but a persistent signature form. It is built in a casual sequence of three principles: Insight, Intervention, and Impact.

inovalon

And 'On' communicates a strong call to action.

'Value' is a cornerstone of our offerings and a commitment to our clients.

2018 AT-A-GLANCE

REVENUE
\$527.7M

ADJUSTED EBITDA
\$151.9M

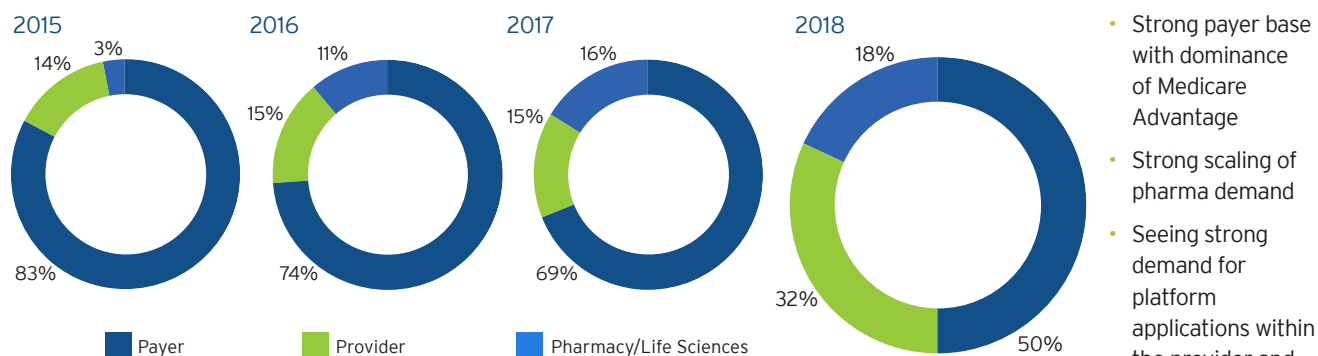
FINANCIAL HIGHLIGHTS

Year Ended December 31,

<i>\$ in thousands</i>	2018	2017	2016	2015	2014
Revenue	\$ 527,676	\$ 449,358	\$ 427,588	\$ 437,271	\$ 361,540
Cost of revenue	\$ 144,826	\$ 151,046	\$ 159,169	\$ 146,140	\$ 112,761
(Loss) Income from operations	(\$ 2,585)	\$ 33,789	\$ 37,634	\$ 116,456	\$ 110,061
Net (loss) income	(\$ 39,164)	\$ 34,818	\$ 27,104	\$ 66,063	\$ 65,352
Adjusted EBITDA ⁽¹⁾	\$ 151,945	\$ 109,014	\$ 99,944	\$ 151,622	\$ 133,648
Adjusted EBITDA margin ⁽¹⁾	29%	24%	23%	35%	37%
Non-GAAP net income ⁽¹⁾	\$ 39,321	\$ 41,780	\$ 50,953	\$ 75,352	\$ 70,205
Net cash provided by operating activities	\$ 90,401	\$ 97,706	\$ 92,830	\$ 67,554	\$ 85,528
Investment in innovation ⁽²⁾	\$ 79,639	\$ 85,814	\$ 62,430	\$ 47,783	\$ 44,528

ADJACENT MARKET EXPANSION

Demand for Inovalon's cloud-based platforms and data-driven capabilities is driving expansion not only in the Company's original area of focus, the payer landscape, but also in the pharmacy/life sciences and provider landscapes, resulting in greater diversification of revenue and an expanding number and scale of cross-synergy opportunities.



Graph does not depict category "Other," which is de minimis.

(1) For a reconciliation to the most directly comparable GAAP measures refer to the tables in the back of the Annual Report for the year ended December 31, 2018.

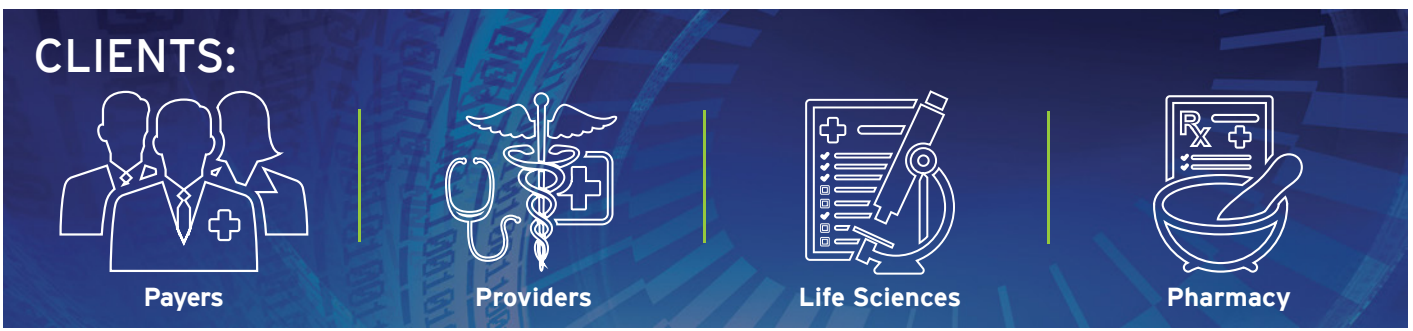
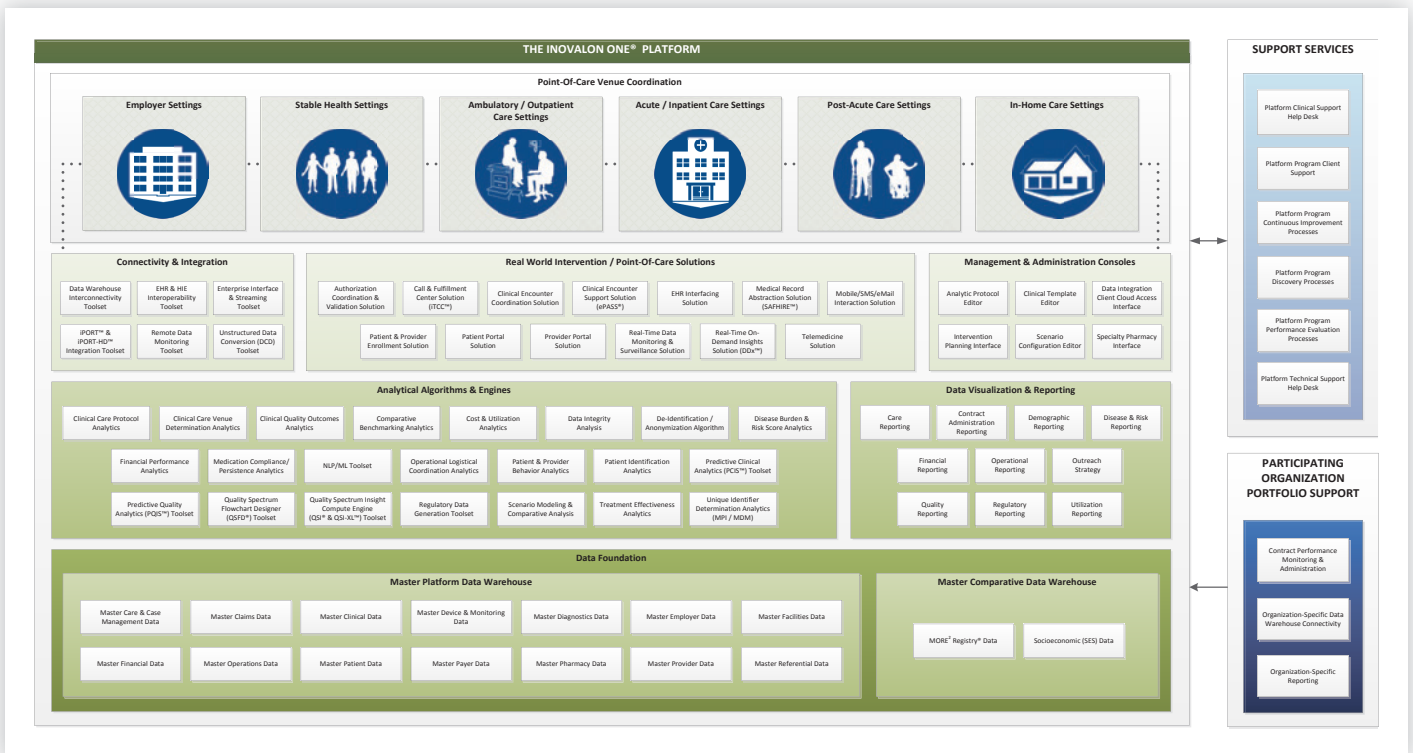
(2) For a definition of investment in innovation and the component make-up refer to page 35 of the Annual Report for the year ended December 31, 2018.

WHAT WE DO

Inovalon provides a cloud-based software platform that enables healthcare organizations to implement highly sophisticated data-driven initiatives in very large scale. At the core of data-based initiatives is the need to aggregate and analyze data, garner meaningful insight from the results, and use these insights to drive material change to outcomes and economics. To achieve this, four competencies are needed: 1) large-scale data connectivity, integration, and validation capabilities, 2) advanced predictive analytics and high-speed compute, 3) toolsets to translate resulting insights into real-world impact, and 4) purpose-built data visualization and reporting. To inform our platform, Inovalon brings to bear massive-scale datasets and industry-leading subject matter expertise.

THE INOVALON ONE® PLATFORM

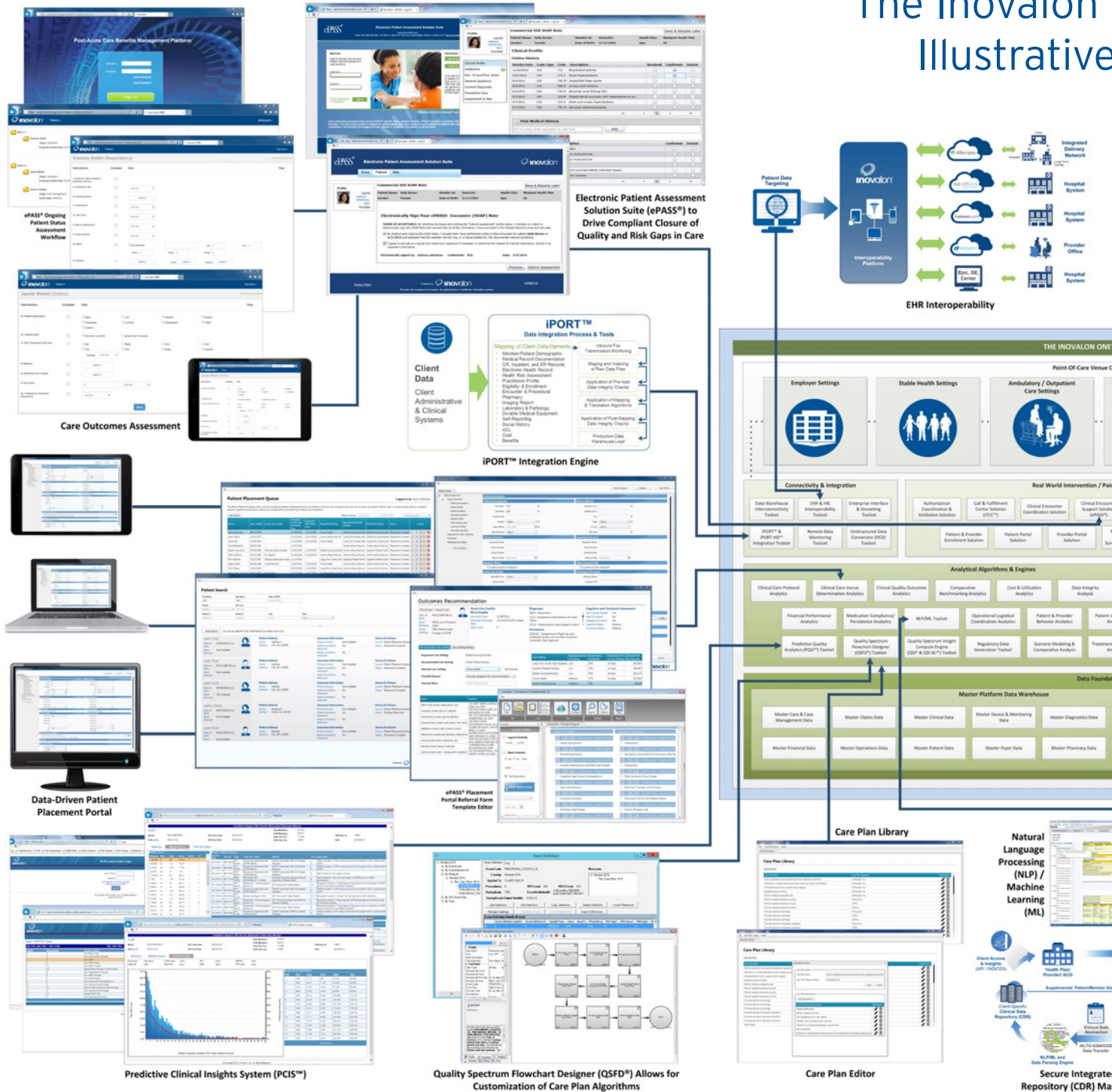
The Inovalon ONE® Platform is an integrated native cloud-based platform of nearly 100 individual proprietary toolsets able to be rapidly configured to empower the operationalization of large-scale, value-based care initiatives. Each toolset is referred to as a “Component,” with each supporting critical healthcare ecosystem functional needs. Components are configured into integrated sets identified as “Modules,” each of which share cohesive interoperability and common data management.



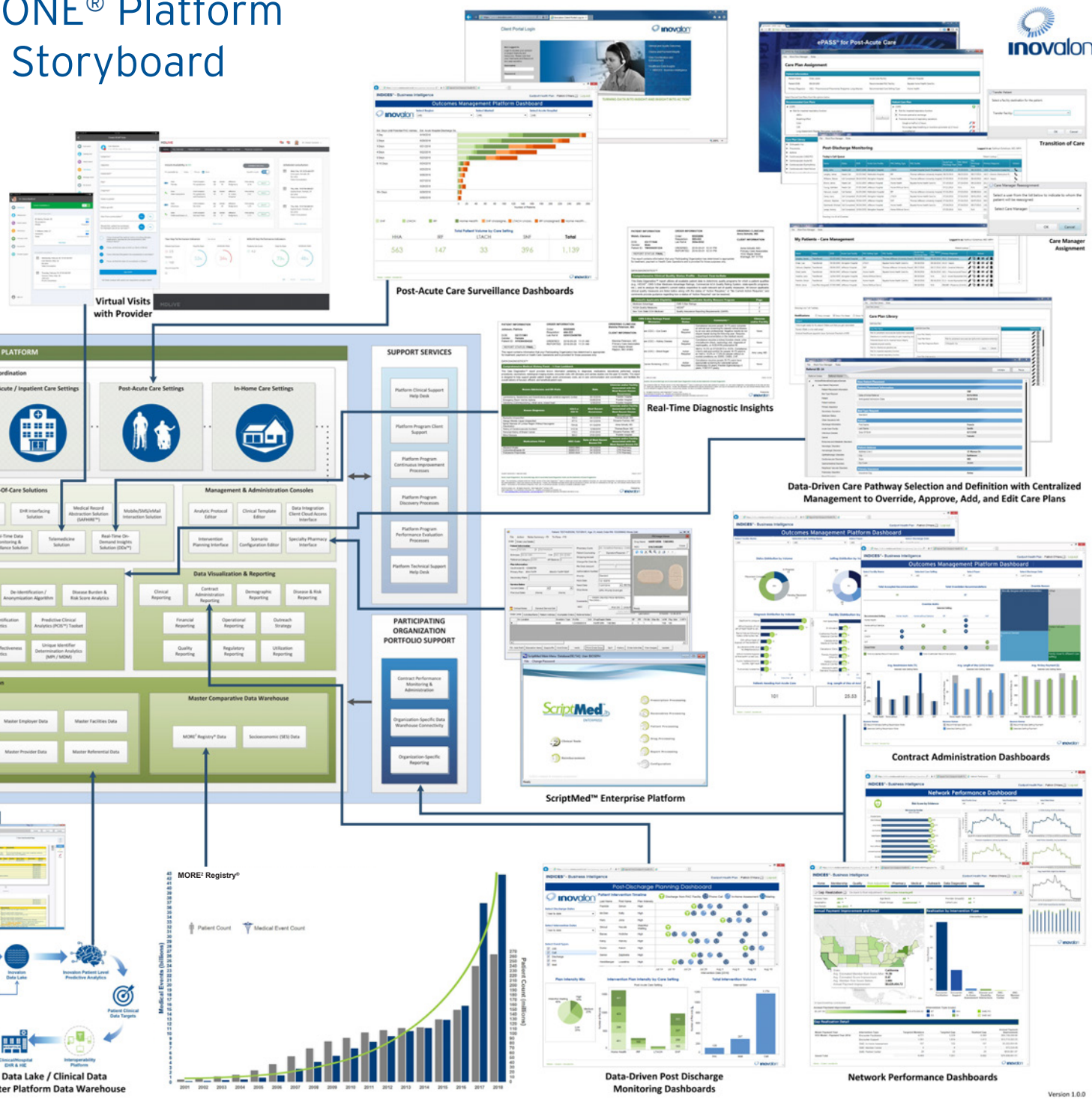
THE INOVALON ONE® PLATFORM

The Inovalon ONE® Platform brings to the marketplace a highly extensible, national-scale capability to interconnect with the healthcare ecosystem on massive scale, aggregate and analyze data in petabyte volumes, arrive at sophisticated insights in real-time, and drive impact wherever it is analytically identified best to intervene.

The Inovalon Illustrative



ONE® Platform Storyboard



A LETTER FROM THE CEO

KEITH R. DUNLEAVY, M.D.



Dear Fellow Stockholders,

2018 marked a year of positive transformation for Inovalon, leading to the emergence of the next generation of our Company and what we refer to as “Inovalon 2.0.” During the year, we completed the conversion of the majority of Inovalon’s offerings to a cloud-based, subscription-based model and we expanded our reach into the provider market through the acquisition of ABILITY Network, Inc. We continued to integrate and hone the business capabilities, sales models, strong workforce, and advanced technologies and data streams of our business units, including ABILITY, increasing the beneficial network effect of our combined entity and bringing to life synergy revenue generation opportunities. The Company continued to innovate, develop and expand our data assets and cloud-based platform offerings, increasing both our MORE² Registry[®] dataset and the number of Modules and the level of sophistication offered within the configurations of the Inovalon ONE[®] Platform.

The undertakings and accomplishments of the year were extensive – driving what we see to be notably positive benefits for our clients, the patients for whom they care, our Company, and our stockholders. In comparison to 2017, revenue in 2018 increased 17% to \$527.7 million, gross margin expanded by 620 basis points to 72.6%, adjusted EBITDA increased 39% to \$151.9 million, and cash flow from operations topped \$90 million – an amount that included the strongest fourth quarter cash generation since the Company went public in 2015.

In addition to the aforementioned in-year financial performance, which reflected the Company’s transformation to Inovalon 2.0 throughout the period, a number of key metrics demonstrated an increasingly positive momentum and growing success in the latter half of 2018. Driven by expanding data, analytical and platform differentiation, value delivery, and an improved focus on client success, we achieved outstanding client renewal rates and relationship expansions in 2018, resulting in our entering 2019 with a Client Retention Rate of 103% on a dollar basis. In addition to demonstrated success with existing clients, we also achieved a very strong showing with new clients, increasing the number of new logos added to our client portfolio by 29% in comparison to 2017. Altogether, the combination of the Inovalon 2.0 strengths resulted in impressive sales expansion delivering a 77% year-over-year increase in Annual Contract Value (ACV) sales by year-end.

Key to the expanding market demand seen by the Company in 2018 was the continued expansion of our market-leading Inovalon ONE[®] Platform. During 2018, we increased the number of Modules on the system from approximately 80 to nearly 100, enabling our customers across all of our verticals – payer, provider, pharmacy and life sciences – to adopt a wide array of possible configurations of our software-as-a-service solutions, selecting the capabilities that best meet their needs. Behind the scenes, our massive datasets continued to increasingly inform our platform’s capabilities – empowering the development and training of machine learning, artificial intelligence, and deep learning algorithms to deliver even greater client value and further differentiate Inovalon within the marketplace. Since the Company went public, our combined datasets have grown at greater than 50% per year on a compounded annual basis. By the end of 2018, our count of unique patients and medical events within our MORE² Registry[®] dataset had risen to more than 264 million and nearly 43 billion, respectively.

As seen within our strong Client Retention Rates, new logo addition rates, and ACV sales growth, the differentiated capabilities of the Company are increasingly resonating with existing clients and new clients. We are seeing this across all of the Company’s business verticals, with strong sales being realized by each. In addition, Inovalon is benefitting from the network effect wherein companies across our end markets begin to understand the dramatic interrelationship between their organizations. Pharmaceutical companies are seeking ways to demonstrate greater value and differentiation with health plans. Pharmacies are looking to collaborate more effectively with providers, and health plans are aiming to decrease costs and achieve better outcomes in coordination with all parts of the ecosystem. Inovalon’s breadth of relationships across the landscape, access to common data, interconnectivity, and appreciation of the healthcare marketplace’s regulations and complex dynamics is supporting a very positive network effect – enabling Inovalon to provide and empower increasingly differentiated offerings of concurrent value to multiple parties.

As we have expanded our platform capability set and client base, we continued to increase our total addressable market (TAM) and concurrently decrease our customer concentration. As our total addressable market has grown from an estimated \$84 billion in 2014 to \$142 billion in 2018, our total serviceable market has grown

from an estimated \$10.6 billion to \$30.1 billion. Over the same period, the concentration of our ten largest customers has decreased from approximately 76% down to approximately 42%. As we see the opportunities ahead continuing to expand, we have made substantial investments to pursue them. We have dramatically expanded our salesforce from approximately 15 people when we went public in 2015 to more than 200 people by the end of 2018. We have shifted from a healthcare-focused sales effort to a tech-led sales effort supported by subject matter experts. We implemented a project called “Simplify,” wherein we changed the entire contracting environment within the Company to streamline our efforts, shorten contract cycle time, and enable a higher velocity of sale and implementation. Today, we can capture opportunity and deploy our technology faster than at any other time in our history.

As we enter 2019, we have strong momentum and unprecedented visibility into our expected financial results for the year. We see very strong growth ahead – and we see it with greater visibility than ever before. In addition to significant reported and organic revenue growth, we also see continued expansion in our already-strong profitability through additional technology synergies, process automation, connectivity, product mix, and value-driven pricing strength. This forecasted revenue and margin expansion, in turn, are seen driving further increases in our cash flow and balance sheet strength.

Today, Inovalon is delivering high-value solutions to a marketplace that is undergoing an important transformation to data-driven healthcare. Our vision is to be the high-value enablement layer within this ecosystem and the trusted partner able to empower our clients’ achievement of clinical quality and financial performance improvement. We are seeing this play out and resulting in a strong, positive inflection in our business, and this has us excited about what lies ahead. We are pleased that you are on this journey with us, and we sincerely appreciate your interest and support as stockholders.

A handwritten signature in black ink, appearing to read "Keith R. Dunleavy". The signature is fluid and cursive, written over a white background.

KEITH R. DUNLEAVY, M.D.
Chief Executive Officer &
Chairman of the Board
April, 2019

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K**

(Mark One)

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
or
 TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission file number: 001-36841

INOVALON HOLDINGS, INC.
(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)
47-1830316
(IRS Employer
Identification No.)
4321 Collington Road
Bowie, Maryland
(Address of Principal Executive Offices)
20716
(Zip Code)

(301) 809-4000

Registrant's Telephone Number, Including Area Code

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

<u>Title of Each Class</u>	<u>Name Of Each Exchange On Which Registered</u>
Class A Common Stock, \$0.000005 par value per share	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 15(d) of the Act. Yes No

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

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

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company
Emerging growth company

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

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

As of June 30, 2018, the last business day of the registrant's most recently completed second fiscal quarter, aggregate market value of the voting stock (common stock) held by non-affiliates of the registrant was approximately \$520.3 million.

As of January 31, 2019, the registrant had 72,046,008 shares of Class A common stock outstanding and 80,608,685 shares of Class B common stock outstanding.

Documents Incorporated by Reference

The information required by Part III (Items 10, 11, 12, 13 and 14) will be incorporated by reference from the Registrant's definitive proxy statement relating to its 2019 annual meeting of stockholders (the "2019 Proxy Statement"). The 2019 Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days after the end of the fiscal year to which this report relates.

INOVALON HOLDINGS, INC.

FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2018

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). All statements contained in this Annual Report other than statements of historical fact, including but not limited to statements regarding our future results of operations and financial position, our business strategy and plans, market growth, and our objectives for future operations, are forward-looking statements. The words “believe,” “may,” “see,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “expect,” and similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives and financial needs. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the future events and trends discussed in this Annual Report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

Factors that may cause actual results to differ from expected results include, among others:

- our future financial performance, including our ability to continue and manage our growth;
- our ability to retain our client base and sell additional services to them;
- the effect of the concentration of our revenue among our top clients;
- our ability to innovate and adapt our platforms and toolsets;
- the effects of regulations applicable to us, including regulations relating to data protection and data privacy;
- the effects of consolidation in the healthcare industry;
- the ability to successfully integrate our acquisitions, including ABILITY, and the ability of the acquired business to perform as expected;
- the ability to enter into new agreements with existing or new platforms, products, and solutions in the timeframes expected, or at all;
- the successful implementation and adoption of new platforms, products and solutions;
- the effects of changes in tax legislation for jurisdictions within which we operate, including recent changes in U.S. tax laws;
- the ability to protect the privacy of our clients’ data and prevent security breaches;
- the effect of current or future litigation;
- the ability to secure final court approval of existing class action lawsuits related to our initial public offering;
- the effect of competition on our business;
- the efficacy of our platforms and toolsets; and
- the timing and size of business realignment and restructuring charges.

Forward-looking statements are only current predictions and are subject to known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from those anticipated by such statements. These factors include, among other factors, those set forth in Part I, Item 1A, “Risk Factors.”

You should not rely upon forward-looking statements as predictions of future events. The events and circumstances reflected in the forward-looking statements may not be achieved or occur. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements. In addition, graphics, images or illustrations pertaining to or demonstrating our products, data, services and/or technology that may be used herein are intended for illustrative purposes only unless otherwise noted. We are under no duty to, and we disclaim any obligation to, update any of these forward-looking statements after the date of this Annual Report or to conform these statements to actual results or revised expectations.

PART I

Explanatory Note Regarding Market Information: This Annual Report on Form 10-K includes market data and forecasts with respect to the healthcare industry. Although we are responsible for all of the disclosure contained in this Annual Report, in some cases we rely on and refer to market data and certain industry forecasts that were obtained from third party surveys, market research, consultant surveys, publicly available information and industry publications and surveys that we believe to be reliable.

Item 1. Business.

Our Company

We are a leading technology company providing cloud-based platforms empowering data-driven healthcare. Through the Inovalon ONE[®] Platform, Inovalon brings to the marketplace a national-scale capability to interconnect with the healthcare ecosystem, aggregate and analyze data in real-time, and empower the application of resulting insights to drive meaningful impact at the point of care. Leveraging its platform, unparalleled proprietary data sets, and industry-leading subject matter expertise, Inovalon enables better care, efficiency, and financial performance across the healthcare ecosystem. From health plans and provider organizations, to pharmaceutical, medical device, and diagnostics companies, Inovalon's unique achievement of value is delivered through the effective progression of "Turning Data into Insight, and Insight into Action[®]." Supporting thousands of clients, including 24 of the top 25 U.S. health plans and 22 of the top 25 global pharma companies, Inovalon's technology platforms and analytics are informed by data pertaining to more than 964,000 physicians, 519,000 clinical facilities, 264 million Americans, and 42 billion medical events.

We generate the substantial majority of our revenue through the sale or subscription licensing of our platform solutions, as well as revenue from related arrangements for advisory, implementation, and support services.

On April 2, 2018, the Company acquired Butler Group Holdings, Inc., a Delaware corporation and its wholly-owned subsidiaries, including, without limitation, ABILITY Network Inc., a Delaware corporation ("ABILITY"). The combination of Inovalon and ABILITY creates a vertically integrated cloud-based platform empowering the achievement of real-time, value-based care from payers, manufacturers, and diagnostics all the way to the patient's point of care.

On September 17, 2014, Inovalon, Inc. implemented a holding company reorganization, pursuant to which Inovalon Holdings, Inc. became the new parent company of Inovalon, Inc. and Inovalon, Inc. became the direct, wholly owned subsidiary of the Company. The Company was incorporated in the state of Delaware on September 11, 2014. Inovalon, Inc. was incorporated in the state of Delaware on November 18, 2005. In this Annual Report, unless we indicate otherwise or the context requires, references to the "Company," "Inovalon," "we," "our," "ours," and "us" refer to Inovalon Holdings, Inc. and its consolidated subsidiaries.

Industry Overview and Demand Drivers

The Company believes that healthcare is increasingly becoming data-driven in nature, transactional in design, real-time in speed, and ultimately consumer-centric in focus. Driven by the first waves of disease-burden based reimbursement models and quality incentive programs, data has gained an increasing role in the U.S. healthcare system. Data is increasingly a competitive differentiator, as its aggregation, analysis, validation, and associated connectivity can be leveraged to identify individual patients' unique needs, refine care plans, speed drug discovery and commercialization, reduce waste, expand the value proposition of medications and medical devices, and streamline healthcare workflows and supply chains. As transparency into the many facets of healthcare increases, the Company believes the pace of the industry's transformation will continue to accelerate, ultimately placing consumers at the center as they play an increasingly active role in their care.

We believe that demand for our offerings is driven by the confluence of a number of fundamental healthcare industry trends, including:

Shift to Value-Based Healthcare. The healthcare industry is undergoing a significant transformation, driven by a shift from volume-based models to value-based and outcome-based models. The traditional fee-for-service reimbursement model in healthcare has played a major role in elevating both the level and growth rate of healthcare spending. In response, both the public and private sectors are shifting away from the historical fee-for-service (volume-based) models toward value-based, capitated payment models that are designed to incentivize value and quality at an individual patient level. The number of Americans covered by capitated payment programs (care programs wherein an organization is financially responsible for the healthcare of a population of patients for which the total compensation is fixed other than adjustments for factors including specifically how sick individual patients are, how much resource is needed to be applied or spent on each patient, what is the quality of the clinical care, and other demographic factors) continues to increase, according to industry sources and our internal estimates. This increase is expected to further drive the critical importance to accurately measure, analyze, report, and improve patient disease and comorbidity conditions, utilization rates, and clinical quality outcomes. Further, this shift from volume-based to value-based and outcome-based models is increasingly impacting other segments of the healthcare industry, including pharmaceutical companies, healthcare providers, medical device

manufacturers, and diagnostics companies. For example, pharmaceutical companies are increasingly pursuing outcomes-based contracting (“OBC”) arrangements with health plans in order to leverage data and analytics to demonstrate value and improve care outcomes. This is particularly true as a large number of new, complex, and expensive specialty treatments are expected to enter the market over the coming years.

Digitization of Healthcare Information. Across the healthcare landscape, a significant amount of data is being created every day, driven by patient care, payment systems, regulatory compliance, and record keeping. These data include information within patient health records, clinical trials, pharmacy benefit programs, imaging systems, sensors and monitoring platforms, laboratory results, patient reported information, hospital and physician performance programs, and billing and payment processing. However, despite significant investments by public and private sources within the industry, the digitized healthcare data remain largely stored in “walled gardens”—data that is static and not easily shared or interpreted. As the amount of data in healthcare continues to grow, we believe that it will be critical for participants across the healthcare industry to be able to analyze this disparate data and apply insights in a targeted manner in order to better achieve the goals of higher quality and more efficient care.

Healthcare Becoming Increasingly Consumer-centric. Increasingly, the patient (the consumer of healthcare) wants to take a more active and informed role in how their own individual healthcare is delivered—how to select their health plan and based on what information, how to select and interact with a physician, how to determine whether or not to have a particular surgical procedure or whether or not to take a particular medication, etc. Similar to other industries including financial services, retail, and entertainment, the healthcare marketplace is becoming increasingly consumer-centric. This transformation means that interactions in healthcare are becoming increasingly data-driven, transactional, and real-time in nature, all of which require increasingly sophisticated data ingestion and analytical capabilities, extensive industry connectivity, and high-speed, scalable, and secure compute infrastructures.

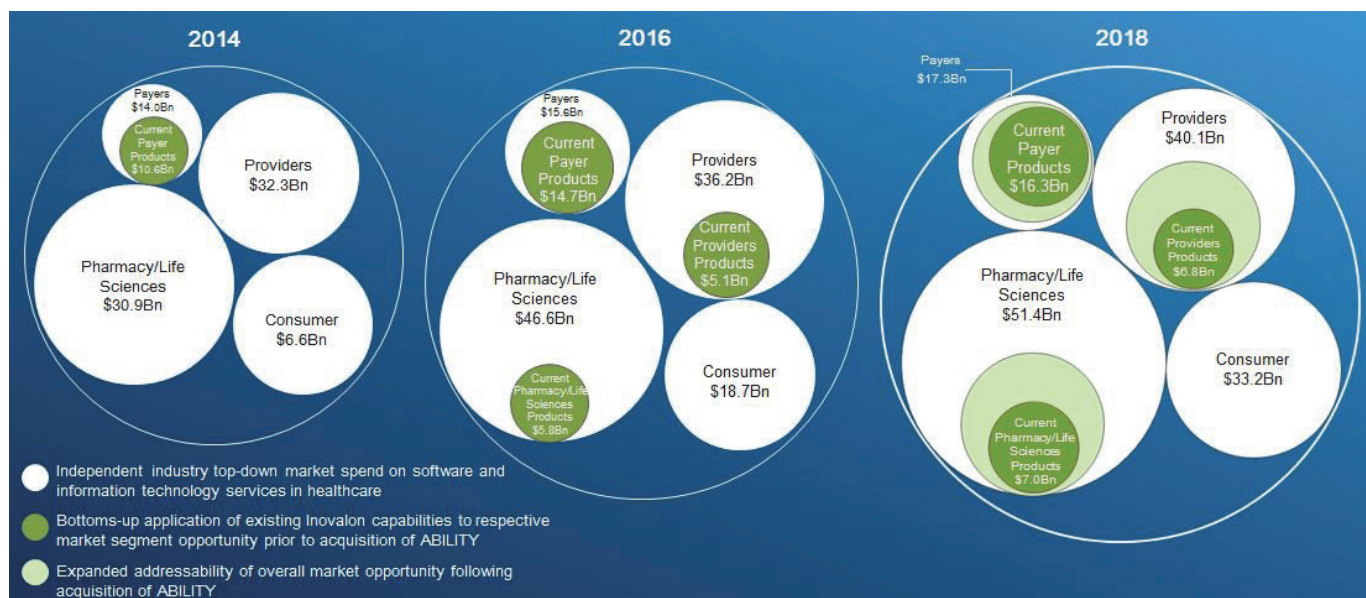
Increasing Complexity. The healthcare industry is on a course of dramatically progressive complexity. As technology employed in the healthcare space has become increasingly sophisticated, new diagnostics and treatments have been introduced, the pool of clinical research has expanded, and the paradigms dictating payment and regulatory oversight have multiplied. This expanding complexity drives a growing and continuous need for the aggregation, analysis, and targeted application of the underlying and resulting data.

Unsustainable Rise in Healthcare Costs. According to the 2017 National Health Expenditure Projections prepared by the Centers for Medicare and Medicaid Services (“CMS”), healthcare spending in the U.S. is projected to have increased 4.6% on a year-over-year basis to \$3.5 trillion in 2017, representing 17.9% of U.S. Gross Domestic Product (“GDP”). CMS projects healthcare spending in the U.S. to increase to approximately 20% of GDP by 2026. To address this expected significant rise in healthcare costs, the U.S. healthcare market is seeking more efficient and effective methods of delivering care. This same trend is playing out across modernized nations around the globe.

Our Market Opportunity

We believe that our market opportunity for data-driven healthcare solutions is significant and growing. The ability to aggregate, integrate, and analyze data on a massive scale and apply garnered insights in a manner that achieves meaningful impact is crucial for healthcare payers (e.g., health plans and integrated health delivery systems), healthcare providers (e.g., hospitals, accountable care organizations (“ACOs”), post-acute care providers, and physicians), pharmaceutical companies (e.g., medication discovery and manufacturers, specialty pharmacies, retail pharmacies, pharmacy benefit management companies), medical device manufacturers, diagnostics companies, and consumers.

According to third-party industry estimates, the addressable market for software and related services capabilities serving these healthcare constituents continues to expand from an estimated \$84 billion in 2014 to approximately \$142 billion in 2018. According to industry sources, the market for software and related services is approximately \$17.3 billion within the U.S. payer market. We believe that as analytics continue to demonstrate greater value within the U.S. payer landscape, the market will expand commensurately. We believe that the market opportunity for our current offerings within the payer market, the historical focus of our Company, is approximately \$16.3 billion. As we continue to build and launch new capabilities and expand our market opportunities following the acquisition of ABILITY, we believe analytics will provide a significantly larger value opportunity within this same payer space. For providers, industry sources estimate that software and related services represent a \$40.1 billion U.S. market size. We believe that the market opportunity for our current offerings within the provider market is approximately \$6.8 billion (excluding expected expansion of market opportunity following the ABILITY acquisition). In the pharmaceutical and life-sciences market, industry sources estimate a \$51.4 billion market size for total software and related services spend. We believe that the market opportunity for our current offerings within the pharmaceutical and life-sciences market is approximately \$7.0 billion, largely driven by our acquisitions of Avalere Health, Inc. (“Avalere”), a leading provider of data-driven advisory services and business intelligence solutions in the pharmaceutical and life sciences industry, in 2015, and Creehan Holding Co., Inc. (“Creehan”), a leader in specialty pharmacy software platforms, in 2016. In the consumer market, industry sources estimate a \$33.2 billion global market size for mobile health applications and solutions. We believe that, over time, analytics will also drive a significant opportunity expansion in the consumer market, as consumers seek to take a more active and informed role in how their healthcare is delivered.



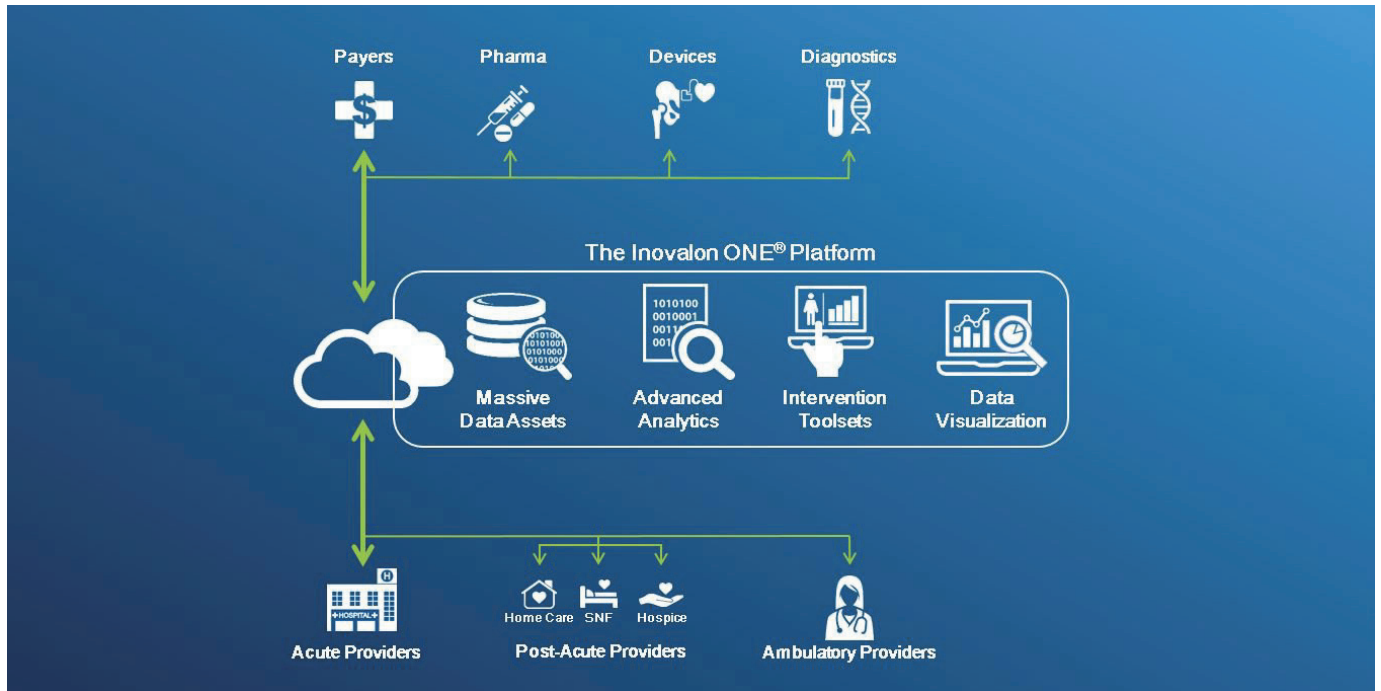
Source: Gartner, IDC, Research and Markets and Inovalon (with methodology validated by HMA).

In addition, the pressures that face the U.S. healthcare market are not unique, as other communities around the world are facing aging populations and growing pressures in sustaining affordable healthcare. We believe that our capabilities are highly applicable to other developed and developing countries around the globe, which we believe represents a sizable related future opportunity for our Company.

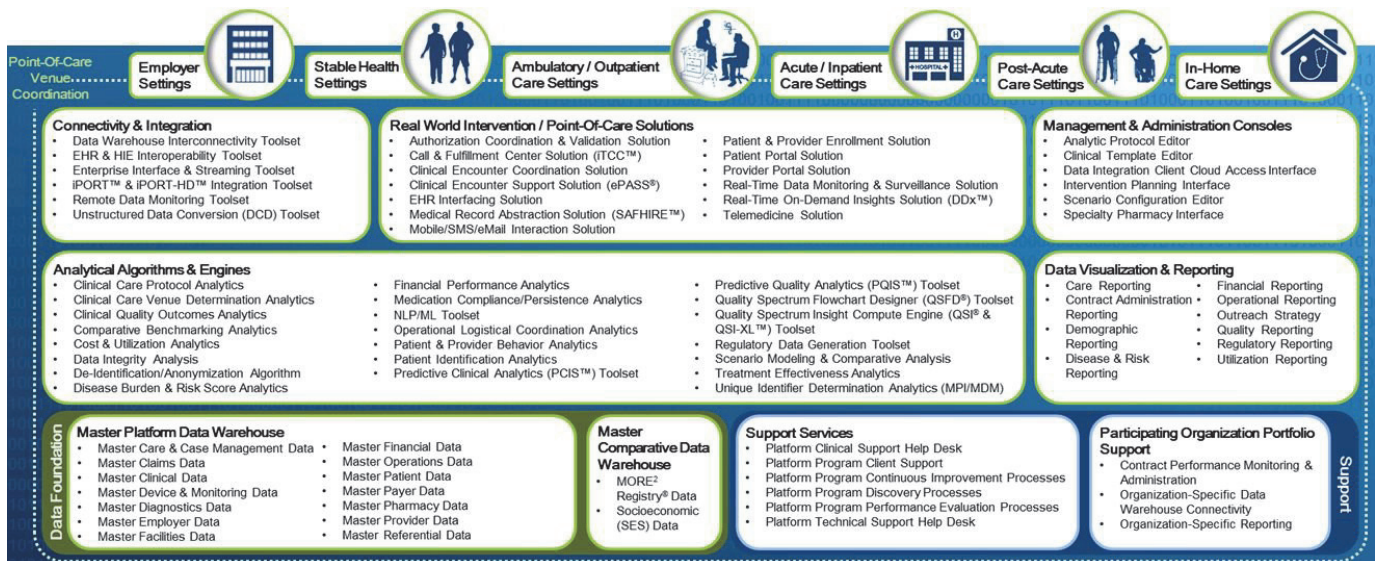
The Inovalon ONE® Platform

Inovalon provides a technology platform that enables healthcare organizations to implement highly sophisticated value-based initiatives in very large scale. At the core of value-based initiatives is the need to aggregate and analyze data, garner meaningful insight from the results, and use these insights to drive material change to outcomes and economics. To achieve this, four competencies are needed: 1) large-scale data connectivity, integration, and validation capabilities, 2) advanced predictive analytics and high-speed compute, 3) toolsets to translate resulting insights into real-world impact, and 4) purpose-built data visualization

and reporting. To inform and enable these competencies, Inovalon brings to bear large-scale datasets, expansive connectivity, robust technology infrastructure, and industry-leading subject matter expertise.



The Inovalon ONE[®] Platform is an integrated cloud-based platform of more than 80 individual proprietary technology toolsets and deep data assets able to be rapidly configured to empower the operationalization of large-scale, data-driven healthcare initiatives. Each proprietary technology toolset is referred to as a Component, which are grouped into Modules, and informed by the data of billions of medical events within Inovalon’s proprietary datasets. Combinations of Components and Modules are configured to empower highly differentiated solutions for client needs quickly and in a highly scalable fashion. The flexibility of the modular design of the Platform enables clients to integrate the capabilities of the Platform with their own internal capabilities or other third-party solutions. The Platform brings to the marketplace a highly extensible, national-scale capability to interconnect with the healthcare ecosystem on a massive scale, aggregate and analyze data in petabyte volumes, arrive at sophisticated insights in real-time, and drive meaningful impact wherever it is analytically identified best to intervene and intuitively visualize data and information to inform business strategy and execution.



Additionally, the myABILITY[®] software platform is an integrated set of cloud-based applications for providers that offers core connectivity, administrative, clinical, and quality analysis, management, and performance improvement capabilities to acute, post-acute and ambulatory point-of-care provider facilities.

The myABILITY[®] software platform is in the process of being connected and integrated with the Inovalon ONE[®] Platform.

Platform Capabilities

Data Integration. Throughout the healthcare industry, data is captured from many different sources, and while standards for exchanging information between healthcare applications are emerging, much of the data associated with population health remains in disparate silos, without the exchange of data, insight into patient or program status, or coordination of relevant patient engagements, and is both interchanged and processed without automation. Where investments have been made in the digitization of health data, many of the resulting solutions remain “walled gardens” of information—data that is static and not easily shared or interpreted.

Our data integration platform capability was designed and developed to address these challenges. This capability enables integration of any data source, on any hardware platform, in any data format at extremely high speeds. Our data integration platform receives information from external sources through a number of channels, including secure FTP, web services, and direct connections to external systems. Our data integration platform loads data into our “data lake” in its native format, which ensures that we maintain all data as it is received and allows users to query the data directly in its structured or unstructured format. Processing data in its raw format, however, presents many technological challenges. We have developed interactive data mapping technologies to support the mapping of the raw data files to staging structures used by our platform to convert data from its native format into a structured format that can be used by all processes on our platform. Once mapped, the data is run through multiple processes to standardize the data and perform data verification and integrity checks so that values are uniform across our entire platform.

We believe that our enterprise-scale data integration and management capability enables us to receive, integrate, and process extremely large-scale data flows at industry-leading speeds, and is a critical capability in achieving material improvement in clinical quality outcomes and financial performance in healthcare, creating a material market differentiator and value creator for us and our clients. We integrate data seamlessly and securely into our systems through our proprietary Extract, Transform, Load tools and processes. This system manages the process of defining and configuring thousands of industry data feeds from our clients and partners (such as electronic health records (“EHR”), laboratory, pharmacy, patient reported, claims, paper based medical records, biometric, and hospital data feeds respectively), manages the data processing workflow, and monitors the ongoing provision and quality of data through the application of more than 2,000 data integrity checks.

Our big data technology has been created through the use of internally developed software coupled with industry-leading technology frameworks that are vendor-agnostic. We leverage modern big data frameworks such as Hadoop and the Hadoop Distributed File System, which enable us to store structured and unstructured data while making it readily accessible by our analytics engine. Our big data processing capabilities enable dramatic improvements in data integration and analytical cycle speed to value recognition to empower improvements for intelligent product development through the “real world” functional application. Our big data technology lays the foundation of the data fabric allowing integration into our analytical capabilities.

Advanced Analytics. We have developed, honed, and scaled a broad portfolio of sophisticated analytics. Applying our subject matter expertise in computer processing, data architecture, statistics, medical sciences, healthcare policy, and leveraging the billions of medical events within our significant propriety datasets, we believe that we have developed one of the most advanced analytical platforms in the industry, as well as a culture and set of analytical toolsets that serve to rapidly innovate and expand our platform capabilities. In addition, by leveraging technologies such as Optical Character Recognition, Natural Language Processing and Machine Learning, we are able to further enhance our analytical capabilities, improve efficiency, and accelerate processing capacity and client value delivery.

Intervention Systems. In order to translate analytical insights into tangible impact, interventions at the point of care are critical. We are able to translate our analytical insights into meaningful impact through data-driven, multi-channel intervention platforms, which include toolsets and services that enable our clients to take the insights derived from our analytics and implement solutions that achieve meaningful impact at the patient and provider level. Our intervention capabilities include direct connectivity with many leading EHR systems, hard copy and electronic mail, and interactions via telephone, in patients’ homes, through mobile devices, at dedicated patient centers, through web-enabled decision support tools, in retail pharmacies, and in traditional clinical locations.

Business Processing. Our business processing capability consists of a powerful business intelligence system and comprehensive data warehousing to provide historical and current data insight, reporting, and benchmarking to support multiple client business needs such as government-mandated data filings, financial planning, and compliance requirements. We have also implemented an integrated platform of data visualization, allowing clients and their downstream users and operators to access data and analytical results from the population-level down to sophisticated individual drill-down details in real-time.

Data Sets

Datasets and the management of data are part of our core strengths, which provide meaningful insight into how a patient, provider, or population is doing. Our datasets grant us both relative and absolute insight, and inform the construction of new

analytics capabilities, predictive models, and impact predictions. Further, data management speeds our time to client impact, decreases the burden on clients choosing to do business with us, and empowers our achievement of mission and results.

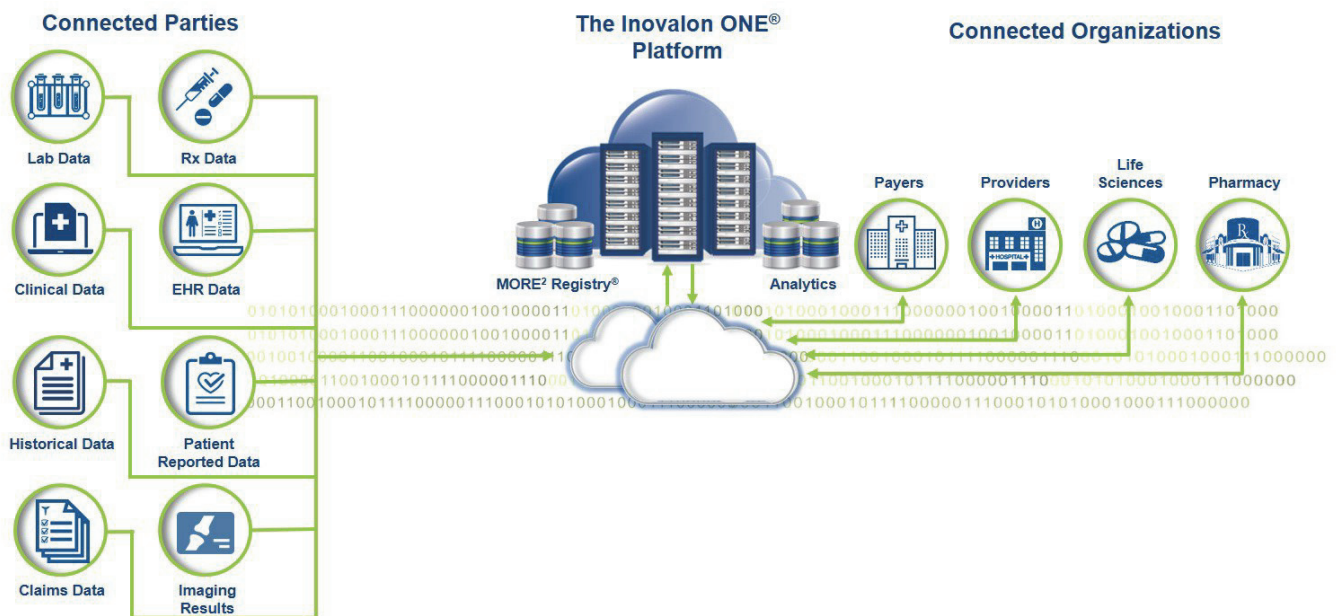
In addition to being maintained and tagged within client-specific data lakes, data we receive in the course of providing our services are statistically de-identified and stored in our MORE² Registry[®]. The MORE² Registry[®] goes beyond just claims data to include information about demographics, enrollment, diagnoses, procedures, pharmacy, laboratory results, and deep medical record clinical data and presents a significant representative mix of commercial, HIX Marketplace, Medicare Advantage, and managed Medicaid care plan patients. As of December 31, 2018, our MORE² Registry[®] dataset contained data pertaining to more than 964,000 physicians, 519,000 clinical facilities, 264 million Americans, and 42 billion medical events. The following is a sample of components within our MORE² Registry[®]:

- Patient Demographic Data
- Medical Record Documentation
- Operating Room, Procedure, Discharge Summary, Emergency Room Records
- Electronic Health Record Data
- Health Risk Assessment Data
- Practitioner Profile Data
- Claim Diagnostic Data
- Eligibility and Enrollment Data
- Benefits Data
- Encounter and Procedural Data
- Pharmacy Data
- Imaging Report Data
- Laboratory & Pathology Data
- Durable Medical Equipment Data
- Self-Reported Data
- Social History Data
- Activities of Daily Living (ADL)
- Cost Data

Connectivity

We have developed technology that enables real-time, highly differentiated data aggregation and point-of-care interoperability through many leading EHR systems, which drives positive impact and efficiency for clients, clinicians, patients, and the Company.

The Inovalon ONE[®] Platform facilitates the two-way exchange of clinical data with both cloud and non-cloud based EHR and integrates the Healthcare Enterprise systems, connecting thousands of physicians in an effective, efficient, secure and scalable fashion while minimizing disruption. The Inovalon ONE[®] Platform automatically requests and retrieves necessary clinical data, which is then analyzed by our advanced predictive analytics to identify gaps in patient care, and then embeds those insights directly into the clinical workflow to inform targeted interventions at the point-of-care.



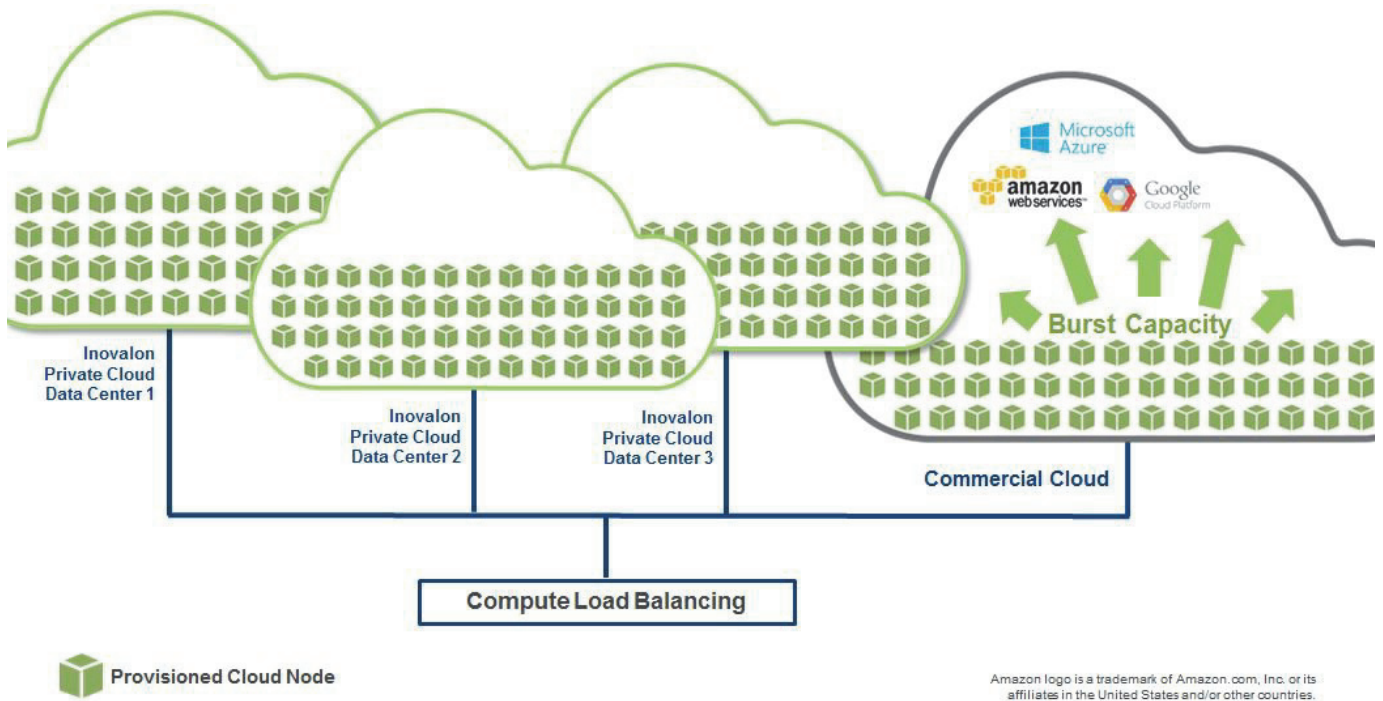
Technology Infrastructure

We believe that our track record of service is the result of our commitment to excellence and our devotion to maintaining one of the industry’s most sophisticated technology infrastructures. We have made significant investments over the past decade to build an industry-leading enterprise-scale infrastructure capable of managing the heavy computing and storage requirements of our

cloud-based data-driven business. Today, we employ a combination of owned, virtualized data centers along with hosted facilities to enable seamless, secure, and scalable solutions nationwide.

Our physical converged compute and storage infrastructure is deployed with a hybrid approach to cloud computing. Leveraging heavily virtualized infrastructure together with orchestration and automation tools, we have achieved significant capabilities within our private cloud environment.

The following diagram provides a high level overview of our key infrastructure elements.



Our data and compute capacity is maintained within an interconnected set of infrastructure sets made up of owned and co-located data centers. The three principal datacenters owned by Inovalon are located in the Washington D.C. metro area, Atlanta metro region and the Pittsburgh metro region. Our co-located datacenter facilities are located in Northern Virginia, Minneapolis, Minnesota and Phoenix, Arizona. Each datacenter supports the ability to interconnect agnostically to third-party cloud capacity providers. This macro architecture provides us a significant ability to maintain both enterprise-level capacity and redundancy, while also achieving significant flexibility and cost effectiveness for burst capacity needs.

We have a proven track record of implementing virtualization as our current datacenters are over 85% virtualized using VMware technologies. Operations of the virtualization technologies are streamlined by the orchestration, automation, and reporting capabilities provided by our private cloud and integration with public cloud service providers. These technologies are used to provide computing, storage, and networking components to the hosting environment and provide operational efficiencies and cost optimization for the corporation.

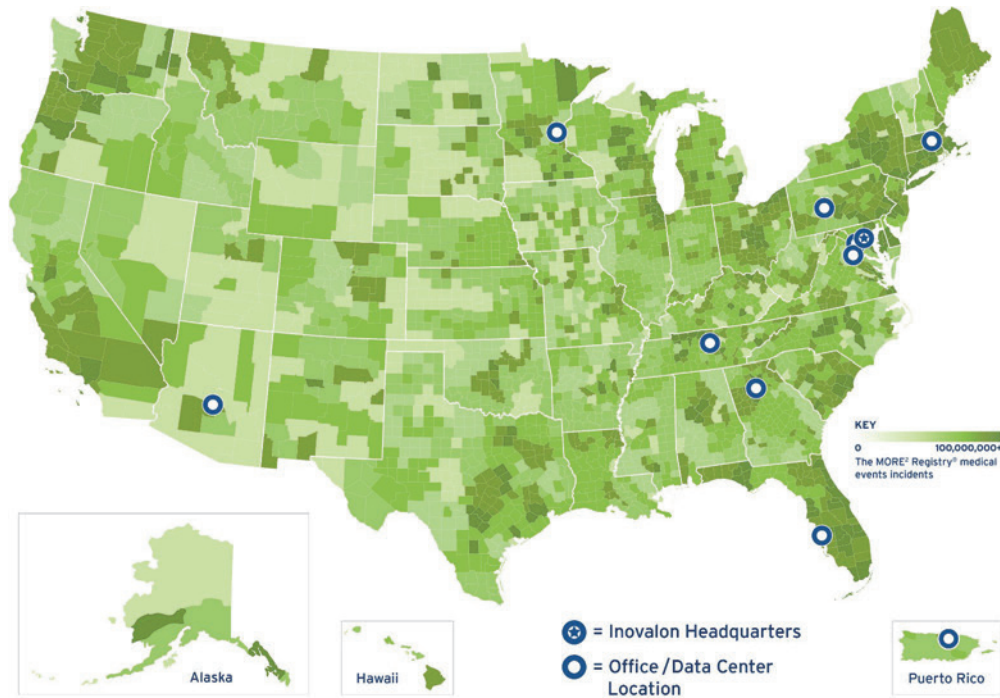
We have implemented a sophisticated hybrid cloud and service based application stack design, enabling “burst” capacity architecture to allow provider-agnostic utilization of public cloud capacity if such capacity is required. Our virtualization technology has been integrated with automation and orchestration technology to create a cloud environment that provides both Infrastructure and Platform as a Service capabilities. These service based capabilities allow us to dynamically expand our compute capacity in real time and provide the business with a cost effective and nimble platform. By leveraging both private and public cloud offerings, we can provide efficient, elastic, and cost effective compute resources based on the operational needs of our clients. We believe we are leaders in the use of big data technology and high performance compute technology stack at the point of care in our industry.

Our platform is built utilizing an innovative enterprise infrastructure platform enabling robust performance scaling, strong security, high availability, and advanced business continuity options. The building blocks of this infrastructure consist of the following:

- Multiple data centers connected by redundant high-speed WAN connections;
- High competency and utilization of virtualization technologies;

- Rapid provisioning of computing capabilities to support the dynamic elasticity needed to support the variable computing needs of the application;
- Measured service to optimize resource utilization and provide transparency of the utilized services; and
- Available hosting facilities providing physical structure compliance with Federal Information Security Management Act (“FISMA”) standards.

Disaster Recovery. Our contingency program is designed to provide response and subsequent recovery from unplanned business disruptions. Supported by our data centers, our contingency program provides a coordinated emergency response foundation across the organization. The program includes business continuity, emergency occupant, pandemic planning, security incident response, and disaster recovery plans that encompass all areas of our technology and business operations. These interrelated processes align to provide significant protection and risk mitigation. In addition to company-wide plans, specific details on event response and subsequent business recovery actions and activities are included within each respective business unit plan.



Business continuity and disaster recovery are an important part of our technology platform. Through significant investment in hardware, software, and application design, Inovalon provides solutions that support mission critical, business critical, and business important products and services through our nationwide enterprise data center presence.

Network Operations Center. We maintain a central network operations center (“NOC”) where systems are monitored to ensure proper operation and capacity utilization. The NOC monitors and collects information about a multitude of technology operating metrics regarding system load and status. In conjunction with the rapid provisioning capability, automation, and standardization, the NOC provides us with the automated capabilities to oversee and manage our technology resources in order to meet business demands.

Privacy Management and Data Security. Protected health information is a sensitive component of personal information. It is highly important that information about an individual’s healthcare is properly and thoroughly protected from any inappropriate access, use and disclosure. Given the industry vertical in which we operate, we realize the importance of the safety and sensitivity of personal health information. We have been a trusted partner to our clients and are committed to the security and privacy of our client data, enterprise data, and our systems through the application of highly trained personnel, robust processes, and technology. Our privacy and security management includes:

- governance, frameworks, and models to promote good decision making and accountability. Our comprehensive privacy and security program is based on industry practices including those of the National Institute of Standards and Technology, the Control Objectives for Information and Related Technology, Defense Information Systems Agency, and FISMA;
- an internal security council, which advises on and prioritizes the development of information security initiatives, projects, and policies;

- a layered approach to privacy and security management to avoid single points of failure;
- a defense in depth protection model that addresses the network, platform, application, and file and data layers;
- ongoing evaluation of privacy and security practices to promote continuous improvement;
- use of safeguards and controls including: administrative, technical, and physical safeguards;
- collaboration with our clients on best security and privacy practices; and
- working closely with leading researchers, thought leaders, and policy makers.

Platform Modularity

Our platform has been created through the use of internally-developed software coupled with industry-leading technology frameworks that are vendor-agnostic. Because we have designed and developed our own software, we have built significant flexibility and modularity into our platform components. This enables us to not only enhance our existing products as our clients' needs evolve, but also to increase our addressable market opportunity by rapidly developing new product offerings and expanding into adjacent markets in the healthcare industry. Our acquisitions of ABILITY, Avalere, and Creehan further enhance this process through the infusion of our data and analytics into additional offerings, new products, greater differentiation, additional capabilities, technologies, client relationships, and industry expertise that they bring. Our large, deep proprietary data sets in the MORE² Registry[®] also enable and support this flexibility and modularity, as the depth and breadth of the data allows its analysis and application in the context of many situations across the healthcare industry—not just for payers, but also providers, pharmaceutical companies, device manufacturers, diagnostics companies, etc. For example, within the set of Inovalon ONE[®] Platform Components that would typically enable our Quality Measurement and Reporting offering for a national health plan, a certain subset of these Components could be combined with an additional new set of Components to enable our OBC offering with a global pharmaceutical company.

Our Clients

For over 19 years, we have provided quality services to our clients. During that time, we have built a leading position and have become a true thought leader and innovator in our industry. We have achieved significant scale, and we believe that we play a key role in the U.S. healthcare market.

Our clients renew existing client agreements throughout the year. The renewal rates of existing clients for the years ended December 31, 2018, 2017 and 2016 were approximately 90%, 88% and 93%, respectively. The renewal rate is representative of clients with engagements exceeding \$0.1 million in revenue.

Sales and Marketing

We believe that our sales and marketing initiatives are key to capitalizing on our significant market and growth opportunities. During 2018, we significantly increased the scale and sophistication of our sales force by leveraging the expertise of technology focused personnel supported by subject matter experts. While we have successfully leveraged our sales and marketing as we have grown, we believe that additional strategic investments in sales and marketing capacity and capabilities will enable us to increasingly seize on the healthcare industry's need for advanced technological capabilities including data connectivity, advanced analytics, intervention toolsets, and integrated business processing to empower the healthcare industry's transformation from volume-based models to value-based models.

We sell our offerings primarily through three avenues:

- *Business development led by product and management personnel:* We benefit significantly from the subject matter expertise, market credibility, thought leadership, and relationships of our executives, senior management, and product leaders within the industry. They have played, and are expected to continue to play, a significant role in the establishment and ongoing development of our client relationships.
- *Business development led by dedicated sales personnel:* We have a dedicated, direct sales team, which is comprised of focused field sales professionals who are organized principally by geography and product type. Our dedicated sales personnel are supported by a sales operations staff, including product technology experts, lead generation personnel, and sales data personnel.
- *Business development led by strategic channel relationships:* We increasingly are developing and expanding our use of strategic partnerships and channel relationships for the establishment and development of new and existing clients.

Our marketing and communications strategies are centered on initiatives that drive awareness of our Company and capabilities. These initiatives include: educating the market about our Company broadly; improving the marketplace's understanding of our platform offerings; hosting industry-focused events and speaking engagements; disseminating articles discussing data trends and

metrics, and strategic interfacing with key business and trade media personnel. We employ a broad array of specific events to facilitate these initiatives, including but not limited to:

- Sponsorship and partnership of key industry conferences;
- Client-focused events and programs;
- Hosting our annual Client Congress highlighted by healthcare leaders, industry icons and senior government officials sharing best practices, strategies, and trends;
- Web and social properties, digital and video content marketing, creative online advertising, and blogs; and
- Hosted webinars, direct mail, analyst relations, and media relations.

In addition, in order to enhance our value proposition, our sales and marketing staff develops best practices tools, case studies, and educational materials to drive deeper client engagement, understanding, and utilization.

Operations

Our operations are divided into two groups. Our IT Operations Group manages the process steps from data receipt through to the generation of analytical outputs. Our Services Operations Group manages the process steps applied to achieve impact through our data-driven intervention platforms.

IT Operations Group

We achieve excellence in the operation of our technology based on a foundation of service management aligned with data integration, data provisioning, system support, and security operations. These operational processes are measured clearly through a framework of key performance indicators, which seek to provide an optimal level of transparency and control.

We have implemented a rigorous command and control structure for maintaining availability of production systems and ensuring the security of technology infrastructure. Our NOC is responsible for monitoring network and systems, security incident response, and management and communication as well as the oversight of planned system maintenance. The personnel of the NOC are also responsible for invoking our business continuity plan when appropriate.

The security operations within our NOC maintain the confidentiality, integrity, and availability of our production systems and technology infrastructure by maintaining security situational awareness, as well as coordinating security incident response and proactively protecting sensitive data. The security operations team utilizes a variety of tools and techniques to identify, contain, remediate, and gather intelligence on both known and emerging technology threats. Reports are tracked through automated event management triggers and communicated to leadership through our business service management layer.

We have a comprehensive framework for managing change control, problem management, incident and event management, service management, and production operations. We use a defined quality change control management system for managing technology changes.

Product support integration across all of our solutions enables commonality of processes—allowing our clients to benefit from increased technology operational efficiencies. Regardless of the efficiencies achieved, we are continuously enhancing our technology product operations through the dedication of the process automation and performance assurance team focused on designing and deploying zero-touch capabilities.

Services Operations Group

Many of our clients utilize the analytical outputs of our platform to feed into their own internal systems to achieve value within the provider and patient base. Other clients license our data-driven intervention platforms to facilitate the realization of value from our analytics. For still other clients, our service support personnel operate our data-driven intervention platforms to deliver end-to-end value realization. For these clients, through the implementation of our sophisticated platforms, we leverage our analytical output to provide data-driven intervention support services at the varying points of care necessary to achieve the goals of our clients. This unique end-to-end approach implements the solutions necessary to turn insight generated through our advanced analytics into meaningful impact and realized value for our clients on a national scale.

One of the centerpieces of our services operations is our strong management systems, which serve as vehicles to drive transparency, ownership and execution. Our management systems enable general managers and operational leaders the ability to “see around the corner” and be ambidextrous in how they balance achieving efficiency gains while also focusing on exceptional client value delivery.

Competition

We compete with a broad and diverse set of businesses. We believe the competitive landscape is highly fragmented with no single competitor offering similarly expansive capabilities and diverse platform solution offerings in healthcare data analytics,

data-driven interventions, connectivity, and data visualization solutions. Our primary competitive challenge is to demonstrate to our existing and potential clients the value of utilizing our platforms rather than developing or assembling their own alternative capabilities. We believe that the combination of our competitive strengths and successful culture of innovation, including our large proprietary datasets, advanced data integration technologies, sophisticated predictive analytics, extensive industry connectivity, data-driven intervention platforms, and the deep subject matter expertise of our associates, make it time- and cost-prohibitive for our clients to replace or replicate all that we offer. In addition, we believe the combination of these attributes differentiates us from our competition.

The competitive landscape can be characterized by the following categories of companies that provide capabilities or solutions that compete with one or more offerings of our platform:

- Large-scale healthcare-specific solutions providers, such as Optum, Change Healthcare (formerly Change Healthcare Holdings, Inc. and McKesson Technology Solutions), Vercend Technologies (formerly Verisk Health), and IQVIA (formerly QuintilesIMS);
- Providers of enterprise-scale, industry agnostic IT solutions, such as Oracle, Dell, SAP, SAS, and IBM;
- Large-scale IT consultants and third-party service providers, such as Accenture and Deloitte Consulting; and
- Point solution providers, such as Change Healthcare, DST Systems, edifecs, and Silverlink.

Intellectual Property

We generally rely on copyright, trademark, and trade secret laws as well as confidentiality agreements, licenses, and other agreements with employees, consultants, vendors, and customers. We also seek to control access to and distribution of our proprietary software, confidential information and know-how, technology, and other intellectual property. Historically, because our initial technological innovations were primarily algorithmic in nature, these innovations were well suited to trade secret protection. Accordingly, and due to the complex, time intensive, and costly patent process, with somewhat limited utility for business processes, the use of patents has not historically been compelling for us. However, beginning in the second quarter of 2015, we filed a limited number of provisional and non-provisional patent applications. We expect to continue to seek patents in the future.

We own and use trademarks in connection with our applications and services, including both unregistered common law marks and issued trademark registrations in the United States. Our material trademarks, service marks and other marks include: CAAS[™], CARA[®], Caresync Advantage[®], CCS Advantage[®], CEDI[™], ChaseWise[™], Data-Driven Improvements in Health Care[™], Data Has a Story to Tell. We Give it Voice[®], Distributed Analytics[®], eCAAS Advantage[®], ePASS[®], Healthcare Empowered[®], Healthier Members, Healthier Business[®], HEDIS Advantage, HCC Surveillance[®], HIX Foundation[®], INDICES[®], Inovalon[®], Empowering the Transformation From Volume To Value[®], Inovalon Spiral Design[®], Inovalon Healthcare Empowered (and Spiral Design), Inovalon Healthcare Empowered[®], Insights: a business intelligence solution[™], iPORT[™], iTCC[™], MORE2 Registry[®], PCIS[™], Prospective Advantage[®], QSCL[™], QSFD[®], QSI[®], QSI-XL[™], Star Advantage[®], Turning Data into Insight and Insight into Action[®], We See Solutions[™], Data Diagnostics[®], DDx[®], ScriptMed[®], Clinical Data Extraction as a Service (CDEaaS[™]), Natural Language Processing as a Service (NLPaaS[™]), Elastic Container Technology (ECT[™]), myABILITY[®], and the Inovalon ONE[®] Platform. We also have trademark applications pending to register marks in the United States, Japan and European Union.

While our intellectual property rights are important to our success, we believe that our business as a whole is not materially dependent on any particular patent, trademark, license or other intellectual property right.

Our Employees

As of December 31, 2018, we had a total of 2,499 associates across the following areas: Technology, Innovation and Product, Data-driven Client Services, and Selling, General and Administrative. There were 2,104 full-time associates and 395 part-time associates. None of our associates are represented by a labor union; all of our associates currently work in the U.S. and its territories (Puerto Rico), and we consider our current relations with our associates to be good.

Requirements Regarding the Privacy and Security of Personal Information

HIPAA and Other Privacy and Security Requirements. There are numerous U.S. federal and state laws and regulations related to the privacy and security of personal information. In particular, regulations promulgated pursuant to the Health Insurance Portability and Accountability Act of 1996 (“HIPAA”), as amended, establish privacy and security standards that limit the use and disclosure of Protected Health Information (“PHI”) and require the implementation of administrative, physical, and technical safeguards to ensure the confidentiality, integrity, and availability of individually identifiable health information in electronic form. Our health plan customers, as well as healthcare clearinghouses and certain providers with which we have or may establish business relationships, are covered entities that are regulated under HIPAA. The Health Information Technology for Economic and Clinical Health Act (“HITECH”) and an implementing regulation known as the Omnibus Final Rule significantly expanded HIPAA’s privacy and security requirements. Among other things, HITECH and the Omnibus Final Rule make HIPAA’s privacy and security

standards directly applicable to “business associates,” which are independent contractors or agents of covered entities that create, receive, maintain, or transmit PHI in connection with providing a service for or on behalf of a covered entity. Under HIPAA and our contractual agreements with our customers, we are considered a “business associate” and thus are directly subject to HIPAA’s privacy and security standards. In order to provide our covered entity clients with services that involve the use or disclosure of PHI, HIPAA requires our clients to enter into business associate agreements with us. Such agreements must, among other things, require us to:

- limit how we will use and disclose PHI;
- implement reasonable administrative, physical, and technical safeguards to protect such information from misuse;
- enter into similar agreements with our agents and subcontractors that have access to the information;
- report security incidents, breaches, and other inappropriate uses or disclosures of the information; and
- assist the customer in question with certain of its duties under the privacy standards.

In addition to HIPAA, HITECH, and their implementing regulations, we may be subject to other state and federal privacy laws. Such laws prohibit unfair or deceptive privacy and security practices and/or place requirements on certain types of activities, such as data security and data access. We may also be subject to state medical record privacy laws (sometimes more strict than HIPAA), including the laws of the state of California.

Data Protection and Breaches. In recent years, there have been a number of well-publicized data breaches involving the improper use and disclosure of individuals’ personal information. Many states have responded to these incidents by enacting laws requiring holders of personal information to maintain safeguards and to take certain actions in response to a data breach, such as providing prompt notification of the breach to affected individuals and state officials. Under HIPAA and pursuant to our business associate agreement obligations, we must report breaches of unsecured PHI to our contractual partners upon discovery. Notification must also be made in certain circumstances to affected individuals, the U.S. Department of Health and Human Services (“HHS”), and the media.

We have implemented and maintain physical, technical, and administrative safeguards intended to protect individually identifiable health information. We have controls in place to assist us in complying with all applicable laws, regulations, and contractual requirements regarding the protection of these data. We have established processes that allow us to properly respond to any security breaches or incidents.

In many cases, applicable state laws, including breach notification requirements, are not preempted by the HIPAA privacy and security standards and are subject to interpretation by various courts and other governmental authorities, thereby complicating our compliance efforts. Where a state law is not preempted by HIPAA, we may also be subject to that state law’s requirements, in addition to our obligations under HIPAA, HITECH, and their implementing regulations. Additionally, state and federal laws regarding deceptive practices may apply to public assurances we provide to individuals about the security of services we provide on behalf of our contractual customers.

Other Requirements. In addition to HIPAA, numerous other U.S. federal and state laws govern the collection, dissemination, use, access to, and confidentiality of individually identifiable health information and healthcare provider information. Some states are also considering new laws and regulations that further protect the confidentiality, privacy, and security of medical records or other types of medical information. Further, Congress and a number of states have considered or are considering prohibitions or limitations on the disclosure of medical or other information to individuals or entities located outside of the United States.

Seasonality

The nature of our customers’ end-market results in partial seasonality reflected in both revenue and cost of revenue differences during the year. Regulatory impact of data submission deadlines in, for example, January, March, June, and September drive some degree of predictable timing of analytics and data processing activity variances from quarter to quarter. Further, regulatory clinical encounter deadlines of June 30th and December 31st drive predictable intervention concentrations variances from quarter to quarter. The timing of these factors results in analytical and intervention activity mix variances, which have limited predictable impact in the aggregate on our financial performance from quarter to quarter. However, quarter to quarter financial performance may increasingly vary from historical seasonal trends as we continue to expand into adjacent markets and increase the portion of our revenue generated from new offerings. Further, we also expect the impact of seasonality to decrease over time as we expand our mix of revenue generated from a subscription-based model. The timing of new contract signings and their respective implementations can also lead to variances in our seasonal revenue performance.

Corporate Information

Our executive offices are located at 4321 Collington Road, Bowie, Maryland 20716. Our telephone number at our executive offices is (301) 809-4000 and our corporate website is www.inovalon.com. The information on, or accessible through, our website

is not incorporated into and does not constitute a part of this Annual Report on Form 10-K or any other report or document we file with or furnish to the Securities and Exchange Commission (“SEC”). Our Class A common stock is listed on the NASDAQ Global Select Market under the symbol “INOV.”

Available Information

We file our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and all amendments to those reports with the SEC. You may obtain copies of these documents by visiting the SEC’s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549, by calling the SEC at 1-800-SEC-0330 or by accessing the SEC’s website at www.sec.gov. In addition, as soon as reasonably practicable after such materials are furnished to the SEC, we make copies of these documents available to the public free of charge through our website or by contacting our Secretary at the address set forth above under “—Corporate Information.”

Our Board of Directors Corporate Governance Charter, Code of Business Conduct and Ethics, and the charters of our audit committee, compensation committee, nominating and corporate governance committee and security and compliance committee are all available in the Governance Documents section of the Corporate Information section of our website.

Financial Information

For required financial information related to our operations, please refer to our consolidated financial statements, including the notes thereto, included with this Annual Report on Form 10-K.

Item 1A. Risk Factors.

Set forth below are the risks that we believe are material to our stockholders. You should carefully consider the following risks in evaluating our Company and our business. The occurrence of any of the following risks could materially adversely impact our financial condition, results of operations, cash flow, the market price of shares of our common stock and our ability to, among other things, satisfy our debt service obligations and to make distributions to our stockholders, which in turn could cause our stockholders to lose all or a part of their investment. Some statements in this report including statements in the following risk factors constitute forward-looking statements. Please refer to the section entitled “Special Note Regarding Forward-Looking Statements” at the beginning of this Annual Report on Form 10-K.

Risks Related to Our Business

We may not grow at the rates we historically have achieved or at all, even if our key metrics may indicate growth, which could have a material adverse effect on the market price of our Class A common stock.

We have experienced significant growth since 2014, with total revenues growing from approximately \$361.5 million for the year ended December 31, 2014 to approximately \$527.7 million for the year ended December 31, 2018. Future revenues may not grow at these same rates or may decline, such as the approximate 2% revenue decline from the year ended December 31, 2015 to the year ended December 31, 2016. Our future growth will depend, in part, on our ability to grow our revenue from existing clients, to complete sales to potential new clients, to expand our client base in adjacent industry segments such as the life sciences industry and with provider organizations, to develop new services and capabilities including direct-to-consumer services, and to expand internationally. We can provide no assurances that we will be successful in executing on these growth strategies or that, even if our key metrics, such as trailing 12 month Patient Analytics Months (“PAM”), would indicate future growth, we will continue to grow our revenue, margins or net income. Our ability to execute on our existing sales pipeline, create additional sales opportunities, and expand our client base depends on, among other things, the attractiveness of our services relative to those offered by our competitors, our ability to demonstrate the value of our existing and future services, and our ability to attract and retain a sufficient number of qualified sales and marketing leadership and support personnel. In addition, clients in certain industries in which we have a more limited presence, such as the life sciences industry, may be slower to adopt our services than we currently anticipate, which could adversely affect our results of operations and growth prospects.

If our existing clients do not renew their agreements with us, renew at lower fee levels, decline to purchase additional services from us, choose to purchase fewer services from us, or terminate their agreements with us, and we are unable to replace any lost revenue, our business and operating results could suffer.

We historically have derived, and expect in the future to derive, a significant portion of our revenue from renewals of existing client agreements and sales of additional services to existing clients. As a result, achieving a high renewal rate of our client agreements and selling additional services to existing clients is critical to our future operating results. It is difficult to predict our client renewal rate, and we may experience significantly more difficulty than we anticipate in renewing existing client agreements. Factors that may affect the renewal rate for our services and our ability to sell additional services include:

- the price, performance and functionality of our services;
- the availability, price, performance and functionality of competing services;

- our clients' perceived ability to develop and perform the services that we offer using their internal resources;
- our ability to develop complementary services;
- our continued ability to access the data necessary to enable us to effectively develop and deliver new services to clients;
- the stability and security of our platform;
- changes in healthcare laws, regulations or trends; and
- the business environment of our clients, in particular, reductions in our clients' membership populations and budgetary constraints affecting our clients.

Contracts with our clients generally have stated terms of two to five years. However, our clients have no obligation to renew their contracts for our services after the term expires. In addition, a high renewal rate in any particular year does not necessarily correlate to recurring or increasing revenue from our existing clients, as our clients may negotiate terms less advantageous to us upon renewal, may renew for fewer services, may choose to discontinue one or more services under an existing contract, may exercise flexibilities within their contracts to adjust service volumes, or which could reduce our revenue from these clients. Accordingly, annual renewal rate metrics have inherent limitations and renewal rates should not be used as a key metric to evaluate the Company's results of operations. Our future operating results also depend, in part, on our ability to sell new services to our existing clients. If our clients fail to renew their agreements, renew their agreements upon less favorable terms, at lower fee levels or for fewer services, fail to purchase new services from us, or terminate their agreements with us, and we are unsuccessful in generating significant revenue from new clients to replace any lost revenue, our revenues may decline and our future revenue growth may be constrained.

If a client fails to fulfill its obligations under its agreements with us, or permanently terminates certain services or its agreement in its entirety prior to its expected completion date, whether or not in our view permitted by the terms of the agreement, and revenue and cash flows expected from a client are not realized in the time period expected or at all, our business, operating results and financial condition could be adversely affected.

Our top clients account for a significant portion of our revenues and, as a result, the loss of one or more of these clients could materially and adversely affect our business and operating results.

Our top ten clients accounted for approximately 42% of our revenues for the year ended December 31, 2018. The engagement between these clients and us generally is covered through multiple separate statements of work ("SOWs"), each often with different and/or staggered terms which are all multi-year in their duration, ranging typically from two to five years. We can provide no assurance that these clients will renew their existing contracts or all SOWs with us upon expiration or that any such failure to renew will not have a material adverse effect on our revenue. If we lose one or more of our top clients, or if one or more of these clients significantly decreases its use of our services, our business and operating results could be materially and adversely affected.

If we do not develop new services that are adopted by clients, or fail to provide high quality support services to our clients, our growth prospects, revenues and operating results could be materially and adversely affected.

Our longer-term operating results and revenue growth will depend in part on our ability to successfully develop and sell new services that existing and potential clients want and are willing to purchase. We must continue to invest significant resources in research and development in order to enhance our existing services and introduce new high-quality services that clients and prospective clients will want. If we are unable to predict or adapt to changes in user preferences or industry or regulatory changes, or if we are unable to modify our services on a timely basis in response to those changes, clients may not renew their agreements with us, and our services may become less attractive than services offered by our competitors. Our operating results could also suffer if our innovations are not responsive to the needs of our clients, are not appropriately timed with market opportunity, or are not effectively brought to market. Our success also depends on successfully providing high-quality support services to resolve any issues related to our services. High-quality education and client support is important for the successful marketing and sale of our services and for the renewal of existing clients. If we do not help our clients quickly resolve issues and provide effective ongoing support, our ability to sell additional services to existing clients would suffer and our reputation with existing or potential clients would be harmed.

We cannot assure you that we will be able to manage our growth effectively, which could have a material adverse effect on our business, results of operations and growth prospects.

If we are successful in expanding our client base and growing our business, our existing services may not be as scalable as we anticipate, and we may need to expend significant resources to enhance our IT infrastructure, financial and accounting systems, and controls, and also hire a significant number of qualified client support personnel, professional services personnel, software engineers, technical personnel, and management personnel in order to provide services to those new clients. As a result, our expenses may increase more than expected, which could adversely affect our results of operations and net income. In addition, identifying and recruiting qualified personnel and training them in the use of our services requires significant time, expense, and

attention, and our business may be adversely affected if our efforts to expand and train qualified personnel do not generate a corresponding increase in revenues. If our existing services are not as scalable as we anticipate or if we are unable to manage our growth and the cost thereof effectively, the quality of our services and our reputation may suffer, which could adversely affect our business, results of operations and growth prospects.

If our security measures fail or are breached and unauthorized access to a client's data is obtained, our services may be perceived as insecure, we may incur significant liabilities, our reputation may be harmed, and we could lose sales and clients.

Our services involve the storage and transmission of clients' proprietary information, sensitive or confidential data, including valuable intellectual property and personal information of employees, clients and others, as well as protected health information, or PHI, of our clients' patients. Because of the extreme sensitivity of the information we store and transmit, the security features of our computer, network, and communications systems infrastructure are critical to the success of our business. A breach or failure of our security measures could result from a variety of circumstances and events, including third-party action, employee negligence or error, malfeasance, computer viruses, cyber-attacks by computer hackers, failures during the process of upgrading or replacing software and databases, power outages, hardware failures, telecommunication failures, user errors, or catastrophic events. Information security risks have generally increased in recent years because of the proliferation of new technologies and the increased sophistication and activities of perpetrators of cyber-attacks, including, for example, the Spectre and Meltdown threats which, rather than acting as viruses, were design flaws in many CPUs that allowed programs to steal data stored in the memory of other running programs and required patch software to correct. As cyber threats continue to evolve, we may be required to expend additional resources to further enhance our information security measures and/or to investigate and remediate any information security vulnerabilities. If our security measures fail or are breached, it could result in unauthorized persons accessing sensitive client or patient data (including PHI), a loss of or damage to our data, an inability to access data sources, or process data or provide our services to our clients. Such failures or breaches of our security measures, or our inability to effectively resolve such failures or breaches in a timely manner, could severely damage our reputation, adversely affect client or investor confidence in us, and reduce the demand for our services from existing and potential clients. In addition, we could face litigation, damages for contract breach, monetary penalties, or regulatory actions for violation of applicable laws or regulations, and incur significant costs for remedial measures to prevent future occurrences and mitigate past violations. Although we maintain insurance covering certain security and privacy damages and claim expenses, we may not carry insurance or maintain coverage sufficient to compensate for all liability and in any event, insurance coverage would not address the reputational damage that could result from a security incident.

We may experience cyber-security and other breach incidents that remain undetected for an extended period. Because techniques used to obtain unauthorized access or to sabotage systems change frequently and generally are not recognized until launched, we may be unable to anticipate these techniques or to implement adequate preventive measures. In addition, in the event that our clients authorize or enable third parties to access their information and data that are stored on our systems, we cannot ensure the complete integrity or security of such data in our systems as we would not control access. If an actual or perceived breach of our security occurs, or if we are unable to effectively resolve such breaches in a timely manner, the market perception of the effectiveness of our security measures could be harmed and we could lose sales and clients, which could have a material adverse effect on our business, operations, and financial results.

Data protection, privacy and similar laws restrict access, use, and disclosure of information, and failure to comply with or adapt to changes in these laws could materially and adversely harm our business.

We are subject to federal and state data privacy and security regulations. HIPAA established uniform federal standards for certain "covered entities," which include healthcare providers and health plans, governing the conduct of specified electronic healthcare transactions and protecting the security and privacy of PHI. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates, and other persons for HIPAA violations. Under HITECH, state attorneys general were granted new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA's requirements, and to seek attorney's fees and costs associated with pursuing federal civil actions.

A portion of the data that we obtain and handle for or on behalf of our clients is considered PHI and subject to HIPAA because our clients are covered entities under HIPAA and we act as their business associate. Under HIPAA and our contractual agreements with our covered entity health plan clients, we are considered a "business associate." Therefore, we are required to maintain the privacy and security of PHI in accordance with HIPAA and the terms of our agreements with clients which includes implementing HIPAA-required administrative, technical, and physical safeguards.

We have incurred, and will continue to incur, significant costs to establish and maintain these safeguards and, if additional safeguards are required to comply with HIPAA or our clients' requirements, our costs could increase further, which would negatively affect our operating results. Furthermore, if we fail to maintain adequate safeguards, or if we use or disclose PHI in a manner not permitted by HIPAA or our agreements with our clients, or if the privacy or security of PHI that we obtain and handle is otherwise compromised, we could be subject to significant liabilities and consequences, including, without limitation:

- breach of our contractual obligations to clients, which may result in contract terminations and potentially significant financial obligations to our clients;
- investigation by the federal regulatory authorities empowered to enforce HIPAA - the Office for Civil Rights (OCR) within HHS, and the possible imposition of civil and criminal penalties;
- investigation by the state attorneys general empowered under HITECH to enforce comparable state laws, and the possible imposition of civil and criminal penalties;
- private litigation by individuals adversely affected by any violation of HIPAA, HITECH, or comparable state laws to which we are subject; and
- negative publicity, which may decrease the willingness of current and potential future clients to work with us and negatively affect our sales and operating results.

Laws and expectations relating to privacy continue to evolve, and we continue to adapt to changing needs. Nevertheless, changes in these laws may limit our data access, use, and disclosure, and may require increased expenditures by us or may dictate that we not offer certain types of services. In addition, data protection, privacy and similar laws protect more than patient information and, although they vary by jurisdiction, these laws can extend to employee information, business contact information, provider information, and other information relating to identifiable individuals. Any of the foregoing may have a material adverse effect on our ability to provide services to our clients and, in turn, our results of operations.

Data protection, privacy and similar laws protect more than patient information and, although they vary by jurisdiction, these laws can extend to employee information, business contact information, provider information, and other information relating to identifiable individuals. Failure to comply with these laws may result in, among other things, civil and criminal liability, negative publicity, damage to our reputation, and liability under contractual provisions. In addition, compliance with such laws may require increased costs to us or may dictate that we not offer certain types of services in the future.

The information that we provide to our clients could be inaccurate or incomplete, which could harm our business reputation, financial condition, and results of operations.

We aggregate, process, and analyze healthcare-related data and information for use by our clients. Because data in the healthcare industry is fragmented in origin, inconsistent in format, and often incomplete, the overall quality of data received or accessed in the healthcare industry is often poor, the degree or amount of data which is knowingly or unknowingly absent or omitted can be material, and we frequently discover data issues and errors during our data integrity checks. If the analytical data that we provide to our clients are based on incorrect or incomplete data or if we make mistakes in the capture, input, or analysis of these data, our reputation may suffer and our ability to attract and retain clients may be materially harmed.

In addition, we assist our clients with the management and submission of data to governmental entities, including CMS. These processes and submissions are governed by complex data processing and validation policies and regulations. If we fail to abide by such policies or submit incorrect or incomplete data, we may be exposed to liability to a client, court, or government agency that concludes that our storage, handling, submission, delivery, or display of health information or other data was wrongful or erroneous. Further, although we maintain insurance coverage, this coverage may prove to be inadequate or could cease to be available to us on acceptable terms, if at all. Even unsuccessful claims could result in substantial costs and diversion of management time, attention, and resources. A claim brought against us that is uninsured or under-insured could harm our business, financial condition, and results of operations.

General economic, political and market forces and dislocations beyond our control could reduce demand for our solutions and harm our business.

The demand for our platform capabilities, toolsets and services may be impacted by factors that are beyond our control, including macroeconomic, political and market conditions, the availability of short-term and long-term funding and capital, and the level of interest rates. We believe that the state of economic and political conditions in the U.S. is particularly uncertain due to ongoing political discord between and among the legislative and executive branches of the U.S. government, potential shifts in legislative and regulatory conditions concerning, among other matters, international trade and taxation, as well as healthcare, and that an uneven recovery or a renewed global downturn may contribute to reduced demand for our platforms, toolsets and services, which could have an adverse effect on our results of operations and financial condition.

Our business is principally focused on the healthcare industry, and factors that adversely affect the financial condition of the healthcare industry could consequently affect our business.

We derive substantially all of our revenue from clients within the healthcare industry. As a result, our financial condition and results of operations could be adversely affected by conditions affecting the healthcare industry generally and health systems and payers in particular. For example, in 2016 and 2017, consumer operated and oriented plans, or health insurance Co-Ops, experienced financial distress, including insolvency, bankruptcy or liquidation, and many were forced to exit the exchange marketplace. Our

ability to grow will depend upon the economic environment of the healthcare industry, as well as our ability to increase the number of services that we sell to our clients. Furthermore, we may not become aware in a timely manner of changes in regulatory requirements affecting our business, which could result in us taking, or failing to take, actions, resulting in noncompliance with state or federal regulations.

There are many factors that could affect the purchasing practices, operations and, ultimately, the operating funds of healthcare organizations, such as reimbursement policies for healthcare expenses, consolidation in the healthcare industry, and regulation, litigation, and general economic conditions. In particular, we could be required to make unplanned modifications to our services or could suffer delays or cancellations of orders or reductions in demand for our services as a result of changes in regulations affecting the healthcare industry, such as any increased regulation by governmental agencies, changes to HIPAA and other federal or state privacy laws, laws relating to the tax-exempt status of many of our clients or restrictions on permissible discounts, and other financial arrangements. We cannot predict with certainty what additional healthcare regulations, if any, will be implemented at the federal and state level, or what the ultimate effect of federal healthcare reform or any future legislation or regulation will have on us and our clients. We cannot predict with certainty what effect the current U.S. presidential administration together with the U.S. Congress may have, if any, on coverage and reimbursement for healthcare items and services. Further, regardless of the prevailing political environment in the United States, Medicare, Medicaid and managed care organizations are increasing pressure to both control healthcare utilization and to limit reimbursement. Changes in reimbursement programs or regulations, including retroactive and prospective rate and coverage criteria changes, competitive bidding for certain products and services, and other changes intended to reduce expenditures could adversely affect the portions of our clients' businesses that are dependent on third-party reimbursement or direct governmental payment. Moreover, to the extent that our clients experience reimbursement pressure resulting in lower revenue for them, their demand for our products and services might decrease. It is unclear what long-term effects the general economic conditions will have on the healthcare industry, and in turn, on our business, financial condition, and results of operations.

Consolidation in the industries in which our clients operate may result in certain clients discontinuing their use of our services following an acquisition or merger, which could materially and adversely affect our business and financial results.

Mergers or consolidations among our clients have in the past and could in the future reduce the number of our existing and potential clients. When companies consolidate, overlapping services previously purchased separately are typically purchased only once by the combined entity, leading to loss of revenue for the service provider. If our clients merge with or are acquired by other entities that are not our clients, they may discontinue their use of our services. There can be no assurance as to the degree to which we may be able to address the revenue impact of such consolidation. Any of these developments could materially and adversely affect our business and financial results.

Our services could become subject to new, revised, or enhanced regulatory requirements in the future, which could result in increased costs, could delay or prevent our introduction of new services, or could impair the function or value of our existing services, which could materially and adversely affect our results of operations and growth prospects.

The healthcare industry is highly regulated on the federal, state, and local levels, and is subject to changing legislative, regulatory, political, and other influences. Changes to existing laws and regulations, or the enactment of new laws or regulations affecting the healthcare industry, could create unexpected liabilities for us, could cause us or our clients to incur additional costs, could alter our clients' business models, and could restrict our or our clients' operations.

Many healthcare laws are complex, subject to frequent change, and dependent on interpretation and enforcement decisions from government agencies and other adjudicatory bodies with broad discretion. The application of these laws to us, our clients, or the specific services and relationships we have with our clients is not always clear. In addition, federal and state legislatures have periodically enacted programs designed to reform or amend the U.S. healthcare system at both the federal and state level, such as the enactment of the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (the "ACA"). The ACA included provisions to control health care costs, improve health care quality, and expand access to affordable health insurance. Together with ongoing statutory and budgetary policy developments at a federal level, this health care reform legislation could include changes in Medicare and Medicaid payment policies and other health care delivery administrative reforms that could potentially negatively impact the business of our clients. Because not all the administrative rules implementing health care reform under the legislation have been finalized, because of recent judicial action, because of ongoing federal fiscal budgetary pressures yet to be resolved for federal health programs, and because of the lack of implementing regulations or interpretive guidance, gradual and partially delayed implementation, possible amendment, repeal or further implementation delays, the full impact of the health care reform legislation and of further statutory actions to reform healthcare payment on our business and the business of our clients is unknown. Further, we expect that the current U.S. presidential administration together with the U.S. Congress will continue to seek to modify, repeal or otherwise invalidate all or certain provisions of the ACA. Any such changes will likely take time to be implemented and there can be no assurances that health care reform legislation will not adversely impact either our operational results or the manner in which we operate our business. Health care industry participants may respond by reducing their investments or postponing investment decisions, including investments in our

platforms, solutions and services. Our failure to anticipate accurately the application of these laws and similar or future laws and regulations, or our failure to comply with them, could create liability for us, result in adverse publicity, and negatively affect our business.

Our services may become subject to new or enhanced regulatory requirements, and we may be required to change or adapt our services in order to comply with these regulations. If we fail to successfully implement new, enhanced or revised regulatory requirements, it could adversely affect our ability to offer services deemed critical by our clients, which could materially and adversely affect our results of operations. New or enhanced regulatory requirements may render our services obsolete or prevent us from performing certain services. New or enhanced regulatory requirements could impose additional costs on us, and thereby make existing services unprofitable, and could make the introduction of new services more costly or time-consuming than we anticipate, which could materially and adversely affect our results of operations and growth prospects.

Because personal, public, and non-public information is stored in some of our databases, we are subject to government regulation and vulnerable to adverse publicity concerning the use of our data.

We provide many types of data and services that already are subject to regulation under HIPAA and, to a lesser extent, various other federal, state, and local laws and regulations. These laws and regulations are designed to protect the privacy of the public and to prevent the misuse of personal information in the marketplace. However, many consumer advocates, privacy advocates, and government regulators believe that existing laws and regulations do not adequately protect privacy. They have become increasingly concerned with the use of personal information, including health information. As a result, they are lobbying for further restrictions on the dissemination or commercial use of personal information to the public and private sectors. Similar initiatives are under way in other countries in which we may do business in the future. The following legal and regulatory developments also could have a material adverse effect on our business, financial position, results of operations, or cash flows:

- amendment, enactment, or interpretation of laws and regulations that restrict the access and use of personal information and reduce the supply of data available to clients;
- changes in cultural and consumer attitudes to favor further restrictions on information collection and sharing, which may lead to regulations that prevent full utilization of our solutions;
- failure of our solutions to comply with current laws and regulations; and
- failure of our solutions to adapt to changes in the regulatory environment in an efficient, cost-effective manner.

Our estimates of market opportunity and forecasts of market growth may prove to be inaccurate, and even if the market in which we compete achieves the forecasted growth, our business could fail to grow at similar rates, if at all.

Market opportunity estimates and growth forecasts are subject to significant uncertainty and are based on assumptions and estimates that may not prove to be accurate. Our estimates and forecasts relating to the size and expected growth of our aggregate market opportunity or any of the sub-components of our total addressable market may prove to be inaccurate. Even if our total addressable market or any sub-component thereof meets our size estimates and forecasted growth, our business could fail to grow at similar rates, if at all.

Our proprietary applications may not operate properly, which could damage our reputation, give rise to a variety of claims against us, or divert our resources from other purposes, any of which could harm our business and operating results.

Proprietary software and application development is time-consuming, expensive, and complex, and may involve unforeseen difficulties. We may encounter technical obstacles, and it is possible that we discover additional problems that prevent our proprietary applications from operating properly. If our applications and services do not function reliably or fail to achieve client expectations in terms of performance, clients could assert liability claims against us and attempt to cancel their contracts with us. Moreover, material performance problems, defects, or errors in our existing or new applications and services may arise in the future and may result from, among other things, the lack of interoperability of our applications with systems and data that we did not develop and the function of which is outside of our control or undetected in our testing. Defects or errors in our applications might discourage existing or potential clients from purchasing services from us. Correction of defects or errors could prove to be time consuming, costly, impossible, or impracticable. The existence of errors or defects in our applications and the correction of such errors could divert our resources from other matters relating to our business, damage our reputation, increase our costs, and have a material adverse effect on our business, financial condition, and results of operations.

As a result of our variable sales and implementation cycles, we might not be able to recognize revenue to offset expenditures, which could result in fluctuations in our quarterly results of operations or otherwise adversely affect our future operating results.

The sales cycle for our services is typically four to six months from initial contact to contract execution, but can vary depending on the particular client, product under consideration, and time of year, among other factors. Some clients, for instance, undertake a more prolonged evaluation process, which has in the past resulted in extended sales cycles. Our sales efforts involve educating

potential clients about the use, technical capabilities, and benefits of our services, and gaining an understanding of their needs and budgets. During the sales cycle, we expend significant time and resources, and we do not recognize any revenue to offset such expenditures, which could result in fluctuations in our quarterly results of operations and adversely affect our future operating results. In addition, we may be unable to enter into definitive contracts at the end of a sales cycle on terms that are favorable to us or at all, in some cases for reasons outside our control, which may materially adversely affect our ability to accurately forecast future growth which may cause our stock price to decline.

After a client contract is signed, we provide an implementation process for the client during which we load, test, and integrate data into our system and train client personnel. Our implementation cycle generally ranges from 20 to 90 days from contract execution to completion of implementation, but can vary depending on the amount and quality of the client's data and how quickly the client facilitates access to data. In addition, for certain clients, our third-party vendors must go through delegation processes in order to become authorized to provide certain services to those clients, which could delay our ability to provide such services to those clients. During the implementation cycle, we expend time, effort, and financial resources implementing our services, but accounting principles do not allow us to recognize the resulting revenue until implementation is complete and the services are available for use by our clients. If implementation periods are extended, revenue recognition will be delayed, which could adversely affect our results of operations in certain periods.

In addition, because most of our revenue in each quarter is derived from agreements entered into with our clients during previous quarters, the negative impacts resulting from a decline in new or renewed agreements in any one quarter may not be fully reflected in our revenue for that quarter. Such declines, however, would negatively affect our revenue in future periods and the effect of significant downturns in sales of and market demand for our services, and potential changes in our renewal rates or renewal terms may not be fully reflected in our results of operations until future periods. Our sales and implementation cycles also make it difficult for us to rapidly increase our total revenue through additional sales in any period. As a result, the effect of changes in the industry impacting our business, or changes we experience in our new sales, may not be reflected in our short-term results of operations.

We operate in a competitive industry, and if we are not able to compete effectively, our business and financial results could be materially and adversely impacted.

We operate in a competitive industry, and we expect that competition will increase as a result of consolidation in both the information technology and healthcare industries. Our future growth and success will depend on our ability to successfully compete with other companies that provide similar services, including existing clients and other healthcare organizations that seek to build and operate competing services themselves and newer companies that provide similar services, often at substantially lower prices. We compete on the basis of various factors, including breadth and depth of services, reputation, reliability, quality, innovation, security, price, and industry expertise, and experience. If we are unable to maintain our technology, management, healthcare, or regulatory expertise or attract and retain a sufficient number of qualified sales and marketing leadership and support personnel, we will be at a competitive disadvantage. Some of our competitors, in particular health plans and larger technology or technology-enabled consultative service providers, have greater name recognition, longer operating histories, and significantly greater resources than we do. Furthermore, our current or potential competitors may have greater financial resources and larger sales and marketing capabilities than we have, and may have a more diversified set of revenue sources, which may allow them to be less sensitive to changes in client preferences and more aggressive in pricing their services, any of which could put us at a competitive disadvantage. As a result, our competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards, or client requirements and may have the ability to initiate or withstand substantial price competition. In addition, potential clients frequently have requested competitive bids from us and our competitors in terms of price and services offered and, if we do not accurately assess potential clients' needs and budgets when submitting our proposals, they may appear less attractive than those of our competitors, and we may not be successful in attracting new business. In addition, our clients may perceive our toolsets to be at a higher price point than our competitors, which could result in reduced revenue if we are not able to adequately demonstrate the value of our toolsets to our clients and prospective clients. Increases in competition in our industry could reduce our market share and result in price declines for certain services, which could negatively impact our business, profitability, and growth prospects.

If we fail to maintain awareness of our brand in a cost-effective manner, our business might suffer.

Maintaining awareness of our brand in a cost-effective manner is critical to continuing the widespread acceptance of our existing services and is an important element in attracting new clients and in attracting and retaining qualified employees. The importance of brand recognition may increase as competition in our market increases. Successful promotion of our brand will depend largely on the effectiveness of our marketing efforts and on our ability to provide reliable and useful services at competitive prices. Our efforts to build and maintain our brand nationally have involved and will continue to involve significant expense. Brand promotion activities may not yield increased revenue, and even if they do, any increased revenue may not offset the expenses we incur in maintaining our brand. In addition, third parties' use of trademarks or branding similar to ours could materially harm our business or result in litigation and other costs. If we fail to successfully maintain our brand, or incur substantial expenses in an

unsuccessful attempt to maintain our brand, we may fail to attract enough new clients or retain our existing clients to the extent necessary to realize a sufficient return on our brand-building efforts, and our business and our ability to attract and retain qualified employees could suffer.

Our success depends on our ability to protect our intellectual property rights.

Our success depends in part on our ability to protect our proprietary software, confidential information and know-how, technology, and other intellectual property and intellectual property rights. We rely generally on copyright, trademark and trade secret laws, confidentiality and invention assignment agreements with employees and third parties, and license and other agreements with consultants, vendors, and clients. There can be no assurance that employees, consultants, vendors, and clients have executed such agreements or have not breached or will not breach their agreements with us, that we will have adequate remedies for any breach, or that our trade secrets will not otherwise become known or independently developed by competitors. Additionally, we monitor our use of open source software to avoid uses that would require us to disclose our proprietary source code or violate applicable open source licenses, but if we engaged in such uses inadvertently, we could be required to take remedial action or release certain of our proprietary source code. These scenarios could materially and adversely affect our business, financial condition, and results of operations. In addition, despite the protections we do place on our intellectual property, a third party could, without authorization, copy or otherwise obtain and use our products or technology, or develop similar technology. In addition, agreement terms that address non-competition are difficult to enforce in many jurisdictions and might not be enforceable in certain cases.

Beginning in the second quarter of 2015, we filed a limited number of provisional and non-provisional patent applications, which may or may not result in an issued patent or patents. In addition, we do not know whether the examination process will require us to narrow our claims. To the extent that patents are issued from our patent applications, which are not certain, they may be contested, circumvented or invalidated in the future. Moreover, the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages, may be successfully challenged by third parties, and, as with any technology, competitors may be able to develop similar or superior technologies to our own now or in the future.

We currently rely primarily on unpatented proprietary technology. It is possible that others will independently develop the same or similar technology or otherwise obtain access to our unpatented technology. To protect our trade secrets and other proprietary information, we require employees, consultants, advisors, and collaborators to enter into confidentiality agreements. We cannot assure you that these agreements will provide meaningful protection for our trade secrets, know-how, or other proprietary information in the event of any unauthorized use, misappropriation, or disclosure of such trade secrets, know-how, or other proprietary information. Further, the theft or unauthorized use or publication of our trade secrets and other confidential business information could reduce the differentiation of our services and harm our business, the value of our investment in development or business acquisitions could be reduced, and third parties might make claims against us related to losses of their confidential or proprietary information.

We rely on our trademarks, service marks, trade names, and brand names to distinguish our services from the services of our competitors, and have registered or applied to register many of these trademarks. We cannot assure you that our trademark applications will be approved. Third parties may also oppose our trademark applications, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our services, which could result in loss of brand recognition and could require us to devote resources advertising and marketing new brands. Further, we cannot assure you that competitors will not infringe our trademarks or that we will have adequate resources to enforce our trademarks.

Our ability to obtain, protect, and enforce our intellectual property rights is subject to uncertainty as to the scope of protection, registerability, patentability, validity, and enforceability of our intellectual property rights in each applicable jurisdiction, as well as the risk of general litigation or third-party oppositions.

Existing U.S. federal and state intellectual property laws offer only limited protection. Moreover, if we expand our business into markets outside of the United States, our intellectual property rights may not receive the same degree of protection as they would in the United States because of the differences in foreign trademark and other laws concerning proprietary rights. Governments may adopt regulations, and government agencies or courts may render decisions, requiring compulsory licensing of intellectual property rights. When we seek to enforce our intellectual property rights we may be subject to claims that the intellectual property rights are invalid or unenforceable. Litigation may be necessary in the future to enforce our intellectual property rights and to protect our trade secrets. Litigation brought to protect and enforce our intellectual property rights could be costly, time consuming, and distracting to management and could result in the impairment or loss of portions of our intellectual property rights. Furthermore, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims, and countersuits attacking the validity and enforceability of our intellectual property rights. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation or diversion of our management's attention and resources, could delay further sales or the implementation of our solutions, impair the functionality of our solutions, delay introductions of new solutions, result in our substituting inferior or more costly technologies into our solutions, or have a material adverse effect on our business, financial condition, and results of operations.

Laws regulating the corporate practice of medicine could restrict the manner in which we provide our clients certain of our intervention toolsets, and the failure to comply with such laws could subject us to penalties or require that we change the manner in which we provide such toolsets.

Among our intervention toolsets are supplemental patient encounters (“SPEs”). While some clients utilize our platform toolsets to conduct their own SPEs directly or through third-parties, some of our clients engage us to utilize our intervention platform toolsets to facilitate SPEs. In such cases, we use third-parties to undertake such SPEs utilizing our intervention platform toolsets or may utilize our own associate to undertake such SPEs. Certain of our SPEs may be considered patient care. Some states have laws that prohibit business entities from practicing medicine, employing providers to practice medicine, exercising control over medical decisions by providers (also known collectively as the corporate practice of medicine). These laws, regulations, and interpretations have, in certain states, been subject to enforcement, as well as judicial and regulatory interpretation, and are subject to change.

In these states, we operate by maintaining long term contracts with affiliated physician groups, which are each owned and operated by physicians and which employ or contract with additional providers to perform the SPEs. If there were a determination that a corporate practice of medicine violation existed or exists, we could be subject to criminal or civil penalties or an injunction for practicing medicine without a license or aiding and abetting the unlicensed practice of medicine. The occurrence of any of such events could have a material adverse effect on our ability to continue to provide our clients with the full array of our intervention toolsets.

We could experience losses or liability not covered by insurance.

Our business exposes us to risks that are inherent in the provision of analytics and toolsets that assist clinical decision-making and relate to patient medical histories and treatment plans. If clients or individuals assert liability claims against us, any ensuing litigation, regardless of outcome, could result in a substantial cost to us, divert management’s attention from operations, and decrease market acceptance of our toolsets. We attempt to limit our liability to clients by contract; however, the limitations of liability set forth in the contracts may not be enforceable or may not otherwise protect us from liability for damages. Additionally, we may be subject to claims that are not explicitly covered by contract. We also maintain general liability coverage; however, this coverage may not continue to be available on acceptable terms, may not be available in sufficient amounts to cover one or more large claims against us, and may include larger self-insured retentions or exclusions for certain products. In addition, the insurer might disclaim coverage as to any future claim. A successful claim not fully covered by our insurance could have a material adverse impact on our liquidity, financial condition, and results of operations.

We could incur substantial costs as a result of any claim of infringement of another party’s intellectual property rights.

In recent years, there has been significant litigation in the United States involving patents and other intellectual property rights. Companies in the software and healthcare technology and services industries are increasingly bringing and becoming subject to suits alleging infringement of proprietary rights, particularly patent rights, and our competitors and other third parties may hold patents or have pending patent applications which could be related to our business. These risks have been amplified by the increase in third parties, which we refer to as non-practicing entities, whose primary business is to assert infringement claims or make royalty demands. Moreover, many of our current and potential competitors may dedicate substantially greater resources to protection and enforcement of intellectual property rights, especially patents. It is difficult to proceed with certainty in a rapidly evolving technological environment in which there may be patent applications pending related to our technologies, many of which are confidential when filed.

We may receive in the future notices that claim we or our clients using our services have misappropriated or misused other parties’ intellectual property rights, particularly as the number of competitors in our market grows and the functionality of services among competitors overlaps. If we are sued by a third party that claims that our technology infringes its rights, the litigation, whether or not successful, could be extremely costly to defend, divert our management’s time, attention, and resources, damage our reputation and brand, and substantially harm our business. We do not currently have a patent portfolio of our own, which may limit the defenses available to us in any such litigation.

In addition, in most instances, we have agreed to indemnify our clients against certain third-party claims, which may include claims that one of our services infringes the intellectual property rights of such third parties. These claims may require us to initiate or defend protracted and costly litigation on behalf of our clients, regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of our clients or may be required to obtain licenses for the products they use. If we cannot obtain all necessary licenses on commercially reasonable terms, our customers may be forced to stop using our services. In addition, our business could be adversely affected by any significant disputes between us and our clients as to the applicability or scope of our indemnification obligations to them. The results of any intellectual property litigation to which we might become a party, or for which we are required to provide indemnification, may also require us to do one or more of the following:

- cease offering or using technologies that incorporate the challenged intellectual property;

- make substantial payments for legal fees, settlement payments, or other costs or damages;
- obtain a license, which may not be available on reasonable terms, to sell or use the relevant technology; or
- redesign technology to avoid infringement, if feasible.

If we were to discover that our applications and services violate third-party proprietary rights, there can be no assurance that we would be able to obtain licenses to continue offering those applications and services on commercially reasonable terms, or at all, to redesign our technology to avoid infringement, or to avoid or settle litigation regarding alleged infringement without substantial expense and damage awards. Any claims against us relating to the infringement of third-party proprietary rights, even if not meritorious, could result in the expenditure of significant financial and managerial resources and in injunctions preventing us from distributing certain products. If we are required to make substantial payments or undertake any of the other actions noted above as a result of any intellectual property infringement claims against us or any obligation to indemnify our clients for such claims, such payments or costs could have a material adverse effect on our business, financial condition, and results of operations.

We depend on our senior management team and other key employees, and the loss of one or more of our executive officers or key employees could materially and adversely affect our business.

Our success depends in large part upon the continued services of our key executive officers, including Dr. Dunleavy. We also rely on our leadership team in the areas of research and development, marketing, services, and general and administrative functions. We can provide no assurances that any of our executive officers or key employees will continue their employment with us. The replacement of one or more of our executive officers or other key employees would likely involve significant time and costs and may significantly delay or prevent the achievement of our business objectives.

We may fail to attract, train, and retain enough qualified employees to support our operations and growth strategy, which could materially and adversely affect our business and growth strategy.

The success of our business and growth strategy depends on our ability to attract, train, and retain qualified employees, particularly technology personnel, subject matter experts, sales and marketing leadership and support personnel, and personnel with healthcare regulatory, clinical, and appropriate management expertise. The market for qualified employees in our industry and in the markets in which we operate is very competitive, and companies that we compete with for experienced personnel may have greater resources than we. In addition, our ability to attract and retain qualified employees depends in part on our ability to maintain awareness of our brand. If we are not successful in our recruiting efforts, or if we are unable to train and retain a sufficient number of qualified employees, our ability to develop and deliver successful technologies and services and grow our business may be materially and adversely affected.

We may acquire other companies or technologies, which could divert our management's attention, result in dilution to our stockholders and otherwise disrupt our operations and adversely affect our operating results.

We have previously and may in the future seek to acquire or invest in businesses, services, or technologies that we believe could complement or expand our services, enhance our technical capabilities, or otherwise offer growth opportunities. For example, on October 1, 2016, we acquired Creehan, on July 6, 2017, we completed the acquisition of ComplexCare Solutions, Inc. and ComplexCare Solutions IPA, LLC (together, "CCS"), and on April 2, 2018, we acquired ABILITY. The pursuit of potential acquisitions may divert the attention of management and cause us to incur various expenses in identifying, investigating, and pursuing suitable acquisitions, whether or not they are consummated. Acquisitions also could result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results and financial condition. In addition, we have limited experience in acquiring other businesses. We may not achieve the anticipated benefits from the acquired business, including from Creehan, CCS, or ABILITY, due to a number of factors, including:

- inability or difficulty integrating and benefiting from acquired technologies, services, or clients in a profitable manner, including as a result of reductions in operating income, increases in expenses, the failure to achieve anticipated synergies, or otherwise;
- unanticipated costs or liabilities associated with the acquisition;
- difficulty integrating the accounting systems, operations, and personnel of the acquired business;
- adverse effects to our existing business relationships with business partners and clients as a result of the acquisition;
- assuming potential liabilities of an acquired company;
- possibility of overpaying for acquisitions, particularly those with significant intangibles and those assets that derive value using novel tools or are involved in niche markets;
- difficulty in acquiring suitable businesses, including challenges in predicting the value an acquisition will ultimately contribute to our business;

- the potential loss of key employees;
- use of substantial portions of our available cash to consummate the acquisition; and
- the need to understand local healthcare regulatory regimes.

If an acquired business fails to meet our expectations, our operating results, business, and financial condition may suffer materially.

The integration of newly acquired businesses, including Creehan, CCS, and ABILITY, will also require a significant amount of time and attention from management. The diversion of management attention away from ongoing operations and key research and development, marketing or sales efforts could adversely affect ongoing operations and business relationships. Moreover, even if we were able to fully integrate a new acquisition's business operations and other assets successfully, there can be no assurance that such integration will result in the realization of the full benefits of synergies, cost savings, innovation and operational efficiencies that may be possible or were anticipated from the acquisition or that these benefits will be achieved within a reasonable period of time. Delays in integrating our acquisitions, which could be caused by factors outside of our control, could adversely affect the intended benefits of the acquisitions to our business, financial results, financial condition and the trading price of our Class A common stock.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. In the future, if our acquisitions do not yield expected returns, we may be required to take charges to our operating results based on this impairment assessment process, which could adversely affect our results of operations.

Our use of accounting estimates involves judgment and could adversely impact our financial results, and ineffective internal controls could adversely impact our business and operating results.

The methods, estimates, and judgments that we use in applying accounting policies have a significant impact on our results of operations. For more information on our critical accounting policies and estimates, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Note 2—Summary of Significant Accounting Policies," of the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K. These methods, estimates, and judgments are subject to significant risks, uncertainties, and assumptions, and changes could affect our results of operations. In addition, our internal control over financial reporting may not prevent or detect misstatements because of the inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. Even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of our consolidated financial statements.

We are obligated to report on the effectiveness of our internal control over financial reporting. These internal controls may not be determined to be effective, which may harm investor confidence in our Company and, as a result, the trading price of our Class A common stock.

The Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act") requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. We are required, pursuant to Section 404 of the Sarbanes-Oxley Act to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting in each Annual Report on Form 10-K. This assessment is required to include disclosure of material weaknesses, if any, identified by our management in our internal control over financial reporting. In addition, our independent registered public accounting firm is required to formally attest to the effectiveness of our internal control over financial reporting in each of our Annual Reports on Form 10-K. There can be no assurance that we or our independent registered public accounting firm will not identify a material weakness in our internal control over financial reporting in the future. Any failure of our internal control over financial reporting to be effective or our failure to implement required new or improved controls, if any, or difficulties encountered in their implementation, including delaying or failing to successfully integrate our acquisitions into our internal control over financial reporting or the identification and reporting of a material weakness, may harm our operating results, cause us to fail to meet our reporting obligations, harm investor confidence, and negatively impact the trading price of our Class A common stock.

Our Board of Directors may change our strategies, policies, and procedures without stockholder approval and we may become more highly leveraged, which may increase our risk of default under our debt obligations.

Our investment, financing, leverage, and dividend policies, and our policies with respect to all other activities, including growth, capitalization, and operations, are determined exclusively by our board of directors, and may be amended or revised at any time by our board of directors without notice to or a vote of our stockholders. This could result in us conducting operational matters, making investments, or pursuing different business or growth strategies than those contemplated in this Annual Report on Form 10-K. Further, our charter and bylaws do not limit the amount or percentage of indebtedness, funded or otherwise, that we may incur. Higher leverage also increases the risk of default on our obligations. In addition, a change in our investment policies, including the manner in which we allocate our resources across our portfolio or the types of assets in which we seek to invest,

may increase our exposure to interest rate risk and liquidity risk. Changes to our policies with regards to the foregoing could materially adversely affect our financial condition, results of operations, and cash flow.

Future sales to clients outside the United States or use of third party vendors outside the United States might expose us to risks inherent in international operations which, if realized, could adversely affect our business.

An element of our growth strategy is to expand internationally. In addition, we intend to continue to utilize certain third-party vendors that are located outside of the United States. For example, we currently contract with a third-party vendor in India that provides IT support for certain of our operations. Operating in international markets requires significant resources and management attention and subjects us to regulatory, economic, and political risks that are different from those in the United States. Because of our limited experience with international operations, any international expansion efforts might not be successful in creating demand for our services outside of the United States or in effectively selling our services in the international markets we enter. In addition, we will face risks in doing business internationally that could adversely affect our business, including:

- the need to localize and adapt our services for specific countries, including translation into foreign languages and associated expenses;
- difficulties in staffing and managing foreign operations;
- different pricing environments, longer sales cycles, and longer accounts receivable payment cycles and collections issues;
- new and different sources of competition;
- weaker protection for intellectual property and other legal rights than in the United States and practical difficulties in enforcing intellectual property and other rights outside of the United States;
- laws and business practices favoring local competitors;
- compliance challenges related to the complexity of multiple, conflicting, and changing governmental laws and regulations, including employment, anti-bribery, foreign investment, tax, privacy, and data protection laws and regulations;
- increased financial accounting and reporting burdens and complexities;
- adverse tax consequences; and
- if we denominate our international contracts in local currencies, fluctuations in the value of the U.S. dollar and foreign currencies might impact our operating results when translated into U.S. dollars.

Our business could be harmed by disruptions in network service or operational failures at our data centers (including our co-location facility) related to the storage, transmission and presentation of client data.

Our success depends on the efficient and uninterrupted operation of our data centers and service provider locations. Interruptions in service or damage to locations may be caused by natural disasters, power loss, Internet or network failures, physical damage, operator error, security breaches, computer viruses, denial-of-service attacks, or similar events. The varied types and severity of the interruptions that could occur may render our safeguards inadequate. These service interruption events could result in the corruption or loss of data and impair the processing of data and our delivery of services to clients, which could have an adverse effect on our business, operations, and financial results. Furthermore, if any of our data centers are unable to keep up with our growing needs for capacity, it could have an adverse effect on our business.

Problems faced by our third-party data center location, with the telecommunications network providers with whom we or it contract, or with the systems by which our telecommunications providers allocate capacity among their clients, including us, could adversely affect the experience of our clients and the security of the data.

Further, our ability to deliver our cloud-based services depends on the infrastructure of the Internet and a reliable network with the necessary speed, data capacity, bandwidth capacity, and security. Our services are designed to operate without interruption in accordance with our service level commitments. We have, however, experienced, and may experience in the future, interruptions and delays in services and availability from time to time. An extended period of network unavailability could negatively impact our ability to deliver acceptable or accurate services, and negatively impact our relationship with clients, which could have an adverse effect on our reputation, financial condition, and results of operations.

We rely on third-party cloud capacity providers to efficiently scale our cloud-based solutions.

Although substantially all of the computer hardware necessary to deliver our solutions, data and compute capacity is located and maintained in our owned data centers, we rely on third-party cloud capacity providers, including Amazon Web Services, Microsoft Azure, and Google cloud services, to efficiently scale our cloud-based solutions. The systems and operations of our third-party cloud based capacity providers could suffer damage or interruption as a result of human error, fire, flood, power loss, telecommunications failure, break-ins, terrorist attacks, acts of war, and similar events. The occurrence of any such natural disaster,

an act of terrorism or other unanticipated problems at our third-party cloud based capacity providers' hosting facilities could result in lengthy interruptions in our service. Although our third-party cloud based capacity providers maintain backup facilities and disaster recovery services in the event of a system failure, these systems may be insufficient or fail. Any system failure, including network, software, or hardware failure, that causes an interruption in our use of third-party cloud capacity providers or that causes a decrease in responsiveness of our cloud-based solutions could damage our reputation and cause our customers and potential customers to believe that our service is unreliable, causing us to lose customers, which could have a material adverse effect on our business, financial condition and results of operations.

We rely on agreements with third parties to provide certain services, goods, technology, and intellectual property rights necessary to enable us to implement some of our applications.

Our ability to implement and provide our applications and services to our clients depends, in part, on services, goods, technology, and intellectual property rights owned or controlled by third parties, including one vendor from whom we purchase significant components of our storage architecture. These third parties may become unable to or refuse to continue to provide these services, goods, technology, or intellectual property rights on commercially reasonable terms consistent with our business practices, or otherwise discontinue a service important for us to continue to operate our applications. If we fail to replace these services, goods, technologies, or intellectual property rights in a timely manner or on commercially reasonable terms, our operating results and financial condition could be harmed. In addition, we exercise limited control over our third-party vendors, which increases our vulnerability to problems with technology and services those vendors provide. If the services, technology, or intellectual property of third parties were to fail to perform as expected, it could subject us to potential liability, adversely affect our renewal rates, and have a material adverse effect on our financial condition and results of operations.

Our reliance on third-party vendors to perform certain of our intervention toolsets could have an adverse effect on our business, results of operations and growth prospects.

We rely in part on third-party vendors to perform certain of our intervention toolsets, including supplemental patient encounters such as in-home encounters. These third parties may not perform their obligations to us in a timely and cost-effective manner, in compliance with applicable regulations, or in a manner that is in our and our clients' best interests, which could have an adverse effect on our reputation and our ability to retain and attract clients. In addition, our growth depends in part on the ability of our third-party vendors to leverage our intervention toolsets to a larger group of clients. If our third-party vendors do not perform their services at a level acceptable to us or our clients or if they are unable to leverage our intervention toolsets to a larger group of clients, it could have an adverse effect on our business, results of operations, and growth prospects.

We are currently the subject of purported securities class action lawsuits and additional litigation may be brought against us in the future.

We are currently the subject of two consolidated purported class action lawsuits which assert violations of Section 11, Section 12, and Section 15 of the Securities Act based on allegedly false or misleading statements and omissions in our Registration Statement issued in connection with our initial public offering on February 18, 2015. These lawsuits seek certification as a class and unspecified compensatory damages plus interest and attorneys' fees. On January 23, 2019, the parties informed the court that they had accepted a mediator's recommendation on the amount of a settlement of these lawsuits, subject to agreement on the terms and settlement documentation. On the same day, the court stayed all proceedings for a period of not more than 60 days to enable the parties to finalize the settlement and settlement documentation and move for preliminary approval of the settlement. On February 20, 2019, the parties executed a settlement agreement, which is subject to court approval, provides for the dismissal of all claims against the defendants in connection with the securities class action suit, and provides for a payment to the class of \$17 million, of which the Company has agreed to contribute \$1.7 million, with the remaining amounts to be paid by the Company's insurance carriers. There can be no assurance that such agreement will be approved by the court, that individual claimants will not opt out of the class and pursue individual claims, that the Company can overcome any objections or appeals regarding the settlement, or that all conditions to the settlement agreement will be satisfied. In addition, in the past, following periods of volatility in the market, securities class action litigation has often been instituted against companies. Such current and additional litigation, if any, including in the form of stockholder derivative actions against our Board of Directors, could result in substantial costs and diversion of management's attention and resources, which could materially and adversely affect our business, financial condition, results of operations and growth prospects and cause our stock price to decline.

Our debt may restrict our future operations.

We have substantial debt and have the ability to incur additional debt. As of December 31, 2018, we had approximately \$977.6 million of outstanding principal indebtedness. Our incurrence of substantial amounts of debt may have significant consequences. For instance, it could:

- make it more difficult for us to satisfy our financial obligations, including those relating to our outstanding debt;

- require us to dedicate a substantial portion of our cash flow from operations to the payment of interest and principal due under our debt, which will reduce funds available for other business purposes;
- increase our vulnerability to general adverse economic and industry conditions;
- limit our flexibility in planning for, or reacting to, changes in our business;
- place us at a competitive disadvantage compared with some of our competitors that have less debt; and
- limit our ability to obtain additional financing required to fund working capital and capital expenditures and for other general corporate purposes.

Our 2018 Credit Agreement and the terms of our other debt instruments, including agreements relating to debt we may incur in the future, contain or will contain covenants imposing significant restrictions on our business. These restrictions may affect our ability to operate our business and may limit our ability to take advantage of potential business opportunities as they arise. For instance, these covenants place restrictions on our ability to, among other things: incur additional debt; create additional liens, merge or consolidate; make certain investments, loans, advances, guarantees and acquisitions; make certain restricted payments; or enter into transactions with affiliates. In addition, our 2018 Credit Agreement requires that we comply with certain financial ratios, including a maximum senior secured net leverage ratio test. Our ability to comply with these covenants may be adversely affected by events beyond our control, including prevailing economic, financial and industry conditions. A breach, or alleged breach, of any of these covenants could result in a default and our lenders could elect to declare all amounts outstanding to be immediately due and payable and to terminate all commitments to extend further credit. If we were unable to repay those amounts, the secured lenders could proceed against the collateral granted to them to secure such indebtedness. There can be no assurance that we will have sufficient assets to repay amounts due under our indebtedness.

Our failure to hedge effectively against interest rate changes may adversely affect results of operations.

Our 2018 Term Facility currently bears interest at variable rates and we may incur additional variable rate debt in the future. Accordingly, increases in interest rates on variable rate debt would increase our interest expense, which could reduce net earnings and cash available for payment of our debt obligations. We currently manage our exposure to interest rate volatility by using interest rate swap agreements and may in the future use additional interest rate hedging arrangements, such as interest cap agreements. These agreements involve risks, such as the risk that counterparties may fail to honor their obligations under these arrangements, that these arrangements may not be effective in reducing our exposure to interest rate increases and that a court could rule that such an agreement is not legally enforceable. In addition, hedging strategies involve transaction and other costs, and our hedging strategies and the derivatives that we use may not completely offset the risks of interest rate volatility and may result in or magnify losses. Furthermore, interest rate derivatives may not be available at all, or at favorable terms, particularly during economic downturns. Failure to hedge effectively against interest rate changes may materially and adversely affect our results of operations.

Risks Related to Our Class A Common Stock

Our quarterly operating results may fluctuate significantly, which could adversely impact the value of our Class A common stock.

Our quarterly results of operations, including our revenue, cost of revenue, net income, and cash flows, may vary significantly in the future, and sequential quarter-to-quarter comparisons of our operating results may not be meaningful. In addition to the other risk factors included in this section, some of the important factors that may cause sequential quarter-to-quarter fluctuations in our operating results include:

- seasonal variations driven primarily by regulatory timelines have historically caused a significantly higher proportion of our services to be performed, and therefore revenues and costs to be recognized, during the second and, to a lesser extent, the fourth quarters of the year compared to the first and, most significantly, the third quarter, (quarter to quarter financial performance may increasingly vary from historical seasonal trends as we further expand into adjacent markets and increase the portion of our revenue generated from new offerings);
- possible delays in the expected recognition of revenue due to lengthy and sometimes unpredictable sales and implementation timelines;
- the amount and timing of operating expenses related to the maintenance and expansion of our business, operations, and infrastructure;
- the timing and success of introductions of new applications and services by us or our competitors or any other change in the competitive dynamics of our industry, including consolidation among competitors, clients, or strategic partners;
- the addition or loss of large clients, including through acquisitions or consolidations of such clients;
- network outages or security breaches;

- our ability to attract new clients;
- general economic, industry, and market conditions;
- client renewal rates and the timing and terms of client renewals;
- changes in our pricing policies or those of our competitors;
- the mix of applications and services sold during a period; and
- the timing of expenses related to the development or acquisition of technologies or businesses.

Any fluctuations in our quarterly operating results may not accurately reflect the underlying longer-term performance of our business and could cause a decline in the trading price of our Class A common stock.

Because the dual class structure of our common stock has the effect of concentrating voting control with holders of our Class B common stock, holders of our Class B common stock, including Dr. Dunleavy and Mr. Hoffmann, have significant influence over us, including control over decisions that require the approval of stockholders, which could limit your ability to influence the outcome of matters submitted to stockholders for a vote.

We are currently controlled by holders of our Class B common stock. As of January 31, 2019, holders of our Class B common stock beneficially own an aggregate of approximately 92% of the voting power of our common stock. In particular, Dr. Dunleavy beneficially owns an aggregate of approximately 63% of the voting power of our common stock, and Mr. Hoffmann beneficially owns an aggregate of approximately 22% of the voting power of our common stock. The shares beneficially owned by Dr. Dunleavy and Mr. Hoffmann and certain other stockholders are shares of Class B common stock, which have 10 votes per share, whereas each share of Class A common stock has one vote per share. As long as holders of our Class B common stock control at least a majority of the voting power of our outstanding common stock, they will have the ability to exercise substantial control over all corporate actions requiring stockholder approval, irrespective of how our other stockholders may vote, including the election and removal of directors and the size of our board of directors, any amendment of our certificate of incorporation or bylaws, or the approval of any merger or other significant corporate transaction, including a sale of all or substantially all of our assets. Even if their ownership falls below 50%, holders of our Class B common stock will continue to be able to exert significant influence or effectively control our decisions because of the dual class structure of our common stock. This concentrated control by our Class B common stockholders will limit or preclude your ability to influence those corporate matters for the foreseeable future and, as a result, we may take actions that holders of our Class A common stock do not view as beneficial. This dual class structure may adversely affect the market price of our Class A common stock. In addition, this structure may prevent or discourage unsolicited acquisition proposals or offers for our capital stock that you may feel are in your best interest as one of our stockholders.

We incur significantly increased costs and devote substantial management time as a result of operating as a public company.

As a publicly traded company, we incur significant legal, accounting, stockholder communication, and other expenses and spend a significant amount of management time and internal resources to comply with changing tax laws, regulations and standards relating to corporate governance and public disclosure. For example, we are subject to the reporting requirements of the Exchange Act, and are required to comply with the applicable requirements of the Sarbanes-Oxley Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as rules and regulations subsequently implemented by the SEC, and the NASDAQ Stock Market LLC (“NASDAQ”), including the establishment and maintenance of effective disclosure and financial controls, changes in corporate governance practices, and required filing of annual, quarterly, and current reports with respect to our business and operating results. In particular, we incur significant expenses and devote substantial management effort toward ensuring compliance with the requirements of Section 404 of the Sarbanes-Oxley Act.

Changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and new regulations issued by the SEC are creating additional disclosure obligations for public companies. We may need to invest substantial resources to comply with evolving standards, which may result in increased expenses and a diversion of management time. Furthermore, if we are unable to satisfy our obligations as a public company, we could be subject to delisting of our Class A common stock, fines, sanctions, and other regulatory action and potentially civil litigation, which could have a material adverse effect on our financial condition and results of operations.

The stock price of our Class A common stock may be volatile or may decline regardless of our operating performance, and you may not be able to resell your shares at or above the price at which you acquire shares of our Class A common stock.

The market price of our Class A common stock may fluctuate significantly. These fluctuations could cause you to lose all or part of your investment in our common stock since you might be unable to sell your shares at or above the price you paid. Factors, many of which are beyond our control, that could cause fluctuations in the market price of our Class A common stock include the following:

- overall performance of the equity markets;
- our operating performance and the performance of other similar companies;
- changes in the market valuations of similar companies;
- changes in our capital structure, such as future issuances of securities or the incurrence of debt;
- changes in the estimates of our operating results that we provide to the public or our failure to meet these projections;
- failure of securities analysts to maintain coverage of us, changes in financial estimates by securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors or changes in recommendations by securities analysts that elect to follow our Class A common stock;
- sales of shares of our Class B common stock by our stockholders;
- announcements of technological innovations, new services or enhancements to services, acquisitions, strategic alliances, or significant agreements by us or by our competitors;
- disruptions in our services due to computer hardware, software, or network problems or a security breach;
- announcements of client additions and client cancellations or delays in client purchases;
- recruitment or departure of key personnel;
- the economy as a whole or market conditions in our industry and the industries of our clients;
- litigation involving us, our industry, or both, or investigations by regulators into our operations or those of our competitors;
- developments or disputes concerning our intellectual property or other proprietary rights;
- new laws or regulations, or new interpretations of existing laws or regulations, applicable to our business;
- the size of our market float; and
- any other factors discussed in this Annual Report on Form 10-K.

In addition, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many technology companies. Stock prices of many technology companies have fluctuated in a manner unrelated or disproportionate to the operating performance of those companies. In the past, stockholders have filed securities class action litigation following periods of market volatility. If we were to become involved in securities litigation, it could subject us to substantial costs, divert resources and the attention of management from our business, and materially adversely affect our business.

We do not currently intend to pay dividends on our common stock and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our Class A common stock.

Although we have paid cash dividends on our common stock in the past, we currently intend to invest any future earnings to finance the operation and growth of our business and do not expect to pay any dividends for the foreseeable future. As a result, the success of an investment in shares of our Class A common stock will depend upon future appreciation in its value, if any, and there is no guarantee that shares of our Class A common stock will appreciate in value.

Delaware law and provisions in our restated certificate of incorporation and bylaws could make a merger, tender offer, or proxy contest difficult, thereby depressing the trading price of our Class A common stock.

Our status as a Delaware corporation and the anti-takeover provisions of the Delaware General Corporation Law may discourage, delay, or prevent a change in control by prohibiting us from engaging in a business combination with an interested stockholder (generally a stockholder, who together with affiliates and associates, owns 15% or more of our voting rights) for a period of three years after the person becomes an interested stockholder, even if a change of control would be beneficial to our stockholders. In addition, our restated certificate of incorporation and bylaws contain provisions that may make the acquisition of our company more difficult, including the following:

- we have a dual class common stock structure, which could provide the holders of our Class B common stock, including our executive officers, directors, and their affiliates, with the ability to control the outcome of matters requiring stockholder approval, even if they own significantly less than a majority of the shares of our outstanding Class A and Class B common stock;
- when the outstanding shares of our Class B common stock represent less than 10% of the total outstanding shares of our common stock, certain amendments to our restated bylaws will require the approval of two-thirds of the voting power of our then-outstanding shares of common stock;

- when the outstanding shares of our Class B common stock represent less than 10% of the total outstanding shares of our common stock, vacancies on our board of directors will be able to be filled only by our board of directors and not by stockholders;
- when the outstanding shares of our Class B common stock represent less than 10% of the total outstanding shares of our common stock, our board of directors will be classified into three classes of directors with staggered three-year terms and directors will only be able to be removed from office for cause;
- when the outstanding shares of our Class B common stock represent less than 10% of the total outstanding shares of our common stock, our stockholders will only be able to take action at a meeting of stockholders and not by written consent;
- only our chairman, our chief executive officer, a majority of our board of directors, or stockholders holding shares representing at least 50% of the combined voting power of our Class A common Stock and Class B common stock will be authorized to call a special meeting of stockholders until the outstanding shares of our Class B common stock represent less than 10% of the total outstanding shares of our common stock, at which time only our chairman, our chief executive officer, or a majority of our board of directors will be authorized to call a special meeting of stockholders;
- advance notice procedures will apply for stockholders to nominate candidates for election as directors or to bring matters before an annual meeting of stockholders;
- our restated certificate of incorporation authorized up to 100,000,000 shares of undesignated preferred stock, the terms of which may be established, and shares of which may be issued, without stockholder approval; and
- certain litigation against us can only be brought in Delaware.

Our restated certificate of incorporation provides that, subject to certain exceptions, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for certain stockholder litigation matters, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our restated certificate of incorporation provides that, subject to limited exceptions, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law, our restated certificate of incorporation or our restated bylaws, or (iv) any action asserting a claim against us that is governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our restated certificate of incorporation described above. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers or other employees, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition.

If securities or industry analysts do not publish research or reports about our business, if they adversely change their recommendations regarding our shares, or if our results of operations do not meet their expectations, the share price and trading volume of our Class A common stock could decline.

The trading market for our Class A common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not have any control over these analysts. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause the share price or trading volume of our Class A common stock to decline. Moreover, if one or more of the analysts who cover us, express views regarding us that may be perceived as negative or less favorable than previous views, downgrade our stock, or if our results of operations do not meet their expectations, the share price of our Class A common stock could decline.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our corporate headquarters is located in Bowie, Maryland, where we occupy approximately 110,000 square feet under a lease agreement that expires in June 2029. In addition, we lease an aggregate of approximately 406,000 square feet at the following locations: Minneapolis, MN; Washington, DC; Bowie, Maryland; Nashville, Tennessee; Phoenix, Arizona; Parsippany, NJ; Tampa, FL; Canonsburg, Pennsylvania; Boston, MA; Morristown, NJ; Herndon, Virginia; and Yellow Springs, OH. We own one property in Snellville, Georgia, which is approximately 12,000 square feet. In addition, we maintain a number of leases for smaller office facilities in various locations in the regions of our clients coinciding with specific client needs.

Item 3. Legal Proceedings.

Legal Proceedings—From time to time the Company is involved in various litigation matters arising out of the normal course of business. The Company consults with legal counsel on those issues related to litigation and seeks input from other experts and advisors with respect to such matters. Estimating the probable losses or a range of probable losses resulting from litigation, government actions and other legal proceedings is inherently difficult and requires an extensive degree of judgment, particularly where the matters involve indeterminate claims for monetary damages, may involve discretionary amounts, present novel legal theories, are in the early stages of the proceedings, or are subject to appeal. Whether any losses, damages or remedies ultimately resulting from such matters could reasonably have a material effect on the Company's business, financial condition, results of operations, or cash flows will depend on a number of variables, including, for example, the timing and amount of such losses or damages (if any) and the structure and type of any such remedies. The Company's management does not presently expect any litigation matters to have a material adverse impact on the condensed consolidated financial statements of the Company.

There have been no significant or material developments to current legal proceedings, including the estimated effects on the Company's condensed consolidated financial statements and note disclosures, other than the following updates with respect to the *Xiang v. Inovalon Holdings, Inc., et.al.*, No. 1:16-cv-04923 case filed in the United States District Court for the Southern District of New York on June 24, 2016 against the Company, certain officers, directors and underwriters in the Company's initial public offering, which was previously disclosed. Expert discovery was completed on December 21, 2018. Subsequent to December 31, 2018, on January 23, 2019, the parties informed the court that they had accepted a mediator's recommendation on the amount of a settlement, subject to agreement on the terms and settlement documentation. On the same day, the court stayed all proceedings for a period of not more than 60 days to enable the parties to finalize the settlement and settlement documentation and move for preliminary approval of the settlement. On January 24, 2019, the parties filed a motion with the U.S. Court of Appeals for the Second Circuit requesting that the pending petition seeking permission to appeal the court's class certification order under Federal Rule of Civil Procedure 23(f) be held in abeyance pending the resolution of settlement negotiations, which request the court granted on January 28, 2019. On February 20, 2019, the parties executed a settlement agreement, which is subject to court approval, provides for the dismissal of all claims against the defendants in connection with the securities class action suit, and provides for a payment to the class of \$17 million, of which the Company has agreed to contribute \$1.7 million, with the remaining amounts to be paid by the Company's insurance carriers. The settlement contains no admission of liability by the Company and the other defendants. See "Note 11—Commitments and Contingencies" of the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Item 4. Mine Safety Disclosures.

Not Applicable.

PART II

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

Market Information

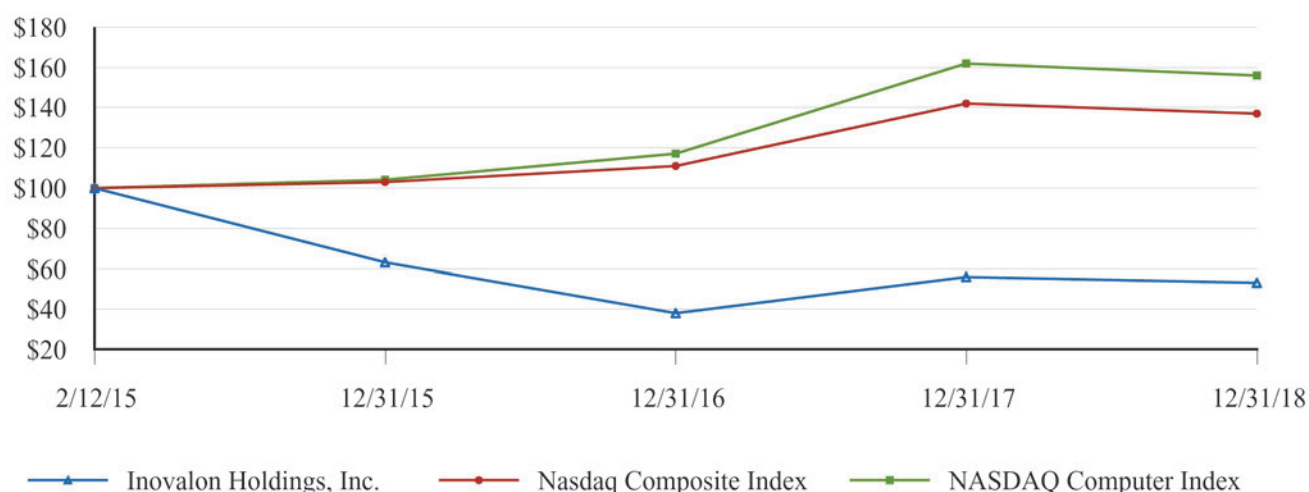
Our Class A common stock is listed on the NASDAQ Global Select Market under the symbol “INOV.”

Stock Performance Graph

The following performance graph and related information shall not be deemed “soliciting material” or to be “filed” with the Securities and Exchange Commission, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that we specifically incorporate it by reference into such filing.

The line graph and table below compare the cumulative total stockholder return on our Class A common stock with the NASDAQ Composite-Total Returns Index and the NASDAQ Computer Index. This graph and table assume the investment of \$100 in Company common stock on February 12, 2015 and assumes the reinvestment of dividends, if any, on the relevant payment dates.

The following performance graph is historical and not necessarily indicative of future price performance.



The following table was used to prepare the preceding chart, assumes \$100 was invested at the close of market on February 12, 2015, which was our initial trading day, and illustrates the value of the investment based on quoted prices as of the indicated dates:

	February 12, 2015	December 31, 2015	December 31, 2016	December 31, 2017	December 31, 2018
Inovalon Holdings, Inc.	\$ 100	\$ 63	\$ 38	\$ 56	53
NASDAQ Composite Index	\$ 100	\$ 103	\$ 111	\$ 142	137
NASDAQ Computer Index	\$ 100	\$ 104	\$ 117	\$ 162	156

Holders

As of January 31, 2019, there were 131 stockholders of record of our Class A common stock. However, because many shares of our common stock are held by brokers and other institutions on behalf of stockholders, we believe there are substantially more beneficial holders of our common stock than record holders. As of January 31, 2019, there were 23 stockholders of record of our Class B common stock.

Dividend Policy

Our board of directors does not currently intend to declare and pay dividends on our common stock. However, our board of directors will periodically reevaluate our dividend policy and may determine to pay dividends in the future. Any future determination to declare cash dividends will be at the sole discretion of our board of directors. No dividends were declared during the years ended December 31, 2018 and 2017.

Unregistered Sales of Equity Securities

None.

Use of Proceeds from Registered Securities

On February 18, 2015, we completed our initial public offering (“IPO”) of 22,222,222 shares of Class A common stock and, upon the underwriters’ exercise of their option to purchase additional shares, issued an additional 3,142,581 shares of Class A common stock for a total of 25,364,803 shares issued. All of the shares issued in the IPO were primary shares offered by us as none of our stockholders sold any shares in the IPO. The offering price of the shares sold in the IPO was \$27.00 per share, resulting in net proceeds to us, after underwriters’ discounts and commissions and other expenses payable by us, of \$639.1 million. All of the shares were sold pursuant to our registration statement on Form S-1, as amended (File No. 333-201321), that was declared effective by the SEC on February 11, 2015. Goldman, Sachs & Co., Morgan Stanley & Co. LLC, and Citigroup Global Markets Inc. acted as joint book-running managers for the IPO and as representatives of the underwriters. The principal purposes of our IPO were to create a public market for our Class A common stock and thereby enable future access to the public equity markets by us and our stockholders, and obtain additional capital. On September 1, 2015, we used approximately \$126.2 million of the net proceeds from the IPO to complete the acquisition of Avalere Health, Inc. On October 1, 2016, we committed \$120.0 million as partial consideration for our acquisition of Creehan. (See “Note 3—Business Combinations” of the notes to our audited consolidated financial statements included elsewhere within this Annual Report on Form 10-K for more information). Through December 31, 2017, in aggregate, we have used approximately \$200.0 million of the net proceeds from the IPO to repurchase outstanding shares of Class A common stock under our share repurchase program. We used the remaining net proceeds to us from our IPO to fund a portion of the cash used to acquire ABILITY on April 2, 2018.

Purchases of Equity Securities by the Issuer or Affiliated Purchasers

None.

Securities Authorized for Issuance Under Equity Compensation Plans

See Item 12, “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters” for information regarding securities authorized for issuance.

Item 6. Selected Financial Data.

The following table sets forth selected consolidated financial data for the years presented and at the dates indicated below. Our historical results are not necessarily indicative of our results in any future periods. The summary of our consolidated financial data set forth below should be read together with our consolidated financial statements and related notes, as well as the sections entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” included elsewhere in this Annual Report on Form 10-K.

	Year Ended December 31,				
	2018	2017	2016	2015	2014
	(in thousands, except share and per share information)				
Consolidated Statement of Operations Data:					
Revenue	\$ 527,676	\$ 449,358	\$ 427,588	\$ 437,271	\$ 361,540
(Loss) Income from operations	(2,585)	33,789	37,634	116,456	110,061
Net (loss) income	(39,164)	34,818	27,104	66,063	65,352
Net (loss) income attributable to common stockholders	(39,164)	33,828	26,943	66,014	65,352
Basic net (loss) income per share	\$ (0.27)	\$ 0.24	\$ 0.18	\$ 0.45	\$ 0.50
Diluted net (loss) income per share	\$ (0.27)	\$ 0.24	\$ 0.18	\$ 0.45	\$ 0.49

	December 31,				
	2018	2017	2016	2015	2014
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash and cash equivalents	\$ 115,591	\$ 208,944	\$ 127,683	\$ 114,034	\$ 162,567
Short-term investments	7,000	267,288	445,315	614,130	—
Accounts receivable, net of allowances	104,405	90,054	85,591	81,305	43,938
Working capital	130,817	466,628	601,720	776,477	168,217
Property, equipment and capitalized software, net	141,758	125,768	76,420	65,031	50,962
Goodwill	956,029	184,932	184,557	137,733	62,269
Total assets	1,921,415	995,078	1,053,344	1,112,877	342,569
Long-term debt and capital lease obligations	953,441	203,359	236,465	266,546	281,418
Total liabilities	1,238,826	352,306	369,767	373,721	350,791
Total stockholders' equity (deficit)	682,589	642,772	683,577	739,156	(8,222)

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our "Selected Financial Data" and our consolidated financial statements and notes thereto appearing elsewhere in this Annual Report on Form 10-K. In addition to historical consolidated financial information, the following discussion and analysis may contain forward-looking statements that involve risks, uncertainties and assumptions. Our actual results could differ materially from those anticipated by forward-looking statements as a result of many factors. We discuss factors that we believe could cause or contribute to these differences below and elsewhere in this Annual Report on Form 10-K, including those set forth under "Risk Factors" and "Special Note Regarding Forward-Looking Statements."

Overview

We are a leading technology company providing cloud-based platforms empowering data-driven healthcare. Through the Inovalon ONE[®] Platform, Inovalon brings to the marketplace a national-scale capability to interconnect with the healthcare ecosystem, aggregate and analyze data in real-time, and empower the application of resulting insights to drive meaningful impact at the point of care. Leveraging its platform, unparalleled proprietary data sets, and industry-leading subject matter expertise, Inovalon enables better care, efficiency, and financial performance across the healthcare ecosystem. From health plans and provider organizations, to pharmaceutical, medical device, and diagnostics companies, Inovalon's unique achievement of value is delivered through the effective progression of "Turning Data into Insight, and Insight into Action[®]." Supporting thousands of clients, including 24 of the top 25 U.S. health plans and 22 of the top 25 global pharma companies, Inovalon's technology platforms and analytics are informed by data pertaining to more than 964,000 physicians, 519,000 clinical facilities, 264 million Americans, and 42 billion medical events.

2018 marked a bookend of a period of transformation in which the company experienced meaningful, positive inflection. A multitude of dynamics have been navigated with Inovalon emerging with recognized market differentiation and leadership, high-value cloud-based capabilities, meaningful operating leverage, and significant accelerating organic growth.

We generate the substantial majority of our revenue through the sale or subscription licensing of our platform solutions, as well as revenue from related arrangements for advisory, implementation, and support services.

Recent Developments

On April 2, 2018, the Company completed the acquisition of ABILITY, for aggregate consideration of \$1.19 billion in cash and restricted shares of our Class A common stock. ABILITY is a leading cloud-based Software-as-a-service ("SaaS") technology company helping to simplify the administrative and clinical complexities of healthcare. Through the myABILITY[®] software platform, an integrated set of cloud-based applications for providers, ABILITY provides core connectivity, administrative, clinical, and quality analysis, management, and performance improvement capabilities to more than 44,000 acute, post-acute and ambulatory point-of-care provider facilities. The extensive datasets, on-demand compute capability, advanced analytics, and broad healthcare ecosystem connectivity enabled by the Inovalon ONE[®] Platform are expected to provide a significant expansion of application offerings within the myABILITY[®] software platform while also expanding the nature and reach of high-value solutions for Inovalon's existing payer, pharma, and device client-base. The combination of Inovalon and ABILITY created a vertically integrated cloud-based platform empowering the achievement of real-time, value-based care from payers, manufacturers, and diagnostics all the way to the patient's point of care. See "Note 3—Business Combinations" in the notes to our audited consolidated financial statements included elsewhere within this Annual Report on Form 10-K for more information.

In connection with the ABILITY acquisition, on April 2, 2018, the Company entered into a credit agreement with a group of lenders and Morgan Stanley Senior Funding, Inc., as administrative agent, providing for: (i) a term loan B facility with the Company as borrower in a total principal amount of \$980.0 million (the “2018 Term Facility”); and (ii) a revolving credit facility with the Company as borrower in a total principal amount of up to \$100.0 million (the “2018 Revolving Facility” and, together with the 2018 Term Facility, the “2018 Credit Facilities”). The entire \$980.0 million 2018 Term Facility was borrowed on April 2, 2018, and was used to pay off all of the Company’s existing debt obligations under its previous credit facilities as well as to provide the financing necessary to fund, in part, the cash consideration paid to acquire ABILITY. See “Note 10—Debt” in the notes to our audited consolidated financial statements included elsewhere within this Annual Report on Form 10-K for more information.

The Company adopted new accounting guidance on revenue from contracts with customers as of January 1, 2018 using the modified retrospective approach. Revenues for periods beginning after January 1, 2018 are presented under Accounting Standards Codification (“ASC”) 606, *Revenue from Contracts with Customers*, while prior period amounts are not adjusted and continue to be reported in accordance with our historic accounting under ASC 605. See “Note 4—Revenue” in the notes to our audited consolidated financial statements included elsewhere within this Annual Report on Form 10-K for more information.

Key Metrics

We review a number of metrics, including the key metrics shown in the table below. We believe that these metrics are indicative of our overall level of analytical activity and the underlying growth in our business. Data resulting from the integration with ABILITY is not yet fully reflected within the MORE² Registry[®] dataset and is therefore not fully reflected within the related data metrics below as of this date.

	Year Ended December 31,		
	2018	2017	2016
	(in thousands, except percentages)		
MORE ² Registry [®] dataset metrics ⁽¹⁾			
Unique patient count ⁽²⁾	264,220	240,180	150,961
Medical event count ⁽³⁾	42,898,600	37,813,583	13,345,220
Trailing 12 month PAM ⁽¹⁾⁽⁴⁾	48,099,042	42,156,422	26,401,946

- (1) MORE² Registry[®] dataset metrics and Trailing 12 month PAM, each of which is presented in the table, are key operating metrics that management uses to assess our level of operational activity. While we believe that each of these metrics is indicative of our overall level of analytical activity and the underlying growth in our business, increases or decreases in these metrics do not necessarily correlate to proportional increases or decreases in revenue, or net income. For instance, although increased levels of analytical activity historically have corresponded to increases in revenue over the long term, differences in fees charged for different analytical packages exist and differences in how analytics trigger the applicability of our data-driven intervention platforms may result in increases in analytical activity that do not result in proportional increases in revenue, or net income (and vice versa). Accordingly, while we believe the presentation of these operating metrics is helpful to investors in understanding our business, these metrics have limitations and should not be considered as substitutes for analysis of our financial results reported under generally accepted accounting principles (“GAAP”). In addition, we believe that other companies, including companies in our industry, do not present similar operating metrics and that there is no commonly accepted method of calculating these metrics, which may reduce their usefulness as comparative measures.
- (2) Unique patient count is defined as each unique, longitudinally matched, de-identified natural person represented in our MORE² Registry[®] as of the end of the period presented.
- (3) Medical event count is defined as the total number of discrete medical events as of the end of the period presented (for example, a discrete medical event typically results from the presentation of a patient to a physician for the diagnosis of diabetes and congestive heart failure in a single visit, the presentation of a patient to an emergency department for chest pain, etc.).
- (4) PAM is defined as the sum of the analytical processes performed on each respective patient within patient populations covered by clients under contract. As used in the metric, an “analytical process” is a distinct set of data calculations undertaken by us which is initiated and completed within our platform solutions to examine a specific question such as whether a patient is believed to have a condition such as diabetes, or worsening of the disease, during a specific time period.

Trends and Factors Affecting Our Future Performance

A number of factors influence our growth and performance. We see many of these factors as being more quantitatively driven, such as the rate of growth of the underlying data counts within our datasets, the ongoing investment in innovation, and our revenue mix of subscription-based platform offerings. Additionally, there are several factors that influence our growth and performance that are less quantitatively driven, including seasonality, macro-economic forces, and trends within healthcare (such as payment

models, incentivization, and regulatory oversight) that can be driven by changes in federal and state laws and regulations, as well as private sector market forces.

Growth of Datasets. Healthcare costs in the United States have been increasing significantly for many years. This rise in healthcare costs has driven a broad transition from consumption-based payment models to quality and value-based payment models across the healthcare landscape. As a result, the specific disease and comorbidity status, clinical and quality outcomes, resource utilization, and care details of the individual patient have become increasingly relevant to the various constituents across the healthcare delivery system. Concurrently, the count and complexity of diseases, diagnostics, and treatments—as well as payment models and regulatory oversight requirements—have soared. In this setting, granular data has become critical to determining and improving quality and financial performance in healthcare. Our MORE² Registry[®] is our largest principal dataset and serves as a proxy for our general growth of datasets within Inovalon. The growth of our datasets that inform our analytical capabilities and comparative analytics is a key aspect of our provision of value to our clients and is indicative of our overall growth and capabilities.

Innovation and Platform Development. Our business model is based upon our ability to deliver value to our clients through our platform solutions and related services focused on the achievement of meaningful and measurable improvements in clinical quality outcomes and financial performance in healthcare. Our ability to deliver this value is dependent in part on our ability to continue to innovate, design new capabilities, enter into new agreements with clients for new platforms, and bring these capabilities to market in an enterprise scale. Our continued ability to innovate our platform and bring differentiated capabilities to market is an important aspect of our business success.

Our investment in innovation includes costs for research and development, capitalized software development, and capital expenditures related to hardware and software platforms on which our platform solutions are deployed as summarized below (in thousands, except percentages).

	Year Ended December 31,		
	2018	2017	2016
Investment in Innovation			
Research and development ⁽¹⁾	\$ 28,638	\$ 27,383	\$ 29,148
Capitalized software development ⁽²⁾	38,253	34,789	21,994
Research and development infrastructure investments ⁽³⁾	12,748	23,642	11,288
Total investment in innovation	\$ 79,639	\$ 85,814	\$ 62,430
As a percentage of revenue			
Research and development ⁽¹⁾	5%	6%	7%
Capitalized software development ⁽²⁾	7%	8%	5%
Research and development infrastructure investments ⁽³⁾	3%	5%	3%
Total investment in innovation	15%	19%	15%

(1) Research and development primarily includes employee costs related to the development and enhancement of our service offerings.

(2) Capitalized software development includes capitalized costs incurred to develop and enhance functionality for our platform solutions.

(3) Research and development infrastructure investments include strategic capital expenditures related to hardware and software platforms under development or enhancement.

Mix of Subscription-Based Platform Offerings and Legacy Solutions. In 2018, we continued to execute an intentional transition in our offering portfolio from legacy platform solutions to subscription-based cloud-based platform offerings with add-on advisory services. Subscription-based cloud-based platform offerings are generally defined as modular, cloud-based solutions that utilize dynamic, high-speed cloud-based compute and storage, offer enhanced data visualization capabilities, and are tied to subscription-based contract structures where revenue is predominantly based on factors such as the number of patients under contract or similar relevant metrics (e.g., the number of prescriptions issued), the size of the client, and/or a specific period of time. Legacy platform solutions are generally defined as solutions historically not cloud-based in nature and not tied to subscription-based contract structures. We believe subscription-based cloud-based platform offerings provide more advanced capabilities, higher value, and greater visibility to clients, as well as improved visibility, market differentiation, and financial performance for us. Over time, we expect that subscription-based cloud-based platform offerings will continue to represent an increasing share of our total revenue, contributing to an increasing base of recurring revenue.

Additionally, through the ABILITY acquisition, we have expanded our subscription-based cloud-based platform offering revenues and we began to achieve revenue synergies realized through i) the infusion of Inovalon's data and analytics into ABILITY's

existing offerings, ii) the combination of the Inovalon ONE[®] Platform and myABILITY[®] Platform capabilities to introduce new and more vertically integrated offerings which appeal to both organizations' traditional market base, iii) the enhancement of Inovalon's offerings from ABILITY's provider point-of-care data, connectivity, and workflow presence, and iv) the leveraging of ABILITY's sales channel, techniques and capacity.

Breadth of Healthcare Industry Connectivity. The healthcare industry is undergoing a significant transition as it becomes increasingly data-driven. As part of this transition, participants across the healthcare industry, including health plans, pharmaceutical companies, medical device manufacturers, and diagnostic companies, are increasingly interested in achieving timely and seamless access to relevant data and being able to drive impact directly with providers and their patients. Concurrently, providers are also increasingly interested in access to more advanced analytical tools to support and improve their clinical and financial performance. Enhancing and expanding our industry connectivity with payer administrative systems, provider facilities, diagnostic systems, pharmacy systems, healthcare industry systems (e.g., electronic healthcare record systems, health information exchange systems, claims processing systems, decision support systems, etc.), and other healthcare clinical and business systems, offers the potential for increased differentiation in the healthcare marketplace as well as improved efficiency of our operations.

Client and Analytical Process Count Growth. Our business is generally driven by the number of underlying patients for which our platform solutions are being utilized. As such, we track the number of analytical processes that we run on patients each month in fulfillment of our client contracts, as totaled for the trailing 12 months. We believe that PAM is indicative of our overall level of analytical activity, and we expect our period-to-period comparisons of our PAM to be indicative of underlying growth of our business, although changes in levels of analytical activity do not always directly translate to changes in financial performance of our business. Differences in fees charged for different analytical packages exist and differences in how analytics trigger the applicability of our data-driven intervention platforms may result in increases in analytical activity that do not result in proportional increases in revenue, or net income (and vice versa). Therefore, in situations in which a new engagement is initiated for analytical processes that have a higher than average fee rate, revenue could expand disproportionately faster than the increase in PAM. Likewise, if engagements for analytical processes that have a higher than average fee rate are concluded then such conclusions can negatively affect revenue disproportionately more than PAM.

Seasonality. The nature of our customers' end-market results in partial seasonality reflected in both revenue and cost of revenue differences during the year. Regulatory impact of data submission deadlines in, for example, January, March, June, and September drive some degree of predictable timing of analytics and data processing activity variances from quarter to quarter. Further, regulatory clinical encounter deadlines of June 30th and December 31st drive predictable intervention concentrations variances from quarter to quarter. The timing of these factors results in analytical and intervention activity mix variances, which have limited predictable impact in the aggregate on our financial performance from quarter to quarter. However, quarter to quarter financial performance may increasingly vary from historical seasonal trends as we continue to expand into adjacent markets and increase the portion of our revenue generated from new offerings. Further, we also expect the impact of seasonality to decrease over time as we expand our mix of revenue generated from a subscription-based model. The timing of new contract signings and their respective implementations can also lead to variances in our seasonal revenue performance.

Regulatory, Economic and Industry Trends. Our clients are affected, sometimes directly and sometimes counter-intuitively, by macro-economic trends such as economic growth (or economic recession), inflation, and unemployment. Further, industry trends in federal and state laws and regulations, as well as emerging trends in private sector payment models, affect our clients' businesses and their need for technologies and services to support these challenges. These factors have various effects on our business, and on occasion have resulted in the slowing or cessation of the decision-making process by clients adopting our technologies and services. On the other hand, changes in macro-economic trends and the industry landscape have accelerated the need for our technologies and services from time-to-time, particularly as regulators introduce complex requirements with which our clients must comply.

Components of Results of Operations

Revenue

We earn revenue primarily through the sale or subscription licensing of our platform solutions, as well as revenue from related arrangements for advisory, implementation, and support services.

Platform solutions include arrangements for technology-based offerings representing subscription-based cloud-based platform offerings, including solutions offered through the myABILITY[®] software platform, and legacy platform solutions that are not cloud-based and not billed under a subscription-based contract structure. Our platform solutions revenue is driven primarily by cloud-based data connectivity, analytics, intervention, and visualization software that enables the identification and resolution of gaps in care, quality, utilization, compliance, and/or other gaps that may impact our clients' achievement of greater healthcare quality and financial performance associated with value-based care. Revenue is predominantly based on the number of clients, the number of patients or similar relevant metrics (e.g., the number of prescriptions issued), the size of the client, the number of analytical services contracted for by a client and the contractually negotiated price of such services. Additionally, revenue is based

on the number of identified and/or resolved gaps in care, quality, utilization, compliance, and/or other gaps resulting from our analytical services at a contractually negotiated transactional price for each identified and/or resolved gap.

The majority of our platform solutions contracts contain a series of separately identifiable and distinct services that represent performance obligations that are satisfied over time. Revenue is allocated to platform solutions by determining the standalone selling price of each performance obligation. Revenue is generally recognized on our platform offerings over the contract term. For certain contracts, we have determined that we will recognize revenue when we have the right to invoice.

Service revenue represents revenue that is generated from strategic advisory, implementation and support services. Revenue from our services arrangements is generally provided under time and materials, fixed-price, or retainer-based contracts, based on agreed upon billing rates applied to direct labor hours expended plus the costs of other items used in the performance of the contract. We recognize revenue when we have the right to invoice the customer using the allowable practical expedient since the right to invoice the customer corresponds with the performance obligations completed. Revenues under fixed-price and retainer-based contracts are recognized ratably over the contract period or upon contract completion.

Cost of Revenue

Cost of revenue consists primarily of expenses for employees who provide direct contractual services to our clients, including salaries, benefits, discretionary incentive compensation, employment taxes, severance, and equity compensation costs. Cost of revenue also includes expenses associated with the integration, and verification of data and other service costs incurred to fulfill our revenue contracts. Cost of revenue does not include allocated amounts for occupancy expense and depreciation and amortization. Many of the elements of our cost of revenue are relatively variable and semi-variable, and can be reduced in the near-term to help offset any decline in our revenue.

Our business and operational models are designed to be highly scalable and leverage variable costs to support revenue generating activities. While we may grow our headcount over time to capitalize on our market opportunities, we believe our increased investment in automation, electronic health record integration capabilities, and economies of scale in our operating model, will position us to grow our platform solutions revenue at a greater rate than our cost of revenue.

Sales and Marketing

Sales and marketing expense consists primarily of employee-related expenses, including salaries, benefits, commissions, discretionary incentive compensation, employment taxes, severance, and equity compensation costs for our employees engaged in sales, sales support, business development, and marketing. Sales and marketing expense also includes operating expenses for marketing programs, research, trade shows and brand messages, and public relations costs. Our sales and marketing expense excludes any allocation of occupancy expense and depreciation and amortization.

We expect our sales and marketing expenses to continue to increase in absolute dollar terms as we strategically invest to expand our business, although it may vary from period to period as a percentage of total revenues.

Research and Development

Research and development expense (one component of our investment in innovation) consists primarily of employee-related expenses, including salaries, benefits, discretionary incentive compensation, employment taxes, severance, and equity compensation costs for our software developers, engineers, analysts, project managers, and other employees engaged in the development and enhancement of our service offerings. Research and development expense also includes certain third party consulting fees. Our research and development expense excludes any allocation of occupancy expense and depreciation and amortization.

We expect to continue our focus on developing new product offerings and enhancing our existing product offerings. As a result, we expect our research and development expense to increase in absolute dollars, although it may vary from period to period as a percentage of revenue.

General and Administrative

Our general and administrative expense consists primarily of employee-related expenses including salaries, benefits, discretionary incentive compensation, employment taxes, severance, and equity compensation costs, for employees who are responsible for management information systems, administration, human resources, finance, legal, and executive management. General and administrative expense also includes occupancy expenses (including rent, utilities, communications, and facilities maintenance), professional fees, consulting fees, insurance, travel, contingent consideration, transaction costs, integration costs, and other expenses. Our general and administrative expense excludes depreciation and amortization.

In the near term, we expect our general and administrative expense to continue to increase in absolute dollars to support business growth. Over the long term, we expect general and administrative expense to decrease as a percentage of revenue.

Depreciation and Amortization Expense

Our depreciation and amortization expense consists primarily of depreciation of fixed assets, amortization of capitalized software development costs, and amortization of acquisition-related intangible assets.

We expect our depreciation and amortization expense to increase as we expand our business organically and through acquisitions.

Interest Income

Interest income represents interest earned net of amortization of premium for purchased interest from our available-for-sale short-term investments.

We expect our interest income to fluctuate in proportion to the amount of funds we invest, according to our corporate investment policy, in available-for-sale short-term investments and considering prevailing available interest rate yields on such investment grade debt securities.

Interest Expense

Interest expense represents interest incurred on our credit facilities and related interest rate swaps.

We expect our interest expense to increase in connection with the debt commitment discussed in “Note 10—Debt” and to fluctuate in proportion to our outstanding principal balance under the 2018 Credit Facilities and the prevailing London Interbank Offer Rate (“LIBOR”) interest rate.

Provision for Income Taxes

Provision for income taxes consists of federal and state income taxes in the United States and foreign income taxes from the territory of Puerto Rico, including deferred income taxes reflecting the net 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, and excess tax benefits or deficiencies derived from exercises of stock options and vesting of restricted stock.

Our effective tax rate has decreased due to the Tax Cuts and Jobs Act of 2017 (the “Tax Act”), which was signed into law on December 22, 2017 and was effective January 1, 2018, and in the future may fluctuate due to the recognition of excess tax benefits and tax deficiencies associated with stock-based compensation transactions which are considered to be discrete items. Excluding discrete items impacting the effective tax rate, we expect our long-term tax rate to reflect the applicable statutory rates.

Results of Operations

The following tables set forth our consolidated statement of operations data for each of the periods presented (in thousands, except percentages):

	Year Ended December 31,			2018 to 2017 Change		2017 to 2016 Change	
	2018	2017	2016	\$	%	\$	%
Revenue	\$527,676	\$449,358	\$427,588	\$ 78,318	17 %	\$ 21,770	5 %
Expenses:							
Cost of revenue ⁽¹⁾	144,826	151,046	159,169	(6,220)	(4)%	(8,123)	(5)%
Sales and marketing ⁽¹⁾	45,534	34,103	27,078	11,431	34 %	7,025	26 %
Research and development ⁽¹⁾	28,638	27,383	29,148	1,255	5 %	(1,765)	(6)%
General and administrative ⁽¹⁾	205,038	149,948	137,275	55,090	37 %	12,673	9 %
Depreciation and amortization	96,725	53,089	37,284	43,636	82 %	15,805	42 %
Restructuring expense	9,500	—	—	9,500	*	—	*
Total operating expenses	530,261	415,569	389,954	114,692	28 %	25,615	7 %
(Loss) Income from operations	(2,585)	33,789	37,634	(36,374)	(108)%	(3,845)	(10)%
Other income and (expenses):							
Interest income	2,181	5,429	5,792	(3,248)	(60)%	(363)	(6)%
Interest expense	(50,898)	(6,225)	(5,065)	(44,673)	718 %	(1,160)	23 %
Other (expense) income, net	(2,255)	(406)	538	(1,849)	*%	(944)	*%
(Loss) Income before taxes	(53,557)	32,587	38,899	(86,144)	(264)%	(6,312)	(16)%
(Benefit from) Provision for income taxes	(14,393)	(2,231)	11,795	(12,162)	545 %	(14,026)	(119)%
Net (loss) income	<u>\$ (39,164)</u>	<u>\$ 34,818</u>	<u>\$ 27,104</u>	<u>\$ (73,982)</u>	<u>(212)%</u>	<u>\$ 7,714</u>	<u>28 %</u>

(1) Includes stock-based compensation expense as follows:

Cost of revenue	\$ 237	\$ 1,652	\$ 483	\$ (1,415)	(86)%	\$ 1,169	242%
Sales and marketing	735	2,011	613	(1,276)	(63)%	1,398	228%
Research and development	1,937	1,293	1,184	644	50 %	109	9%
General and administrative	13,253	12,362	7,774	891	7 %	4,588	59%
Total stock-based compensation expense	<u>\$ 16,162</u>	<u>\$ 17,318</u>	<u>\$ 10,054</u>	<u>\$ (1,156)</u>	<u>(7)%</u>	<u>\$ 7,264</u>	<u>72%</u>

* Asterisk denotes not meaningful

The following table sets forth our consolidated statement of operations data for each of the periods presented as a percentage of revenue:

	Year Ended December 31,		
	2018	2017	2016
Revenue	100 %	100 %	100 %
Expenses:			
Cost of revenue ⁽¹⁾	28 %	34 %	37 %
Sales and marketing ⁽¹⁾	9 %	8 %	6 %
Research and development ⁽¹⁾	5 %	6 %	7 %
General and administrative ⁽¹⁾	39 %	33 %	32 %
Depreciation and amortization	18 %	12 %	9 %
Restructuring expense	2 %	— %	— %
Total operating expenses	101 %	93 %	91 %
(Loss) Income from operations	(1)%	7 %	9 %
Other income and (expenses):			
Interest income	*0%	1 %	1 %
Interest expense	(10)%	(1)%	(1)%
Other (expense) income, net	*0%	*0%	*0%
(Loss) Income before taxes	(11)%	7 %	9 %
(Benefit from) Provision for income taxes	(3)%	(1)%	3 %
Net (loss) income	(8)%	8 %	6 %

Years Ended December 31, 2018, 2017, and 2016

Revenue

2018 Compared with 2017. Revenue for the year ended December 31, 2018 was \$527.7 million, an increase of 17% compared with revenue of \$449.4 million for the year ended December 31, 2017. This increase was primarily attributable to \$121.2 million in revenue contributed by the acquired businesses of ABILITY and CCS, through the anniversary date of the acquisition, and \$24.2 million in revenue contributed from new clients signed, which was partially offset by a decrease of \$67.0 million in revenue from existing clients resulting from a combination of factors including decisions in 2017 by a limited number of clients to withdraw from ACA markets, the transition of client contracts to newer product offerings and more subscription-based agreements versus the year-ago period, and the conclusion of client contracts included in the year-ago period.

2017 Compared with 2016. In 2017, Inovalon continued to execute on its transition from legacy enterprise solutions to subscription-based cloud-based platform offerings, with this portion of revenue contribution accounting for \$295.3 million (or 66% of revenue), reflecting growth of 30% over 2016. Revenue for the year ended December 31, 2017 was \$449.4 million, an increase of 5% compared with revenue of \$427.6 million for the year ended December 31, 2016. This increase was primarily attributable to \$35.3 million in revenue contributed by the acquired businesses of Creehan and CCS, through the anniversary date of the acquisition, and \$14.5 million in revenue contributed from new clients signed, which was partially offset by a decrease of \$28.0 million in revenue from existing clients resulting from a combination of factors including the transition of client contracts to newer product offerings and more subscription-based agreements versus the year-ago period, and the conclusion of client contracts included in the year-ago period.

Cost of Revenue

2018 Compared with 2017. During the year ended December 31, 2018, cost of revenue decreased by \$6.2 million, or 4%, compared with the year ended December 31, 2017. The decrease in cost of revenue was primarily attributable to a decrease in professional third-party costs of \$13.8 million, a decrease of employee-related expenses of \$10.4 million, and a decrease in stock-based compensation expense of \$1.4 million, which was partially offset by the combined incremental cost of revenue of \$20.0 million attributable to the acquired businesses of ABILITY and CCS, through the anniversary date of the acquisition. Cost of revenue as a percentage of revenue was 28% and 34% for the years ended December 31, 2018 and 2017, respectively.

2017 Compared with 2016. During the year ended December 31, 2017, cost of revenue decreased by \$8.1 million, or 5%, compared with the year ended December 31, 2016. The decrease in cost of revenue was primarily attributable to a decrease of employee-related expenses of \$30.6 million driven by technology-enabled platform efficiency initiatives, which was partially offset by the combined incremental cost of revenue of \$17.5 million attributable to the acquired businesses of Creehan and CCS, an increase in fulfillment of \$2.3 million, an increase in professional third-party costs of \$1.6 million, and an increase in stock-

based compensation expense of \$1.2 million. Cost of revenue as a percentage of revenue was 34% and 37% for the years ended December 31, 2017 and 2016, respectively.

Sales and Marketing

2018 Compared with 2017. During the year ended December 31, 2018, sales and marketing expenses increased by \$11.4 million, or 34%, compared with the year ended December 31, 2017. The increase was primarily attributable to incremental sales and marketing expense of \$14.8 million attributable to the acquired business of ABILITY, which was partially offset by a decrease in stock-based compensation expense of \$1.2 million, and a decrease in employee-related expenses of \$0.9 million. Sales and marketing as a percentage of revenue was 9% and 8% for the years ended December 31, 2018 and 2017, respectively.

2017 Compared with 2016. During the year ended December 31, 2017, sales and marketing expenses increased by \$7.0 million, or 26%, compared with the year ended December 31, 2016. The increase was primarily attributable to an increase in employee-related expenses of \$4.9 million, which were driven by our investment to expand our sales organization and partner team to focus on adding new clients and capturing an increased amount of market opportunity, and an increase in stock-based compensation expense of \$1.4 million. Sales and marketing as a percentage of revenue was 8% and 6% for the years ended December 31, 2017 and 2016, respectively.

Research and Development

2018 Compared with 2017. During the year ended December 31, 2018, research and development expense increased by \$1.3 million, or 5%, compared with the year ended December 31, 2017. The increase was primarily attributable to the incremental expense of \$8.0 million attributable to the acquired businesses of ABILITY and CCS, through the anniversary date of the acquisition, an increased focus of development on the Inovalon ONE[®] Platform, resulting in an increase to capitalized software projects of \$1.3 million, which was partially offset by a decrease in professional third-party costs of \$4.9 million, and a decrease in employee-related expenses of \$3.6 million.

2017 Compared with 2016. During the year ended December 31, 2017, research and development expense decreased by \$1.8 million, or 6%, compared with the year ended December 31, 2016. The decrease was primarily attributable to an increased focus of development on the Inovalon ONE[®] Platform, resulting in an increase to capitalized software projects of \$6.8 million, which was partially offset by the incremental expense of \$4.4 million attributable to the acquired businesses of Creehan and CCS, through the anniversary date of the acquisition.

General and Administrative

2018 Compared with 2017. During the year ended December 31, 2018, general and administrative expenses increased by \$55.1 million, or 37%, compared with the year ended December 31, 2017. The increase was primarily attributable to incremental expense of \$30.4 million attributable to the acquired businesses of ABILITY and CCS, through the anniversary date of the acquisition, an increase of \$12.5 million related to the fair value adjustment of contingent consideration, transaction and integration costs related to the acquisition of ABILITY of \$6.6 million, and an increase in employee-related expenses of \$4.1 million which includes an increase in severance expense related to restructuring initiatives. General and administrative expenses as a percentage of revenue was 39% and 33% for the years ended December 31, 2018 and 2017, respectively.

2017 Compared with 2016. During the year ended December 31, 2017, general and administrative expenses increased by \$12.7 million, or 9%, compared with the year ended December 31, 2016. The increase was primarily attributable to incremental expense of \$18.5 million attributable to the acquired businesses of Creehan and CCS, through the anniversary date of the acquisition, an increase in professional third-party costs of \$5.8 million, which includes a \$3.1 million increase in legal expenses related to non-recurring litigation, and an increase of \$4.6 million related to stock-based compensation expense. The increase in general and administrative expense was partially offset by a decrease of employee-related expenses of \$10.2 million, and a decrease of \$5.2 million related to the fair value adjustment of contingent consideration. General and administrative expenses as a percentage of revenue was 33% and 32% for the years ended December 31, 2017 and 2016, respectively.

Depreciation and Amortization

2018 Compared with 2017. During the year ended December 31, 2018, depreciation and amortization expense increased by \$43.6 million, or 82%, compared with the year ended December 31, 2017. The increase was primarily attributable to \$28.7 million of amortization of acquired intangible assets, depreciation of software licenses and computers of \$8.2 million, amortization of capitalized software of \$5.0 million, and \$1.7 million of depreciation of other assets related to the acquired businesses of ABILITY and CCS, through the anniversary date of the acquisition.

2017 Compared with 2016. During the year ended December 31, 2017, depreciation and amortization expense increased by \$15.8 million, or 42%, compared with the year ended December 31, 2016. The increase was primarily attributable to \$6.0 million of amortization of acquired intangible assets, \$4.2 million of incremental amortization of capitalized software, and

\$0.7 million of depreciation of other assets related to the acquired businesses of Creehan, through the anniversary date of the acquisition, and CCS.

Interest Income

During the year ended December 31, 2018, interest income decreased by \$3.2 million, compared with the year ended December 31, 2017. During the year ended December 31, 2017, interest income decreased by \$0.4 million, compared with the year ended December 31, 2016. The decrease in our interest income was primarily attributable to a decrease in the balance of our available-for-sale short term investment portfolios as a result of the liquidation of certain investments to fund the ABILITY acquisition and resulted in a decrease in earnings derived from these investments.

Interest Expense

During the year ended December 31, 2018, interest expense increased by \$44.7 million, compared with the year ended December 31, 2017. The increase in interest expense was primarily attributable to an increase in borrowings in connection with the 2018 Term Facility and an increase in expense related to the interest rate swaps entered into in connection with the 2018 Term Facility. During the year ended December 31, 2017, interest expense increased by \$1.2 million, compared with the year ended December 31, 2016.

(Benefit from) Provision for Income Taxes

2018 Compared with 2017. During the year ended December 31, 2018, benefit from income taxes increased by \$12.2 million, or 545%, compared to the year ended December 31, 2017. Our effective tax rate for the year ended December 31, 2018 was approximately 27%, as compared to approximately (7)% for the year ended December 31, 2017, which included a one-time tax benefit of approximately \$15.5 million, resulting in a benefit from income tax. The increase in our benefit from income taxes is primarily attributable to the Tax Act which included a change in the U.S. corporate income tax rate to 21%, and the effect of current year state tax law changes and nondeductible items such as acquisition costs which resulted in an increase to the effective tax rate.

2017 Compared with 2016. During the year ended December 31, 2017, provision for income taxes decreased by \$14.0 million, or 119%, compared to the year ended December 31, 2016. Our effective tax rate for the year ended December 31, 2017 was approximately (7)%, resulting in a benefit from income tax, as compared to approximately 30% for the year ended December 31, 2016. The decrease in our provision for income taxes is primarily due to a tax benefit of approximately \$15.5 million recognized as a result of the Tax Act which was signed into law on December 22, 2017 and is effective January 1, 2018. This tax benefit represents what we believe is a reasonable estimate of the impact of the income tax effects of the Tax Act in our consolidated statement of operations as of December 31, 2017.

Quarterly Financial Information

The following tables show a summary of the Company's quarterly financial information for each of the four quarters of 2018 and 2017 (in thousands, except per share amounts):

	2018			
	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
Revenue	\$ 136,314	\$ 145,809	\$ 152,798	\$ 92,755
Gross profit	\$ 100,416	\$ 109,387	\$ 113,783	\$ 59,264
Net loss	\$ (11,020)	\$ (844)	\$ (10,466)	\$ (16,834)
Net loss attributable to common stockholders	\$ (11,020)	\$ (844)	\$ (10,466)	\$ (16,272)
Basic net loss per share ⁽¹⁾	\$ (0.07)	\$ (0.01)	\$ (0.07)	\$ (0.12)
Diluted net loss per share ⁽¹⁾	\$ (0.07)	\$ (0.01)	\$ (0.07)	\$ (0.12)

2017

	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
Revenue	\$ 114,619	\$ 115,855	\$ 110,578	\$ 108,306
Gross profit	\$ 77,487	\$ 77,424	\$ 73,380	\$ 70,021
Net income	\$ 17,449	\$ 8,241	\$ 5,486	\$ 3,642
Net income attributable to common stockholders	\$ 16,864	\$ 7,968	\$ 5,338	\$ 3,569
Basic net income per share ⁽¹⁾	\$ 0.12	\$ 0.06	\$ 0.04	\$ 0.02
Diluted net income per share ⁽¹⁾	\$ 0.12	\$ 0.06	\$ 0.04	\$ 0.02

(1) Basic and diluted earnings per share are computed independently for each of the quarters presented. Therefore, the sum of quarterly basic and diluted per share information may not equal annual basic and diluted earnings per share.

Liquidity and Capital Resources

The following table presents a summary of our cash flow activity for the periods set forth below (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Consolidated Statements of Cash Flows Data:			
Net income	\$ (39,164)	\$ 34,818	\$ 27,104
Net cash provided by operating activities	\$ 90,401	\$ 97,706	\$ 92,830
Net cash (used in) provided by investing activities	\$ (889,354)	\$ 106,559	\$ 39,799
Net cash provided by (used in) financing activities	\$ 705,600	\$ (123,004)	\$ (118,980)

Sources of Liquidity

Our principal sources of liquidity have been cash generated by operating activities, proceeds from our initial public offering (the balance of which was expended in connection with the ABILITY acquisition) and proceeds from our 2018 Credit Facilities. Our cash generated from such means has been sufficient to fund our growth, including our capital expenditures. As of December 31, 2018, our cash, cash equivalents and short-term investments totaled \$122.6 million, of which \$7.0 million represented short-term, available-for-sale, investment grade, domestic debt-securities, compared to \$476.2 million of cash, cash equivalents, and short-term investments as of December 31, 2017, of which \$267.3 million represented short-term, available-for-sale, investment grade, domestic debt-securities. All cash held by us is domiciled in the United States.

We believe our current cash, cash equivalents, and short-term investments balance, expected cash generated by operating activities and availability of cash under our 2018 Credit Facilities (including \$99.0 million under the 2018 Revolving Facility and a letter of credit of \$1.0 million as of December 31, 2018) are sufficient to fund our operations, finance our strategic initiatives, and fund our investment in innovation and new service offerings, for the foreseeable future. There can be no assurance that we will continue to generate cash flows at or above current levels or that we will be able to maintain our ability to borrow under our 2018 Credit Facilities.

Debt

On September 19, 2014, we entered into a Credit and Guaranty Agreement with a group of lenders and Goldman Sachs Bank USA, as administrative agent, providing for a senior unsecured term loan facility in the original principal amount of \$300.0 million (the “2014 Term Loan Facility”) and a senior unsecured revolving credit facility in the maximum principal amount of \$100.0 million (the “2014 Revolving Credit Facility” and, together with the Term Loan Facility, the “2014 Credit Facilities”).

On April 2, 2018, we paid in full all existing debt obligations under the 2014 Credit Facilities and terminated all commitments to extend further credit thereunder. On April 2, 2018, we entered into the 2018 Credit Facilities. As of December 31, 2018, the Company had \$100.0 million available to us consisting of \$99.0 million under the 2018 Revolving Facility and a letter of credit of \$1.0 million.

As of December 31, 2018, we had outstanding indebtedness under the 2018 Term Loan Facility and capital lease obligations of \$949.3 million and \$16.8 million, respectively. No amounts were outstanding under the 2018 Revolving Credit Facility as of December 31, 2018. The obligations under the 2018 Facilities are guaranteed by our domestic, wholly owned subsidiaries. The 2018 Term Facility has a seven year term and is an amortizing facility with quarterly principal payments and monthly interest payments. The 2014 Term Loan Facility had a five year term and was an amortizing facility with quarterly principal payments and monthly interest payments. Scheduled principal payments totaling \$238.7 million and scheduled interest payments totaling \$43.6

million were paid during the year ended December 31, 2018. As of December 31, 2018, we were in compliance with the covenants under the 2018 Credit Agreement.

See “Note 10—Debt” in the Notes to our audited consolidated financial statements, included elsewhere in this Annual Report on Form 10-K for additional information.

Cash Flows

Operating Cash Flow Activities

Cash provided by operating activities consisted of net income adjusted for certain non-cash items, including depreciation and amortization, stock-based compensation, and deferred income taxes, as well as the effect of changes in working capital and other activities.

2018 Compared with 2017. Cash provided by operating activities during the year ended December 31, 2018 was \$90.4 million, representing a decrease in cash inflow of \$7.3 million compared with the year ended December 31, 2017. Cash provided by operating activities was driven by the exclusion of non-cash expenses totaling \$118.4 million, which includes depreciation and amortization of \$96.7 million, an increase in the fair value adjustment of contingent consideration of \$7.2 million, and non-cash restructuring expenses of \$7.1 million, partially offset by net loss of approximately \$39.2 million.

2017 Compared with 2016. Cash provided by operating activities during the year ended December 31, 2017 was \$97.7 million, representing an increase in cash inflow of \$4.9 million compared with the year ended December 31, 2016. Cash provided by operating activities was driven by net income of \$34.8 million, as adjusted for the exclusion of non-cash expenses totaling \$59.5 million, and \$3.4 million related to the effect of changes in working capital and other balance sheet accounts.

Investing Cash Flow Activities

We make investments in innovation, including research and development expense, capital software development costs, and research and development infrastructure investments, on a recurring basis. We expect our investment in innovation to increase in the foreseeable future to support our continued growth and new service offerings.

2018 Compared with 2017. Cash used in investing activities during the year ended December 31, 2018 was \$889.4 million compared with cash provided by investing activities of \$106.6 million during the year ended December 31, 2017. Cash used in investing activities was primarily due to the acquisition of ABILITY, net of cash acquired of \$1.1 billion and investments in property and equipment and capitalized software of \$65.0 million, which was partially offset by proceeds generated from sales and maturities of available-for-sale securities of \$258.4 million.

2017 Compared with 2016. Cash provided by investing activities during the year ended December 31, 2017 was \$106.6 million compared with approximately \$39.8 million during the year ended December 31, 2016. Cash provided by investing activities was primarily due to proceeds generated from maturities of available-for-sale securities of \$174.4 million, partially offset by \$65.5 million of investments in property and equipment and capitalized software.

Financing Cash Flow Activities

2018 Compared with 2017. Cash provided by financing activities during the year ended December 31, 2018 was \$705.6 million, compared with cash used in financing activities of \$123.0 million during the year ended December 31, 2017. Cash provided by financing activities during the year ended December 31, 2018 was primarily due to proceeds from the 2018 Term Facility of \$965.3 million, which was partially offset by \$236.3 million for the repayment of 2014 Credit Facility borrowings and the payment of debt issuance costs of \$18.3 million.

2017 Compared with 2016. Cash used in financing activities during the year ended December 31, 2017 was \$123.0 million, compared with \$119.0 million during the year ended December 31, 2016. The cash used in financing activities during the year ended December 31, 2017 was primarily due to \$93.6 million related to share repurchases and \$30.0 million for the repayment of Credit Facility borrowings.

Off Balance Sheet Arrangements

We do not have any off-balance sheet arrangements and did not have any such arrangements during the years ended December 31, 2018, 2017, and 2016.

Contractual Obligations

Our principal commitments consist of obligations under our 2018 Term Loan Facility, purchase obligations, our operating leases for equipment, office space, and co-located data center facilities and our capital leases. See “Note 10—Debt,” and “Note 11—Commitment and Contingencies,” of the notes to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

The following table summarizes our future payments in cash, excluding the effects of time value, on contractual obligations by period as of December 31, 2018 (in thousands).

	Payments Due by Period				
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Credit facilities	\$ 977,550	\$ 9,800	\$ 19,600	\$ 19,600	\$ 928,550
Purchase obligation	1,997	688	1,198	111	—
Capital lease obligations	16,832	2,976	3,834	1,916	8,106
Operating lease obligations	48,930	11,250	12,957	9,124	15,599
Total	\$ 1,045,309	\$ 24,714	\$ 37,589	\$ 30,751	\$ 952,255

We have cash interest requirements due on the 2018 Credit Facilities, payable at variable rates, that are not included in the table above.

Our existing operating lease agreements may provide us with the option to renew. Our future operating lease obligations would change if we entered into additional operating lease agreements and if we exercised renewal options.

Contractual obligations represent future cash commitments and liabilities under agreements with third parties, and exclude purchase orders for goods and services. Purchase orders are not included in the table above. Our purchase orders represent authorizations to purchase rather than legally binding agreements. The contractual commitment amounts in the table above are associated with agreements that are legally binding and enforceable, and that specify all significant terms, including fixed or minimum services to be used, fixed, minimum or variable price provisions and the approximate timing of the transaction.

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect our reported amounts of assets, liabilities, revenue and expenses, as well as related disclosures. To the extent that there are material differences between these estimates and actual results, our financial condition or operating results would be affected. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. We refer to accounting estimates of this type as critical accounting policies and estimates, which we discuss further below.

Our significant accounting policies are described in “Note 2—Summary of Significant Accounting Policies,” of the notes to our audited consolidated financial statements, included elsewhere in this Annual Report on Form 10-K. The following are the accounting policies that we believe involve a greater degree of judgment and complexity and are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of operations.

Revenue Recognition

We generate the substantial majority of our revenue through the sale or subscription licensing of our platform solutions, as well as revenue from related arrangements for advisory, implementation, and support services. Revenue is recognized when performance obligations under the terms of a contract are satisfied through the transfer of control of these solutions and services to our customers.

Our platform solutions revenue is predominantly based on the number of clients, the number of patients or similar relevant metrics (e.g., the number of prescriptions issued), the size of the client, the number of analytical services contracted for by a client and the contractually negotiated price of such services. Additionally, revenue is based on the number of identified and/or resolved gaps in care, quality, utilization, compliance, and/or other gaps resulting from our analytical services at a contractually negotiated transactional price for each identified and/or resolved gap. The majority of our platform solutions contracts contain a series of separately identifiable and distinct services that represent performance obligations that are satisfied over time. We allocate revenue to our platform solutions by determining the standalone selling price of each performance obligation. The determination of standalone selling price for each performance obligation is determined based on the terms of the contract and can require judgment. Generally, the best estimate of standalone selling price is consistent with the contractual arrangement fee for each element. Revenue is generally recognized on our platform offerings over the contract term. For these contracts, we have determined that we will use the practical expedient under ASC 606-10-55-18 to recognize revenue when we have the right to invoice. We qualify for this practical expedient because the right to invoice corresponds directly with the value transferred to the customer.

We also generate revenue from advisory, implementation, and support services. We primarily enter into arrangements for advisory services under fixed-price, time and materials, or retainer-based contracts. Revenues under fixed-price and retainer-based contracts are recognized ratably over the contract period or upon contract completion. Revenue for time and material contracts is recognized based upon contractually agreed upon billing rates applied to direct labor hours expended plus the costs of other items

used in the performance of the contract. We recognize revenue when we have the right to invoice the customer using the allowable practical expedient under ASC 606-10-55-18 since the right to invoice the customer corresponds with the performance obligations completed.

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables, and deferred revenue. Invoices to clients are generated in accordance with the terms of the applicable contract, which may not be directly related to the performance of services. Unbilled receivables are invoiced when the achievement of specific events as defined by each contract occurs. Unbilled receivables are classified as accounts receivable on the consolidated balance sheet. Advanced billings to clients in excess of revenue earned are recorded as deferred revenue until the aforementioned revenue recognition criteria are met.

Certain of our arrangements entitle a client to receive a refund if we fail to satisfy contractually specified performance obligations. The refund is limited to a portion or all of the consideration paid. In this case, revenue is recognized when any and all performance obligations are satisfied.

We maintain an allowance, charged to revenue, which reflects our estimated future billing adjustments resulting from client concessions or resolutions of billing disputes. We believe that our approach and judgments applied to estimating our allowance is reasonable, actual results could differ, and we may be exposed to increases or decreases in revenue to the extent that actual results differ from our estimates.

Stock-Based Compensation

Stock-based awards, including employee stock options, Restricted Stock Unit (“RSU”) and Restricted Stock Award (“RSA”) grants, including RSAs with performance conditions, are measured and recognized in the financial statements at fair value as of the grant date in accordance with ASC 718, *Compensation—Stock Compensation*. RSUs are share awards that, upon vesting, will deliver to the holder shares of the Company’s common stock. RSAs are shares of the Company’s common stock that are reserved in the grantee’s name upon grant which will be delivered to the holder upon vesting.

We estimate the fair value of each RSU and RSA based on the fair market values of the underlying common stock on the dates of grant. Additionally, our performance-based RSAs have vesting conditions tied to the achievement of specified performance conditions, which have target performance levels that span from three to five years. Upon the conclusion of the performance period, the performance level achieved will be measured and the ultimate number of shares that vest will be determined.

We recognize stock-based compensation expense using the straight-line basis over the requisite service period of the applicable award, which is generally three to five years. Stock-based compensation expense for RSAs with performance conditions is recorded ratably over their vesting period or using a graded vest method, depending on the specific terms of the award and achievement of the specified performance conditions. We record adjustments related to forfeitures as they occur.

Income Taxes

We account for income taxes using the asset and liability approach, which requires the recognition of deferred tax assets and liabilities related to the expected future tax consequences of events that have been recognized between financial reporting and income tax reporting. We measure deferred tax assets and liabilities using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

We make estimates, assumptions and judgments to determine our provision for income taxes and also for deferred tax assets and liabilities and any valuation allowances recorded against our deferred tax assets. We assess the likelihood that our deferred tax assets will be recovered from future taxable income and, to the extent we believe that recovery is not likely, we establish a valuation allowance.

We account for uncertain tax positions in accordance with ASC 740-10, *Accounting for Uncertainty in Income Taxes*, that prescribes a recognition threshold of more-likely-than-not, and a measurement attribute for all tax positions taken or expected to be taken on a tax return, in order for those positions to be recognized in the financial statements. We continually review tax laws, regulations and related guidance in order to properly record any uncertain tax liability positions. We adjust these reserves in light of changing facts and circumstances.

As a result of the Tax Act, we revalued our ending net deferred tax liabilities at December 31, 2017 and recognized a \$15.5 million tax benefit in the Company’s consolidated statement of operations for the year ended December 31, 2017. Refer to “Note 16—Income Taxes,” of the notes to our audited consolidated financial statements, included elsewhere in this Annual Report on Form 10-K.

We adopted ASU 2016-09 in the fourth quarter of 2016, which resulted in the modification of income tax consequences for several aspects of stock-based payment awards. Excess tax benefits and tax deficiencies for stock-based payments are now included in our tax provision expense rather than additional-paid-in-capital. Variability of tax consequences arising from excess tax benefits

and tax deficiencies may result due to fluctuations in our stock price and the volume of our employees' equity awards that are exercised or vest.

Goodwill

Goodwill represents the excess of acquisition costs over the fair value of tangible net assets and identifiable intangible assets of businesses acquired. Goodwill is not amortized and is subject to impairment testing annually, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable.

Historically, the annual goodwill impairment assessment was performed as of December 31st. During 2018, we changed the date of the goodwill impairment assessment to November 1st for the year ended December 31, 2018 and thereafter. We believe this change in our measurement date does not represent a material change in method of applying the accounting principal as the new and old assessment dates are close in proximity and fall within the same quarter and the change does not produce different results as similar valuation assumptions are used and the carrying values are stable. The change in the date of our goodwill impairment analysis will allow for more time to prepare and review the valuations for each reporting unit and lessen the accounting and valuation resource constraints during year-end reporting.

In January 2017, the FASB issued ASU 2017-04, *Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. The new standard simplifies the subsequent measurement of goodwill by eliminating the second step of the goodwill impairment test. This ASU will be applied prospectively and is effective for annual or interim goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company early adopted the requirements of the new standard in the fourth quarter of 2017. As a result, the amendments modify the concept of impairment from the condition that exists when the carrying amount of goodwill exceeds its implied fair value to the condition that exists when the carrying amount of a reporting unit exceeds its fair value. If the fair value of the reporting unit exceeds the carrying value of the reporting unit, goodwill is not impaired. If the carrying value of the reporting unit exceeds the fair value of the reporting unit, then the Company will record an impairment loss in the amount equal to the difference between the fair value and the carrying value.

The Company performs the goodwill impairment testing annually as of November 1st, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. Significant judgment in testing goodwill for impairment includes assigning assets and liabilities to the reporting unit and assessing or determining the fair value of each reporting unit based on the Company's best estimates and assumptions, as well as other information including valuations that utilize customary valuation procedures and techniques. The Company tests its goodwill for impairment at the reporting unit level which is one level below the operating segment and has identified four reporting units: Inovalon, ABILITY, Avalere and Creehan.

During 2017, the Company performed a qualitative assessment for the Inovalon and ABILITY reporting units and concluded that they were not impaired. Qualitative factors that were considered include, but were not limited to, macroeconomic conditions, industry and market conditions, company specific events, changes in circumstances, after tax cash flows and market capitalization. As it relates to ABILITY, the Company also considered proximity of and factors impacting the valuation on April 2, 2018 and changes that may have occurred since the valuation date.

The Company elected to bypass the qualitative assessment and performed a quantitative assessment for its Avalere and Creehan reporting units and concluded that these reporting units were not impaired. The Company employed a combined valuation approach that included the income approach using the discounted cash flow method, the market approach using the guideline public company method and the merger and acquisition method to value the reporting units. Critical estimates in determining the fair value of the reporting units include, but are not limited to, historical and projected customer retention rates, anticipated growth in revenue and earnings, and expected future cash outflows. Based on the Company's annual impairment evaluation performed as of December 31, 2018, the Company concluded that there was no impairment of goodwill.

During 2017, the Company performed a qualitative assessment for the Inovalon reporting unit and concluded that it was not impaired. Qualitative factors that were considered include, but were not limited to, macroeconomic conditions, industry and market conditions, company specific events, changes in circumstances, after tax cash flows and market capitalization.

The Company elected to bypass the qualitative assessment and performed a quantitative assessment for its Avalere and Creehan reporting units and concluded that these reporting units were not impaired. The Company employed a combined valuation approach that included the income approach using the discounted cash flow method, the market approach using the guideline public company method and the merger and acquisition method to value the reporting units. Critical estimates in determining the fair value of the reporting units include, but are not limited to, historical and projected customer retention rates, anticipated growth in revenue and earnings, and expected future cash outflows. Based on the Company's annual impairment evaluation performed as of December 31, 2017, the Company concluded that there was no impairment of goodwill.

Business Combinations

Business combinations, which may include purchased intangible assets, are accounted for at estimated fair value on the date of acquisition. Acquisition costs are expensed as incurred and recorded in general and administrative expenses. Measurement period adjustments relate to information that we should have known at the time of acquisition and these adjustments and any other changes to purchase accounting are recorded as an adjustment to goodwill. After the measurement period is closed, (not to exceed one year following the acquisition date) any purchase accounting adjustments are recorded in earnings in the current period.

Determining the fair value of assets acquired and liabilities assumed requires management's judgment and utilizes data such as discounted cash flow analysis and valuations derived from customary valuation procedures and techniques. Management's best estimates and assumptions are employed in determining the acquisition date fair value including the timing and amounts of future cash inflows and outflows, discount rates, market prices and asset lives. Judgments made in the determination of the estimated fair value assigned to the assets acquired and liabilities assumed, as well as future business and economic conditions, could materially impact the financial statements in periods after the acquisition through impairment of goodwill or intangible assets, and acceleration of the amortization period of the purchased intangible assets.

Recently Issued Accounting Standards

Recently issued accounting standards and their expected impact, if any, are discussed in "Note 2—Summary of Significant Accounting Policies," of the notes to our consolidated financial statements, included elsewhere within this Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Market risk includes risks that arise from changes in interest rates, equity prices and other market changes that affect market sensitive instruments. Our primary market risk exposure is related to changes in interest rates on our variable rate debt.

Variable Rate Debt Risk. Our variable rate debt includes our 2018 Term Loan Facility and our 2018 Revolving Credit Facility. As of December 31, 2018, we had \$977.6 million of outstanding principal indebtedness under our 2018 Term Loan Facility at an effective interest rate of 5.9%. As a result, if market interest rates were to increase by 1.0%, or 100 basis points, interest expense would decrease future earnings and cash flows, net of estimated tax benefits, by approximately \$6.6 million annually, assuming that we do not enter into contractual hedging arrangements. As of December 31, 2018, there was no balance outstanding on the 2018 Revolving Credit Facility.

To mitigate the risk of a rise in interest rates, we entered into four interest rate swap transactions during the second quarter of 2018, which mature in March 2025, fixing the LIBOR component of the interest on a total of \$700.0 million of our 2018 Term Facility at a weighted average rate of 2.8%. While we have and may continue to enter into agreements intending to limit our exposure to higher interest rates, any such agreements may not completely offset the risks of interest rate volatility or other risks inherent to interest rate swap transactions.

Item 8. Financial Statements and Supplementary Data.

Our consolidated financial statements and supplementary data are included as a separate section of this Annual Report on Form 10-K commencing on page F-1 and are incorporated herein by reference.

The supplementary financial information required by this Item 8 is included in Item 7 under the caption "Quarterly Financial Information," which is incorporated herein by reference.

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

None.

Item 9A. Controls and Procedures.

Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer ("CEO") and chief financial officer ("CFO"), has evaluated the effectiveness of our disclosure controls and procedures, (as defined in Rules 13a- 15(e) and 15d- 15(e) under the Exchange Act), as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our CEO and CFO have concluded that, as of December 31, 2018, our disclosure controls and procedures were designed at a reasonable assurance level to ensure that material information relating to Inovalon Holdings, Inc., including its consolidated subsidiaries, is made known to our CEO and CFO by others within those entities, particularly during the period in which this report was being prepared and that our disclosure controls and procedures were effective in providing reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the SEC, and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

Management’s Annual Report on Internal Control over Financial Reporting

Our management, with the participation of our CEO and CFO, is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Our management conducted an assessment of the effectiveness of our internal control over financial reporting based on the criteria established in “Internal Control—Integrated Framework” (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on that assessment, which excluded the integration of our acquisition of Butler Group Holdings, Inc., management has concluded that our internal control over financial reporting was effective as of December 31, 2018.

Our management, including our CEO and CFO, believes that our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives and are effective at the reasonable assurance level. However, our management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

The effectiveness of the Company’s internal control over financial reporting as of December 31, 2018, has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report which appears in Part II, Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There have been no changes in the Company’s internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) during the quarter ended December 31, 2018 that have materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this Item 10 will be included in the 2019 Proxy Statement and is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by this Item 11 will be included in the 2019 Proxy Statement and is incorporated herein by reference.

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

The information required by this Item 12 will be included in the 2019 Proxy Statement and is incorporated herein by reference.

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

The information required by this Item 13 will be included in the 2019 Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services.

The information required by this Item 14 will be included in the 2019 Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

The following is a list of documents filed as a part of this report:

- (1) Financial Statements
- (2) Financial Statement Schedule
- (3) Exhibits

The exhibits required to be filed by Item 601 of Regulation S-K are listed in the Exhibit Index contained within this Annual Report on Form 10-K.

EXHIBIT INDEX

Exhibit Number	Description of Document
2.1	Agreement and Plan of Merger by and among Inovalon Holdings, Inc., New Heights Merger Corporation, Butler Group Holdings, Inc. and Shareholder Representative Services LLC, dated March 6, 2018. (Incorporated by reference from Exhibit 2.1 to the Current Report on Form 8-K filed March 7, 2018).
3.1	Second Amended and Restated Certificate of Incorporation. (Incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form S-1/A dated February 6, 2015).
3.2	Second Amended and Restated Bylaws. (Incorporated by reference to Exhibit 3.2 to the Company's Registration Statement on Form S-1/A dated February 6, 2015).
3.3	Amendment to Second Amended and Restated Bylaws of Inovalon Holdings, Inc. (Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed January 7, 2019).
10.1	Form of Indemnification Agreement. (Incorporated by reference to Exhibit 10.1 to the Company's Registration Statement on Form S-1 dated December 30, 2014).
10.2	Inovalon, Inc. Amended and Restated Long-term Incentive Plan (as amended on October 7, 2010), as assumed by Inovalon Holdings, Inc. (Incorporated by reference to Exhibit 10.2 to the Company's Registration Statement on Form S-1 dated December 30, 2014).
10.3	Form of Stock Option Agreement under the Amended and Restated Long-term Incentive Plan (as amended on October 7, 2010), as assumed by Inovalon Holdings, Inc. (Incorporated by reference to Exhibit 10.3 to the Company's Registration Statement on Form S-1 dated December 30, 2014).
10.4	Form of Restricted Stock Units Agreement under the Amended and Restated Long-term Incentive Plan (as amended on October 7, 2010), as assumed by Inovalon Holdings, Inc. (Incorporated by reference to Exhibit 10.4 to the Company's Registration Statement on Form S-1 dated December 30, 2014).
10.5	2015 Omnibus Incentive Plan. (Incorporated by reference to Exhibit 10.5 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).
10.6	Form of Stock Option Award under the 2015 Omnibus Incentive Plan. (Incorporated by reference to Exhibit 10.6 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).
10.7	Form of Restricted Stock Award under the 2015 Omnibus Incentive Plan. (Incorporated by reference to Exhibit 10.7 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).
10.8	Form of Restricted Stock Unit Award under the 2015 Omnibus Incentive Plan. (Incorporated by reference to Exhibit 10.8 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).
10.9	Form of Stock Option Award under the 2015 Omnibus Incentive Plan (Section 16 Grantees). (Incorporated by reference to Exhibit 10.9 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).
10.10	Form of Restricted Stock Award under the 2015 Omnibus Incentive Plan (Section 16 Grantees). (Incorporated by reference to Exhibit 10.10 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).
10.11	Form of Restricted Stock Unit Award under the 2015 Omnibus Incentive Plan (Section 16 Grantees). (Incorporated by reference to Exhibit 10.11 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).
10.12	Form of Long-Term Incentive Restricted Stock Bonus Award. (Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed May 4, 2017).
10.13	Form of Non-Employee Director's Restricted Stock Unit Deferral Election Form. (Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed August 3, 2017).
10.14	Form of Restricted Stock Unit Award under the 2015 Omnibus Incentive Plan (Non-Employee Directors). (Incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed August 3, 2017).
10.15	Employee Stock Purchase Plan. (Incorporated by reference to Exhibit 10.12 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).

Exhibit Number	Description of Document
10.16	Shareholders Voting Agreement, dated as of September 15, 2008, by and among Inovalon Holdings, Inc. and those persons identified on Exhibit A thereto. (Incorporated by reference to Exhibit 10.13 to the Company's Registration Statement on Form S-1 dated December 30, 2014).
10.17	Debt Commitment Letter with Morgan Stanley Senior Funding, Inc., dated March 6, 2018. (Incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K filed March 7, 2018).
10.18	Second Amended and Restated Stockholders Rights Agreement, dated as of September 15, 2014, by and among Inovalon Holdings, Inc. and certain of its stockholders. (Incorporated by reference to Exhibit 10.15 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).
10.19	Amended and Restated Employment Agreement, dated December 3, 2014, by and between Inovalon, Inc. and Dr. Keith R. Dunleavy. (Incorporated by reference to Exhibit 10.16 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).
10.20	Amended and Restated Employment Agreement, dated December 3, 2014, by and between Inovalon, Inc. and Robert A. Wychulis. (Incorporated by reference to Exhibit 10.17 to the Company's Registration Statement on Form S-1/A dated January 29, 2015).
10.21	Credit Agreement dated as of April 2, 2018 among Inovalon Holdings, Inc., Morgan Stanley Senior Funding Inc., as Administrative Agent, and the other lenders party thereto (incorporated by reference to the Company's Current Report on Form 8-K, filed April 2, 2018).
10.22	Guarantee and Collateral Agreement with Morgan Stanley Senior Funding, Inc., as Collateral Agent for the secured parties thereto, and the Subsidiary Guarantors dated April 2, 2018 (incorporated by reference to the Company's Current Report on Form 8-K, filed April 2, 2018).
10.23	Agreement for Consulting Services with Mark A. Pulido, dated March 29, 2018. (Incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on May 8, 2018).
21.1*	Subsidiaries of the Registrant.
23.1*	Consent of Deloitte & Touche LLP.
31.1*	Certification of Chief Executive Officer pursuant to Rule 13a- 14(a)/15d-14(a) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Chief Financial Officer pursuant to Rule 13a- 14(a)/15d-14(a) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Chief Executive Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Chief Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase
101.DEF*	XBRL Taxonomy Extension Definition Linkbase
101.LAB*	XBRL Taxonomy Extension Label Linkbase
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase

* Filed herewith.

** This certification is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (Exchange Act), or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended (Securities Act), or the Exchange Act.

SIGNATURES

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

Date: February 20, 2019

INOVALON HOLDINGS, INC.

By:

/s/ KEITH R. DUNLEAVY, M.D.

Keith R. Dunleavy, M.D.
Chief Executive Officer & Chairman
(Principal Executive Officer)

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ KEITH R. DUNLEAVY, M.D. Keith R. Dunleavy, M.D.	Chief Executive Officer & Chairman (principal executive officer)	February 20, 2019
/s/ JONATHAN R. BOLDT Jonathan R. Boldt	Chief Financial Officer (principal financial officer & principal accounting officer)	February 20, 2019
/s/ DENISE K. FLETCHER Denise K. Fletcher	Director	February 20, 2019
/s/ WILLIAM D. GREEN William D. Green	Director	February 20, 2019
André S. Hoffmann	Director	
Isaac S. Kohane	Director	
/s/ MARK A. PULIDO Mark A. Pulido	Director	February 20, 2019
/s/ LEE D. ROBERTS Lee D. Roberts	Director	February 20, 2019
/s/ WILLIAM J. TEUBER William J. Teuber	Director	February 20, 2019

INOVALON HOLDINGS, INC.
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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of
Inovalon Holdings, Inc.
Bowie, MD

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Inovalon Holdings, Inc. and subsidiaries (the “Company”) as of December 31, 2018 and 2017, the related consolidated statements of operations, consolidated statements of comprehensive (loss) income, consolidated statements of stockholders’ equity, and the consolidated statements of cash flows, for each of the three years in the period ended December 31, 2018, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 20, 2019, expressed an unqualified opinion on the Company’s internal control over financial reporting.

Basis for Opinion

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

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

/s/ DELOITTE & TOUCHE LLP
Baltimore, Maryland
February 20, 2019

We have served as the Company’s auditor since 2007.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of
Inovalon Holdings, Inc.
Bowie, MD

Opinion on Internal Control over Financial Reporting

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

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2018 of the Company and our report dated February 20, 2019, expressed an unqualified opinion on those financial statements.

As described in Management’s Annual Report on Internal Control over Financial Reporting, management excluded from its assessment the internal control over financial reporting at Butler Group Holdings, Inc. which was acquired on April 2nd, 2018 and whose financial statements constitute 60% of total assets and 22% of revenues of the consolidated financial statement amounts as of and for the year ended December 31, 2018. Accordingly, our audit did not include the internal control over financial reporting at Butler Group Holdings, Inc.

Basis for Opinion

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ DELOITTE & TOUCHE LLP
Baltimore, Maryland
February 20, 2019

Inovalon Holdings, Inc.
Consolidated Balance Sheets
(In thousands, except share amounts)

	December 31,	
	2018	2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 115,591	\$ 208,944
Short-term investments	7,000	267,288
Accounts receivable (net of allowances of \$3,350 and \$2,038 at December 31, 2018 and 2017, respectively)	104,405	90,054
Prepaid expenses and other current assets	34,801	10,441
Income tax receivable	10,330	11,987
Total current assets	272,127	588,714
Non-current assets:		
Property, equipment and capitalized software, net	141,758	125,768
Goodwill	956,029	184,932
Intangible assets, net	535,343	89,326
Other assets	16,158	6,338
Total assets	<u>\$ 1,921,415</u>	<u>\$ 995,078</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	\$ 31,295	\$ 34,109
Accrued compensation	25,298	18,592
Other current liabilities	50,765	15,277
Deferred revenue	20,628	6,954
Deferred rent	619	1,818
Credit facilities	9,800	45,000
Capital lease obligation	2,905	336
Total current liabilities	141,310	122,086
Non-current liabilities:		
Credit facilities, less current portion	939,514	191,250
Capital lease obligation, less current portion	13,927	12,109
Deferred rent, less current portion	3,186	219
Other liabilities	30,220	—
Deferred income taxes	110,669	26,642
Total liabilities	<u>1,238,826</u>	<u>352,306</u>
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Common stock, \$0.000005 par value, 900,000,000 shares authorized, zero shares issued and outstanding at each of December 31, 2018 and 2017, respectively	—	—
Class A common stock, \$0.000005 par value, 750,000,000 shares authorized; 86,679,575 shares issued and 72,059,400 shares outstanding at December 31, 2018; 77,588,018 shares issued and 62,967,843 shares outstanding at December 31, 2017	—	—
Class B common stock, \$0.000005 par value, 150,000,000 shares authorized; 80,608,685 shares issued and outstanding at December 31, 2018; 80,957,495 shares issued and outstanding at December 31, 2017	1	1
Preferred stock, \$0.0001 par value, 100,000,000 shares authorized, zero shares issued and outstanding at December 31, 2018 and 2017, respectively	—	—
Additional paid-in-capital	618,674	534,159
Retained earnings	270,471	308,905
Treasury stock, at cost, 14,620,175 shares at December 31, 2018 and 2017	(199,817)	(199,817)
Other comprehensive loss, net of tax	(6,740)	(476)
Total stockholders' equity	682,589	642,772
Total liabilities and stockholders' equity	<u>\$ 1,921,415</u>	<u>\$ 995,078</u>

See notes to consolidated financial statements.

Inovalon Holdings, Inc.
Consolidated Statements of Operations
(In thousands, except per share amounts)

	Year Ended December 31,		
	2018	2017	2016
Revenue	\$ 527,676	\$ 449,358	\$ 427,588
Expenses:			
Cost of revenue ⁽¹⁾	144,826	151,046	159,169
Sales and marketing ⁽¹⁾	45,534	34,103	27,078
Research and development ⁽¹⁾	28,638	27,383	29,148
General and administrative ⁽¹⁾	205,038	149,948	137,275
Depreciation and amortization	96,725	53,089	37,284
Restructuring expense	9,500	—	—
Total operating expenses	530,261	415,569	389,954
(Loss) Income from operations	(2,585)	33,789	37,634
Other income and (expenses):			
Interest income	2,181	5,429	5,792
Interest expense	(50,898)	(6,225)	(5,065)
Other (expense) income, net	(2,255)	(406)	538
(Loss) Income before taxes	(53,557)	32,587	38,899
(Benefit from) Provision for income taxes	(14,393)	(2,231)	11,795
Net (loss) income	\$ (39,164)	\$ 34,818	\$ 27,104
Net (loss) income attributable to common stockholders, basic and diluted	\$ (39,164)	\$ 33,828	\$ 26,943
Net (loss) income per share attributable to common stockholders, basic and diluted:			
Basic net (loss) income per share	\$ (0.27)	\$ 0.24	\$ 0.18
Diluted net (loss) income per share	\$ (0.27)	\$ 0.24	\$ 0.18
Weighted average shares of common stock outstanding:			
Basic	145,389	142,225	150,048
Diluted	145,389	142,737	150,955

(1) Includes stock-based compensation expense as follows:

Cost of revenue	\$ 237	\$ 1,652	\$ 483
Sales and marketing	735	2,011	613
Research and development	1,937	1,293	1,184
General and administrative	13,253	12,362	7,774
Total stock-based compensation expense	\$ 16,162	\$ 17,318	\$ 10,054

See notes to consolidated financial statements.

Inovalon Holdings, Inc.
Consolidated Statements of Comprehensive (Loss) Income
(In thousands)

	Year Ended December 31,		
	2018	2017	2016
Net (loss) income	\$ (39,164)	\$ 34,818	\$ 27,104
Other comprehensive income (loss):			
Realized losses on cash flow hedges reclassified from accumulated other comprehensive income, net of tax of \$(956), \$0 and \$0, respectively	2,022	—	—
Net change in unrealized losses on cash flow hedges, net of tax of \$4,156, \$0 and \$0, respectively	(8,751)	—	—
Realized losses (gains) on short-term investments reclassified from accumulated other comprehensive income, net of tax of \$(319), \$0 and \$4, respectively	716	—	(6)
Net change in unrealized (losses) and gains on available-for-sale investments, net of tax of \$69, \$(94) and \$(682), respectively	(149)	104	1,008
Reclassification of income tax effects of the Tax Cuts and Jobs Act of 2017	(102)	—	—
Comprehensive (loss) income	<u>\$ (45,428)</u>	<u>\$ 34,922</u>	<u>\$ 28,106</u>

See notes to consolidated financial statements.

Inovalon Holdings, Inc.
Consolidated Statements of Stockholders' Equity
(In thousands, except share amounts)

	Issued Class A Common Stock		Issued Class B Common Stock		Treasury Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance—January 1, 2016	53,482,669	\$ —	98,230,363	\$ 1	—	\$ —	\$ 493,197	\$ 247,540	\$ (1,582)	\$ 739,156
Adjustment to adopt ASU 2016-09	—	—	—	—	—	—	757	(557)	—	200
Repurchase of common stock	—	—	—	—	(7,508,985)	(106,231)	—	—	—	(106,231)
Stock-based compensation expense	—	—	—	—	—	—	9,914	—	—	9,914
Issuance of common stock related to business combination	651,355	—	—	—	—	—	7,764	—	—	7,764
Exercise of stock options	660,156	—	158,753	—	—	—	6,200	—	—	6,200
Conversion Class B to Class A common stock	15,085,488	—	(15,085,488)	—	—	—	—	—	—	—
Issuance of shares for Employee Stock Purchase Plan	—	—	—	—	—	—	(34)	—	—	(34)
Issuance of shares related to restricted stock units and awards	2,453,593	—	—	—	—	—	—	—	—	—
Shares withheld for employee taxes upon conversion of restricted stock	(61,963)	—	—	—	—	—	(1,498)	—	—	(1,498)
Other comprehensive loss	—	—	—	—	—	—	—	—	1,002	1,002
Net income	—	—	—	—	—	—	—	27,104	—	27,104
Balance—December 31, 2016	72,271,298	\$ —	83,303,628	\$ 1	(7,508,985)	\$ (106,231)	\$ 516,300	\$ 274,087	\$ (580)	\$ 683,577
Repurchase of common stock	—	—	—	—	(7,111,190)	(93,586)	—	—	—	(93,586)
Stock-based compensation expense	—	—	—	—	—	—	17,164	—	—	17,164
Exercise of stock options	654,035	—	6,833	—	—	—	4,967	—	—	4,967
Conversion Class B to Class A common stock	2,352,966	—	(2,352,966)	—	—	—	—	—	—	—
Issuance of shares related to restricted stock units and awards	2,546,426	—	—	—	—	—	—	—	—	—
Shares withheld for employee taxes upon conversion of restricted stock	(236,707)	—	—	—	—	—	(4,272)	—	—	(4,272)
Other comprehensive loss	—	—	—	—	—	—	—	—	104	104
Net income	—	—	—	—	—	—	—	34,818	—	34,818
Balance—December 31, 2017	77,588,018	\$ —	80,957,495	\$ 1	(14,620,175)	\$ (199,817)	\$ 534,159	\$ 308,905	\$ (476)	\$ 642,772
Stock-based compensation expense	—	—	—	—	—	—	16,044	—	—	16,044
Issuance of common stock related to business combination	7,598,731	—	—	—	—	—	70,000	—	—	70,000
Exercise of stock options	258,921	—	—	—	—	—	1,834	—	—	1,834
Conversion Class B to Class A common stock	348,810	—	(348,810)	—	—	—	—	—	—	—
Issuance of shares related to restricted stock units and awards	1,168,541	—	—	—	—	—	—	—	—	—
Shares withheld for employee taxes upon conversion of restricted stock	(283,446)	—	—	—	—	—	(3,363)	—	—	(3,363)
Other comprehensive loss	—	—	—	—	—	—	—	—	(6,264)	(6,264)
Adjustment to retained earnings for adoption of ASC 606	—	—	—	—	—	—	—	628	—	628
Adjustment to retained earnings for adoption of ASU 2018-02	—	—	—	—	—	—	—	102	—	102
Net (loss)	—	—	—	—	—	—	—	(39,164)	—	(39,164)
Balance—December 31, 2018	86,679,575	\$ —	80,608,685	\$ 1	(14,620,175)	\$ (199,817)	\$ 618,674	\$ 270,471	\$ (6,740)	\$ 682,589

See notes to consolidated financial statements.

Inovalon Holdings, Inc.
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net (loss) income	\$ (39,164)	\$ 34,818	\$ 27,104
Adjustments to reconcile net income to net cash provided by operating activities:			
Stock-based compensation expense	16,162	17,318	10,054
Depreciation	52,742	37,853	28,078
Amortization of intangibles	43,983	15,236	9,206
Amortization of premiums on short-term investments	289	1,958	3,163
Amortization of debt issuance costs and debt discount	3,138	—	—
Deferred income taxes	(12,495)	(6,665)	(1,740)
Restructuring expense, non-cash	7,075	—	—
Change in fair value of contingent consideration	7,212	(5,200)	706
Bargain purchase gain	—	(1,434)	—
Other	332	406	(332)
Changes in assets and liabilities:			
Accounts receivable	3,280	(977)	4,683
Prepaid expenses and other current assets	(20,002)	3,346	(6,198)
Income taxes receivable	2,208	3,293	3,639
Other assets	(4,209)	(3,355)	4,071
Accounts payable and accrued expenses	(6,007)	8,252	(3,463)
Accrued compensation	9,292	3,030	243
Other current and non-current liabilities	17,672	(5,373)	10,479
Deferred rent	2,219	(440)	(770)
Deferred revenue	6,674	(4,360)	3,907
Net cash provided by operating activities	<u>90,401</u>	<u>97,706</u>	<u>92,830</u>
Cash flows from investing activities:			
Maturities of short-term investments	96,588	174,416	300,524
Sales of short-term investments	161,772	1,175	31,549
Purchases of short-term investments	—	—	(164,737)
Purchases of property and equipment	(25,505)	(32,565)	(19,360)
Investment in capitalized software	(39,469)	(32,977)	(19,668)
Acquisition, net of cash acquired of \$23,850, \$1,535 and \$861, respectively	(1,082,740)	(3,490)	(88,509)
Net cash (used in) provided by investing activities	<u>(889,354)</u>	<u>106,559</u>	<u>39,799</u>
Cash flows from financing activities:			
Repurchase of common stock	—	(93,586)	(106,231)
Proceeds from credit facility borrowings, net of discount	965,300	—	—
Repayment of credit facility borrowings	(238,700)	(30,000)	(15,000)
Payments for debt issuance costs	(18,269)	—	—
Acquisition-related contingent consideration	—	—	(2,300)
Proceeds from exercise of stock options	1,833	4,967	6,165
Capital lease obligations paid	(1,201)	(113)	(116)
Tax payments for equity award issuances	(3,363)	(4,272)	(1,498)
Net cash provided by (used in) financing activities	<u>705,600</u>	<u>(123,004)</u>	<u>(118,980)</u>
(Decrease) Increase in cash and cash equivalents	(93,353)	81,261	13,649
Cash and cash equivalents, beginning of period	208,944	127,683	114,034
Cash and cash equivalents, end of period	<u>\$ 115,591</u>	<u>\$ 208,944</u>	<u>\$ 127,683</u>
Supplemental cash flow disclosure:			
Cash (received) paid during the year for:			
Income taxes, net of refunds	\$ (4,136)	\$ 962	\$ 11,117
Interest	43,573	5,972	4,835
Non-cash investing activities:			
Capital lease obligations incurred	5,677	12,231	—
Accruals of purchases of property, equipment	12,097	7,924	816
Accruals for investment in capitalized software	1,495	2,711	913
Acquisition consideration	84,156	—	—

See notes to consolidated financial statements.

Inovalon Holdings, Inc.
Notes to Consolidated Financial Statements

1. NATURE OF OPERATIONS

Inovalon Holdings, Inc., (the “Company”), is a leading technology company providing cloud-based platforms empowering data-driven healthcare. Through the Inovalon ONE[®] Platform, Inovalon brings to the marketplace a national-scale capability to interconnect with the healthcare ecosystem, aggregate and analyze data in real-time, and empower the application of resulting insights to drive meaningful impact at the point of care. Leveraging its platform, unparalleled proprietary data sets, and industry-leading subject matter expertise, Inovalon enables better care, efficiency, and financial performance across the healthcare ecosystem. From health plans and provider organizations, to pharmaceutical, medical device, and diagnostics companies, Inovalon’s unique achievement of value is delivered through the effective progression of “Turning Data into Insight, and Insight into Action[®].”

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation—The accompanying consolidated financial statements include the accounts of Inovalon Holdings, Inc. and its wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Basis of Presentation and Use of Estimates—These consolidated financial statements have been prepared in accordance with United States Generally Accepted Accounting Principles (“GAAP”). The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities as of the date of the financial statements, and the reported amounts of revenue and expenses during the reported period. Certain prior period amounts have been reclassified within the consolidated statements of operations and within the operating section of the consolidated statements of cash flows to conform with current period presentation. Such reclassifications had no impact on net income or net cash provided by operating activities as previously reported.

Significant estimates made by management include, but are not limited to: revenue recognition; accounts receivable allowances; fair value of intangibles and goodwill; fair value of contingent consideration; depreciable lives of property, equipment and capitalized software; and useful lives of intangible assets. Actual results could differ from management’s estimates, and such differences could be material to the Company’s consolidated financial position and results of operations.

Cash and Cash Equivalents—Cash and cash equivalents consist of highly liquid investments with an original maturity of three months or less at the time of purchase, and demand deposits with financial institutions.

Short-term investments—Short-term investments consists of investment grade debt securities. The Company classifies short-term investments as available-for-sale at the time of purchase and reevaluates such classification as of each balance sheet date. All short-term investments are recorded at estimated fair value. Unrealized gains and losses for available-for-sale securities are included in accumulated other comprehensive loss, a component of stockholders’ equity. The Company evaluates its investments to assess whether those with unrealized loss positions are other than temporarily impaired. Impairments are considered to be other-than-temporary if they are related to deterioration in credit risk, if it is more likely than not that the Company will be required to sell or intends to sell the securities before the recovery of their cost basis. Realized gains and losses and declines in value judged to be other than temporary are determined based on the specific identification method and are reported as components of other income and (expenses), in the consolidated statements of operations. Interest, amortization of premiums, and accretion of discount on short-term investments classified as available for sale are included as a component of interest income, in the consolidated statements of operations. There were no other-than-temporary impairments during 2018.

The Company may sell short-term investments at any time, without significant penalty, for use in current operations or for other purposes, even if the short-term investments have not yet reached maturity. As a result, the Company classifies these investments, including securities with maturities beyond 12 months, as current assets in the accompanying consolidated balance sheets. Gains or losses realized from the sale of securities are reclassified out of other comprehensive income (loss) into earnings using the specific identification method.

Concentrations of Credit Risk—Accounts receivable and cash and cash equivalents subject the Company to its highest potential concentrations of credit risk. Although the Company deposits its cash and cash equivalents with multiple financial institutions, the Company’s deposits may exceed federally insured limits. The Company has not experienced any losses on cash and cash equivalent accounts to date, and management believes the Company is not exposed to any significant credit risk related to cash and cash equivalents.

The Company sells services to clients without requiring collateral, based on an evaluation of the client’s financial condition. Exposure to losses on receivables is principally dependent on each client’s financial condition. The Company monitors its exposure for credit losses and maintains allowances for anticipated losses.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Revenue from a significant client, representing 10% or more of total revenue for the respective periods, is summarized as follows:

	Year Ended December 31,		
	2018	2017	2016
Client A	*	12%	17%

*Less than 10%

The Company did not have accounts receivable from a significant client, representing 10% or more of total accounts receivable as of December 31, 2018 and December 31, 2017, respectively.

Accounts Receivable and Allowances—Accounts receivable consists primarily of amounts due to the Company from its normal business activities. The Company provides an allowance for estimated losses resulting from the failure of clients to make required payments (credit losses) and a sales allowance for estimated future billing adjustments resulting from client concessions or resolutions of billing disputes. The provision for sales allowances are charged against revenue while credit losses are recorded in general and administrative expenses.

Fair Value Measurements—The Company applies the Accounting Standards Codifications (“ASC”) 820-10, *Fair Value Measurements and Disclosures*. ASC 820-10 defines fair value, establishes a fair value hierarchy for assets and liabilities measured at fair value, and expands required disclosures about fair value measurements. This guidance requires the Company to classify and disclose assets and liabilities measured at fair value on a recurring basis, as well as fair value measurements of assets and liabilities measured on a nonrecurring basis in periods subsequent to initial measurement, in a three-tier fair value hierarchy as described below.

The guidance defines fair value as the exchange price that would be received for an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The guidance describes three levels of inputs that may be used to measure fair value:

Level 1—Financial assets and liabilities whose values are based on quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date.

Level 2—Financial assets and liabilities whose values are based on inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3—Financial assets and liabilities whose values are based on unobservable inputs for the asset or liability.

The carrying amounts of accounts receivable, other current assets, accounts payable, and accrued liabilities approximate fair value due to their short-term nature. The Company’s Credit Facilities (as defined in “Note 10—Debt”) approximate fair value because of their floating rate structure.

Interest Rate Swaps—The Company uses interest rate swaps to mitigate the risk of a rise in interest rates. The Company applies ASC 815, *Derivatives and Hedging* and the interest rate swaps are recorded on the balance sheet at fair value as either assets or liabilities and any changes to the fair value are recorded through accumulated other comprehensive income and reclassified into interest expense in the same period in which the hedged transaction is recognized in earnings. Cash flows from interest rate swaps are reported in the same category as the cash flows from the items being hedged.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Property, Equipment and Capitalized Software, net—Property and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation and amortization on property, leasehold improvements, equipment, and software is computed on a straight-line basis over the estimated useful lives of the assets, as follows:

	Useful Life
Office and computer equipment	3 - 5 years
Purchased software	5 years
Capitalized software	3 - 5 years
Furniture and fixtures	7 years
Building	*
Leasehold improvements	*
Assets under capital leases	*

*Lesser of lease term or economic life

Expenses for repairs and maintenance that do not extend the life of property and equipment are expensed as incurred. Expenses for major renewals and betterments, which significantly extend the useful lives of existing property and equipment, are capitalized and depreciated. Upon retirement or disposition of property and equipment, the cost and related accumulated depreciation are removed from the accounts and any resulting gain or loss is recognized.

In accordance with ASC 350-40, *Internal-use Software*, the Company capitalizes certain software development costs while in the application development stage related to software developed for internal use. All other costs to develop software for internal use, either in the preliminary project stage or post implementation stage, are expensed when incurred. Software development costs are amortized on a straight-line basis over a three to five year period, which management believes represents the useful life of these capitalized costs.

In accordance with ASC 985-20, *Software to be Sold, Leased, or Marketed*, certain software development costs are expensed as incurred until technological feasibility has been established. Thereafter, all software development costs incurred through the software's general release date are capitalized and subsequently reported at the lower of amortized cost or net realizable value. Capitalized costs are amortized based on current and expected future revenue for each software solution with minimum annual amortization equal to the straight-line amortization over the estimated economic life, which is typically over a three to five year period.

Intangible Assets—Intangible assets consist of acquired technology, including developed and core technology, databases, trade names, and customer relationships. Intangible assets are initially recorded at fair value and amortized on a straight line basis over their estimated useful lives. Acquired intangible assets are being amortized over the following periods:

	Useful Life
Technology	3 - 13 years
Trademark and trade names	3 - 17 years
Database	10 years
Customer relationships	8 - 15.75 years
Non-compete agreements	Contractual term
In-process research and development	Indefinite

At least annually, or whenever events or changes in circumstances indicate a revision to the useful life, the Company reviews the remaining useful lives of its definite-lived intangible assets. On an annual basis, the Company reviews its indefinite-lived in process research and development for impairment until the research and development is completed or abandoned. There were no impairment charges on indefinite-lived intangible assets for the years ended December 31, 2018 and 2017.

Goodwill—Goodwill represents the excess of acquisition costs over the fair value of tangible net assets and identifiable intangible assets of businesses acquired. Goodwill is not amortized and is subject to impairment testing annually, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable.

Historically, the annual goodwill impairment assessment was performed as of December 31st. During 2018, the Company changed the date of the goodwill impairment assessment to November 1st for the year ended December 31, 2018 and thereafter. The Company believes this change in the Company's measurement date does not represent a material change in method of

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

applying the accounting principal as the new and old assessment dates are close in proximity and fall within the same quarter. Additionally, the change does not produce different results as similar valuation assumptions are used and the carrying values are stable. The change in the date of the Company's goodwill impairment analysis will allow for more time to perform the analysis and prepare the valuations for certain reporting units.

Impairment is the condition that exists when the carrying amount of a reporting unit exceeds its fair value. If the fair value of the reporting unit exceeds the carrying value of the reporting unit, goodwill is not impaired. If the carrying value of the reporting unit exceeds the fair value of the reporting unit, then the Company will record an impairment loss in the amount equal to the difference between the fair value and the carrying value.

Significant judgment in testing goodwill for impairment includes assigning assets and liabilities to the reporting unit and assessing or determining the fair value of each reporting unit based on the Company's best estimates and assumptions, as well as other information including valuations that utilize customary valuation procedures and techniques. The Company tests its goodwill for impairment at the reporting unit level which is one level below the operating segment and has identified four reporting units: Inovalon, ABILITY, Avalere and Creehan. Based on the Company's annual impairment evaluation performed as of November 1, 2018, the Company concluded that there was no impairment of goodwill. Refer to "Note 9—Goodwill and Intangible Assets" for a summary of changes in goodwill.

Valuation of Long-Lived Assets—The Company reviews long-lived assets for events or changes in circumstances that would indicate potential impairment. If the Company determines that an asset may not be recoverable, an impairment charge is recorded. There were no impairment charges on long-lived assets for the years ended December 31, 2018, and 2017.

Revenue Recognition—The Company generates a substantial majority of its revenue through the sale or subscription licensing of its platform solutions, as well as revenue from related arrangements for advisory, implementation, and support services.

The Company recognizes revenue when performance obligations under the terms of a contract are satisfied. A performance obligation is a contractual promise to transfer a distinct good or service to the customer. This occurs when the control of the product or service is transferred to the customer.

The majority of the Company's platform solutions contracts contain a series of separately identifiable and distinct services that represent performance obligations that are satisfied over time. The Company allocates revenue to platform services by determining the standalone selling price of each performance obligation. The determination of standalone selling price for each performance obligation is determined based on the terms of the contract and can require judgment. Generally, the best estimate of standalone selling price is consistent with the contractual arrangement fee for each element. Revenue is generally recognized on platform offerings over the contract term. For these contracts, the Company has determined that it will use the practical expedient under ASC 606-10-55-18 to recognize revenue when it has the right to invoice. The Company qualifies for this practical expedient because the right to invoice corresponds directly with the value transferred to the customer.

The Company also generates revenue from advisory, implementation, and support services. The Company primarily enters into arrangements for advisory services under fixed-price, time and materials, or retainer-based contracts. Revenues under fixed-price and retainer-based contracts are recognized ratably over the contract period or upon contract completion. Revenue for time and material contracts is recognized based upon contractually agreed upon billing rates applied to direct labor hours expended plus the costs of other items used in the performance of the contract. The Company recognizes revenue when the Company has the right to invoice the customer using the allowable practical expedient under ASC 606-10-55-18 since the right to invoice the customer corresponds with the performance obligations completed.

Certain of the Company's arrangements entitle a client to receive a refund if the Company fails to satisfy contractually specified performance obligations. The refund is limited to a portion or all of the consideration paid. In this case, revenue is recognized when performance obligations are satisfied.

The Company maintains an allowance, charged to revenue, which reflects the Company's estimated future billing adjustments resulting from client concessions or resolutions of billing disputes.

Cost of Revenue—Cost of revenue consists primarily of employee-related expenses including salaries, benefits, discretionary incentive compensation, employment taxes, equity compensation costs, and severance for employees that provide direct revenue-generating services to clients. Cost of revenue also includes expenses associated with the integration and verification of data and other service costs incurred to fulfill the Company's revenue contracts. Cost of revenue does not include allocated amounts for occupancy expense, depreciation and amortization.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Research and Development—Research and development expenses consist primarily of employee-related expenses. All such costs are expensed as incurred, except for certain internal use software development costs that are capitalized. Research and development excludes any allocation of occupancy expense, depreciation and amortization.

Selling and Marketing—Sales and marketing expense consists primarily of employee-related expenses including salaries, benefits, discretionary incentive compensation, employment taxes, severance and equity compensation costs for employees engaged in sales, sales support, business development, and marketing. Sales and marketing expense also includes operating expenses for marketing programs, research, trade shows and brand messages, and public relations costs. Sales and marketing expense excludes any allocation of occupancy expense, depreciation and amortization.

General and Administrative—General and administrative expense consists primarily of employee-related expenses including salaries, benefits, discretionary incentive compensation, employment taxes, severance and equity compensation costs, for employees who are responsible for management information systems, administration, human resources, finance, legal, and executive management. General and administrative expense also includes occupancy expenses (including rent, utilities, communications, and facilities maintenance), professional fees, consulting fees, insurance, travel, and other expenses. General and administrative expense excludes any allocation of depreciation and amortization.

Segments—The Company operates its business as one operating segment. The Company provides cloud-based platforms under a shared infrastructure and provides related services to its clients in order to achieve meaningful insight and improvement in clinical and quality outcomes, utilization, and financial performance. The Company derives substantially all of its revenue from the sale or subscription licensing of its platform solutions, as well as revenue from related arrangements for advisory, implementation, and support services of one group of similar product offerings—proprietary datasets, core connectivity, advanced integration technologies, sophisticated predictive analytics, and deep subject matter expertise that enable the Company to provide seamless, end-to-end platforms that bring the benefits of big data and large-scale analytics to clients. Operating segments are defined as components of an enterprise for which separate financial information is available and is evaluated regularly by the Company’s chief operating decision maker (“CODM”), in deciding how to allocate resources and in assessing performance. In the process of allocating resources and assessing performance, the Company’s CODM, its chief executive officer, reviews financial information presented on a consolidated basis.

Income Taxes—The Company accounts for income taxes in accordance with ASC 740, *Income Taxes*, which prescribes the use of the asset and liability approach to the recognition of deferred tax assets and liabilities related to the expected future tax consequences of events that have been recognized in the Company’s financial statements or income tax returns. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

Valuation allowances are established, when necessary, to reduce deferred tax assets when it is more likely than not that a portion or all of a given deferred tax asset will not be realized. In accordance with ASC 740, income tax expense includes (i) deferred tax expense, which represents the net change in the deferred tax asset or liability balance during the period and any change in valuation allowances and (ii) current tax expense, which represents the amount of tax currently payable to or receivable from a taxing authority and amounts accrued for expected tax contingencies (including both tax and interest). ASC 740 prescribes a recognition threshold of more-likely-than-not, and a measurement attribute for all tax positions taken or expected to be taken on a tax return, in order for those positions to be recognized in the financial statements. The Company continually reviews tax laws, regulations and related guidance in order to properly record any uncertain tax liability positions. The Company adjusts these reserves in light of changing facts and circumstances. As a result of the Tax Cuts and Jobs Act of 2017 (the “Tax Act”), which was signed into law on December 22, 2017 and was effective January 1, 2018, the Company remeasured the ending deferred tax assets to reflect the decrease in the federal corporate tax rate resulting in a tax benefit. Refer to “Note 16—Income Taxes.”

Stock-Based Compensation—All stock-based awards, including employee stock option grants, restricted stock unit (“RSU”) grants, and restricted stock award (“RSA”) grants, are recorded at fair value as of the grant date in accordance with ASC 718, *Compensation—Stock Compensation*, and recognized in the statement of operations over the service period of the applicable award using the straight-line method or using a graded vest schedule for RSAs with a performance condition and ratable vest terms.

The Company determines the fair value of its stock option awards on the date of grant, using the Black-Scholes option pricing model. The assumptions used in calculating the fair value of stock-based awards represent management’s best estimates.

The Company measures RSUs and RSAs that vest upon satisfaction of a service condition, a performance condition, or a liquidity condition, if such conditions are applicable, based on the fair market values of the underlying common stock on the dates of grant. RSUs are share awards that, upon vesting, will deliver to the holder shares of the Company’s common stock. Compensation expense is recognized based upon the satisfaction of the requisite service, liquidity condition as of that date, and/or the probability

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

of achievement of the specified performance conditions following the straight-line method or using a graded vest method, depending on the specific terms of the award.

Treasury Stock—The Company records treasury stock activities under the cost method whereby the cost of the acquired stock is recorded as treasury stock. The Company’s accounting policy upon the formal retirement of treasury stock is to deduct the par value from common stock and to reflect any excess of cost over par value as a reduction to additional paid-in capital (to the extent created by previous issuances of the shares) and then retained earnings.

Deferred Rent—Deferred rent consists of rent escalation payment terms, tenant improvement allowances and other incentives received from landlords related to the Company’s operating leases for its facilities. Rent escalation represents the difference between actual operating lease payments due and straight-line rent expense, which is recorded by the Company over the term of the lease, including any construction period. The excess is recorded as a deferred credit in the early periods of the lease, when cash payments are generally lower than straight-line rent expense, and is reduced in the later periods of the lease when payments begin to exceed the straight-line expense. Tenant allowances from landlords for tenant improvements are generally comprised of cash received from the landlord as part of the negotiated terms of the lease or reimbursements of moving costs. These cash payments are recorded as deferred rent from landlords and are amortized as a reduction of periodic rent expense, over the term of the applicable lease.

Recently Adopted Accounting Standards

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2014-09, *Revenue from Contracts with Customers* and subsequent clarifying guidance (“ASU 2014-09”). The core principle is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The Company adopted this standard on January 1, 2018 using the modified retrospective approach. Refer to “Note 4—Revenue.”

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. The update amends the guidance in Accounting Standards Codification (“ASC”) 230, *Statement of Cash Flows*, and clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flows with the objective of reducing the existing diversity in practice related to eight specific cash flow issues. The Company adopted the requirements of the new standard in the first quarter of 2018 and there was no material impact on its consolidated financial statements.

In August 2017, the FASB issued ASU 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities* (“ASU 2017-12”). The update amends the current hedge accounting model and eliminates the requirement to separately measure and report hedge ineffectiveness. This guidance also requires, for qualifying hedges, the entire change in the fair value of a hedging instrument to be presented in the same income statement line item as the hedged item. The update also eases documentation and assessment requirements, modifies certain disclosure requirements, and modifies the method of accounting for components excluded from the assessment of hedge effectiveness. The Company adopted the requirements of the new standard in the second quarter of 2018 concurrent with entering into four interest rate swaps. Refer to “Note 7—Fair Value Measurements.”

In February 2018, the FASB issued ASU 2018-02, *Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. The guidance is effective for all public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. This guidance allows for a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from Tax Act. Early adoption is permitted in any interim period or fiscal year before the effective date. The Company early adopted the requirements of the new standard in the first quarter of 2018, and elected to reclassify the income tax effects of the Tax Act of \$0.1 million from other comprehensive income to retained earnings. Refer to the consolidated statements of comprehensive (loss) income.

Recently Issued Accounting Standards

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* and, in July 2018, issued subsequent clarifying guidance (collectively, “ASU 2016-02”). ASU 2016-02 requires the recognition of lease assets and lease liabilities on the balance sheet and enhanced disclosure about leasing arrangements. The lease asset represents a right of use asset and the lease liability represents the obligation to make lease payments. This guidance is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Company has finalized its portfolio of leases to determine the impact that will be recorded to the balance sheet, reviewed applicable lease agreements, and is in the process of implementing changes to our processes and internal controls. The standard initially required the use of a modified-retrospective method. In July 2018, the FASB issued updated guidance which allows for an additional transition method which requires that the cumulative effect of applying the new standard is recognized as an adjustment to the opening retained earnings balance. The Company adopted the

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

new standard effective January 1, 2019 using the additional transition approach and has elected all applicable practical expedients under ASC 842-10-65-1. The Company is finalizing the calculation of the financial statement impact and currently expects the right of use asset to be in the approximate range of \$34 million and \$35 million and currently expects the lease liability to be in the approximate range of \$36 million and \$37 million. The adjustment to retained earnings is currently expected to be in the approximate range of \$0.5 million to \$1.5 million. The Company will provide additional disclosures as required by the new standard in the first quarter of 2019.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* and subsequent clarifying guidance (“ASU 2016-13”). ASU 2016-13 replaces the current incurred loss impairment method with a methodology that reflects the amortized cost basis net of expected credit losses that are calculated based on certain relevant information. The standard also amends the credit loss guidance for available-for-sale debt securities and requires the measurement and recognition of an expected allowance for credit losses for financial assets held at amortized cost. This guidance is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The Company is in the process of evaluating the timing and impact of adoption on the consolidated financial statements and notes disclosures.

In June 2018, the FASB issued ASU 2018-07, *Compensation—Stock Compensation (Topic 718)*. ASU 2018-07 expands the scope of ASC 718, *Compensation—Stock Compensation: Improvements to Nonemployee Share-Based Payment Accounting*, to include share-based payment transactions for acquired goods and services from non-employees. This update includes changing the accounting for non-employee stock-based compensation as it relates to the award measurement date, the fair value measurement of the awards, and forfeitures, among other changes to align the accounting with ASC 718. This guidance is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Company adopted the new standard effective January 1, 2019 and expects no material impact on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Requirements for Fair Value Measurement*. This update changes the fair value measurement disclosure requirements of ASC 820. The standard consists of removals, modifications, and additions to the existing disclosure requirements. This guidance is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The Company is in the process of evaluating the timing and impact of adoption on the notes disclosures.

In August 2018, the FASB issued ASU 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. This update aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The standard requires that an entity in a hosting arrangement that is a service contract to follow the guidance in Subtopic 350-40 to determine which implementation costs to capitalize as an asset related to the service contract and which costs to expense. This guidance is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The Company is in the process of evaluating the timing and impact of adoption on the consolidated financial statements and notes disclosures.

In October 2018, the FASB issued ASU 2018-17, *Derivatives and Hedging (Topic 815): Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes* in response to the potential transition away from the London Interbank Offer Rate (“LIBOR”). This update permits the use of the Overnight Index Swap (“OIS”) Rate based on the Secured Overnight Financing Rate (“SOFR”) as a U.S. benchmark interest rate for hedge accounting purposes under ASC Topic 815. For public companies that have adopted ASU 2017-12, the amendments are effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company adopted the guidance under ASU 2017-12 which applies to interest rate swap agreements that fix the LIBOR component on our 2018 Credit Facility. The Company will apply the requirements of the new standard on a prospective basis beginning January 1, 2019 for any new or redesignated hedging agreements. Refer to “Note 7—Fair Value Measurements.”

3. BUSINESS COMBINATIONS

2018 Acquisition

ABILITY Network, Inc.

On April 2, 2018, the Company completed the acquisition (the “ABILITY Acquisition”) of Butler Group Holdings, Inc., a Delaware corporation, and its wholly-owned subsidiaries, including, without limitation, ABILITY Network Inc., a Delaware corporation (“ABILITY”), for aggregate consideration of \$1.19 billion in cash and restricted shares of our Class A common stock (the “Purchase Price”).

3. BUSINESS COMBINATIONS (Continued)

ABILITY is a leading cloud-based Software-as-a-service (“SaaS”) technology company helping to simplify the administrative and clinical complexities of healthcare. Through the *my*ABILITY[®] software platform, an integrated set of cloud-based applications for providers, ABILITY provides core connectivity, administrative, clinical, and quality analysis, management, and performance improvement capabilities to more than 44,000 acute, post-acute and ambulatory point-of-care provider facilities. The extensive datasets, on-demand compute capability, advanced analytics, and broad healthcare ecosystem connectivity enabled by the Inovalon ONE[®] Platform are expected to provide a significant expansion of application offerings within the *my*ABILITY[®] software platform while also expanding the nature and reach of high-value solutions for Inovalon’s existing payer, pharma, and device client-base. The combination of Inovalon and ABILITY creates a vertically integrated cloud-based platform empowering the achievement of real-time, value-based care from payers, manufacturers, and diagnostics all the way to the patient’s point of care.

A summary of the composition of the stated Purchase Price and fair value of the stated Purchase Price is as follows (in thousands):

Purchase Price	\$ 1,220,800
Working capital adjustment	(630)
Shareholder payable adjustment	576
Subtotal	<u>1,220,746</u>
Fair value adjustments:	
Restricted stock marketability discount	(30,000)
Total fair value purchase price	<u>\$ 1,190,746</u>

The composition of the fair value of the consideration transferred is as follows (in thousands):

Cash	\$ 1,107,220
Issuance of Class A common stock	70,000
Contingent consideration	14,156
Working capital adjustment	(630)
Total fair value purchase price	<u>\$ 1,190,746</u>

The ABILITY Acquisition was accounted for using the acquisition method of accounting under ASC No. 805, *Business Combinations*, which requires that assets acquired and liabilities assumed are recognized at their estimated fair values. The excess of the aggregate consideration over the estimated fair values has been allocated to goodwill.

In addition, ASC No. 805 requires that the consideration transferred be measured at the closing date of the ABILITY Acquisition at the then-current market prices. The preliminary value of consideration and the purchase price allocation is subject to adjustment until the Company has completed its analysis within the measurement period. The Company is in the process of reviewing its assumptions related to the fair value of the consideration including any working capital adjustments and estimates of tax related matters. The Purchase Price allocation is preliminary and the finalization of the Company’s Purchase Price allocation may result in changes in the valuation of assets acquired and liabilities assumed. The Company will finalize the Purchase Price allocation as soon as practicable in accordance with ASC No. 805, but not to exceed one year following the ABILITY Acquisition.

Inovalon Holdings, Inc.
Notes to Consolidated Financial Statements (Continued)

3. BUSINESS COMBINATIONS (Continued)

The preliminary estimates of fair value represent the Company's best preliminary estimates and preliminary valuations. The following table summarizes the net assets acquired and liabilities assumed (in thousands):

	Preliminary Fair Value
Cash and cash equivalents	\$ 23,850
Accounts receivable	16,739
Income tax receivable	551
Prepaid expenses and other current assets	3,025
Property and equipment	3,095
Goodwill ⁽¹⁾⁽²⁾	771,097
Intangible assets ⁽¹⁾	490,000
Other assets	1,252
Accounts payable and accrued expenses	(6,863)
Deferred revenue	(7,000)
Other current liabilities	(507)
Other liabilities	(5,291)
Deferred tax liabilities ⁽²⁾	(99,202)
Total consideration transferred	<u>\$ 1,190,746</u>

- (1) The Company allocated a portion of the goodwill associated with the ABILITY Acquisition to the Inovalon reporting unit based on expected revenue synergies. As a result, the fair value of the customer relationships intangible asset was adjusted by \$23.0 million during the third quarter of 2018.
- (2) The Company recognized a net purchase accounting adjustment of \$1.6 million resulting in a decrease to goodwill. This adjustment was driven by a \$7.2 million decrease to deferred tax liabilities primarily attributable to the tax impact related to the reduction to the fair value of the customer relationships intangible assets, which was partially offset by a \$5.0 million increase in deferred tax liabilities related to tax basis goodwill and provision-to-tax adjustments from ABILITY's 2017 tax return filings and an adjustment of \$0.6 million to the shareholder payable attributable to the ABILITY Acquisition.

The amounts attributed to identified intangible assets are summarized in the table below (in thousands):

	Estimated Useful Life	Preliminary Fair Value	Measurement Period Adjustments	Adjusted Preliminary Fair Value
Customer relationships	13 years	\$ 408,000	\$ (23,000)	\$ 385,000
Technology	13 years	86,000	—	86,000
Tradenames	17 years	19,000	—	19,000
Total intangible assets		<u>\$ 513,000</u>	<u>\$ (23,000)</u>	<u>\$ 490,000</u>

Acquisition-related costs were expensed as incurred. For the twelve months ended December 31, 2018, the Company incurred acquisition-related costs of \$6.5 million. Acquisition-related costs are recognized within "General and administrative" expenses in the accompanying consolidated statements of operations.

The following table presents revenue and loss before taxes of ABILITY since the acquisition date, April 2, 2018, included in the consolidated statements of operations (in thousands):

	Total
Revenue	\$ 113,578
Loss before taxes	\$ (3,902)

The following pro forma financial information is based on Inovalon's and ABILITY's historical consolidated financial statements as adjusted to give effect to pro forma events that are (1) directly attributable to the ABILITY Acquisition, (2) factually

3. BUSINESS COMBINATIONS (Continued)

supportable, and (3) with respect to the unaudited pro forma condensed combined statements of operations, expected to have a continuing impact on the combined results. The pro forma adjustments include, but are not limited to: (i) amortization of acquired intangible assets, (ii) net increase to interest expense resulting from the extinguishment of the 2014 Credit Facilities and historical ABILITY debt, borrowings under the 2018 Term Facility and the amortization of related debt issuance costs, and (iii) elimination of non-recurring acquisition and integration-related expenses. The following pro forma financial information is unaudited and gives effect to the transactions as if they had occurred on January 1, 2017 (in thousands):

	Year ended December 31,	
	2018	2017
Revenue	\$ 565,040	\$ 589,197
Loss before taxes	\$ (56,016)	\$ (5,554)

The unaudited pro forma revenue and loss before taxes was prepared for informational purposes only based on estimates and assumptions that the Company believes to be reasonable and is not necessarily indicative of the results of operations that would have occurred if the ABILITY Acquisition had been completed on the date indicated nor of the future financial position or results of operations following completion of the ABILITY Acquisition.

2017 Acquisition

ComplexCare Solutions

On July 6, 2017, the Company completed the acquisition of ComplexCare Solutions, Inc. and ComplexCare Solutions IPA, LLC (together, “CCS”). CCS is a company which provides technology-enabled interventions and member engagement coordination services for a number of payers and employers throughout the United States. The fair value included in the consolidated financial statements, in conformity with ASC No. 820, *Fair Value Measurements and Disclosures*, represent the Company’s best estimates and valuations. The final purchase price was allocated to identifiable assets acquired and liabilities assumed based upon valuation procedures performed to-date. The Company acquired all of the capital stock of CCS for approximately \$4.5 million in cash and the settlement of an existing payable to CCS of \$2.3 million. The Company acquired approximately \$9.8 million of assets, including approximately \$1.5 million of cash, and approximately \$3.9 million of liabilities. The net assets acquired exceeded the consideration paid by approximately \$1.4 million, and as such the Company recorded a bargain purchase gain in general and administrative expenses.

2016 Acquisition

Creehan Holding Co., Inc.

On October 3, 2016, the Company completed its acquisition of Creehan Holding Co., Inc. (“Creehan”). Creehan, through its subsidiary Creehan & Company Corporation, is a leading provider of specialty pharmacy software solutions to the pharmaceutical industry. Pursuant to the terms of the Stock Purchase Agreement between the Company and Creehan (the “Stock Purchase Agreement”), Creehan became a wholly owned subsidiary of Inovalon.

Pursuant to the terms of the Stock Purchase Agreement, Inovalon acquired all of the issued and outstanding capital stock of Creehan for an aggregate purchase price of \$130.0 million, which was comprised of \$120.0 million in cash and \$10.0 million in shares of Class A common stock of the Company. The Company completed the acquisition of Creehan through the use of cash on hand and the issuance of 651,355 shares of Class A common stock, subject to resale restrictions. Certain components, which are referred to below as contingent consideration, of the aggregate purchase price are subject to the achievement of financial performance objectives. The Company acquired Creehan for the assembled workforce, technology platform, client base, and to accelerate entry into the specialty pharmacy software market. Transaction costs in connection with the acquisition are expensed as incurred and are included in general and administrative expenses. The results of operations related to Creehan are included in our consolidated statements of operations beginning from the date of acquisition.

3. BUSINESS COMBINATIONS (Continued)

A summary of the final composition of the stated purchase price and fair value of the stated purchase price is as follows (in thousands):

Share Purchase Agreement purchase price	\$ 130,000
Working capital adjustment	755
Subtotal	<u>130,755</u>
Fair value adjustments:	
Marketability restrictions on equity consideration	(2,236)
Contingent consideration probability of achievement adjustment	(12,400)
Post-acquisition compensation expense	(5,952)
Total fair value purchase price	<u>\$ 110,167</u>

The Company finalized the working capital adjustment in the third quarter of 2017 resulting in an increase of approximately \$0.4 million to the initial purchase price allocation. After adjusting for this difference the composition of the fair value of the consideration transferred is as follows (in thousands):

Cash	\$ 89,803
Issuance of Class A common stock	7,764
Contingent consideration	12,600
Total fair value purchase price	<u>\$ 110,167</u>

Recording of Assets Acquired and Liabilities Assumed

The Company finalized the fair value of acquired assets, assumed liabilities and tax related matters in the third quarter of 2017. The following table summarizes the purchase price allocation to assets acquired and liabilities assumed, including identification of measurement period adjustments (in thousands):

	Recorded Value
Cash and cash equivalents	\$ 861
Accounts receivable	9,048
Other current assets	171
Property, equipment and capitalized software	641
Intangible assets ⁽¹⁾	50,900
Goodwill ⁽²⁾	51,362
Total assets acquired	<u>112,983</u>
Current liabilities	(916)
Deferred revenue	(1,900)
Total liabilities assumed	<u>(2,816)</u>
Net assets acquired	<u>\$ 110,167</u>

- (1) Identifiable intangible assets were measured using a combination of an income approach and a market approach.
- (2) Goodwill is the excess of the consideration transferred over the net assets recognized and represents the future economic benefits, primarily as a result of other assets acquired that could not be individually identified and separately recognized. Goodwill is not amortized. The goodwill attributable to the Creehan acquisition is deductible for tax purposes.

3. BUSINESS COMBINATIONS (Continued)

The amounts attributed to identified intangible assets are summarized in the table below (in thousands):

	Weighted Average Useful Life	Recorded Value
Customer relationships	8 years	\$ 36,500
Tradename	4 years	4,000
Technology	4 years	8,800
In-process Research and Development	indefinite	1,600
Total intangible assets		<u>\$ 50,900</u>

Acquisition-related costs were expensed as incurred. For the year ended December 31, 2016, the Company incurred acquisition-related costs of \$1.6 million recognized within “General and administrative” expenses in the accompanying consolidated statements of operations.

Creehan Results and Pro Forma Impact of Acquisition

The following table presents revenue and loss before taxes of Creehan since the acquisition date, October 3, 2016, included in the consolidated statements of operations and includes amortization expense related to acquired intangible assets (in thousands):

	Year Ended December 31, 2016
Revenue	\$ 8,106
Loss before taxes	\$ (976)

The following table presents pro forma information, based on estimates and assumptions that the Company believes to be reasonable, for the Company as if the acquisition of Creehan had occurred at the beginning of the earliest period presented (unaudited, in thousands):

	Year Ended December 31, 2016
Pro forma revenue	\$ 453,613
Pro forma income before taxes	\$ 44,203

The pro forma information provided in the table above is not necessarily indicative of the consolidated results of operations for future periods or the results that actually would have been realized had the acquisition been completed at the beginning of the periods presented.

4. REVENUE

The Company adopted ASU 2014-09 as of January 1, 2018 using the modified retrospective approach. Revenues for periods beginning after January 1, 2018 are presented under ASC 606, *Revenue from Contracts with Customers*, while prior period amounts are not adjusted and continue to be reported in accordance with our historic accounting under ASC 605. The Company recorded a cumulative effect net adjustment to increase retained earnings by \$0.6 million as of January 1, 2018. The impact as a result of adopting ASC 606 was an increase of \$0.7 million in revenue and an increase of \$0.4 million in expense resulting from deferred commissions for the year ended December 31, 2018.

These adjustments primarily related to commissions for certain contracts which are now expensed over the remaining life of the contracts and credits provided to customers which are recorded as a reduction to revenue over the applicable service period. For the remaining contracts, the Company has elected to use the practical expedient to recognize the incremental costs of obtaining a contract as an expense when incurred if the amortization period of the asset that the entity otherwise would have recognized is one year or less.

On April 2, 2018, concurrent with the ABILITY Acquisition (as defined in “Note 3—Business Combinations”), the Company was required to comply with ASC 606 and adopted ASU 2014-09 with respect to ABILITY. There was no material impact on the consolidated financial statements as a result of adopting ASU 2014-09.

4. REVENUE (Continued)

The Company primarily derives its revenues through the sale or subscription licensing of its platform solutions and services. The following table disaggregates revenue by offering (in thousands):

	Year Ended December 31,	
	2018	2017 ⁽¹⁾
Platform solutions ⁽²⁾	\$ 466,544	\$ 382,778
Services ⁽³⁾	61,132	66,580
Total revenue	<u>\$ 527,676</u>	<u>\$ 449,358</u>

- (1) Prior period amounts have not been adjusted under the modified retrospective method.
- (2) Platform solutions include arrangements for technology-based offerings representing subscription-based cloud-based platform offerings and legacy platform solutions that are not cloud-based and not billed under a subscription-based contract structure.
- (3) Services include advisory, implementation, and support services under time and materials, fixed price, or retainer-based contracts.

Performance Obligations

A performance obligation is a contractual promise to transfer a distinct good or service to the customer. A contract's transaction price is allocated to each distinct performance obligation based on standalone selling price and revenue is recognized when the performance obligations under the terms of a contract are satisfied. The determination of standalone selling price for each performance obligation requires judgment based on the terms of the contract.

The majority of the Company's platform solutions contracts contain a series of separately identifiable and distinct services that represent performance obligations that are satisfied over time. The Company allocates revenue to platform solutions by determining the standalone selling price of each performance obligation. Revenue is generally recognized on our platform offerings over the contract term. For these contracts, the Company has determined that it will use the practical expedient under ASC 606-10-55-18 to recognize revenue when it has the right to invoice. The Company qualifies for this practical expedient because the right to invoice corresponds directly with the value transferred to the customer.

The Company allocates revenue to its service arrangements for advisory, implementation, and support services based on contractually agreed upon billing rates applied to direct labor hours expended plus the costs of other items used in the performance of the contract. The Company concluded that it will recognize revenue when it has the right to invoice the customer using the allowable practical expedient since the right to invoice the customer corresponds with the performance obligations completed. Revenues under fixed-price and retainer-based contracts are recognized ratably over the contract period or upon contract completion.

Certain of the Company's arrangements entitle a client to receive a refund if the Company fails to satisfy contractually specified performance obligations. The refund is limited to a portion or all of the consideration paid. In this case, revenue is recognized when performance obligations are satisfied. Historically, the Company has met contractually specified performance obligations.

Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables, and deferred revenue. Invoices to clients are generated in accordance with the terms of the applicable contract, which may not be directly related to the performance of services. Unbilled receivables are invoiced when the achievement of specific events as defined by each contract occurs. The Company had an unbilled receivables balance of \$20.5 million and \$14.1 million as of December 31, 2018 and December 31, 2017, respectively. The increase in the unbilled receivables balance was primarily driven by the timing of new contract signings, the timing of billings, and \$2.3 million related to the acquisition of ABILITY. Refer to "Note 3—Business Combinations." Unbilled receivables are classified as accounts receivable on the consolidated balance sheet. Advanced billings to clients in excess of revenue earned are recorded as deferred revenue until the aforementioned revenue recognition criteria are met.

The Company had deferred commissions of \$5.7 million as of December 31, 2018 and no deferred commissions as of December 31, 2017. The change in deferred commissions was primarily driven by \$4.9 million related to the acquisition of ABILITY.

The Company had a deferred revenue balance of \$20.6 million and \$7.0 million as of December 31, 2018 and December 31, 2017, respectively. The change in the deferred revenue balance was primarily driven by \$9.5 million related to the acquisition of

4. REVENUE (Continued)

ABILITY. Revenue recognized during the year ended December 31, 2018 that was included in the deferred revenue balance at the beginning of the year, or as of the acquisition date as it relates to ABILITY, was \$11.2 million.

5. NET (LOSS) INCOME PER SHARE

During September 2014, the Company completed a holding company reorganization. As part of the reorganization, the Company implemented a multi-class stock structure. The Company presents the impact on net income per share (“EPS”) by calculating EPS based on the authorized, issued and outstanding shares of Class A and Class B common stock. Holders of all outstanding classes of common stock participate ratably in earnings on an identical per share basis as if all shares were a single class.

The Company has issued RSAs of Class A common stock under the 2015 Omnibus Incentive Plan. The Company considers issued and unvested RSAs to be participating securities as the holders of these RSAs have a non-forfeitable right to dividends in the event of the Company’s declaration of a dividend on shares of Class A and Class B common stock. Subsequent to the issuance of the participating securities, the Company applied the two-class method required in calculating net income per share of Class A and Class B common stock.

Undistributed net income for a given period is apportioned to participating securities based on the weighted-average shares of each class of common stock outstanding during the applicable period as a percentage of the total weighted-average shares outstanding during the same period.

Under the two-class method, net income attributable to common stockholders is determined by allocating undistributed earnings, calculated as net income, less earnings attributable to participating securities. The net income per share attributable to common stockholders is allocated based on the contractual participation rights of the Class A common stock and Class B common stock as if the income for the period has been distributed. As the liquidation and dividend rights are identical for both classes of common stock, the net income attributable to common stockholders is allocated on a proportionate basis. If the Company incurs a loss from continuing operations, losses are not allocated to participating securities.

The Company has issued Class A common stock and Class B common stock. Holders of Class A common stock generally have the same rights, including rights to dividends, as holders of Class B common stock, except that holders of Class A common stock have one vote per share while holders of Class B common stock have ten votes per share. Each share of Class B common stock will convert into one share of Class A common stock immediately upon its sale or transfer. As such, basic and fully diluted earnings per share for Class A common stock and Class B common stock are the same.

Basic net (loss) income per share of common stock is computed by dividing the net (loss) income attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period. All participating securities are excluded from the basic weighted-average shares of common stock outstanding. Unvested RSAs are excluded from the calculation of the weighted-average shares of common stock until vesting occurs, as the restricted shares are subject to forfeiture and cancellation until vested. For purposes of the diluted net income per share attributable to common stockholders calculation, unvested shares of common stock resulting from RSAs are considered to be potentially dilutive shares of common stock.

Diluted net income per share attributable to common stockholders is computed by dividing net income attributable to common stockholders by the weighted-average shares outstanding, including potentially dilutive shares of common stock assuming the dilutive effect of potential shares of common stock for the period determined using the treasury stock method. Potentially dilutive securities also include stock options, restricted stock units, and shares to be purchased under the employee stock purchase plan. Under the treasury stock method, dilutive securities are assumed to be exercised at the beginning of the periods and as if funds obtained thereby were used to purchase common stock at the average market price during the period. Securities are excluded from the computations of diluted net income per share if their effect would be anti-dilutive to earnings per share. If the Company incurs a loss from continuing operations, diluted EPS is computed in the same manner as basic EPS.

Inovalon Holdings, Inc.
Notes to Consolidated Financial Statements (Continued)

5. NET (LOSS) INCOME PER SHARE (Continued)

The numerators and denominators of the basic and diluted EPS computations, reconciliations of the weighted average shares outstanding, and resulting basic and diluted earnings per share for our common stock are calculated as follows (in thousands, except per share amounts):

	Year Ended December 31,		
	2018	2017	2016
Basic			
Numerator:			
Net (loss) income	\$ (39,164)	\$ 34,818	\$ 27,104
Undistributed earnings allocated to participating securities	—	(990)	(161)
Net (loss) income attributable to common stockholders—basic	<u>\$ (39,164)</u>	<u>\$ 33,828</u>	<u>\$ 26,943</u>
Denominator:			
Weighted average shares used in computing net (loss) income per share attributable to common stockholders—basic	145,389	142,225	150,048
Net (loss) income per share attributable to common stockholders—basic	<u>\$ (0.27)</u>	<u>\$ 0.24</u>	<u>\$ 0.18</u>
Diluted			
Numerator:			
Net income attributable to common stockholders—diluted	<u>\$ (39,164)</u>	<u>\$ 33,828</u>	<u>\$ 26,943</u>
Denominator:			
Number of shares used for basic EPS computation	145,389	142,225	150,048
Effect of dilutive securities	—	512	907
Weighted average shares used in computing net income per share attributable to common stockholders—diluted	145,389	142,737	150,955
Net income per share attributable to common stockholders—diluted	<u>\$ (0.27)</u>	<u>\$ 0.24</u>	<u>\$ 0.18</u>

The computation of diluted EPS does not include certain awards, on a weighted average basis, for the years ended December 31, 2018, 2017, and 2016, respectively, because their inclusion would have an anti-dilutive effect on EPS. The awards excluded because of their anti-dilutive effect are as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Awards excluded from the computation of diluted net income per share because their inclusion would have been anti-dilutive	89	88	44

6. SHORT-TERM INVESTMENTS

As of December 31, 2018, short-term investments consisted of the following (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Available-for-sale securities:				
Corporate notes and bonds	\$ 7,018	\$ —	\$ (18)	\$ 7,000
Total available-for-sale securities	<u>\$ 7,018</u>	<u>\$ —</u>	<u>\$ (18)</u>	<u>\$ 7,000</u>

Inovalon Holdings, Inc.
Notes to Consolidated Financial Statements (Continued)

6. SHORT-TERM INVESTMENTS (Continued)

As of December 31, 2017, short-term investments consisted of the following (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Available-for-sale securities:				
Corporate notes and bonds	\$ 232,048	\$ 3	\$ (572)	\$ 231,479
U.S. agency obligations	15,341	—	(99)	15,242
U.S. treasury securities	20,735	—	(168)	20,567
Total available-for-sale securities	<u>\$ 268,124</u>	<u>\$ 3</u>	<u>\$ (839)</u>	<u>\$ 267,288</u>

The following table summarizes the estimated fair value of our short-term investments, designated as available-for-sale and classified by the contractual maturity date of the securities as of the dates shown (in thousands):

	December 31,	
	2018	2017
Due in one year or less	\$ 7,000	\$ 204,725
Due after one year through two years	—	62,563
Total	<u>\$ 7,000</u>	<u>\$ 267,288</u>

The Company has certain available-for-sale securities in a gross unrealized loss position. The Company reviews its debt securities classified as short-term investments on a regular basis to evaluate whether or not any security has experienced an other-than-temporary decline in fair value. The Company considers factors such as the length of time and extent to which the market value has been less than the cost, the financial position and near-term prospects of the issuer and the Company's intent to sell, or whether it is more likely than not the Company will be required to sell the investment before recovery of the investment's amortized-cost basis. If the Company determines that an other-than-temporary decline exists, or if write downs related to credit losses are necessary, in one of these securities, the unrealized losses attributable to the respective investment would be reclassified to realized losses on short-term investments within the statement of operations. There were no impairments considered other-than-temporary as of December 31, 2018.

The following table shows the fair values and the gross unrealized losses of available-for-sale securities that were in a gross unrealized loss position, as of December 31, 2018, aggregated by investment category (in thousands):

	Estimated Fair Value	Gross Unrealized Losses
Corporate notes and bonds	\$ 7,000	\$ (18)

7. FAIR VALUE MEASUREMENTS

The following table presents the fair value hierarchy for financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2018 (in thousands):

	Level 1	Level 2	Level 3	Total
Cash Equivalents:				
Money market funds	\$ 34,064	\$ —	\$ —	\$ 34,064
Short-term investments:				
Corporate notes and bonds	—	7,000	—	7,000
Other current liabilities:				
Interest rate swaps	—	(1,778)	—	(1,778)
Contingent consideration	—	—	(15,182)	(15,182)
Other liabilities				
Interest rate swaps	—	(8,151)	—	(8,151)
Contingent consideration	—	—	(16,642)	(16,642)
Total	<u>\$ 34,064</u>	<u>\$ (2,929)</u>	<u>\$ (31,824)</u>	<u>\$ (689)</u>

Inovalon Holdings, Inc.
Notes to Consolidated Financial Statements (Continued)

7. FAIR VALUE MEASUREMENTS (Continued)

The following table presents the fair value hierarchy for financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2017 (in thousands):

	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	\$ 162,347	\$ —	\$ —	\$ 162,347
Short-term investments:				
Corporate notes and bonds	—	231,479	—	231,479
U.S. agency obligations	—	15,242	—	15,242
U.S. treasury securities	—	20,567	—	20,567
Other current liabilities:				
Contingent consideration	—	—	(7,400)	(7,400)
Total	\$ 162,347	\$ 267,288	\$ (7,400)	\$ 422,235

The Company determines the fair value of its security holdings based on pricing from its pricing vendors. The valuation techniques used to measure the fair value of financial instruments having Level 2 inputs were derived from non-binding consensus prices that are corroborated by observable market data or quoted market prices for similar instruments. Such market prices may be quoted prices in active markets for identical assets (Level 1 inputs) or pricing determined using inputs other than quoted prices that are observable either directly or indirectly (Level 2 inputs). The Company performs procedures to ensure that appropriate fair values are recorded such as comparing prices obtained from other sources.

The following table presents our financial instruments measured at fair value using unobservable inputs (Level 3) as of the years ended December 31 (in thousands):

	Fair Value Measurements Using Unobservable Inputs (Level 3)	
	2018	2017
Balance, beginning of period	\$ (7,400)	\$ (12,600)
Fair value adjustment ⁽¹⁾	(6,159)	5,200
Accretion expense (recognized in general and administrative expenses)	(1,053)	—
Contingent consideration attributable to and assumed from ABILITY Acquisition	(17,212)	—
Total	\$ (31,824)	\$ (7,400)

(1) The Company recognized an adjustment of \$5.6 million in general and administrative expenses related to the change in fair value of contingent consideration, and an adjustment of \$0.6 million recognized in goodwill, which was a purchase accounting adjustment attributable to the ABILITY Acquisition.

2018 Credit Facilities

The Company records debt on the balance sheet at carrying value. The estimated fair value of the Company's debt is determined based on Level 2 inputs including current market rates for similar types of borrowings. The following table presents the carrying value and fair value of the Company's debt (including the current portion thereof) as of December 31, 2018 (in thousands):

	December 31, 2018
Carrying amount	\$ 949,314
Fair value	\$ 922,021

Interest Rate Swaps

In connection with the 2018 Credit Agreement, the Company entered into four interest rate swaps during the second quarter of 2018, each of which mature in March 2025, to mitigate the risk of a rise in interest rates. These interest rate swaps mitigate the exposure on the variable component of interest on the Company's 2018 Credit Facility. The interest rate swaps fix the LIBOR rate component of interest on \$700.0 million of the 2018 Term Facility at a weighted average rate of approximately 2.8%. See "Note

Inovalon Holdings, Inc.
Notes to Consolidated Financial Statements (Continued)

7. FAIR VALUE MEASUREMENTS (Continued)

10—Debt” for additional information. These interest rate swaps are designated as cash flow hedges and are deemed highly effective under ASC 815, *Derivatives and Hedging*. The interest rate swaps are recorded on the balance sheet at fair value as either assets or liabilities and any changes to the fair value are recorded through accumulated other comprehensive income and reclassified into interest expense in the same period in which the hedged transaction is recognized in earnings. Cash flows from interest rate swaps are reported in the same category as the cash flows from the items being hedged.

The following table presents the fair value of interest rate swaps on the balance sheet as of December 31, 2018 (in thousands):

	Liability Derivative	
	Balance Sheet Location	Fair Value
Interest rate swap contract	Other current liabilities	\$ (1,778)
Interest rate swap contract	Other liabilities	\$ (8,151)

The following table presents the location and amount of gains and losses on interest rate swaps included in other comprehensive income (“OCI”) and the statement of operations for the year ended December 31, 2018 (in thousands):

	Gain (Loss) recognized in OCI	Statement of Operations Location	(Gain) Loss reclassified from OCI
Interest rate swap contract	\$ (12,907)	Interest expense	\$ 2,978

The net amount of accumulated other comprehensive income expected to be reclassified to interest expense in the next 12 months is \$1.9 million.

8. PROPERTY, EQUIPMENT AND CAPITALIZED SOFTWARE

Property, equipment and capitalized software consisted of the following (in thousands):

	December 31,	
	2018	2017
Office and computer equipment	\$ 76,748	\$ 55,840
Leasehold improvements	13,158	10,096
Purchased software	45,304	26,425
Capitalized software	128,356	114,569
Furniture and fixtures	6,412	4,670
Land	390	390
Buildings	14,028	14,028
Work in process	5,811	16,323
Total	290,207	242,341
Less: accumulated depreciation and amortization	(148,449)	(116,573)
Property, equipment and capitalized software, net	<u>\$ 141,758</u>	<u>\$ 125,768</u>

The Company purchases software licenses and office equipment under capital lease agreements, with bargain purchase options at the end of the lease term. The total net amount of purchased software licenses and office equipment included in property and equipment at December 31, 2018 and 2017 was \$5.5 million and \$0.6 million, respectively.

The Company leases certain office space under a lease agreement that was determined to be a capital lease. This capital lease is classified as buildings within property and equipment. The total net amount of the capital lease at December 31, 2018 and 2017 was \$10.9 million and \$12.0 million, respectively. There were no leases of office spaces that were determined to be capital leases in 2016.

Depreciation expense for the years ended December 31, 2018, 2017, and 2016 was \$52.7 million, \$37.9 million, and \$28.1 million, respectively. Amortization of the capital leases included in depreciation expense was \$1.4 million, \$0.3 million, and \$0.1 million, for the years ended December 31, 2018, 2017, and 2016, respectively. At December 31, 2018 and 2017, the Company had unamortized capitalized software costs, including costs classified as work in progress, of \$57.8 million and \$54.2 million, respectively.

8. PROPERTY, EQUIPMENT AND CAPITALIZED SOFTWARE (Continued)

At December 31, 2018 and 2017, work in process consisted primarily of purchased software licenses, computer equipment, and capitalized software, which was not placed into service.

9. GOODWILL AND INTANGIBLE ASSETS

Goodwill

Goodwill is primarily derived from the Company's acquisitions of ABILITY in 2018, Creehan in 2016, Avalere in 2015, Catalyst Information Technologies, Inc. in 2009, and Medical Reliance Group, Inc. in 2006. Refer to "Note 2—Summary of Significant Accounting Policies" for a discussion of our accounting policy. Refer to "Note 3—Business Combinations" for further information regarding the goodwill that arose from the Company's acquisitions of ABILITY during 2018 and Creehan during 2016.

The following table summarizes the activity related to the carrying value of our goodwill during the years ended December 31, 2018 and 2017 (in thousands):

Goodwill as of January 1, 2017	\$ 184,557
Adjustments recorded in connection with the acquisition of Creehan ⁽¹⁾	375
Goodwill as of December 31, 2017	184,932
Goodwill recorded in connection with the acquisition of ABILITY	771,097
Goodwill as of December 31, 2018	\$ 956,029

(1) During 2017, the Company finalized the working capital adjustments for Creehan. The adjustments had no impact on the Company's revenues or expenses. Based on our assessments of qualitative and quantitative factors, the adjustments were not considered to be material to our consolidated financial statements, individually or in the aggregate, to any previously issued consolidated financial statements.

Intangible Assets

Intangible assets at December 31, 2018 and 2017 were as follows (in thousands):

	December 31, 2018			Weighted Average Remaining Useful Life (years)
	Gross	Accumulated Amortization	Net	
Technology ⁽¹⁾	\$ 116,177	\$ (28,882)	\$ 87,295	11.7
Trademark and trade names	31,860	(6,415)	25,445	13.4
Database	6,500	(6,012)	488	0.7
Customer relationships	480,950	(58,835)	422,115	11.6
Non-compete agreements	820	(820)	—	0.0
Total	<u>\$ 636,307</u>	<u>\$ (100,964)</u>	<u>\$ 535,343</u>	

(1) Upon completion of the development process of our in-process R&D the Company performed an impairment assessment and determined there was no impairment. As such, \$1.6 million of in-process R&D was reclassified to a definite-lived technology intangible asset upon being placed into service. The Company evaluated the useful life of the asset resulting from the R&D activities pursuant to ASC 350 and determined a useful life of 5.0 years was appropriate based on the period over which the asset is expected to contribute to future cash flows. The Company began amortizing the asset over the useful life on the date the asset was placed into service.

Inovalon Holdings, Inc.
Notes to Consolidated Financial Statements (Continued)

9. GOODWILL AND INTANGIBLE ASSETS (Continued)

	December 31, 2017			Weighted Average Remaining Useful Life (years)
	Gross	Accumulated Amortization	Net	
Technology	\$ 28,577	\$ (20,313)	\$ 8,264	2.8
Trademark and tradenames	12,860	(3,580)	9,280	6.2
Database	6,500	(5,362)	1,138	1.8
Customer relationships	95,950	(27,088)	68,862	7.4
Non-compete agreements	820	(638)	182	0.7
In-Process R&D	1,600	—	1,600	Indefinite
Total	\$ 146,307	\$ (56,981)	\$ 89,326	

Amortization expense for the years ended December 31, 2018, 2017, and 2016 was \$44.0 million, \$15.2 million, and \$9.2 million, respectively.

Estimated future amortization expense of intangible assets, based upon the Company's intangible assets at December 31, 2018, is as follows (in thousands):

	Amount
Year ending December 31:	
2019	\$ 52,302
2020	50,821
2021	48,035
2022	48,035
2023	47,874
Thereafter	288,276
Total	\$ 535,343

10. DEBT

On September 19, 2014, the Company entered into a Credit and Guaranty Agreement with a group of lenders and Goldman Sachs Bank USA, as administrative agent (the "2014 Credit Agreement"). The terms of the 2014 Credit Agreement provided for credit facilities in the aggregate maximum principal amount of \$400.0 million, consisting of a senior unsecured term loan facility in the original principal amount of \$300.0 million (the "2014 Term Loan Facility"), and a senior unsecured revolving credit facility in the maximum principal amount of \$100.0 million (the "2014 Revolving Credit Facility" and, together with the 2014 Term Loan Facility, the "2014 Credit Facilities"). The 2014 Term Loan Facility had a five-year term and was an amortizing facility with principal payments quarterly and interest payments monthly.

On April 2, 2018, the Company paid in full all existing debt obligations under the 2014 Credit Agreement and terminated all commitments to extend further credit thereunder. On April 2, 2018, the Company entered into a credit agreement (the "2018 Credit Agreement") with a group of lenders and Morgan Stanley Senior Funding, Inc. ("MSSF"), as administrative agent, providing for (i) a term loan B facility with the Company as borrower in a total principal amount of \$980.0 million (the "2018 Term Facility"); and (ii) a revolving credit facility with the Company as borrower in a total principal amount of up to \$100.0 million (the "2018 Revolving Facility" and, together with the 2018 Term Facility, the "2018 Credit Facilities"). The 2018 Revolving Facility will terminate on April 2, 2023 and the 2018 Term Facility will mature on April 2, 2025. The entire \$980.0 million 2018 Term Facility was borrowed on April 2, 2018, and was used to pay off all of the Company's existing debt obligations under the 2014 Credit Facilities as well as to provide the financing necessary to fund, in part, the cash consideration paid to acquire ABILITY. A loss on the early extinguishment of debt of \$0.1 million was recognized during the year ended December 31, 2018 related to the write-off of unamortized deferred financing fees.

At the option of the Company, the loans outstanding under the 2018 Term Facility will bear interest either at: (i) Adjusted London Interbank Offer Rate ("LIBOR") plus an applicable rate of 3.50% or (ii) the Alternate Base Rate ("ABR") plus an applicable margin. The Company may elect interest periods of one, two, three or six months for Adjusted LIBOR borrowings. As set forth in the 2018 Credit Agreement, the ABR is the higher of: (i) the rate that MSSF as Administrative Agent announces from time to

Inovalon Holdings, Inc.
Notes to Consolidated Financial Statements (Continued)

10. DEBT (Continued)

time as its prime or base commercial lending rate, as in effect from time to time, (ii) the Federal Funds Effective Rate plus ½ of 1.0% and (iii) one-month Adjusted LIBOR plus 1.0%.

The Company is required to pay a commitment fee ranging from 0.25% to 0.375% per annum in respect of the daily average unused commitments under the 2018 Revolving Facility based on the Company's senior secured net leverage ratio. As of December 31, 2018, the Company had \$100.0 million available consisting of \$99.0 million on the 2018 Revolving Facility and a letter of credit of \$1.0 million.

The following table discloses the outstanding debt at each balance date as follows (in thousands):

	December 31, 2018	December 31, 2017
2018 Term Facility ⁽¹⁾	\$ 949,314	\$ —
2014 Revolving Credit Facility	—	236,250
Total Credit Facilities	949,314	236,250
Less: current portion	9,800	45,000
Non-current Credit Facilities	<u>\$ 939,514</u>	<u>\$ 191,250</u>

(1) The 2018 Term Facility is presented net of unamortized deferred financing fees and original issue discount ("OID") of \$28.2 million.

The Company incurred an OID of \$14.7 million and deferred financing fees of \$16.4 million related to the 2018 Term Facility, which are shown as a direct reduction to the face amount and amortized as interest expense, using the effective interest method, over the life of the 2018 Credit Agreement. The Company incurred \$1.9 million in deferred financing fees related to the 2018 Revolving Facility, which is amortized as interest expense using the straight-line method. During the year ended December 31, 2018, the Company recognized \$1.4 million in OID amortization expense related to the 2018 Term Facility. The Company recognized \$1.5 million in deferred financing fees related to the 2018 Term Facility during the year ended December 31, 2018. The Company recognized \$0.3 million in amortization expense related to the 2018 Revolving Facility during the year ended December 31, 2018.

The Company and its Restricted Subsidiaries (as defined in the 2018 Credit Agreement) are subject to certain affirmative and negative covenants under the 2018 Credit Agreement, and the 2018 Credit Agreement includes certain customary representations and warranties of the Company. As of December 31, 2018, the Company is in compliance with the covenants under the 2018 Credit Agreement.

Scheduled principal maturity of the 2018 Credit Facilities follows (in thousands):

	Amount
2019	\$ 9,800
2020	9,800
2021	9,800
2022	9,800
2023	9,800
Thereafter	928,550
Total scheduled maturities	<u>977,550</u>
Unamortized deferred financing fees and OID	(28,236)
Total Credit Facilities	<u>\$ 949,314</u>

11. COMMITMENTS AND CONTINGENCIES

Operating Leases—The Company leases office space and co-located data center facilities under operating lease arrangements, some of which contain renewal options.

11. COMMITMENTS AND CONTINGENCIES (Continued)

Future non-cancellable lease payments as of December 31, 2018 are as follows (in thousands):

	<u>Amount</u>
Year ending December 31,	
2019	\$ 11,250
2020	7,059
2021	5,898
2022	5,303
2023	3,821
Thereafter	15,599
Total	<u>\$ 48,930</u>

Total expense under operating leases was \$10.7 million, \$11.3 million, and \$8.9 million, during the years ended December 31, 2018, 2017, and 2016, respectively. Certain operating leases contain rent escalation clauses, which are recorded on a straight-line basis over the initial term of the lease, with the difference between the rent paid and the straight-line rent recorded as a deferred rent liability. Lease incentives received from landlords are recorded as deferred rent liabilities and are amortized on a straight-line basis over the lease term as a reduction to rent expense. The deferred rent liability was \$3.8 million and \$2.0 million at December 31, 2018 and 2017, respectively.

Capital Leases—The total capital lease liability at December 31, 2018 and 2017 was \$16.8 million and \$12.4 million, respectively. Future minimum lease payments as of December 31, 2018 are as follows (in thousands):

	<u>Amount</u>
Year ending December 31,	
2019	\$ 3,509
2020	2,567
2021	2,017
2022	1,181
2023	1,275
Thereafter	8,831
Total minimum lease payments	19,380
Less amount representing interest	(2,548)
Present value of minimum lease payments	<u>\$ 16,832</u>

Legal Proceedings—From time to time the Company is involved in various litigation matters arising out of the normal course of business. The Company consults with legal counsel on those issues related to litigation and seeks input from other experts and advisors with respect to such matters. Estimating the probable losses or a range of probable losses resulting from litigation, government actions and other legal proceedings is inherently difficult and requires an extensive degree of judgment, particularly where the matters involve indeterminate claims for monetary damages, may involve discretionary amounts, present novel legal theories, are in the early stages of the proceedings, or are subject to appeal. Whether any losses, damages or remedies ultimately resulting from such matters could reasonably have a material effect on the Company's business, financial condition, results of operations, or cash flows will depend on a number of variables, including, for example, the timing and amount of such losses or damages (if any) and the structure and type of any such remedies. The Company's management does not presently expect any litigation matters to have a material adverse impact on the condensed consolidated financial statements of the Company.

There have been no significant or material developments to current legal proceedings, including the estimated effects on the Company's condensed consolidated financial statements and note disclosures, other than the following updates with respect to the *Xiang v. Inovalon Holdings, Inc., et al.*, No. 1:16-cv-04923 case filed in the United States District Court for the Southern District of New York on June 24, 2016 against the Company, certain officers, directors and underwriters in the Company's initial public offering, which was previously disclosed. Expert discovery was completed on December 21, 2018. Subsequent to December 31, 2018, on January 23, 2019, the parties informed the court that they had accepted a mediator's recommendation on the amount of a settlement, subject to agreement on the terms and settlement documentation. On the same day, the court stayed all proceedings for a period of not more than 60 days to enable the parties to finalize the settlement and settlement documentation and move for preliminary approval of the settlement. On January 24, 2019, the parties filed a motion with the U.S. Court of Appeals for the

11. COMMITMENTS AND CONTINGENCIES (Continued)

Second Circuit requesting that the pending petition seeking permission to appeal the court’s class certification order under Federal Rule of Civil Procedure 23(f) be held in abeyance pending the resolution of settlement negotiations, which request the court granted on January 28, 2019. On February 20, 2019, the parties executed a settlement agreement, which is subject to Court approval, and provides for the dismissal of all claims against the defendants in connection with the securities class action suit, and provides for a payment to the class of \$17 million, of which the Company has agreed to contribute \$1.7 million, with the remaining amounts to be paid by the Company’s insurance carriers. The settlement contains no admission of liability by the Company and the other defendants. The amounts owed by and due to the Company have been recorded within other current liabilities and within prepaid expenses and other current assets, respectively, on the consolidated balance sheet.

12. RESTRUCTURING EXPENSE

During the second quarter of 2018, the Company completed actions under restructuring programs as part of its continuing efficiency-enhancement and cost-reduction initiatives, both as part of its ongoing margin expansion goals, as well as related to the recent acquisition and ongoing integration of ABILITY. The initiatives primarily related to workforce reductions, site closures, streamlining of software development initiatives, changes in the structure of certain business functions, and strategic initiatives to achieve cost and product development synergies in connection with the ABILITY Acquisition (as defined in “Note 3—Business Combinations”).

During the year ended December 31, 2018, the Company incurred \$9.5 million in restructuring expense which includes \$6.4 million related to a streamlining of software development initiatives, \$1.8 million in severance expense, and \$1.3 million for lease termination costs and accelerated depreciation related to associated leasehold improvements. As of December 31, 2018, the Company had a remaining restructuring liability associated with severance and lease termination costs of \$0.6 million.

The following table presents restructuring liability activity for the year ended December 31, 2018 (in thousands):

Balance as of December 31, 2017	\$	—
Accruals for severance		1,764
Accruals for lease termination		1,405
Severance payments		(1,750)
Lease termination accretion		(830)
Balance as of December 31, 2018	\$	<u>589</u>

13. STOCK-BASED COMPENSATION

On December 31, 2006, the Company and its stockholders established the 2007 Long-Term Incentive Plan (the “2007 Plan”), under which the Company’s Board of Directors, at its discretion, could grant stock options to employees and certain directors of the Company. During 2009, the Plan was amended and currently authorizes the grant of stock options or other equity instruments for up to 10,275,000 shares of common stock. The stock-based awards granted under the Plan generally expire at the earlier of a specified period after termination of service or the date specified by the Board of Directors at the date of grant, but not more than ten years from such grant date. Stock issued as a result of exercised stock options will be issued from the Company’s authorized available stock. Effective June 5, 2012, the 2007 Long-Term Incentive Plan changed its name to the Inovalon, Inc. 2007 Long-Term Incentive Plan. Options granted under the Plan may be incentive stock options or non-qualified stock options under the applicable provisions of the Internal Revenue Code. The 2007 Long-Term Incentive Plan was terminated upon completion of the IPO. Awards granted under the 2007 Long-Term Incentive Plan will remain outstanding until the earlier of exercise, forfeiture, cancellation or expiration.

On February 18, 2015, the date of the completion of the Company’s IPO, the Company’s 2015 Omnibus Incentive Plan (the “2015 Plan”) became effective. The 2015 Plan provides for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended (the “Code”), to the Company’s employees and any parent and subsidiary employees, and for the grant of non-qualified stock options, stock appreciation rights, restricted stock, RSAs, RSUs, dividend equivalent rights, cash-based awards (including annual cash incentives and long-term cash incentives), and any combination thereof to the Company’s employees, directors, and consultants and to employees, directors, and consultants of certain affiliated entities. The Company reserved for issuance under the 2015 Plan shares of its Class A common stock equal to the sum of: (i) 7,335,430 shares of Class A common stock; and (ii) the number of shares of its Class A common stock underlying awards granted under the Company’s 2007 Long-Term Incentive Plan, which was terminated upon completion of the IPO, that are forfeited, canceled, or expire (whether voluntarily or involuntarily).

Stock Options

13. STOCK-BASED COMPENSATION (Continued)

The Company uses the Black-Scholes option-pricing model to determine the estimated fair value for stock option awards. The Black-Scholes option-pricing model requires the use of estimates, including the fair market value of the Company's common stock prior to the Company's IPO, expected stock price volatility, expected term, estimated forfeitures and the risk-free interest rate. The fair value of stock option awards is amortized on a straight-line basis over the requisite service period of the awards, which is generally the vesting period.

Prior to the Company's IPO, determining the fair value of the Company's common stock required complex and subjective judgment and estimates. There is inherent uncertainty in making these judgments and estimates. Since the Company's share price was not publicly quoted and lacked an active trading market prior to the Company's IPO in February 2015, the Company's Compensation Committee was required to estimate the fair value of the common stock at each meeting at which options were granted based on factors including, but not limited to, contemporaneous valuations of the Company's common stock performed by an unrelated third-party specialist, the lack of marketability of the Company's common stock, developments in the business, share repurchase arrangements, the status of the Company's development and sales efforts, revenue growth, valuations of comparable companies, and additional objective and subjective factors relating to the Company's business.

Expected volatility was calculated as of each grant date based on reported data for several unrelated public companies within the Company's industry that are considered to be comparable to the Company and for which historical information was available. The average expected term was determined under the simplified calculation as provided by the Securities and Exchange Commission's Staff Accounting Bulletin No. 107, *Share-Based Payment*, which is the mid-point between the vesting date and the end of the contractual term. The dividend yield assumption of zero was based upon the fact that the Company does not have a formal dividend payment policy, the Company does not intend to pay cash dividends on its common stock in the future, and, to the extent the Company pays dividends in the future, there is no assurance that any such dividends will be comparable to those previously declared. Any declarations of dividends and the establishment of future record and payment dates are subject to the final determination of the Company's Board of Directors. The risk-free interest rate was determined by reference to the U.S. Treasury yield curve rates with the remaining term commensurate with the expected life assumed at the date of grant. Forfeitures are recorded as adjustments to expense as they occur.

The Company did not grant any options during the years ended December 31, 2018, 2017 and 2016. Stock option activity is as follows:

	Number of Shares Outstanding	Weighted- Average Exercise Price	Weighted- Average Grant-date Fair Value of Underlying Common Stock	Weighted- Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (in thousands)
Balance at January 1, 2018	1,313,310	\$ 7.47		5.4	\$ 9,895
Stock options granted	—	\$ —	\$ —		
Stock options exercised	(258,921)	\$ 7.01			
Stock options cancelled	(197,305)	\$ 7.36			
Balance at December 31, 2018	857,084	\$ 7.63		4.3	\$ 5,616
Exercisable at December 31, 2018	701,742	\$ 7.63		4.1	\$ 4,600
Vested and expected to vest at December 31, 2018	857,084	\$ 7.63		4.3	\$ 5,616

As of December 31, 2018, there is \$0.6 million of total unrecognized compensation expense related to unvested stock options, and this expense is expected to be recognized over a weighted-average period of 0.5 years.

The aggregate intrinsic value in the table above represents the total intrinsic value (the difference between the fair value of the Company's common stock and the exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their options. This amount is subject to change based on changes to the fair market value of the Company's common stock. The total intrinsic value of options exercised during the years ended December 31, 2018, 2017 and 2016 was \$1.2 million, \$4.2 million, and \$7.7 million, respectively.

Restricted Stock Units

In November 2014, the Company began issuing RSUs pursuant to the 2007 Plan. The Company uses the fair market value of the underlying common stock on the date of grant to determine the fair value of RSUs. The RSUs vest upon the satisfaction of both a service condition and a liquidity condition. The service condition for these awards is satisfied over five years. The liquidity condition is satisfied upon the occurrence of a qualifying event, defined as a change of control transaction or six months following

13. STOCK-BASED COMPENSATION (Continued)

the completion of the Company's IPO. As of December 31, 2014, no stock-based compensation expense had been recognized for these RSUs because the qualifying events (described above) had not occurred. This six-month period following the IPO is not a substantive service condition and, accordingly, in 2015, the year in which the Company consummated its IPO, the Company recognized cumulative stock-based compensation expense for the portion of the RSUs that had met the service condition as of that date, following the straight-line method, net of estimated forfeitures. All remaining unrecognized stock-based compensation expense related to these RSUs is recorded over the remaining requisite service period using the straight-line method.

During 2015, the Company began granting RSUs to employees pursuant to the 2015 Plan. These awards vest ratably over five years on each anniversary of the grant date. Upon vesting, the Company will deliver to the holder shares of the Company's Class A common stock under the 2015 Plan. In 2017, the Company began issuing RSUs to non-employee directors. These awards fully vest upon the one-year anniversary of the award grant date, subject to continued service as a director through the vesting date. Upon vesting, the Company will deliver to the holder shares of the Company's Class A common stock unless a deferral election has been made under certain circumstances. Pursuant to the terms of the awards, any unvested shares terminate upon the RSU holders' separation from the Company. The Company recognizes stock-based compensation expense ratably over the requisite service period and records adjustments related to forfeitures as they occur.

A summary of RSU activity is as follows:

	Number of RSUs	Weighted Average Fair Value Per Unit
RSUs granted and unvested at January 1, 2018	220,938	\$ 19.94
RSUs granted during 2018	101,454	10.35
RSUs vested during 2018	(95,690)	19.14
RSUs forfeited during 2018	(34,834)	21.50
RSUs granted and unvested at December 31, 2018	<u>191,868</u>	<u>\$ 14.98</u>

The weighted-average fair value of RSUs granted during the years ended December 31, 2018, and 2017 was \$10.35 and \$13.70, respectively. There were no RSUs granted during the year ended December 31, 2016. During the years ended December 31, 2018 and 2017, these awards had an aggregate grant date fair value of \$1.1 million and \$0.6 million, respectively. The total fair value of RSUs vested during the years ended December 31, 2018, 2017 and 2016 was \$1.1 million, \$1.3 million and \$1.5 million, respectively. As of December 31, 2018, there was a total of \$1.7 million in unrecognized compensation cost related to unvested RSUs, which are expected to be recognized over a weighted-average period of approximately 0.8 years.

Restricted Stock Awards

During 2015, the Company began granting RSAs pursuant to the 2015 Plan. RSAs granted to directors fully vest upon the one year anniversary of the award grant date. RSAs granted to employees vest over two to five years either ratably on each anniversary of the grant date or cliff vest at the end of the vest period. Upon vesting, the Company will deliver shares of the Company's Class A common stock to the holders. Pursuant to the terms of the awards, any unvested shares terminate upon the RSA holders' separation from the Company. The Company recognizes stock-based compensation expense for the RSAs following the straight-line method over the requisite service period. The Company records adjustments related to forfeitures as they occur.

In March 2017, the Company began issuing RSAs with performance conditions under the 2015 Plan. The awards have vesting conditions tied to the achievement of specified performance conditions, which have target performance levels that span from three to five years. Upon the conclusion of the performance period, the performance level achieved will be measured and the ultimate number of shares that vest will be determined. Stock-based compensation expense for these awards is recorded either ratably over the vesting period or based on a graded vest method, depending on the specific terms of the award and the probability of achievement of the specified performance conditions. During 2018, the Company granted 2.6 million RSAs, of which 0.4 million had performance vesting conditions.

13. STOCK-BASED COMPENSATION (Continued)

A summary of RSA activity is as follows:

	Number of RSAs	Weighted Average Fair Value Per Unit
RSAs granted and unvested at January 1, 2018	4,601,632	\$ 13.43
RSAs granted during 2018	2,571,839	11.12
RSAs vested during 2018	(758,277)	13.57
RSAs forfeited during 2018	(1,475,775)	12.87
RSAs granted and unvested at December 31, 2018	<u>4,939,419</u>	<u>\$ 12.37</u>

The weighted-average fair value of an RSA granted during the years ended December 31, 2018, 2017 and 2016 was \$11.12, \$12.64 and \$13.81, respectively. During the years ended December 31, 2018, 2017 and 2016, these awards had an aggregate grant date fair value of \$28.6 million, \$33.5 million and \$36.9 million, respectively. The total fair value of RSAs vested during the years ended December 31, 2018, 2017 and 2016 was \$8.6 million, \$9.3 million and \$3.0 million, respectively. As of December 31, 2018, there was a total of \$52.6 million in unrecognized compensation cost related to unvested RSAs, which are expected to be recognized over a weighted-average period of approximately 3.4 years.

Employee Stock Purchase Plan

On February 18, 2015, the date of the completion of the Company's IPO, the 2015 Employee Stock Purchase Plan ("2015 ESPP") became effective. The 2015 ESPP provides (i) for six months purchase periods (commencing each March 1 and September 1) and (ii) that the purchase price for shares of Class A common stock purchased under the 2015 ESPP will be 85% of the fair market value of the Company's Class A common stock on the last day of the applicable offering period. Eligible employees are able to select a rate of payroll deduction between 1% and 15% of their base cash compensation subject to a maximum payroll deduction per offering period of \$7,500. The 2015 ESPP is intended to qualify as an employee stock purchase plan under Section 423 of the Code. The Company reserved 1,833,857 shares of Class A common stock for issuance under the 2015 ESPP. The following table summarizes the ESPP activity during the years shown:

	Year Ended December 31,		
	2018	2017	2016
Shares purchased and issued	90,084	49,247	61,184
Weighted average discounted price per share	\$ 9.74	\$ 11.08	\$ 14.03
Stock-based compensation expense (in thousands)	\$ 141	\$ 154	\$ 140

14. EMPLOYEE BENEFIT PLANS

On June 1, 2007, the Company adopted a 401(k) Profit Sharing Plan and Trust ("401(k) Plan"). The 401(k) Plan was amended on February 1, 2010. The amended 401(k) Plan allows employees to become eligible to participate upon the completion of 30 days of service. The Company matches employee contributions up to 4.0% of their compensation and the employer contributions vest immediately.

During the years ended December 31, 2018, 2017, and 2016, total expense recorded for the Company's matching 401(k) contributions were \$6.3 million, \$5.2 million, and \$5.2 million, respectively.

15. STOCKHOLDERS' EQUITY

On May 4, 2016, the Company announced that its Board of Directors authorized a program to repurchase up to \$100.0 million of Inovalon's Class A common stock through December 31, 2017. Repurchases under the Company's share repurchase program have been made in open-market or privately negotiated transactions. The Company funded repurchases through a combination of cash on hand, cash generated by operations and sales of short-term investments, if needed. On November 2, 2016, the Company announced that its Board of Directors authorized an expansion of the share repurchase program to repurchase up to an additional \$100.0 million of shares of Inovalon's Class A Common Stock (bringing the total to \$200.0 million) through December 31, 2017. The share repurchase program did not obligate the Company to acquire any particular amount of Class A common stock. During the years ended December 31, 2017 and 2016, the Company repurchased 7,111,190 and 7,508,985 Class A common shares for \$93.6 million and \$106.2 million, respectively, at an average cost of \$13.16 and \$14.15 per share, respectively, excluding commissions. The share repurchase program expired on December 31, 2017 and there were no repurchases during 2018.

Inovalon Holdings, Inc.
Notes to Consolidated Financial Statements (Continued)

16. INCOME TAXES

The provision for income taxes consisted of the following (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Current:			
Federal ⁽¹⁾	\$ (2,113)	\$ 2,272	\$ 7,747
State	215	2,162	5,788
Total current (benefit) provision	(1,898)	4,434	13,535
Deferred:			
Federal	(8,009)	(8,333)	(1,533)
State	(4,486)	1,668	(207)
Total deferred benefit	(12,495)	(6,665)	(1,740)
Total (benefit from) provision for income taxes	\$ (14,393)	\$ (2,231)	\$ 11,795

(1) As of December 31, 2018, the current income tax benefit reflects the recognition of a \$2.1 million income tax receivable from amended federal income tax returns to carry back the net operating loss and tax credits generated in 2017 and refundable alternative minimum tax credit.

The provision for income taxes reconciles to the amount computed by applying the federal statutory rate, 21.0%, to income before income taxes as follows (in thousands, except percentages):

	Year Ended December 31,					
	2018		2017		2016	
Expected federal income tax	21.0 %	\$ (11,247)	35.0 %	\$ 11,406	35.0 %	\$ 13,650
State income taxes, net of federal income tax effect	8.0 %	(4,270)	8.0 %	2,606	7.4 %	2,859
Permanent items	1.1 %	(614)	0.3 %	88	(0.9)%	(357)
Research and development tax credits	1.6 %	(850)	(2.6)%	(850)	(1.9)%	(756)
Excess tax benefits and stock-based compensation	(1.0)%	559	(0.7)%	(243)	(3.0)%	(1,165)
Acquisition-related tax adjustments	(2.1)%	1,144	(1.4)%	(445)	(4.3)%	(1,686)
Enactment of the Tax Act	— %	—	(47.4)%	(15,461)	— %	—
Other	(1.7)%	885	2.0 %	668	(2.0)%	(750)
Income tax expense	26.9 %	\$ (14,393)	(6.8)%	\$ (2,231)	30.3 %	\$ 11,795

In December 2017, the Tax Act was enacted which included a number of changes to existing U.S. tax laws that impact the Company, most notably a reduction of the U.S. corporate income tax rate from 35% to 21% for tax years beginning after December 31, 2017. The Tax Act also provided for the acceleration of depreciation for certain assets placed into service after September 27, 2017 and prospective changes beginning in 2018, including repeal of the domestic manufacturing deduction, acceleration of tax revenue recognition, capitalization of research and development expenditures, additional limitations on executive compensation and limitations on the deductibility of interest. As a result of the reduction in the U.S. corporate income tax rate from 35% to 21% under the Tax Act, the Company revalued its ending net deferred tax liabilities at December 31, 2017 and recognized a \$15.5 million tax benefit in the Company's consolidated statement of operations for the year ended December 31, 2017. The Company completed its accounting for the income tax effects of the Tax Act in 2017.

16. INCOME TAXES (Continued)

Deferred income taxes reflect the net 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 the Company's deferred tax assets and liabilities were as follows (in thousands):

	December 31,	
	2018	2017
Components of deferred tax assets and liabilities		
Deferred tax assets:		
Net operating loss carryforwards	\$ 17,258	\$ 2,654
Interest expense carryforwards	11,278	—
Accrued expenses and reserves	4,571	313
Stock-based compensation	3,553	3,040
Unrealized gains and losses in other comprehensive income	3,200	257
Tax credit carryforwards	3,114	217
Deferred rent	1,263	581
Other	1,371	284
Total deferred tax assets	<u>45,608</u>	<u>7,346</u>
Deferred tax liabilities:		
Intangibles	127,272	9,568
Property, equipment and capitalized software	26,612	21,564
Prepays and other	2,092	2,639
Total deferred tax liabilities	<u>155,976</u>	<u>33,771</u>
Net deferred tax liabilities before valuation allowance	<u>110,368</u>	<u>26,425</u>
Valuation Allowance	301	217
Net deferred tax liabilities	<u>\$ 110,669</u>	<u>\$ 26,642</u>

As of December 31, 2018, the Company has U.S. federal and state net operating loss carryforwards of approximately \$10.7 million and \$8.3 million, respectively. The majority of the U.S. federal net operating loss carryforwards will not expire and the majority of the state net operating losses will expire by 2038. As of December 31, 2018, the Company has interest expense carryforwards of approximately \$11.3 million that can be carried forward indefinitely. As of December 31, 2018, the Company has U.S. federal and state tax credit carryforwards of approximately \$3.1 million and \$0.5 million, respectively, gross of any uncertain tax position considerations. The tax credit carryforwards will expire between 2022 and 2038. Change of control provisions as defined in Section 382 of the Internal Revenue Code have been analyzed and are not expected to materially limit the Company's use of the interest expense, net operating loss, or tax credit carryforwards.

Uncertain Tax Positions—During the years ended December 31, 2018, 2017, and 2016, changes in the liability for gross uncertain tax position, including interest were \$1.2 million, \$0.1 million, and \$0.1 million, respectively. The interest and penalties related to uncertain tax positions are classified as a component of income tax expense.

The following table presents the changes in uncertain tax position (in thousands).

	2018	2017	2016
Uncertain tax position			
January 1	\$ —	\$ 80	\$ —
Gross increase in tax positions in prior period	32	291	80
Gross decrease in tax positions in prior period	(1)	(160)	—
Gross increase in tax positions from acquisitions	1,162	—	—
Settlement	—	(211)	—
Lapse of statute of limitations	(35)	—	—
Uncertain tax position at December 31	<u>\$ 1,158</u>	<u>\$ —</u>	<u>\$ 80</u>

16. INCOME TAXES (Continued)

If the uncertain tax positions were to be resolved favorably, total uncertain tax position in an amount of approximately \$1.2 million would reduce income tax expense and the Company's effective tax rate in the future. While it is reasonably possible that the amount of the unrecognized tax benefits could increase or decrease during the next twelve months, we believe it is unlikely that the change would be a material amount.

While the Company believes it has adequately provided for all tax positions, amounts asserted by taxing authorities could differ from the Company's accrued position. Accordingly, additional provisions on federal, state and foreign tax-related matters could be recorded in the future as revised estimates are made or the underlying matters are settled or otherwise resolved.

The Company is subject to taxation by the United States of America, various United States of America jurisdictions, and Puerto Rico. The number of years with open tax audits varies depending on the tax jurisdiction.

INOVALON HOLDINGS, INC.
Schedule II
Valuation and Qualifying Accounts and Reserves
(in thousands)

	Allowance for Accounts Receivable				
	Balance at Beginning of Year	Additions Charged Against Revenue	Additions Charged to Cost and Expense	Deductions	Balance at End of Year
Year Ended December 31, 2018	\$ 2,038	\$ 3,039	\$ 3,520	\$ (5,247)	\$ 3,350
Year Ended December 31, 2017	\$ 3,782	\$ 8,886	\$ —	\$ (10,630)	\$ 2,038
Year Ended December 31, 2016	\$ 1,022	\$ 3,792	\$ —	\$ (1,032)	\$ 3,782

CERTIFICATION

I, Keith R. Dunleavy, M.D., certify that:

1. I have reviewed this Annual Report on Form 10-K of Inovalon Holdings, 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.

/s/ KEITH R. DUNLEAVY, M.D.

Keith R. Dunleavy, M.D.

Chief Executive Officer & Chairman

(Principal Executive Officer)

Date: February 20, 2019

CERTIFICATION

I, Jonathan R. Boldt, certify that:

1. I have reviewed this Annual Report on Form 10-K of Inovalon Holdings, 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.

/s/ JONATHAN R. BOLDT

Jonathan R. Boldt

Chief Financial Officer

(Principal Financial Officer & Principal Accounting Officer)

Date: February 20, 2019

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

In connection with the Annual Report of Inovalon Holdings, Inc. (the "Company") on Form 10-K for the period ended December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Keith R. Dunleavy, M.D., the Chief Executive Officer and Chairman of the Company, certify, to my knowledge, pursuant to 18 U.S.C. §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 Section 15(d) of the Securities Exchange Act of 1934, as amended; 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/ KEITH R. DUNLEAVY, M.D.

Keith R. Dunleavy, M.D.

Chief Executive Officer & Chairman

(Principal Executive Officer)

Date: February 20, 2019

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

In connection with the Annual Report of Inovalon Holdings, Inc. (the "Company") on Form 10-K for the period ended December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jonathan R. Boldt, Chief Financial Officer of the Company, certify, to my knowledge, pursuant to 18 U.S.C. §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 Section 15(d) of the Securities Exchange Act of 1934, as amended; 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/ JONATHAN R. BOLDT

Jonathan R. Boldt

(Principal Financial Officer & Principal Accounting Officer)

Date: February 20, 2019

NON-GAAP RECONCILIATION

The following table presents a reconciliation of net (loss) income to Adjusted EBITDA for each of the periods indicated.

	Year Ended December 31,				
	2018	2017	2016	2015	2014
	(in thousands)				
Reconciliation of Net (loss) income to Adjusted EBITDA:					
Net (loss) income	\$ (39,164)	\$ 34,818	\$ 27,104	\$ 66,063	\$ 65,352
Depreciation and amortization	96,725	53,089	37,284	22,633	19,880
Interest income	(2,181)	(5,429)	(5,792)	(3,003)	(6)
Interest expense	50,898	6,225	5,065	4,420	1,336
Other expense, net	2,255	406	(538)	328	—
(Benefit from) Provision for income taxes	(14,393)	(2,231)	11,795	48,648	43,379
EBITDA	94,140	86,878	74,918	139,089	129,941
Stock-based compensation	16,162	17,318	10,054	7,415	2,894
Acquisition costs:					
Transaction costs	6,654	1,177	1,622	1,483	—
Integration costs	6,788	1,805	—	—	—
Contingent consideration accretion	7,306	(5,200)	706	—	—
Compensatory contingent consideration	1,674	1,966	10,258	2,938	—
Restructuring expense	9,500	—	—	—	—
Tax on equity exercises	—	32	127	697	—
Other non-comparable items ⁽¹⁾	9,721	5,038	2,259	—	—
Professional service fees ⁽²⁾	—	—	—	—	813
Adjusted EBITDA	\$ 151,945	\$ 109,014	\$ 99,944	\$ 151,622	\$ 133,648
Adjusted EBITDA margin	28.8%	24.3%	23.4%	34.7%	37.0%

(1) Other "non-comparable items" include items that are not comparable across reporting periods or items that do not otherwise relate to the Company's ongoing financial results, such as certain employee related expenses attributable to advancements in automation and operational efficiencies, and legal expenses beyond those in the normal course of business. Non-comparable items are excluded from Adjusted EBITDA in order to more effectively assess the Company's period over period and ongoing operating performance.

(2) Represents legal costs associated with the enforcement of a specific client contract. The legal process associated with this matter began in the first quarter of 2013 and concluded in the second quarter of 2014.

The following table presents a reconciliation of net (loss) income to Non-GAAP net income for each of the periods indicated.

	Year Ended December 31,				
	2018	2017	2016	2015	2014
	(in thousands)				
Reconciliation of Net (loss) income to Non-GAAP net income:					
Net (loss) income	\$ (39,164)	\$ 34,818	\$ 27,104	\$ 66,063	\$ 65,352
Stock-based compensation	16,162	17,318	10,054	7,415	2,894
Acquisition costs:					
Transaction costs	6,654	1,177	1,622	1,483	—
Integration costs	6,788	1,805	—	—	—
Contingent consideration accretion	7,306	(5,200)	706	—	—
Compensatory contingent consideration	1,674	1,966	10,258	2,938	—
Amortization of acquired intangible assets	43,983	15,236	9,206	3,412	4,368
Amortization of debt issuance costs and debt discount	3,138	—	—	—	—
Restructuring expense	9,500	—	—	—	—
Tax on equity exercises	—	32	127	697	—
Other non-comparable items ⁽¹⁾	9,721	5,038	2,259	—	—
Professional service fees ⁽²⁾	—	—	—	—	813
Tax impact of add-back items	(26,441)	(14,949)	(10,383)	(6,656)	(3,222)
Tax Act benefit	—	(15,461)	—	—	—
Non-GAAP net income	\$ 39,321	\$ 41,780	\$ 50,953	\$ 75,352	\$ 70,205

(1) Other "non-comparable items" include items that are not comparable across reporting periods or items that do not otherwise relate to the Company's ongoing financial results, such as certain employee related expenses attributable to advancements in automation and operational efficiencies, and legal expenses beyond those in the normal course of business. Non-comparable items are excluded from Adjusted EBITDA in order to more effectively assess the Company's period over period and ongoing operating performance.

(2) Represents legal costs associated with the enforcement of a specific client contract. The legal process associated with this matter began in the first quarter of 2013 and concluded in the second quarter of 2014.

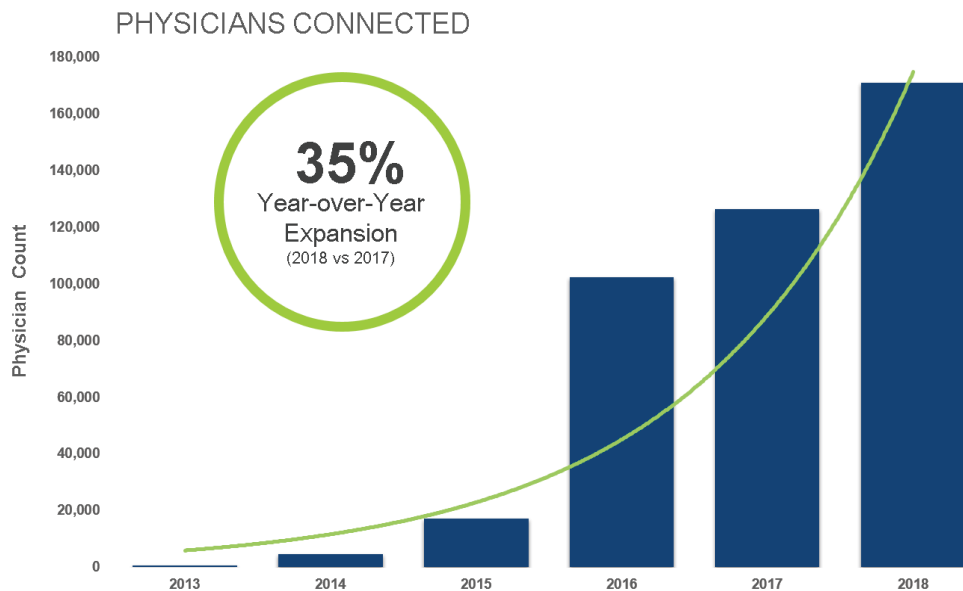
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Please see the Company's filings with the Securities and Exchange Commission (SEC), including the Form 10-K filed on February 20, 2019, for further information on this and other key metrics.

BROAD PROVIDER CONNECTIVITY



- Inovalon's dynamic connect, **real-time EHR connectivity** continues to expand rapidly, enabling highly differentiated aggregation of data and point-of-care interoperability with a growing portion of the healthcare ecosystem.
- By the end of Q4 2018, Inovalon's direct EHR connectivity had grown to **more than 170,000 physicians**, a year-over-year increase of **35%**.

2014 through 2018 figures are as of December 31 for each respective year.

CORPORATE INFORMATION

HEADQUARTERS

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McLean, Virginia 22102
Phone: 703-251-1000

STOCKHOLDER INQUIRIES

Inquiries from stockholders and other interested parties regarding our company are always welcome. Please direct your request to:

Investor Relations
4321 Collington Road
Bowie, Maryland 20716
Phone: 301-809-4000
invalonshareholder@inovalon.com

FORWARD-LOOKING STATEMENTS

This presentation includes forward-looking statements, as defined by the Private Securities Litigation Reform Act of 1995, which involve risks and uncertainties, including those relating to our future success and growth prospects. Please see our accompanying Form 10-K included in this Annual Report to stockholders for a discussion of risk factors that could negatively affect these expectations.

STOCK TRANSFER AGENT

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WEBSITE

www.amstock.com

STOCK LISTING

Our common stock is listed on the Nasdaq Stock Exchange under the symbol INOV.

INOV
Nasdaq Listed

ANNUAL MEETING

The 2019 annual meeting of stockholders will be held on Wednesday, June 5th, 2019 at 10 a.m. ET at The Jefferson, Washington, DC located at 1200 16th St NW Washington, DC 20036.



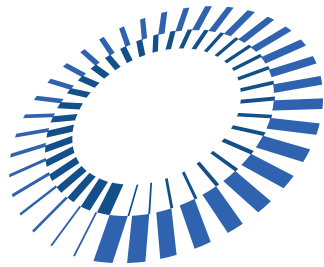
HEADQUARTERS

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