



Inovalon Holdings, Inc., 2019 Annual Report



A leading provider of cloud-based platforms
empowering data-driven healthcare informed
by more than:

53,000,000,000

Medical Events*

314,000,000

Unique Patients

988,000

Physicians

552,000

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, 2019



'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

'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.

And 'On' communicates a strong call to action.

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

2019 AT-A-GLANCE

REVENUE
\$642.4M

ADJUSTED EBITDA
\$210.7M

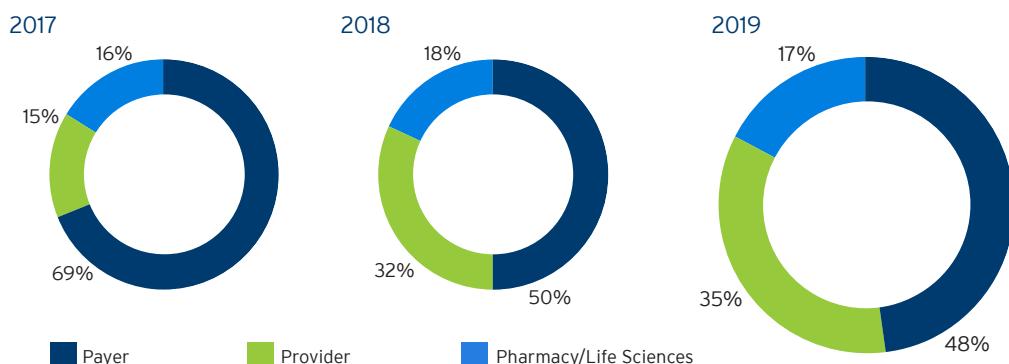
FINANCIAL HIGHLIGHTS

Year Ended December 31,

\$ in thousands	2019	2018	2017	2016	2015
Revenue	\$ 642,410	\$ 527,676	\$ 449,358	\$ 427,588	\$ 437,271
Cost of revenue	\$ 167,814	\$ 144,826	\$ 151,046	\$ 159,169	\$ 146,140
Income (Loss) from operations	\$ 69,487	(\$ 2,585)	\$ 33,789	\$ 37,634	\$ 116,456
Net income (loss)	\$ 7,775	(\$ 39,164)	\$ 34,818	\$ 27,104	\$ 66,063
Adjusted EBITDA ⁽¹⁾	\$ 210,671	\$ 151,945	\$ 109,014	\$ 99,944	\$ 151,622
Adjusted EBITDA margin ⁽¹⁾	33%	29%	24%	23%	35%
Non-GAAP net income ⁽¹⁾	\$ 77,486	\$ 39,321	\$ 41,780	\$ 50,953	\$ 75,352
Net cash provided by operating activities	\$ 106,480	\$ 90,401	\$ 97,706	\$ 92,830	\$ 67,554
Investment in innovation ⁽²⁾	\$71,850	\$ 79,639	\$ 85,814	\$ 62,430	\$ 47,783

ADJACENT MARKET EXPANSION

Demand for Inovalon's cloud-based platforms and data-driven capabilities is driving expansion across each of the healthcare ecosystem segments – payer, provider, pharmacy, and life sciences – resulting in strong diversification of revenue and an expanding number and scale of cross-synergy opportunities.



- Strong payer base with dominance of Medicare Advantage
- Strong scaling of pharma demand
- Seeing strong demand for platform applications within the provider and device landscapes

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

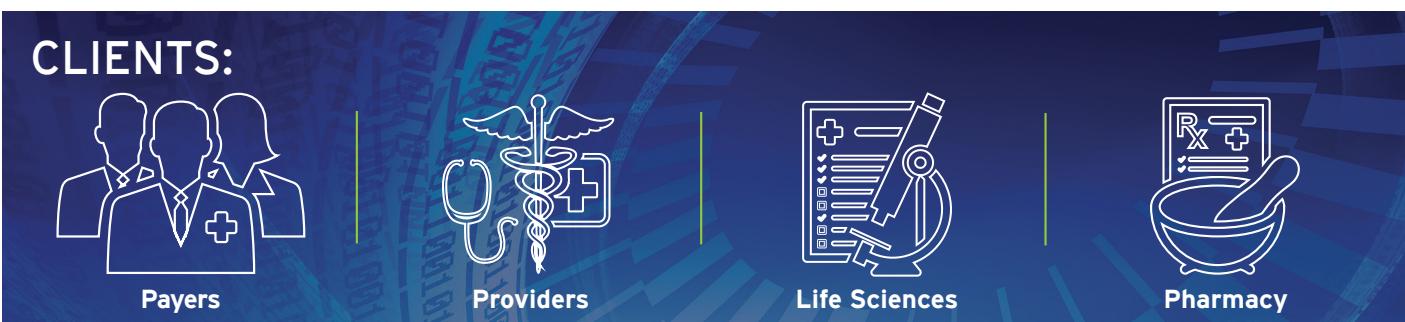
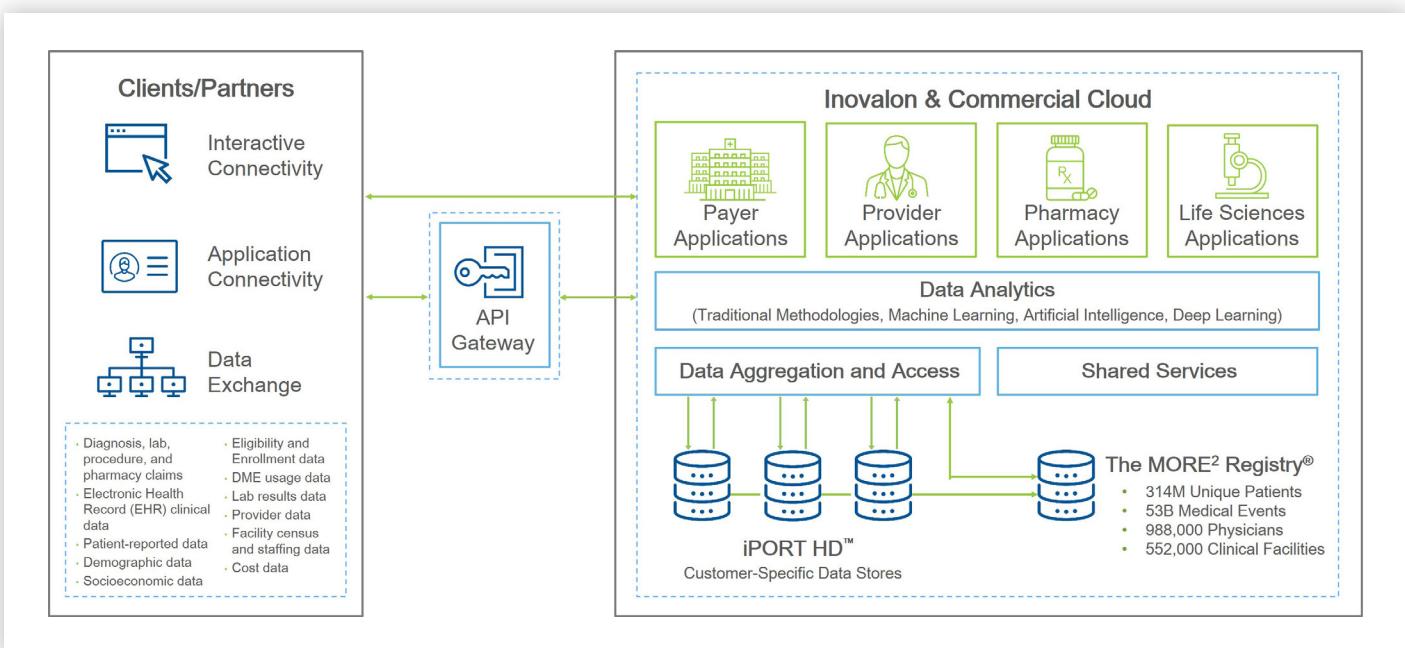
(1) For a reconciliation to the most directly comparable GAAP measures refer to the tables in the back of the Annual Report for the year ended December 31, 2019.
(2) For a definition of investment in innovation and the component make-up refer to page 35 of the Annual Report for the year ended December 31, 2019.

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 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 cloud-based platform of nearly 100 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, referred to as a Module, is informed by the data of billions of medical events within Inovalon's proprietary datasets. Combinations of Modules are configured to empower highly differentiated solutions for client needs quickly and in a highly scalable fashion.

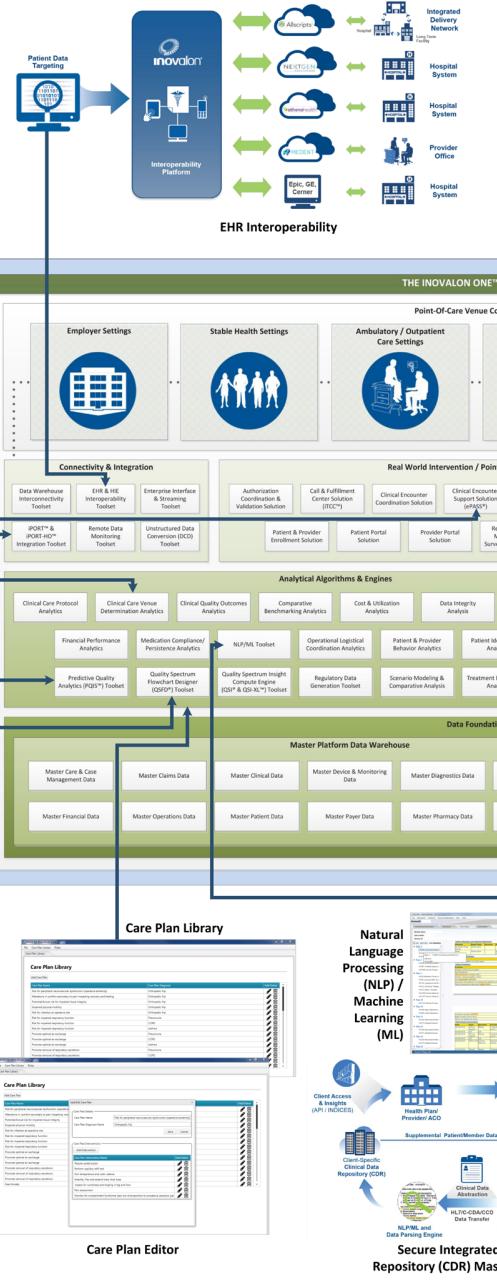


THE INOVALON ONE® PLATFORM

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, Employees, Clients and Partners,

As we close the decade, begin a new one, and reflect on 2019, I am proud of the many positive accomplishments we have achieved together. Among these many accomplishments is the successful progression of our multi-year transformation to the cloud that provides the foundation for our growth in 2020 and beyond. Today, we are not only leading our own transformation but the transformation of the broader ecosystem as we empower data-driven healthcare across the country with the thousands of organizations we are proud to have as clients and partners.

In the workplace, at home and around the world, we see a growing number of examples every day reflecting the importance of data-driven healthcare and the value of connectivity in the cloud. For years now, I have outlined in these letters our investment in the capabilities of the Inovalon ONE® Platform and our focus on becoming the enablement layer empowering data-driven healthcare for our clients. Every computational process that Inovalon has moved into cloud environments, every piece of software that the Company has designed to allow for our associates or our clients to do their jobs and achieve value impact from remote locations, and every EHR to which the Company has connected, have all been investments in our differentiation and value impact. These advancements also serve as investments in our ability to seamlessly operate and deliver meaningful value through a myriad of operating environments for our clients.

2019 was a great demonstration of the Company's capabilities on many levels. You can see these efforts and accomplishments shine through in our client growth, recurring subscription-based revenue growth, primary source dataset growth, platform advancements, and overall financial results. In comparison to 2018, revenue increased 22% to \$642.4 million, Gross margin increased 130 basis points to 73.9%, Adjusted EBITDA increased 39% to \$210.7 million, Adjusted EBITDA margin increased 400 basis points to 33%, Non-GAAP net income per share increased 93% to \$0.52 per diluted share, and Free Cash Flow increased 87% to \$47.5 million.

The returns on our cloud innovation and sales organization investments are also reflected in the 111 new clients added to the Inovalon ONE® Platform throughout the

year and our new sales Annual Contract Value (ACV) growth in the Fourth Quarter of 2019, which was \$73.5 million, representing a 60% year-over-year increase. Recurring subscription-based platform revenue at year-end stood at 83% of total revenue, compared to 54% in 2016, reflecting the strong, growing adoption of Inovalon's platform and client-engagement model, and driving more predictable long-term revenue growth. Impressively, since 2016, when the Company began its transformation to a cloud-based platform model, recurring subscription-based platform revenue has grown 27% on a compound annual growth rate basis.

At the core of Inovalon's value proposition is the MORE² Registry®, which now contains more than 314 million unique patient counts and 53 billion medical event counts, an increase of 19% and 24% year over year, respectively, making it by far the largest primary source healthcare dataset of its kind in the country. This unparalleled data asset empowers and informs Inovalon's industry-leading analytics and artificial intelligence, resulting in meaningful differentiation and enabling significant client value achievement across many capabilities of the Inovalon ONE® Platform portfolio.

It is Inovalon's core belief that the application of data and its analysis is having a transformative impact on healthcare. Leveraging the power of data, the efficiency, scalability, and reach of cloud-based technologies and an industry-leading bench depth of subject matter expertise, Inovalon continues its history of innovation, empowering its clients and delivering improved outcomes and economics across the ecosystem.

In 2019, Inovalon's innovation engine meaningfully advanced the capabilities of several cloud-based software offerings, enabling our clients to drive measurable value. Highlights included capability advancements in the Company's cloud-based pharmacy platform (ScriptMed® Cloud), cloud-based clinical data extraction (CDEaaS[®]), cloud-based natural language processing (NLPaaS[®]), and a significantly expanded number of artificial intelligence applications within the Platform. Additionally, during 2019, Inovalon moved into production its FHIR-enabled API toolset, providing data and data derivatives on-demand for cloud-based applications, allowing for real-

time availability of data and analytics on a transactional basis.

The Company is still in the early innings of a long-term secular growth trend to help our clients drive meaningful value as they move into a data-driven healthcare world in the cloud. Through our strategic investments in the capabilities of the Inovalon ONE® Platform over the years, the Company has grown its current total addressable market to more than \$160 billion. Within this opportunity, our toolsets can serve approximately \$27.0 billion, representing a nearly three-fold increase from the \$10.6 billion that we were able to serve just four years ago. And we are not stopping there. We are bringing to market the industry's most advanced, most differentiated, cloud-based software platforms, with the greatest breadth of connectivity, the deepest access to primary source data, and the most advanced analytics to empower the transformation of data-driven healthcare.

Looking ahead, Inovalon's mission to empower data-driven healthcare has never been more relevant for our clients, our employees, the country, and the world. I can say this confidently as a Founder, a CEO, a physician, a patient and a parent. We are well-positioned at this important time to help lead the data-driven transformation of the entire healthcare ecosystem – today and in the future.

As we enter 2020, we do so with significant strength, momentum, excitement, and a laser focus on driving long-term profitable revenue growth through innovation, technology leadership and fiscal prudence. I have never been more excited about the opportunities ahead for our Company and the value we can help drive for our clients, employees, partners and stockholders.

Thank you for your continued support on this incredible journey at such a meaningful time.

Kind regards,

A handwritten signature in black ink, appearing to read "Keith R. Dunleavy".

KEITH R. DUNLEAVY, M.D.
Founder, CEO, and Chairman of the Board
April, 2020

**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, 2019

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

(I.R.S. 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:

Title of Each Class	Name Of Each Exchange On Which Registered	Ticker Symbol
Class A Common Stock, \$0.000005 par value per share	NASDAQ Global Select Market	INOV

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 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, 2019, 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 \$655.7 million.

As of January 31, 2020, the registrant had 75,693,145 shares of Class A common stock outstanding and 79,369,411 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 2020 annual meeting of stockholders (the "2020 Proxy Statement"). The 2020 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, 2019

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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 new and evolving 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 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 provider of 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, 22 of the top 25 global pharma companies, 19 of the top 25 U.S. healthcare provider systems, and many of the leading pharmacy organizations, device manufacturers, and other healthcare industry constituents, Inovalon's technology platforms and analytics are informed by data pertaining to more than 988,000 physicians, 552,000 clinical facilities, 314 million Americans, and 53 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 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.

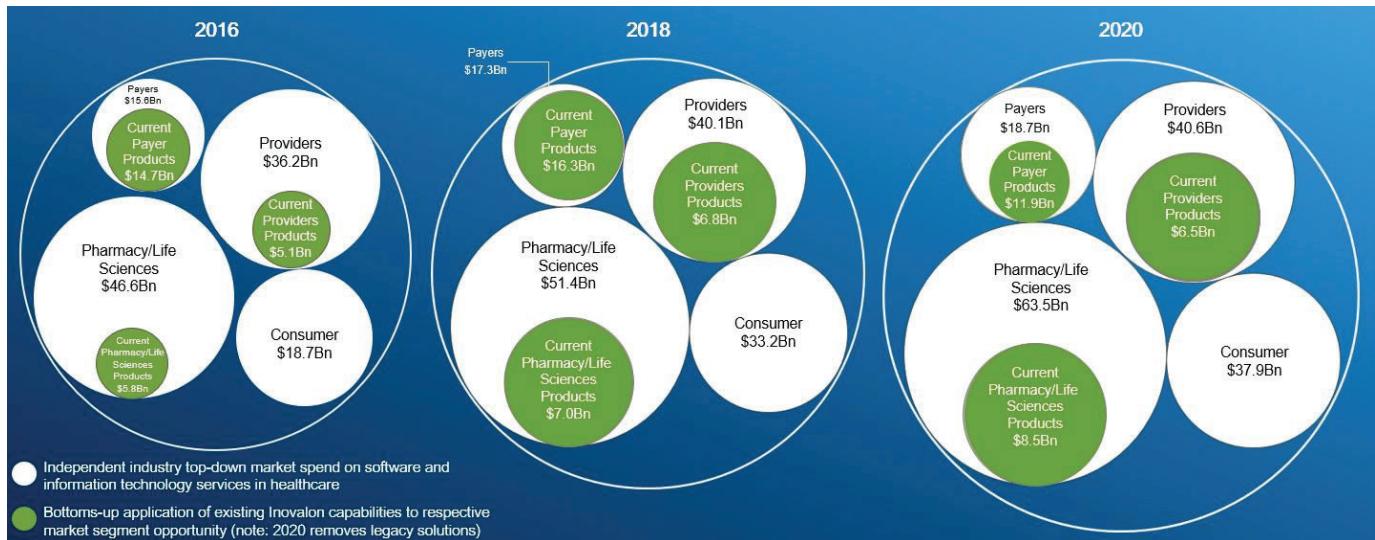
Increasing Complexity. The healthcare industry is on a course of dramatically progressive complexity. As technology employed in the healthcare space has become increasingly sophisticated, new diagnostics and treatments have been introduced, the pool of clinical research has expanded, and the paradigms 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 2018 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 4.8% in 2019, on a year-over-year basis to \$3.8 trillion, up from 4.4% growth in 2018 or \$3.6 trillion, representing 17.6% of 2018 U.S. Gross Domestic Product (“GDP”). CMS projects healthcare spending in the U.S. to increase to approximately 19.4% of GDP by 2027. 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 \$117 billion in 2016 to approximately \$161 billion in 2020. According to industry sources, the market for software and related services is approximately \$18.7 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 \$11.9 billion (excluding legacy solutions). 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 \$40.6 billion U.S. market size. We believe that the market opportunity for our current offerings within the provider market is approximately \$6.5 billion. In the pharmaceutical and life-sciences market, industry sources estimate a \$63.5 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 \$8.5 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 \$37.9 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.

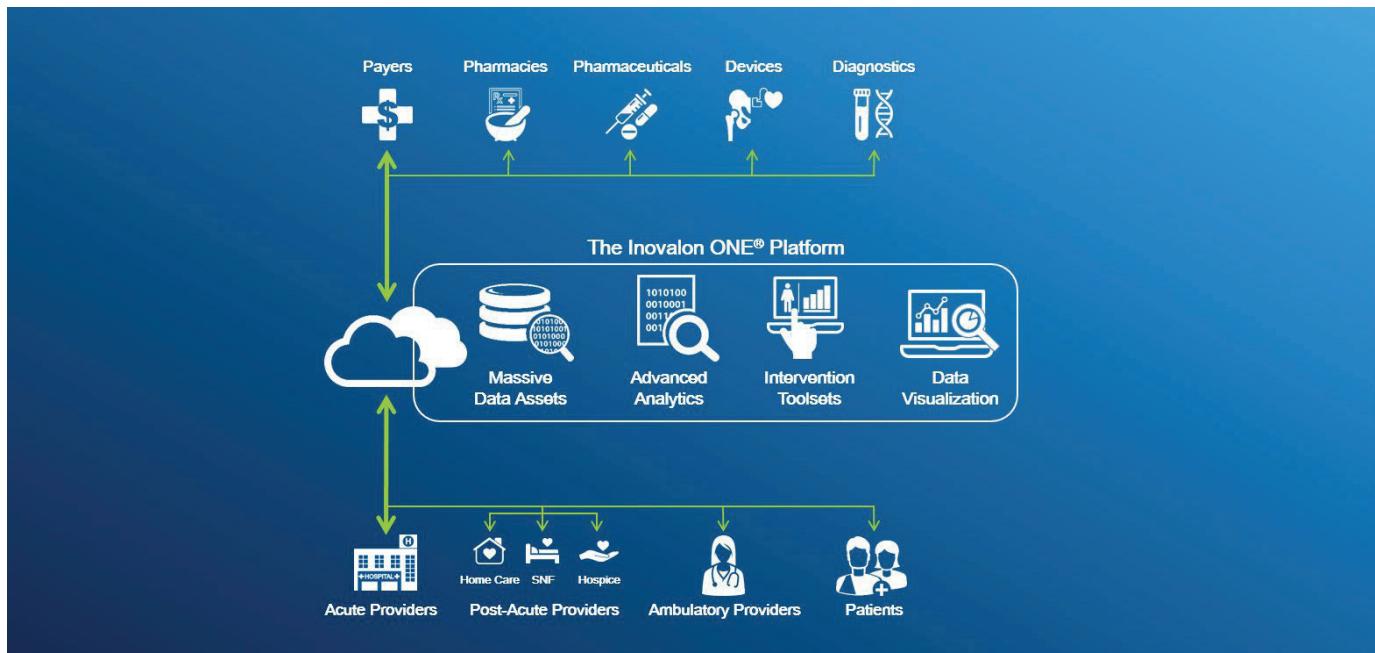


Source: Gartner, IDC, Research and Markets and Inovalon.

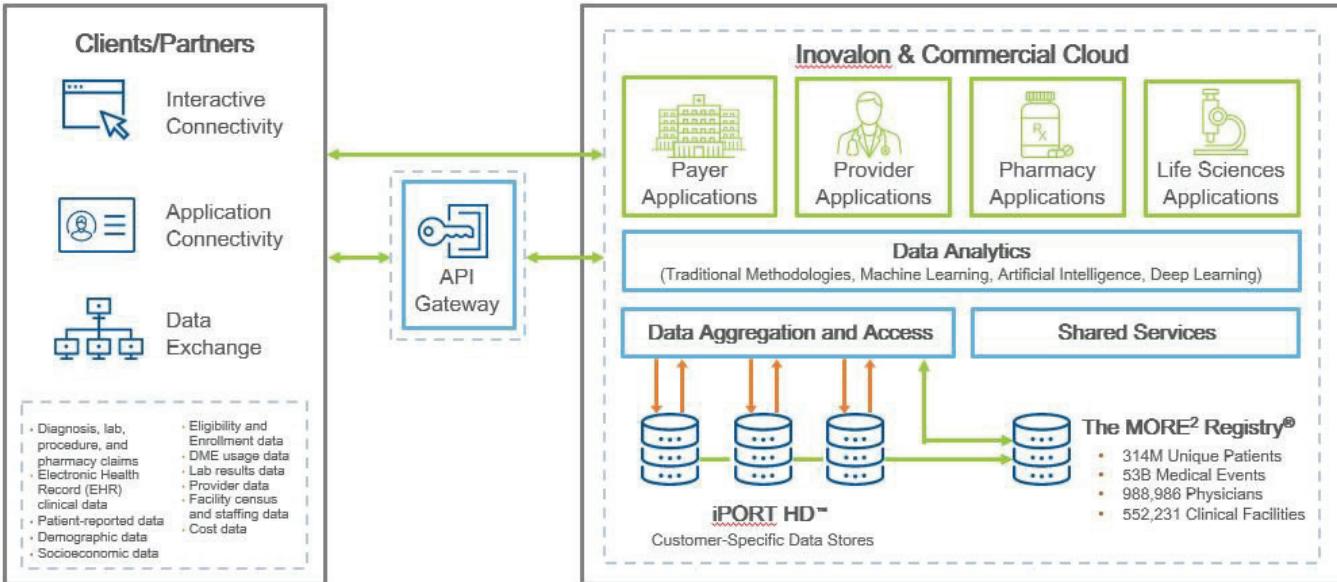
In addition, the pressures that face the U.S. healthcare market are not unique, as other communities around the world are facing aging populations and growing pressures in sustaining affordable healthcare. We believe that our capabilities are highly applicable to other developed and developing countries 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.



Inovalon provides its solutions to the marketplace through the Inovalon ONE® Platform: an integrated, real-time cloud native platform which brings together the capabilities of extensive healthcare ecosystem connectivity, massive scale datasets, advanced analytics, and data-driven intervention toolsets. Together, the capabilities of the platform enable both the efficient determination of highly meaningful insights and the reliable achievement of meaningful impact in the quality and economics of healthcare.



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.

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 proprietary 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 toolsets 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 data-driven intervention toolset 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, 2019, our MORE² Registry® dataset contained data pertaining to more

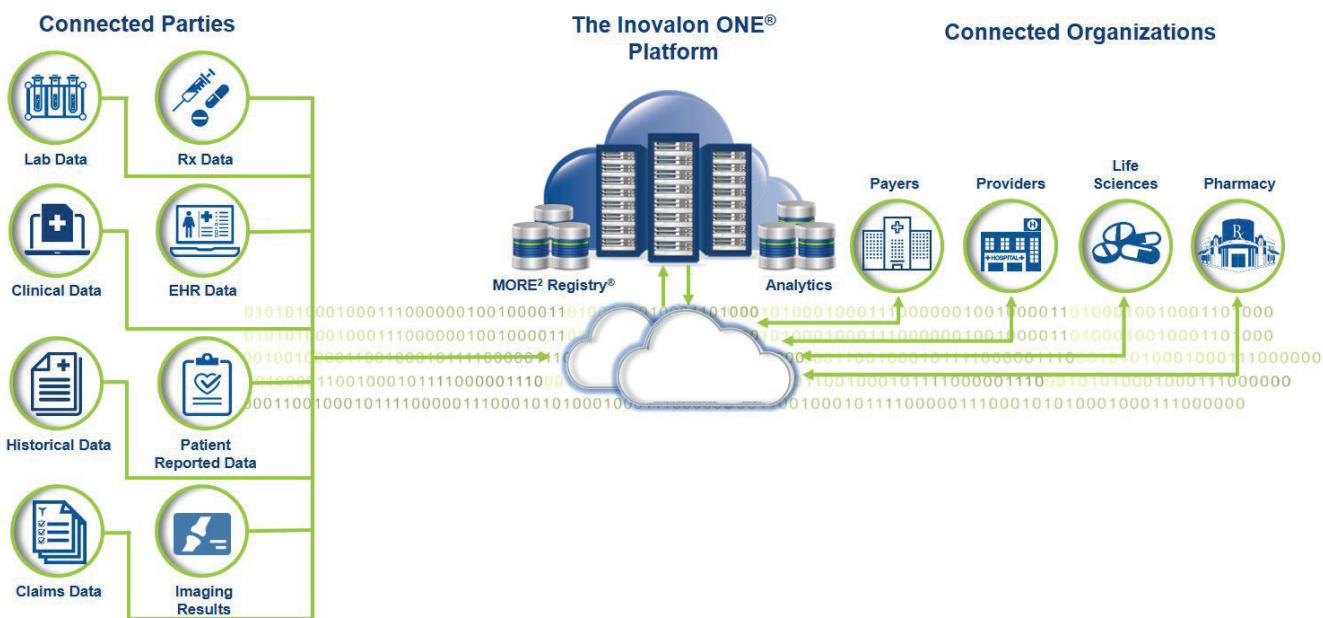
than 988,000 physicians, 552,000 clinical facilities, 314 million Americans, and 53 billion medical events. The following is a sample of components within our MORE² Registry[®]:

- 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.

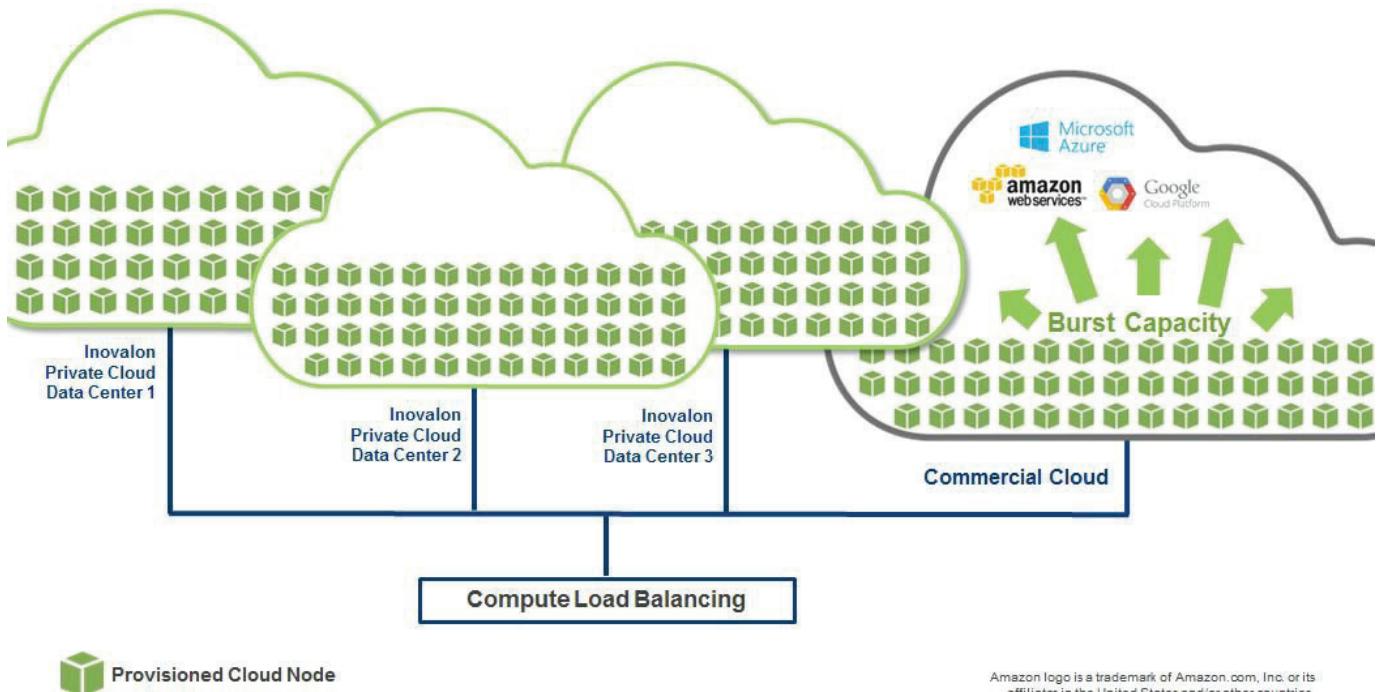


Technology Infrastructure

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.

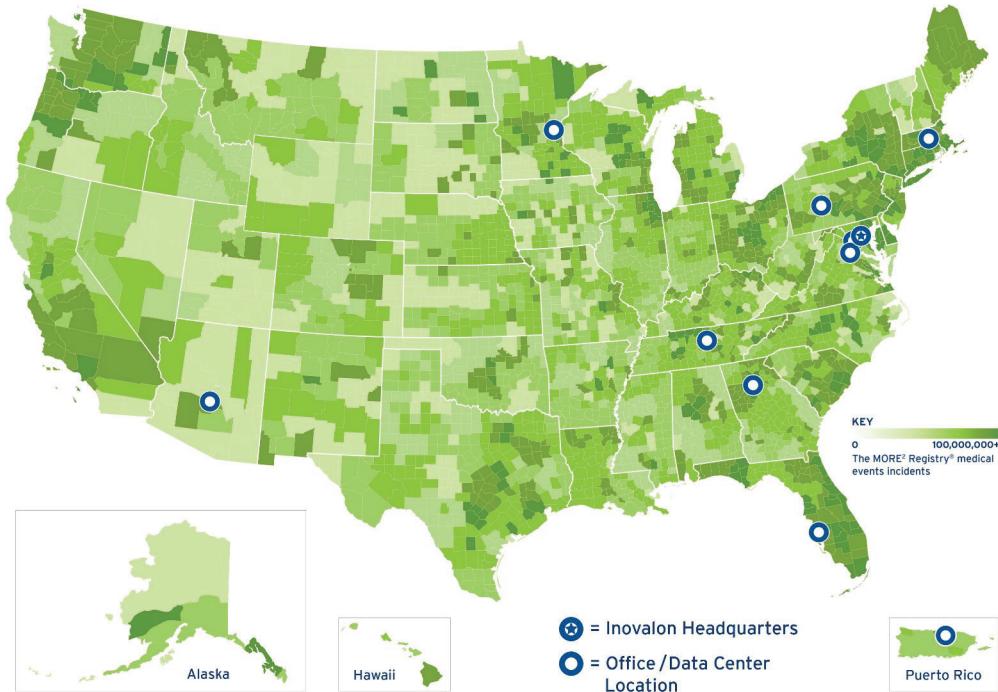
We have a proven track record of implementing virtualization as our current datacenters are over 85% virtualized using VMware technologies. Operations of the virtualization technologies are streamlined by the orchestration, automation, and reporting capabilities provided by our private cloud and integration 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 essential that information about an individual’s healthcare is properly 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 are a trusted partner to our clients, and we are committed to the security and privacy of our client data, enterprise data, and our systems, employing highly trained personnel, robust processes, and leading 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 best practices, including those of the National Institute of Standards and Technology (NIST), the Control Objectives for Information and Related Technology (COBIT), Defense Information Systems Agency, and the Federal Information Security Management Act of 2002 (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 enhanced 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 20 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 client counts for the years ended December 31, 2019, 2018 and 2017 were approximately 90%, 90%, and 88%, 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 and 2019, 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, data-driven 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 toolsets.

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 toolsets to facilitate the realization of value from our analytics. For still other clients, our service support personnel operate our data-driven intervention toolsets 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 toolset 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 intervention toolsets, 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 toolsets, 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), Cotiviti (formerly Verscend Technologies, Inc. and Cotiviti), 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 and DST Systems.

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, which have resulted in issued patents and may result in additional issued patents in the future. We expect to continue to seek patents in the future, both in the U.S. and abroad.

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: CAASTM, CARA®, Caresync Advantage®, CCS Advantage®, CEDITM, 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®, PCISTM, Prospective Advantage®, QSFD®, QSI®, QSI-XL®, Star Advantage®, Turning Data into Insight and Insight into Action®, Data Has a Story to Tell. We Give it a Voice®, Data Diagnostics®, DDX®, ScriptMed®, Clinical Data Extraction as a Service (CDEaaSTM), Natural Language Processing as a Service (NLPaaSTM), Elastic Container Technology (ECT™), myABILITY®, and the Inovalon ONE® Platform. We also have trademark registrations and 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, 2019, we had a total of 2,662 associates across the following areas: Technology, Innovation and Product, Data-driven Client Services, and Selling, General and Administrative. There were 2,371 full-time associates and 291 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 Health Information 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, or other business associates, 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 state medical record privacy laws (sometimes more strict than HIPAA), including the laws of the state of California.

Other Data Protection Requirements. In addition to HIPAA, we may be subject to other U.S. federal and state laws that govern the collection, dissemination, use of and access to, personal information, including laws that prohibit unfair or deceptive privacy and security practices and/or place requirements on certain types of activities, such as data security and data access. Laws and expectations relating to privacy continue to evolve, and we continue to adapt to changing needs. For example, California recently enacted the California Consumer Privacy Act, which became effective on January 1, 2020 and requires covered businesses to, among other things, provide disclosures to California consumers regarding the collection, use and disclosure of such consumers' personal information and afford such consumers new rights with respect to their personal information, including the right to opt out of certain sales of personal information. Additional states are also considering new laws and regulations that further protect the confidentiality, privacy, and security of personal information, including medical records or other types of medical information. Further, a number of states prohibit or limit the disclosure of medical or other information to individuals or entities located outside of the United States.

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 personal and individually identifiable health information. We have implemented controls intended to assist us in complying with all applicable laws, regulations, and contractual requirements regarding the protection of these data. We have established processes that are intended to 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.

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 data-driven intervention toolset concentrations variances from quarter to quarter. The timing of these factors results in analytical and data-driven intervention toolset 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 U.S. 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 2015, with total revenues growing from approximately \$437.3 million for the year ended December 31, 2015 to approximately \$642.4 million for the year ended December 31, 2019. 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 twelve 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 35% of our revenues for the year ended December 31, 2019. 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 in 2018 and 2019 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 laws and 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. For example, California recently enacted the California Consumer Privacy Act, which became effective on January 1, 2020 and requires covered businesses to, among other things, provide disclosures to California consumers regarding the collection, use and disclosure of such consumers' personal information and afford such consumers new rights with respect to their personal information, including the right to opt out of certain sales of personal information. We believe that further increased regulation in additional jurisdictions is likely in the area of data privacy. 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 and that additional uncertainty is likely in the near future, including, without limitation, as a result of potential changes to the political environment in connection with the upcoming election year. Potential shifts in legislative and regulatory conditions concerning, among other matters, international trade and taxation, as well as healthcare, and/or 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 or future U.S. presidential administration together with the U.S. Congress may have, if any, on coverage and reimbursement for healthcare items and services. We also cannot predict any changes to the U.S. federal government's approach to healthcare that may result from the outcome of the 2020 election. 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, including new regulatory oversight from agencies such as the Food and Drug Administration for software functions such as clinical decision support that may constitute a medical device, 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 until we comply with such regulatory requirements, including pre-market submissions and approvals, as applicable. 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 have resulted in issued patents and which may or may not result in an additional issued patent or patents in the future. In addition, we do not know whether the examination process will require us to narrow our claims as to pending applications. 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 data-driven 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 data-driven intervention toolsets are supplemental member encounters ("SMEs"). While some clients utilize our platform toolsets to conduct their own SMEs directly or through third-parties, some of our clients engage us to utilize our data-driven intervention toolsets to facilitate SMEs. In such cases, we contract with third-parties to perform such SMEs utilizing our data-driven intervention toolsets, or we may utilize our own associates to undertake such SMEs. Certain of our SMEs 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 SMEs. 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 data-driven 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.

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 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 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 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;
- compliance risks associated with General Data Protection Regulation which regulates the privacy of all individuals in the European Union, including export of data outside of the European Union; 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 data-driven 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 data-driven intervention toolsets, including supplemental member 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 data-driven 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 data-driven intervention toolsets to a larger group of clients, it could have an adverse effect on our business, results of operations, and growth prospects.

We have previously been the subject of securities class action lawsuits and additional litigation may be brought against us in the future.

In the past, following periods of volatility in the market, securities class action litigation has often been instituted against companies. We have previously been subject to purported securities class action lawsuits and may be subject to additional litigation in the future. Such potential litigation, 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, 2019, we had approximately \$917.8 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.

Changes in how LIBOR is determined, or the potential replacement of LIBOR with an alternative reference rate, may adversely affect our interest expense.

Certain instruments within our debt profile, including our 2018 Credit Agreement, bear interest at rates that are indexed to the London Interbank Offered Rate (“LIBOR”), which is a benchmark rate at which banks offer to lend funds to one another in the international interbank market for short term loans. On July 27, 2017, the United Kingdom Financial Conduct Authority (“FCA”), which regulates LIBOR, announced its intention to stop persuading or compelling banks to submit LIBOR quotations by the end of 2021. We cannot predict the impact of the potential phase out of LIBOR on our debt agreements and interest rates. In particular, our 2018 Credit Agreement does not contain a procedure for determining an alternative base rate in the event that LIBOR is discontinued. We intend to work with our lenders to determine an alternative base rate to LIBOR in the event LIBOR is discontinued, however there can be no assurances as to what an alternative base rate may be and whether such alternative base rate will be more or less favorable than LIBOR. In addition, any other legal or regulatory changes made by the FCA or other governance or oversight bodies in the method by which LIBOR is determined or the transition from LIBOR to a successor benchmark may result in, among other things, a sudden or prolonged increase or decrease in LIBOR, a delay in the publication of LIBOR, or changes in the rules or methodologies in LIBOR, all of which may discourage market participants from continuing to administer or to participate in LIBOR’s determination and, in certain situations, could result in LIBOR no longer being determined and published. Any of these proposals or consequences could have a material adverse effect on our financing costs. Furthermore, there is no guarantee that a transition from LIBOR to an alternative will not result in financial market disruptions, significant increases in benchmark rates, or borrowing costs to borrowers, any of which could have an adverse effect on our business, results of operations, financial condition, and liquidity.

Expectations of our company relating to environmental, social and governance factors may impose additional costs and expose us to new risks.

There is an increasing focus from certain investors, employees and other stakeholders concerning corporate responsibility, specifically related to environmental, social and governance factors. Some investors may use these factors to guide their investment strategies and, in some cases, may choose not to invest in us if they believe our policies relating to corporate responsibility are inadequate. Third-party providers of corporate responsibility ratings and reports on companies have increased to meet growing investor demand for measurement of corporate responsibility performance. In addition, the criteria by which companies' corporate responsibility practices are assessed may change, which could result in greater expectations of us and cause us to undertake costly initiatives to satisfy such new criteria. Alternatively, if we elect not to or are unable to satisfy such new criteria, investors may conclude that our policies with respect to corporate responsibility are inadequate. We may face reputational damage in the event that our corporate responsibility procedures or standards do not meet the standards set by various constituencies. Furthermore, if our competitors' corporate responsibility performance is perceived to be greater than ours, potential or current investors may elect to invest with our competitors instead. In addition, in the event that we communicate certain initiatives and goals regarding environmental, social and governance matters, we could fail, or be perceived to fail, in our achievement of such initiatives or goals, or we could be criticized for the scope of such initiatives or goals. If we fail to satisfy the expectations of investors, employees and other stakeholders or our initiatives are not executed as planned, our reputation and financial results could be materially and adversely affected.

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, 2020, holders of our Class B common stock beneficially own an aggregate of approximately 91% 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 303,000 square feet at the following locations: Minneapolis, Minnesota; Washington, DC; Nashville, Tennessee; Phoenix, Arizona; Tampa, Florida; Canonsburg, Pennsylvania; Boston, Massachusetts; Herndon, Virginia; and Yellow Springs, Ohio. 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 consolidated financial statements of the Company.

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

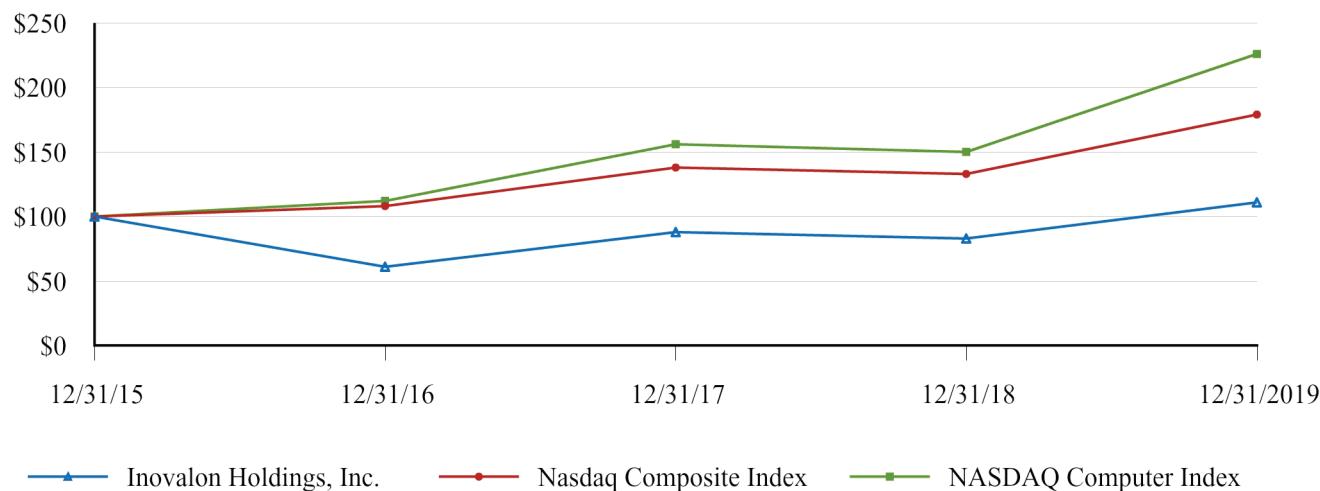
Our Class A common stock is listed on the NASDAQ Global Select Market under the symbol "INOV."

Stock Performance Graph

The following performance graph and related information shall not be deemed "soliciting material" or to be "filed" with the U.S. Securities and Exchange Commission ("SEC"), 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 December 31, 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 December 31, 2015, and illustrates the value of the investment based on quoted prices as of the indicated dates:

	December 31, 2015	December 31, 2016	December 31, 2017	December 31, 2018	December 31, 2019
Inovalon Holdings, Inc.	\$ 100	\$ 61	\$ 88	\$ 83	\$ 111
NASDAQ Composite Index	\$ 100	\$ 108	\$ 138	\$ 133	\$ 179
NASDAQ Computer Index	\$ 100	\$ 112	\$ 156	\$ 150	\$ 226

Holders

As of January 31, 2020, there were 83 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, 2020, there were 21 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, 2019 and 2018.

Unregistered Sales of Equity Securities

None.

Use of Proceeds from Registered Securities

None.

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,				
	2019	2018	2017	2016	2015
(in thousands, except per share information)					
Consolidated Statement of Operations Data:					
Revenue	\$ 642,410	\$ 527,676	\$ 449,358	\$ 427,588	\$ 437,271
Income (Loss) from operations	69,487	(2,585)	33,789	37,634	116,456
Net income (loss)	7,775	(39,164)	34,818	27,104	66,063
Net income (loss) attributable to common stockholders	7,538	(39,164)	33,828	26,943	66,014
Basic net income (loss) per share	\$ 0.05	\$ (0.27)	\$ 0.24	\$ 0.18	\$ 0.45
Diluted net income (loss) per share	\$ 0.05	\$ (0.27)	\$ 0.24	\$ 0.18	\$ 0.45

	December 31,				
	2019	2018	2017	2016	2015
(in thousands)					
Consolidated Balance Sheet Data:					
Cash and cash equivalents	\$ 93,094	\$ 115,591	\$ 208,944	\$ 127,683	\$ 114,034
Short-term investments	—	7,000	267,288	445,315	614,130
Accounts receivable, net of allowances	139,514	104,405	90,054	85,591	81,305
Working capital	126,877	130,817	466,628	601,720	776,477
Property, equipment and capitalized software, net	147,741	141,758	125,768	76,420	65,031
Goodwill	955,881	956,029	184,932	184,557	137,733
Total assets	1,908,634	1,921,415	995,078	1,053,344	1,112,877
Long-term debt and finance lease liabilities	896,203	953,441	203,359	236,465	266,546
Total liabilities	1,220,475	1,238,826	352,306	369,767	373,721
Total stockholders' equity	688,159	682,589	642,772	683,577	739,156

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 provider of 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, 22 of the top 25 global pharma companies, 19 of the top 25 U.S. healthcare provider systems, and many of the leading pharmacy organizations, device manufacturers, and other healthcare industry constituents, Inovalon's technology platforms and analytics are informed by data pertaining to more than 988,000 physicians, 552,000 clinical facilities, 314 million Americans, and 53 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.

Recent Developments

We adopted new lease accounting guidance as of January 1, 2019. Leases presented for periods beginning after January 1, 2019 are presented under Accounting Standards Codification ("ASC") 842, *Leases*, while prior period amounts are not adjusted and continue to be reported in accordance with our historic accounting under Accounting Standards Codification ("ASC") 840. See "Note 8—Leases" 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 (in thousands). We believe that these metrics are indicative of our overall level of analytical activity and the underlying growth in our business.

	Year Ended December 31,		
	2019	2018	2017
MORE ² Registry® dataset metrics ⁽¹⁾			
Unique patient count ⁽²⁾	314,788	264,220	240,180
Medical event count ⁽³⁾	53,363,411	42,898,600	37,813,583
Trailing twelve-month Patient Analytics Months ("PAM") ⁽¹⁾⁽⁴⁾	65,088,648	48,099,042	42,156,422

- (1) MORE² Registry® dataset metrics and Trailing twelve-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 toolsets 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,		
	2019	2018	2017
Investment in Innovation			
Research and development ⁽¹⁾	\$ 33,686	\$ 28,638	\$ 27,383
Capitalized software development ⁽²⁾	36,583	38,253	34,789
Research and development infrastructure investments ⁽³⁾	1,581	12,748	23,642
Total investment in innovation	\$ 71,850	\$ 79,639	\$ 85,814
As a percentage of revenue			
Research and development ⁽¹⁾	5%	5%	6%
Capitalized software development ⁽²⁾	6%	7%	8%
Research and development infrastructure investments ⁽³⁾	—%	3%	5%
Total investment in innovation	11%	15%	19%

- (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 executed 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. Additionally, in 2019 we expanded our offerings of cloud-based SaaS solutions enabled by the Inovalon ONE® Platform which utilize Artificial Intelligence and machine learning application. 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. 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 in April 2018, we expanded our subscription-based cloud-based platform offering revenues and we continue 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 toolsets 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 data-driven intervention toolset concentrations variances from quarter to quarter. The timing of these factors results in analytical and data-driven intervention toolset 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, data-driven intervention toolsets, 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.

As our platform solutions are increasingly integrated into our clients' operations, the timing and delivery of implementations vary.

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.

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 2018 Credit Facilities (as defined below, under the heading Liquidity and Capital Resources—Debt) and related interest rate swaps.

We expect our interest expense to decrease overall as a result of the repricing of our the Term Loan B Credit Facility, as discussed in “Note 10—Debt” in the notes to our audited consolidated financial statements, included elsewhere in this Annual Report on Form 10-K. Additionally, we expect our interest expense fluctuate in proportion to our outstanding principal balance under the 2018 Credit Facilities (as defined below, under the heading Liquidity and Capital Resources—Debt) 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.

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,			2019 to 2018 Change		2018 to 2017 Change	
	2019	2018	2017	\$	%	\$	%
Revenue	\$ 642,410	\$ 527,676	\$ 449,358	\$ 114,734	22 %	\$ 78,318	17 %
Expenses:							
Cost of revenue ⁽¹⁾	167,814	144,826	151,046	22,988	16 %	(6,220)	(4)%
Sales and marketing ⁽¹⁾	62,411	45,534	34,103	16,877	37 %	11,431	34 %
Research and development ⁽¹⁾	33,686	28,638	27,383	5,048	18 %	1,255	5 %
General and administrative ⁽¹⁾	200,762	205,038	149,948	(4,276)	(2)%	55,090	37 %
Depreciation and amortization	108,250	96,725	53,089	11,525	12 %	43,636	82 %
Restructuring expense	—	9,500	—	(9,500)	*%	9,500	*%
Total operating expenses	<u>572,923</u>	<u>530,261</u>	<u>415,569</u>	<u>42,662</u>	<u>8 %</u>	<u>114,692</u>	<u>28 %</u>
Income (Loss) from operations	<u>69,487</u>	<u>(2,585)</u>	<u>33,789</u>	<u>72,072</u>	<u>*%</u>	<u>(36,374)</u>	<u>(108)%</u>
Other income and (expenses):							
Interest income	2,242	2,181	5,429	61	3 %	(3,248)	(60)%
Interest expense	(65,831)	(50,898)	(6,225)	(14,933)	29 %	(44,673)	718 %
Other expense, net	(20)	(2,255)	(406)	2,235	*%	(1,849)	*%
Income (Loss) before taxes	<u>5,878</u>	<u>(53,557)</u>	<u>32,587</u>	<u>59,435</u>	<u>111 %</u>	<u>(86,144)</u>	<u>(264)%</u>
Benefit from income taxes	(1,897)	(14,393)	(2,231)	12,496	(87)%	(12,162)	545 %
Net income (loss)	<u><u>\$ 7,775</u></u>	<u><u>\$ (39,164)</u></u>	<u><u>\$ 34,818</u></u>	<u><u>\$ 46,939</u></u>	<u><u>120 %</u></u>	<u><u>\$ (73,982)</u></u>	<u><u>(212)%</u></u>

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

Cost of revenue	\$ 348	\$ 237	\$ 1,652	\$ 111	47 %	\$ (1,415)	(86)%
Sales and marketing	1,675	735	2,011	940	128 %	(1,276)	(63)%
Research and development	1,707	1,937	1,293	(230)	(12)%	644	50 %
General and administrative	16,500	13,253	12,362	3,247	25 %	891	7 %
Total stock-based compensation expense	<u>\$ 20,230</u>	<u>\$ 16,162</u>	<u>\$ 17,318</u>	<u>\$ 4,068</u>	<u>25 %</u>	<u>\$ (1,156)</u>	<u>(7)%</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,		
	2019	2018	2017
Revenue	100 %	100 %	100 %
Expenses:			
Cost of revenue	26 %	28 %	34 %
Sales and marketing	10 %	9 %	8 %
Research and development	5 %	5 %	6 %
General and administrative	31 %	39 %	33 %
Depreciation and amortization	17 %	18 %	12 %
Restructuring expense	— %	2 %	— %
Total operating expenses	89 %	101 %	93 %
Income (Loss) from operations	11 %	(1)%	7 %
Other income and (expenses):			
Interest income	*%	*%	1 %
Interest expense	(10)%	(10)%	(1)%
Other expense, net	*%	*%	*%
Income (Loss) before taxes	1 %	(11)%	7 %
Benefit from income taxes	*%	(3)%	(1)%
Net income (loss)	1 %	(8)%	8 %

The discussion below includes a comparison of our results of operations for the year ended December 31, 2019 compared with the year ended December 31, 2018. We have elected to omit discussion of the earliest of the three years presented in this Form 10-K. For a discussion of our results of operations for the year ended December 31, 2018 compared with the year ended December 31, 2017, refer to Part II, Item 7 (“Management’s Discussion and Analysis of Financial Condition and Results of Operations”) of our 2018 Form 10-K, which was filed with the SEC on February 20, 2019.

Revenue

Revenue for the year ended December 31, 2019 was \$642.4 million, an increase of 22% compared with revenue of \$527.7 million for the year ended December 31, 2018. This increase was primarily attributable to an increase of \$48.2 million in revenue contributed from new clients signed resulting from continued adoption of subscription-based platform offerings including cloud-based SaaS solutions enabled by the Inovalon ONE® Platform, \$39.8 million in revenue contributed from the acquired business of ABILITY, through the anniversary date of the acquisition, and an increase of \$26.7 million in revenue from existing clients.

Cost of Revenue

During the year ended December 31, 2019, cost of revenue increased by \$23.0 million, or 16%, compared with the year ended December 31, 2018. The increase in cost of revenue was primarily attributable to an increase in employee-related expense and third-party client-servicing expense, which together contributed \$16.5 million, and incremental cost of revenue of \$5.0 million attributable to the acquired business of ABILITY, through the anniversary date of the acquisition. Cost of revenue as a percentage of revenue was 26% and 28% for the years ended December 31, 2019 and 2018, respectively.

Sales and Marketing

During the year ended December 31, 2019, sales and marketing expense increased by \$16.9 million, or 37%, compared with the year ended December 31, 2018. The increase was primarily attributable to an increase in employee-related expense of \$8.7 million, incremental expense of \$5.3 million attributable to the acquired business of ABILITY, through the anniversary date of the acquisition, and an increase in advertising expense of \$2.1 million. Sales and marketing expense as a percentage of revenue was 10% and 9% for the years ended December 31, 2019 and 2018, respectively.

Research and Development

During the year ended December 31, 2019, research and development expense increased by \$5.0 million, or 18%, compared with the year ended December 31, 2018. The increase was primarily attributable to incremental expense of \$2.5 million attributable to the acquired business of ABILITY, through the anniversary date of the acquisition, an increase in employee-related expense of \$1.6 million, and an increase in professional third-party costs of \$1.1 million.

General and Administrative

During the year ended December 31, 2019, general and administrative expense decreased by \$4.3 million, or 2%, compared with the year ended December 31, 2018. The decrease was primarily attributable to an adjustment in the prior year to increase the fair value of contingent consideration that was not present in the current year resulting in a reduction in expense of \$9.2 million, a decrease in professional third-party costs of \$5.6 million, and a decrease in transaction and integration costs of \$4.2 million, which was partially offset by incremental expense of \$7.5 million attributable to the acquired business of ABILITY, through the anniversary date of the acquisition, an increase in stock-based compensation of \$3.2 million, and an increase in employee-related expense of \$2.7 million. General and administrative expense as a percentage of revenue was 31% and 39% for the years ended December 31, 2019 and 2018, respectively.

Depreciation and Amortization

During the year ended December 31, 2019, depreciation and amortization expense increased by \$11.5 million, or 12%, compared with the year ended December 31, 2018. The increase was primarily attributable to \$8.3 million of amortization of acquired intangible assets, depreciation of software licenses and computers of \$1.7 million, and amortization of capitalized software of \$1.7 million.

Interest Expense

During the year ended December 31, 2019, interest expense increased by \$14.9 million, compared with the year ended December 31, 2018. 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.

Benefit from Income Taxes

During the year ended December 31, 2019, the benefit from income taxes decreased by \$12.5 million, or 87%, compared to the year ended December 31, 2018. Our effective tax rate for the year ended December 31, 2019 was approximately (32)%, resulting in a benefit from income tax, as compared to approximately 27% for the year ended December 31, 2018. The decrease in our benefit from income taxes is primarily attributable to the change in income before taxes compared to prior year.

Quarterly Financial Information (Unaudited)

The following tables show a summary of the Company's unaudited quarterly financial information for each of the four quarters of 2019 and 2018 (in thousands, except per share amounts):

	2019			
	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
Revenue	\$ 173,489	\$ 166,453	\$ 156,977	\$ 145,491
Cost of revenue	\$ 46,553	\$ 42,940	\$ 41,118	\$ 37,203
Net income (loss)	\$ 4,718	\$ 6,842	\$ 4,538	\$ (8,323)
Net income (loss) attributable to common stockholders	\$ 4,563	\$ 6,621	\$ 4,403	\$ (8,323)
Basic net income (loss) per share ⁽¹⁾	\$ 0.03	\$ 0.04	\$ 0.03	\$ (0.06)
Diluted net income (loss) per share ⁽¹⁾	\$ 0.03	\$ 0.04	\$ 0.03	\$ (0.06)

	2018			
	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
Revenue	\$ 136,314	\$ 145,809	\$ 152,798	\$ 92,755
Cost of revenue	\$ 35,898	\$ 36,422	\$ 39,015	\$ 33,491
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)

(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,		
	2019	2018	2017
Consolidated Statements of Cash Flows Data:			
Net income (loss)	\$ 7,775	\$ (39,164)	\$ 34,818
Net cash provided by operating activities	\$ 106,480	\$ 90,401	\$ 97,706
Net cash (used in) provided by investing activities	\$ (51,975)	\$ (889,354)	\$ 106,559
Net cash (used in) provided by financing activities	\$ (77,002)	\$ 705,600	\$ (123,004)

Sources of Liquidity

Our principal sources of liquidity have been cash generated by operating activities 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, 2019, our cash, cash equivalents and short-term investments totaled \$93.1 million, compared to \$122.6 million of cash, cash equivalents, and short-term investments as of December 31, 2018, of which \$7.0 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, expected cash generated by operating activities, and availability of cash under our 2018 Credit Facilities 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, 2019, 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, 2019, we had outstanding indebtedness under the 2018 Term Loan Facility and finance lease liabilities of \$893.7 million and \$14.8 million, respectively. No amounts were outstanding under the 2018 Revolving Credit Facility as of December 31, 2019. 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. Scheduled and voluntary principal payments totaling \$59.8 million and scheduled interest payments totaling \$62.8 million were paid during the year ended December 31, 2019. As of December 31, 2019, 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

Cash Flows From Operating 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.

Cash provided by operating activities during the year ended December 31, 2019 was \$106.5 million, representing an increase of \$16.1 million compared with the year ended December 31, 2018. The increase in cash provided by operating activities was primarily driven by an increase in operating income, which was partially offset by the effect of changes in working capital, an increase of \$19.2 million in cash paid for interest, and payments for acquisition-related contingent consideration, of which \$2.5 million was included as a reduction to cash provided by operating activities.

Cash Flows From Investing 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.

Cash used in investing activities during the year ended December 31, 2019 was \$52.0 million compared with \$889.4 million during the year ended December 31, 2018. The change in cash used in investing activities was primarily due to the acquisition of ABILITY in the prior year of \$1.1 billion and a decrease in capital expenditures of \$6.0 million, which was partially offset by a decrease in sales and maturities of short term investments of \$251.4 million.

Cash Flows From Financing Activities

Cash used in financing activities during the year ended December 31, 2019 was \$77.0 million, compared with cash provided by financing activities of \$705.6 million during the year ended December 31, 2018. The change in cash used in financing activities was primarily due to proceeds from the 2018 Term Facility net of repayment of the 2014 Credit Facility borrowings in the prior year and payment for acquisition-related contingent consideration in the current year.

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, 2019, 2018, and 2017.

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 finance leases. See “Note 8—Leases,” “Note 10—Debt,” and “Note 11—Commitments 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, 2019 (in thousands).

	Payments Due by Period				
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Credit facilities	\$ 917,750	\$ 9,800	\$ 19,600	\$ 19,600	\$ 868,750
Purchase obligation	1,309	688	621	—	—
Finance lease liabilities	14,799	2,533	3,023	2,220	7,023
Operating lease liabilities	57,775	8,085	14,429	10,561	24,700
Total	<u>\$ 991,633</u>	<u>\$ 21,106</u>	<u>\$ 37,673</u>	<u>\$ 32,381</u>	<u>\$ 900,473</u>

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 liabilities 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.

Excess tax benefits and tax deficiencies for stock-based payments are 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.

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.

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 2019, the Company performed a qualitative assessment for the Inovalon and Avalere 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.

The Company elected to bypass the qualitative assessment and performed a quantitative assessment for its ABILITY 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, the Company concluded that there was no impairment of goodwill.

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, 2019, we had \$917.8 million of outstanding principal indebtedness under our 2018 Term Loan Facility at an effective interest rate of 5.3%. 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 \$6.2 million annually, assuming that we do not enter into contractual hedging arrangements. As of December 31, 2019, 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 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, 2019, 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, management has concluded that our internal control over financial reporting was effective as of December 31, 2019.

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, 2019, 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, 2019 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 2020 Proxy Statement and is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by this Item 11 will be included in the 2020 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 2020 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 2020 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 2020 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).
4.1*	Description of Securities Registered under Section 12 of the Securities Exchange Act of 1934, as amended.
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
10.17	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).
10.24	Amended and Restated 2015 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated June 5, 2019).
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*	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL 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
104*	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* 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 19, 2020

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 19, 2020
/s/ JONATHAN R. BOLDT Jonathan R. Boldt	Chief Financial Officer (principal financial officer & principal accounting officer)	February 19, 2020
/s/ DENISE K. FLETCHER Denise K. Fletcher	Director	February 19, 2020
/s/ WILLIAM D. GREEN William D. Green	Director	February 19, 2020
/s/ ANDRE S. HOFFMANN André S. Hoffmann	Director	February 19, 2020
/s/ ISAAC S. KOHANE, M.D., Ph.D. Isaac S. Kohane, M.D., Ph.D.	Director	February 19, 2020
/s/ MARK A. PULIDO Mark A. Pulido	Director	February 19, 2020
/s/ LEE D. ROBERTS Lee D. Roberts	Director	February 19, 2020
/s/ WILLIAM J. TEUBER William J. Teuber	Director	February 19, 2020

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, 2019 and 2018, 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, 2019, 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, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, 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, 2019, 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 19, 2020, expressed an unqualified opinion on the Company’s internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 2 to the financial statements, effective January 1, 2019, the Company adopted Accounting Standards Update (“ASU”) 2016-02, *Leases (Topic 842)*, using the transition approach wherein prior period amounts are not adjusted and continue to be reported in accordance with Accounting Standards Codification (“ASC”) 840.

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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue - Revenue Recognition - Refer to Note 2 of the financial statements

Critical Audit Matter Description

The majority of the Company’s contracts contain a series of separately identifiable and distinct services that represent performance obligations that are satisfied over time. The Company allocates revenue by determining the standalone selling price of each performance obligation and revenue is generally recognized over the contract term.

Auditor judgment is involved in testing management’s determination of the number of performance obligations and the allocation of consideration to each performance obligation. The identification of performance obligations requires the subjective application of criteria to determine whether a promised good or service is ‘distinct’. There also exists complexity in the allocation of consideration to each performance obligation related to the determination of standalone selling price and allocation of discounts or variable consideration.

Given the complexities necessary to determine the number of distinct performance obligations and the consideration allocated to each performance obligation, this involves especially subjective judgment and extensive audit effort.

How the Critical Audit Matter Was Addressed in the Audit

The audit procedures we performed to test the identification of performance obligations and the allocation of consideration to each performance obligation included the following, among others:

- We tested the design, implementation, and operating effectiveness of controls over all revenue contracts, including standard platform solution contracts and non-standard contracts.
- We subjected new and amended revenue contracts entered into during the current year to audit sampling. For each selection, we performed the following:
 - Obtained and inspected the contract to determine if terms that may have an impact on revenue recognition were identified and properly considered in the application of revenue recognition methodology.
 - For contracts which leverage an established revenue recognition methodology, we evaluated the appropriateness of the application of this methodology.
 - For contracts with a new or unique revenue recognition methodology, we performed the following:
 - Tested management's identification of distinct performance obligations by evaluating whether the underlying services were highly interdependent and interrelated.
 - Compared the transaction price to the consideration expected to be received based on current rights and obligations under the contract.
 - Tested the allocation of the transaction price to each distinct performance obligation by evaluating management's determination of the relative standalone selling prices.
 - Tested the mathematical accuracy of management's calculation of revenue recognized for the performance obligations.

/s/ DELOITTE & TOUCHE LLP
Baltimore, Maryland
February 19, 2020

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, 2019, 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, 2019, 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, 2019 of the Company and our report dated February 19, 2020, expressed an unqualified opinion on those financial statements and included an explanatory paragraph regarding the Company’s adoption of Accounting Standards Update (“ASU”) 2016-02, *Leases (Topic 842)*, during 2019.

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 19, 2020

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

	December 31,	
	2019	2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 93,094	\$ 115,591
Short-term investments	—	7,000
Accounts receivable (net of allowances of \$3,351 and \$3,350 at December 31, 2019 and 2018, respectively)	139,514	104,405
Prepaid expenses and other current assets	20,141	34,801
Income tax receivable	4,488	10,330
Total current assets	<u>257,237</u>	<u>272,127</u>
Non-current assets:		
Property, equipment and capitalized software, net	147,741	141,758
Operating lease right-of-use assets	45,053	—
Goodwill	955,881	956,029
Intangible assets, net	483,041	535,343
Other assets	19,681	16,158
Total assets	<u>\$ 1,908,634</u>	<u>\$ 1,921,415</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	\$ 34,845	\$ 31,295
Accrued compensation	35,135	25,298
Other current liabilities	26,298	51,384
Deferred revenue	13,664	20,628
Credit facilities	9,800	9,800
Operating lease liabilities	8,085	—
Finance lease liabilities	2,533	2,905
Total current liabilities	<u>130,360</u>	<u>141,310</u>
Non-current liabilities:		
Credit facilities, less current portion	883,937	939,514
Operating lease liabilities, less current portion	49,690	—
Finance lease liabilities, less current portion	12,266	13,927
Other liabilities	46,529	33,406
Deferred income taxes	97,693	110,669
Total liabilities	<u>1,220,475</u>	<u>1,238,826</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, 2019 and 2018, respectively	—	—
Class A common stock, \$0.000005 par value, 750,000,000 shares authorized; 90,327,728 shares issued and 75,707,553 shares outstanding at December 31, 2019; 86,679,575 shares issued and 72,059,400 shares outstanding at December 31, 2018	1	—
Class B common stock, \$0.000005 par value, 150,000,000 shares authorized; 79,369,411 shares issued and outstanding at December 31, 2019; 80,608,685 shares issued and outstanding at December 31, 2018	—	1
Preferred stock, \$0.0001 par value, 100,000,000 shares authorized, zero shares issued and outstanding at December 31, 2019 and 2018, respectively	—	—
Additional paid-in-capital	636,461	618,674
Retained earnings	278,246	270,471
Treasury stock, at cost, 14,620,175 shares at December 31, 2019 and 2018	(199,817)	(199,817)
Other comprehensive loss, net of tax	(26,732)	(6,740)
Total stockholders' equity	<u>688,159</u>	<u>682,589</u>
Total liabilities and stockholders' equity	<u>\$ 1,908,634</u>	<u>\$ 1,921,415</u>

See notes to consolidated financial statements.

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

	Year Ended December 31,		
	2019	2018	2017
Revenue	\$ 642,410	\$ 527,676	\$ 449,358
Expenses:			
Cost of revenue ⁽¹⁾	167,814	144,826	151,046
Sales and marketing ⁽¹⁾	62,411	45,534	34,103
Research and development ⁽¹⁾	33,686	28,638	27,383
General and administrative ⁽¹⁾	200,762	205,038	149,948
Depreciation and amortization	108,250	96,725	53,089
Restructuring expense	—	9,500	—
Total operating expenses	<u>572,923</u>	<u>530,261</u>	<u>415,569</u>
Income (Loss) from operations	<u>69,487</u>	<u>(2,585)</u>	<u>33,789</u>
Other income and (expenses):			
Interest income	2,242	2,181	5,429
Interest expense	(65,831)	(50,898)	(6,225)
Other expense, net	(20)	(2,255)	(406)
Income (Loss) before taxes	<u>5,878</u>	<u>(53,557)</u>	<u>32,587</u>
Benefit from income taxes	(1,897)	(14,393)	(2,231)
Net income (loss)	<u>\$ 7,775</u>	<u>\$ (39,164)</u>	<u>\$ 34,818</u>
Net income (loss) attributable to common stockholders, basic and diluted	<u>\$ 7,538</u>	<u>\$ (39,164)</u>	<u>\$ 33,828</u>
Net income (loss) per share attributable to common stockholders, basic and diluted:			
Basic net income (loss) per share	<u>\$ 0.05</u>	<u>\$ (0.27)</u>	<u>\$ 0.24</u>
Diluted net income (loss) per share	<u>\$ 0.05</u>	<u>\$ (0.27)</u>	<u>\$ 0.24</u>
Weighted average shares of common stock outstanding:			
Basic	<u>148,304</u>	<u>145,389</u>	<u>142,225</u>
Diluted	<u>148,633</u>	<u>145,389</u>	<u>142,737</u>

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

Cost of revenue	\$ 348	\$ 237	\$ 1,652
Sales and marketing	1,675	735	2,011
Research and development	1,707	1,937	1,293
General and administrative	16,500	13,253	12,362
Total stock-based compensation expense	<u>\$ 20,230</u>	<u>\$ 16,162</u>	<u>\$ 17,318</u>

See notes to consolidated financial statements.

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

	Year Ended December 31,		
	2019	2018	2017
Net income (loss)	\$ 7,775	\$ (39,164)	\$ 34,818
Other comprehensive income (loss):			
Realized losses on cash flow hedges reclassified from accumulated other comprehensive income, net of tax of \$(1,219), \$(956) and \$0, respectively	2,592	2,022	—
Net change in unrealized losses on cash flow hedges, net of tax of \$10,598, \$4,156 and \$0, respectively	(22,596)	(8,751)	—
Realized losses on short-term investments reclassified from accumulated other comprehensive income, net of tax of \$0, \$(319) and \$0, respectively	—	716	—
Net change in unrealized gains (losses) on available-for-sale investments, net of tax of \$(6), \$69 and \$(94), respectively	12	(149)	104
Reclassification of income tax effects of the Tax Cuts and Jobs Act of 2017	—	(102)	—
Comprehensive (loss) income	<u>\$ (12,217)</u>	<u>\$ (45,428)</u>	<u>\$ 34,922</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	Shares	Amount	\$ (106,231)	\$ 516,300	\$ 274,087	\$ (580)	\$ 683,577
Balance—January 1, 2017	72,271,298	\$ —	83,303,628	\$ 1	(7,508,985)	\$ (106,231)							(93,586)
Repurchase of common stock	—	—	—	—	(7,111,190)	(93,586)							—
Stock-based compensation expense	—	—	—	—									17,164
Exercise of stock options	654,035	—	6,833	—	—	—	—	—					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, net of forfeitures	2,546,426	—	—	—	—	—	—	—					—
Shares withheld for employee taxes upon conversion of restricted stock	(236,707)	—	—	—	—	—	(4,272)	—					(4,272)
Other comprehensive income	—	—	—	—	—	—	—	—				104	104
Net income	77,588,018	\$ —	80,957,495	\$ 1	(14,620,175)	\$ (199,817)	\$ 534,159	\$ 308,905	\$ 34,818	\$ 308,905	\$ (476)	\$ 642,772	34,818
Balance—December 31, 2017	—	—	—	—	—	—	—	—					16,044
Stock-based compensation expense	7,598,731	—	—	—	—	—	—	—					70,000
Issuance of common stock related to business combination	258,921	—	—	—	—	—	—	—					1,834
Exercise of stock options	348,810	—	(348,810)	—	—	—	—	—					—
Conversion Class B to Class A common stock	1,168,541	—	—	—	—	—	—	—					—
Issuance of shares related to restricted stock units and awards, net of forfeitures	(283,446)	—	—	—	—	—	(3,363)	—					(3,363)
Shares withheld for employee taxes upon conversion of restricted stock	—	—	—	—	—	—	—	—					—
Other comprehensive loss	—	—	—	—	—	—	—	—					—
Adjustment to retained earnings for adoption of ASC 606	—	—	—	—	—	—	—	—					628
Adjustment to retained earnings for adoption of ASU 2018-02	—	—	—	—	—	—	—	—					102
Net loss	86,679,575	\$ —	80,608,685	\$ 1	(14,620,175)	\$ (199,817)	\$ 618,674	\$ 270,471	\$ (39,164)	\$ (39,164)	\$ (6,740)	\$ 682,589	(39,164)
Balance—December 31, 2018	—	—	—	—	—	—	—	—					19,996
Stock-based compensation expense	403,643	—	139,270	—	—	—	—	—					3,669
Exercise of stock options	1,378,544	1	(1,378,544)	(1)	—	—	—	—					—
Conversion Class B to Class A common stock	2,286,379	—	—	—	—	—	—	—					—
Issuance of shares related to restricted stock units and awards, net of forfeitures	(420,413)	—	—	—	—	—	(5,878)	—					(5,878)
Shares withheld for employee taxes upon conversion of restricted stock	—	—	—	—	—	—	—	—					—
Other comprehensive loss	—	—	—	—	—	—	—	—					—
Net income	90,327,728	\$ 1	79,369,411	\$ —	(14,620,175)	\$ (199,817)	\$ 636,461	\$ 278,246	\$ (26,732)	\$ (26,732)	\$ 688,159	\$ 688,159	—
Balance—December 31, 2019													

See notes to consolidated financial statements.

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

	Year Ended December 31,		
	2019	2018	2017
Cash flows from operating activities:			
Net income (loss)	\$ 7,775	\$ (39,164)	\$ 34,818
Adjustments to reconcile net income to net cash provided by operating activities:			
Stock-based compensation expense	20,230	16,162	17,318
Depreciation	55,948	52,742	37,853
Amortization of intangibles	52,302	43,983	15,236
Amortization of debt issuance costs and debt discount	4,598	3,138	—
Deferred income taxes	(3,276)	(12,495)	(6,665)
Restructuring expense, non-cash	—	7,075	—
Change in fair value of contingent consideration	115	7,212	(5,200)
Bargain purchase gain	—	—	(1,434)
Other	(877)	621	2,364
Changes in assets and liabilities:			
Accounts receivable	(35,109)	3,280	(977)
Prepaid expenses and other current assets	(489)	(20,002)	3,346
Income taxes receivable	5,979	2,208	3,293
Other assets	(5,096)	(4,209)	(3,355)
Accounts payable and accrued expenses	10,608	(6,007)	8,252
Accrued compensation	9,329	9,292	3,030
Other current and non-current liabilities	(6,044)	19,891	(5,813)
Deferred revenue	(6,964)	6,674	(4,360)
Payment for acquisition-related contingent consideration	(2,549)	—	—
Net cash provided by operating activities	<u>106,480</u>	<u>90,401</u>	<u>97,706</u>
Cash flows from investing activities:			
Maturities of short-term investments	6,964	96,588	174,416
Sales of short-term investments	—	161,772	1,175
Purchases of property and equipment	(22,809)	(25,505)	(32,565)
Investment in capitalized software	(36,130)	(39,469)	(32,977)
Acquisition, net of cash acquired of \$0, \$23,850 and \$1,535, respectively	—	(1,082,740)	(3,490)
Net cash (used in) provided by investing activities	<u>(51,975)</u>	<u>(889,354)</u>	<u>106,559</u>
Cash flows from financing activities:			
Repurchase of common stock	—	—	(93,586)
Proceeds from credit facility borrowings, net of discount	—	965,300	—
Repayment of credit facility borrowings	(59,800)	(238,700)	(30,000)
Payments for debt issuance costs	—	(18,269)	—
Proceeds from exercise of stock options	3,669	1,833	4,967
Finance lease liabilities paid	(2,393)	(1,201)	(113)
Tax payments for equity award issuances	(5,878)	(3,363)	(4,272)
Payment for acquisition-related contingent consideration	(12,600)	—	—
Net cash (used in) provided by financing activities	<u>(77,002)</u>	<u>705,600</u>	<u>(123,004)</u>
(Decrease) Increase in cash and cash equivalents	(22,497)	(93,353)	81,261
Cash and cash equivalents, beginning of period	115,591	208,944	127,683
Cash and cash equivalents, end of period	<u>\$ 93,094</u>	<u>\$ 115,591</u>	<u>\$ 208,944</u>
Supplemental cash flow disclosure:			
Income taxes received, net	\$ (4,588)	\$ (4,136)	\$ 962
Interest paid	62,768	43,573	5,972
Non-cash transactions:			
Accruals of purchases of property, equipment	3,156	12,097	7,924
Accruals for investment in capitalized software	1,948	1,495	2,711
Leasehold improvement paid by lessor	2,906	—	—
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 provider of 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 datasets, 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 current and non-current liabilities section of the consolidated balance sheets and within the operating section of the consolidated statements of cash flows to conform with current period presentation. Such reclassifications had no impact on current and non-current liabilities 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.

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.

The Company did not have revenue from a significant client, representing 10% or more of total revenue for the years ended December 31, 2019 and December 31, 2018. For the year ended December 31, 2017, the Company had revenue from a significant client representing 12% of total revenue. For the year ended December 31, 2019, the Company had accounts receivable from a significant client representing 13% of total accounts receivable. The Company did not have accounts receivable from a significant client, representing 10% or more of total accounts receivable as of December 31, 2018.

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

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

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.

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.

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	40 years
Leasehold improvements	*
Assets under finance 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:

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

	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

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. There were no impairment charges on indefinite-lived intangible assets for the year ended December 31, 2019.

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.

The Company performs the goodwill impairment test annually as of November 1st, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable.

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, 2019, 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 year ended December 31, 2019.

Leases—The Company determines whether a contract is or contains a lease at inception. At the lease commencement date, the Company records a liability for the lease obligation and a corresponding asset representing the right to use the underlying asset over the lease term. Leases with an initial term of 12 months or less are not recorded on the consolidated balance sheet and are recognized in expense using a straight-line basis for all asset classes. Variable lease payments are expensed as incurred, which primarily include maintenance costs, services provided by the lessor, and other charges reimbursed to the lessor.

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

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.

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.

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.

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,

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

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.

Stock-Based Compensation—All stock-based awards, including restricted stock award (“RSA”) grants, restricted stock unit (“RSU”) grants, and employee stock option 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 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 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.

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.

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.

Recently Adopted Accounting Standards

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-02, *Leases (Topic 842)*, and in July 2018 and in March 2019 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 Company adopted the new standard on January 1, 2019 using the additional transition approach, while prior period amounts are not adjusted and continue to be reported in accordance with the Company’s historic accounting under Accounting Standards Codification (“ASC”) 840. Refer to “Note 8—Leases.”

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. The Company adopted the new standard on January 1, 2019. There was no material impact of adoption on its consolidated financial statements and notes disclosures.

In October 2018, the FASB issued ASU 2018-16, *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 Rate based on the Secured Overnight Financing Rate as a U.S. benchmark interest rate for hedge accounting purposes under ASC Topic 815. The Company will apply the requirements of the new standard for any new or redesignated hedging agreements. Refer to “Note 6—Fair Value Measurements.”

Recently Issued Accounting Standards

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 adopted the requirements of the new standard on January 1, 2020 using the modified-retrospective approach. The Company determined that the standard is applicable to its accounts receivables and available-for-sale debt securities. The Company is in the process of finalizing and documenting the methodology for and implementing changes to processes and internal controls. The Company is finalizing the impact of adoption and currently does not expect a material impact on the consolidated financial statements. The Company will provide additional disclosures as required by the standard in the Company’s Quarterly Report on Form 10-Q the first quarter of 2020.

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

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 plans to adopt the requirements of the new standard for disclosures in the first quarter of 2020. The Company is in the process of evaluating the 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 adopted the requirements of the new standard on January 1, 2020 and does not expect a material impact on its consolidated financial statements and notes disclosures.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. This update removes certain exceptions and provides additional requirements that simplify the accounting for income taxes. This guidance is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. Early adoption of the standard is permitted. The Company is in the process of evaluating the timing and impact of adoption on the consolidated financial statements and notes disclosures.

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 the Company’s Class A common stock (the “Purchase Price”).

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 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 final 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	880
Subtotal	<u>1,221,050</u>
Fair value adjustments:	
Restricted stock marketability discount	(30,000)
Total fair value purchase price	<u>\$ 1,191,050</u>

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

3. BUSINESS COMBINATIONS (Continued)

The final 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	14,460
Working capital adjustment	(630)
Total fair value purchase price	<u>\$ 1,191,050</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 Company finalized the Purchase Price allocation as of March 31, 2019.

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 ⁽²⁾	688
Prepaid expenses and other current assets	3,025
Property and equipment	3,095
Goodwill ⁽¹⁾⁽²⁾	770,949
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⁾	(98,887)
Total consideration transferred	<u>\$ 1,191,050</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.
- (2) The Company recognized a net purchase accounting adjustment of \$1.8 million resulting in a decrease to goodwill. This adjustment was driven by a \$7.5 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 and an adjustment to income tax receivable of \$0.2 million. These reductions to goodwill were partially offset by a \$5.0 million increase in deferred tax liabilities related to tax basis goodwill and provision-to-return tax adjustments from ABILITY's 2017 tax return filings and an adjustment of \$0.9 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>

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

3. BUSINESS COMBINATIONS (Continued)

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 for the year ended December 31, 2018 (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 supportable, and (3) with respect to the unaudited pro forma 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.

4. REVENUE

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,		
	2019	2018	2017⁽¹⁾
Platform solutions ⁽²⁾	\$ 576,295	\$ 466,544	\$ 382,778
Services ⁽³⁾	66,115	61,132	66,580
Total revenue	\$ 642,410	\$ 527,676	\$ 449,358

(1) 2017 amounts have not been adjusted under the modified retrospective method.

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

4. REVENUE (Continued)

- (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. As the Company's standard payment terms are less than one year, the Company has elected the practical expedient under ASC 606-10-32-18 to not assess whether a contract has a significant financing component.

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 \$36.0 million and \$20.5 million as of December 31, 2019 and December 31, 2018, respectively. The increase in the unbilled receivables balance was primarily due to the timing of new contract signings and timing of billings. Unbilled receivables are classified as accounts receivable on the consolidated balance sheet.

Commissions for contracts with terms greater than one year are expensed over the remaining life of the contracts. Credits provided to customers which are recorded as a reduction to revenue are amortized over the applicable service period. For 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. The Company had a deferred commissions balance of \$11.8 million and \$5.7 million as of December 31, 2019 and December 31, 2018, respectively. The Company recognized amortization related to deferred commissions of \$1.6 million during the year ended December 31, 2019. The Company had a deferred contract asset balance of \$5.8 million and \$3.2 million as of December 31, 2019 and December 31, 2018, respectively. These deferred contract assets are applied throughout the life of the contract. Short-term and long-term deferred commissions and deferred contract assets are classified as prepaid expenses and other current assets and other assets on the consolidated balance sheet, respectively.

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 a deferred revenue balance of \$13.7 million and \$20.6 million as of December 31, 2019 and December 31, 2018, respectively. Revenue recognized during the year ended December 31, 2019 that was included in the deferred revenue balance at the beginning of the year was \$18.8 million.

5. NET INCOME (LOSS) 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

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

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

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 income (loss) 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 INCOME (LOSS) 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,		
	2019	2018	2017
Basic			
Numerator:			
Net income (loss)	\$ 7,775	\$ (39,164)	\$ 34,818
Undistributed earnings allocated to participating securities	(237)	—	(990)
Net income (loss) attributable to common stockholders—basic	<u>\$ 7,538</u>	<u>\$ (39,164)</u>	<u>\$ 33,828</u>
Denominator:			
Weighted average shares used in computing net income (loss) per share attributable to common stockholders—basic	148,304	145,389	142,225
Net income (loss) per share attributable to common stockholders—basic	<u>\$ 0.05</u>	<u>\$ (0.27)</u>	<u>\$ 0.24</u>
Diluted			
Numerator:			
Net income (loss) attributable to common stockholders—diluted	<u>\$ 7,538</u>	<u>\$ (39,164)</u>	<u>\$ 33,828</u>
Denominator:			
Number of shares used for basic EPS computation	148,304	145,389	142,225
Effect of dilutive securities	329	—	512
Weighted average shares used in computing net income per share attributable to common stockholders—diluted	148,633	145,389	142,737
Net income (loss) per share attributable to common stockholders—diluted	<u>\$ 0.05</u>	<u>\$ (0.27)</u>	<u>\$ 0.24</u>

The computation of diluted EPS does not include certain awards, on a weighted average basis, for the years ended December 31, 2019, 2018, and 2017, 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,		
	2019	2018	2017
Awards excluded from the computation of diluted net income per share because their inclusion would have been anti-dilutive	1	89	88

6. 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, 2019 (in thousands):

	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	\$ 41,933	\$ —	\$ —	\$ 41,933
Other current liabilities:				
Interest rate swaps	—	(8,354)	—	(8,354)
Contingent consideration	—	—	(3,719)	(3,719)
Other liabilities				
Interest rate swaps	—	(30,957)	—	(30,957)
Contingent consideration	—	—	(13,071)	(13,071)
Total	<u>\$ 41,933</u>	<u>\$ (39,311)</u>	<u>\$ (16,790)</u>	<u>\$ (14,168)</u>

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

6. 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, 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>

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)	
	2019	2018
Balance, beginning of period	\$ (31,824)	\$ (7,400)
Fair value adjustment ⁽¹⁾⁽²⁾	532	(6,159)
Accretion expense (recognized in general and administrative expenses)	(647)	(1,053)
Settlement (payment) of liability	15,149	—
Contingent consideration attributable to and assumed from ABILITY Acquisition	—	(17,212)
Total	<u>\$ (16,790)</u>	<u>\$ (31,824)</u>

- (1) During 2019, the Company recognized an adjustment of \$0.8 million recognized in general and administrative expenses related to the change in fair value of contingent consideration, partially offset by an adjustment of \$0.3 million recognized in goodwill, which was a purchase accounting adjustment attributable to the ABILITY Acquisition.
- (2) During 2018, 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, 2019 (in thousands):

Carrying amount	\$ 893,737
Fair value	\$ 898,206

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

6. FAIR VALUE MEASUREMENTS (Continued)

Interest Rate Swaps

In connection with the 2018 Credit Agreement, the Company entered into four interest rate swaps during 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 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, 2019 (in thousands):

	Liability Derivative	
	Balance Sheet Location	Fair Value
Interest rate swap contract	Other current liabilities	\$ (8,354)
Interest rate swap contract	Other liabilities	\$ (30,957)

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, 2019 (in thousands):

	Gain (Loss) recognized in OCI	Statement of Operations Location	(Gain) Loss reclassified from OCI
Interest rate swap contract	\$ (33,194)	Interest expense	\$ 3,811

The following table presents the location and amount of gains and losses on interest rate swaps included in 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 twelve months is \$8.4 million.

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

7. PROPERTY, EQUIPMENT AND CAPITALIZED SOFTWARE

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

	December 31,	
	2019	2018
Office and computer equipment	\$ 81,090	\$ 76,748
Leasehold improvements	14,936	13,158
Purchased software	51,784	45,304
Capitalized software	166,995	128,356
Furniture and fixtures	7,934	6,412
Land	390	390
Buildings	14,028	14,028
Work in process	8,200	5,811
Total	345,357	290,207
Less: accumulated depreciation and amortization	(197,616)	(148,449)
Property, equipment and capitalized software, net	\$ 147,741	\$ 141,758

Depreciation expense for the years ended December 31, 2019, 2018, and 2017 was \$55.9 million, \$52.7 million, and \$37.9 million, respectively. At December 31, 2019 and 2018, the Company had unamortized capitalized software costs, including costs classified as work in progress, of \$64.0 million and \$57.8 million, respectively. At December 31, 2019 and 2018, work in process consisted primarily of purchased software licenses, computer equipment, and capitalized software, which was not placed into service.

8. LEASES

The Company adopted ASU 2016-02 as of January 1, 2019. Leases held on or after January 1, 2019 are presented under ASC 842, while prior period amounts are not adjusted and continue to be reported in accordance with the Company's historic accounting under ASC 840. The Company recorded a right-of-use asset of \$34.8 million and a lease liability of \$40.5 million. Additionally, the Company recorded a reclassification of \$2.1 million from current liabilities and \$3.6 million from non-current liabilities, related to deferred rent, cease-use lease liabilities, and tenant improvement liabilities related to the implementation of ASC 842.

The Company elected the following practical expedients under ASC 842-10-65-1 including (1) the package of transition provisions related to expired and existing leases that allows an entity to use the historical assessment of whether contracts are or contain leases, lease classification, and initial direct costs, and (2) the practical expedient that allows for the use of hindsight in determining the lease term.

The Company determines whether a contract is or contains a lease at inception. At the lease commencement date, the Company records a liability for the lease obligation and a corresponding asset representing the right to use the underlying asset over the lease term. Leases with an initial term of 12 months or less are not recorded on the consolidated balance sheet and are recognized in expense using a straight-line basis for all asset classes. Variable lease payments are expensed as incurred, which primarily include maintenance costs, services provided by the lessor, and other charges reimbursed to the lessor.

The Company leases office space, data center facilities, printers, and equipment with remaining lease terms ranging from one year to 10 years, some of which contain renewal or purchase options. The exercise of these options is at the Company's sole discretion. The Company has entered into sublease agreements for unoccupied leased office space and records sublease income netted against rent expense. Additionally, the Company is required to maintain a standby letter of credit in the amount of \$1.0 million to satisfy the requirements of a certain lease agreement.

Certain of the Company's leases contain lease and non-lease components. For leases held on or after January 1, 2019, the Company has elected the practical expedient under ASC 842-10-15-37 for all asset classes which allows companies to account for lease and non-lease components as a single lease component.

The Company's leases do not contain an implicit rate of return, therefore an incremental borrowing rate was determined. The Company assessed which rate would be most reflective of a reasonable rate the Company would be able to borrow based on asset class and lease term.

Finance lease right-of-use assets of \$14.4 million are included in property, equipment, and capitalized software, net on the consolidated balance sheet.

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

8. LEASES (Continued)

The following table presents components of lease expense for the year ended December 31, 2019 (in thousands):

Finance lease cost		
Amortization of right-of-use assets	\$ 2,025	
Interest on lease liabilities	495	
Operating lease cost	11,385	
Variable lease cost	2,350	
Sublease income	(1,041)	
Total lease cost	\$ 15,214	

Maturities of lease liabilities as of December 31, 2019 are as follows (in thousands):

	Operating Leases	Finance Leases
2020	\$ 8,507	\$ 2,937
2021	9,019	2,381
2022	9,370	1,185
2023	7,984	1,275
2024	6,051	1,371
Thereafter	31,534	7,445
Total future minimum lease payments	72,465	16,594
Less: Interest	(14,690)	(1,795)
Total	\$ 57,775	\$ 14,799

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

	Operating Leases	Finance Leases
2019	\$ 11,250	\$ 3,509
2020	7,059	2,567
2021	5,898	2,017
2022	5,303	1,181
2023	3,821	1,275
Thereafter	15,599	8,831
Total	48,930	19,380
Less: Interest	—	(2,548)
Total	\$ 48,930	\$ 16,832

Supplemental cash flow information related to leases for the year ended December 31, 2019 are as follows (in thousands):

Cash paid for amounts included in the measurement of lease liabilities:

Operating cash flows for operating leases	\$ 12,940
Operating cash flows for financing leases	495
Financing cash flows for financing leases	2,393

Right-of-use assets obtained in exchange for lease liabilities:

Operating leases	\$ 23,620
Finance leases	20

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

8. LEASES (Continued)

Supplemental balance sheet information related to leases as of December 31, 2019 are as follows:

Weighted average remaining lease term:

Operating leases	5 years
Financing leases	8 years

Weighted average discount rate:

Operating leases	4.7%
Financing leases	3.0%

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 acquisition of ABILITY during 2018.

The following table summarizes the activity related to the carrying value of our goodwill during the years ended December 31, 2019 and 2018 (in thousands):

Goodwill as of January 1, 2018	\$ 184,932
Goodwill recorded in connection with the acquisition of ABILITY	<u>771,097</u>
Goodwill as of December 31, 2018	<u>956,029</u>
Adjustments recorded in connection with the acquisition of ABILITY ⁽¹⁾	<u>(148)</u>
Goodwill as of December 31, 2019	<u><u>\$ 955,881</u></u>

- (1) During 2019, the Company finalized the working capital adjustments for ABILITY. 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, 2019 and 2018 were as follows (in thousands):

	December 31, 2019			
	Gross	Accumulated Amortization	Net	Weighted Average Remaining Useful Life (years)
Technology	\$ 116,177	\$ (38,597)	\$ 77,580	11.0
Trademark and trade names	31,860	(9,363)	22,497	13.0
Database	6,500	(6,500)	—	0.0
Customer relationships	480,950	(97,986)	382,964	10.6
Non-compete agreements	820	(820)	—	0.0
Total	<u><u>\$ 636,307</u></u>	<u><u>\$ (153,266)</u></u>	<u><u>\$ 483,041</u></u>	

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

9. GOODWILL AND INTANGIBLE ASSETS (Continued)

	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 tradenames	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><u>\$ 636,307</u></u>	<u><u>\$ (100,964)</u></u>	<u><u>\$ 535,343</u></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 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.

Amortization expense for the years ended December 31, 2019, 2018, and 2017 was \$52.3 million, \$44.0 million, and \$15.2 million, respectively.

Estimated future amortization expense of intangible assets, based upon the Company's intangible assets at December 31, 2019, is as follows (in thousands):

	Amount
Year ending December 31:	
2020	\$ 50,821
2021	48,035
2022	48,035
2023	47,874
2024	46,574
Thereafter	241,702
Total	<u>\$ 483,041</u>

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.

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

10. DEBT (Continued)

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 margin 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 time as its prime or base commercial lending rate, as in effect from time to time, (ii) the Federal Funds Effective Rate plus $\frac{1}{2}$ 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, 2019, 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, 2019	December 31, 2018
2018 Term Facility ⁽¹⁾	\$ 893,737	\$ 949,314
Less: current portion	9,800	9,800
Non-current Credit Facilities	<u>\$ 883,937</u>	<u>\$ 939,514</u>

- (1) The 2018 Term Facility is presented net of unamortized deferred financing fees and original issue discount (“OID”) of \$24.0 million and \$28.2 million as of December 31, 2019 and 2018, respectively.

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, 2019, 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
2020	\$ 9,800
2021	9,800
2022	9,800
2023	9,800
2024	9,800
Thereafter	868,750
Total scheduled maturities	<u>917,750</u>
Unamortized deferred financing fees and OID	(24,013)
Total Credit Facilities	<u>\$ 893,737</u>

Subsequent Event

On February 11, 2020, the Company executed an amendment to its 2018 Credit Facility to reprice the 2018 Term Facility, resulting in a decrease to the applicable interest rate margin by 50 basis points to 3.00% with an additional 25 basis point reduction upon achievement of a defined senior secured net leverage ratio. Other material provisions under the 2018 Credit Facility and 2018 Term Facility, including the maturity date of April 2, 2025 and current amount of debt outstanding, remain unchanged.

11. COMMITMENTS AND CONTINGENCIES

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

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

11. COMMITMENTS AND CONTINGENCIES (Continued)

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 consolidated financial statements of the Company.

12. 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 provided 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. At the Company's annual meeting of stockholders held on June 5, 2019, the Company's stockholders, upon the recommendation of the Board of Directors of the Company (the "Board"), approved the Amended and Restated 2015 Omnibus Incentive Plan (the "Amended Plan"), which was previously adopted by the Board on February 14, 2019, subject to the approval by the stockholders. The Amended Plan (i) increases the maximum number of shares of the Company's Class A common stock available for issuance by 6,000,000 shares to a total of 13,335,430; (ii) removes the provisions regarding Section 162(m) of the Code that are no longer relevant due to recent changes to the Code pursuant to the Tax Cuts and Jobs Act of 2017, which eliminated the "performance-based compensation" exception to the deduction limitation under Section 162(m) of the Code; and (iii) extends the term of the Amended Plan until the tenth anniversary of the date of Board approval of the Amended Plan.

Restricted Stock Units

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, 2019	191,868	\$ 14.98
RSUs granted during 2019	94,558	13.88
RSUs vested during 2019	(150,250)	14.98
RSUs forfeited during 2019	—	—
RSUs granted and unvested at December 31, 2019	<u>136,176</u>	<u>\$ 14.21</u>

The weighted-average fair value of RSUs granted during the years ended December 31, 2019, 2018, and 2017 was \$13.88, \$10.35, and \$13.70, respectively. During the years ended December 31, 2019 and 2018, and 2017, these awards had an aggregate grant date fair value of \$1.3 million, \$1.1 million, and \$0.6 million, respectively. The total fair value of RSUs vested during the

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

12. STOCK-BASED COMPENSATION (Continued)

years ended December 31, 2019, 2018 and 2017 was \$2.3 million, \$1.1 million, and \$1.3 million, respectively. As of December 31, 2019, there was a total of \$0.5 million in unrecognized compensation cost related to unvested RSUs, which are expected to be recognized over a weighted-average period of approximately 0.4 years.

Restricted Stock Awards

During 2015, the Company began granting RSAs pursuant to the 2015 Plan. RSAs granted to non-employee 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 2019, the Company granted 2.7 million RSAs, of which 0.5 million had performance vesting conditions. A summary of RSA activity is as follows:

	Number of RSAs	Weighted Average Fair Value Per Unit
RSAs granted and unvested at January 1, 2019	4,939,419	\$ 12.37
RSAs granted during 2019	2,678,047	14.96
RSAs vested during 2019	(1,066,293)	12.66
RSAs forfeited during 2019	(541,918)	12.08
RSAs granted and unvested at December 31, 2019	<u>6,009,255</u>	<u>\$ 13.51</u>

The weighted-average fair value of an RSA granted during the years ended December 31, 2019, 2018, and 2017 was \$14.96, \$11.12, and \$12.64, respectively. During the years ended December 31, 2019, 2018, and 2017, these awards had an aggregate grant date fair value of \$40.1 million, \$28.6 million, and \$33.5 million, respectively. The total fair value of RSAs vested during the years ended December 31, 2019, 2018, and 2017 was \$15.9 million, \$8.6 million, and \$9.3 million, respectively. As of December 31, 2019, there was a total of \$62.9 million in unrecognized compensation cost related to unvested RSAs, which are expected to be recognized over a weighted-average period of approximately 3.3 years.

Stock Options

The Company did not grant any options during the years ended December 31, 2019, 2018, and 2017. The Company used the Black-Scholes option-pricing model to determine the estimated fair value for previously granted 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.

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

12. STOCK-BASED COMPENSATION (Continued)

The average expected term was determined under the simplified calculation, 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.

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, 2019	857,084	\$ 7.63		4.3	\$ 5,616
Stock options granted during 2019	—	\$ —	\$ —		
Stock options exercised during 2019	(547,964)	\$ 7.60			
Stock options canceled during 2019	(5,845)	\$ 9.94			
Balance at December 31, 2019	<u>303,275</u>	<u>\$ 7.63</u>		4.4	\$ 3,393
Exercisable at December 31, 2019	<u>303,275</u>	<u>\$ 7.63</u>		4.4	\$ 3,393
Vested and expected to vest at December 31, 2019	<u>303,275</u>	<u>\$ 7.63</u>		4.4	\$ 3,393

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, 2019, 2018, and 2017 was \$4.6 million, \$1.2 million, and \$4.2 million, respectively.

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 month 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,		
	2019	2018	2017
Shares purchased and issued	92,738	90,084	49,247
Weighted average discounted price per share	\$ 12.64	\$ 9.74	\$ 11.08
Stock-based compensation expense (in thousands)	\$ 234	\$ 141	\$ 154

13. 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, 2019, 2018, and 2017, total expense recorded for the Company's matching 401(k) contributions were \$7.0 million, \$6.3 million, and \$5.2 million, respectively.

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

14. 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 year ended December 31, 2017 the Company repurchased 7,111,190 Class A common shares for \$93.6 million, at an average cost of \$13.16 per share, excluding commissions. The share repurchase program expired on December 31, 2017 and there were no repurchases during 2018 or 2019.

15. INCOME TAXES

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

	Year Ended December 31,		
	2019	2018	2017
Current:			
Federal ⁽¹⁾	\$ (468)	\$ (2,113)	\$ 2,272
State	1,847	215	2,162
Total current provision (benefit)	<u>1,379</u>	<u>(1,898)</u>	<u>4,434</u>
Deferred:			
Federal	107	(8,009)	(8,333)
State	(3,383)	(4,486)	1,668
Total deferred benefit	<u>(3,276)</u>	<u>(12,495)</u>	<u>(6,665)</u>
Total benefit from income taxes	<u>\$ (1,897)</u>	<u>\$ (14,393)</u>	<u>\$ (2,231)</u>

- (1) As of December 31, 2018, the 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,					
	2019	2018	2017			
Expected federal income tax	21.0 %	\$ 1,234	21.0 %	\$ (11,247)	35.0 %	\$ 11,406
State income taxes ⁽¹⁾	(26.1)%	(1,536)	8.0 %	(4,270)	8.0 %	2,606
Permanent items	(6.5)%	(384)	1.1 %	(614)	0.3 %	88
Research and development tax credits	(17.1)%	(1,003)	1.6 %	(850)	(2.6)%	(850)
Excess tax benefits and stock-based compensation	(13.9)%	(815)	(1.0)%	559	(0.7)%	(243)
Acquisition-related tax adjustments	3.2 %	189	(2.1)%	1,144	(1.4)%	(445)
Enactment of the Tax Act	— %	—	— %	—	(47.4)%	(15,461)
Other	7.1 %	418	(1.7)%	885	2.0 %	668
Income tax benefit	<u>(32.3)%</u>	<u>\$ (1,897)</u>	<u>26.9 %</u>	<u>\$ (14,393)</u>	<u>(6.8)%</u>	<u>\$ (2,231)</u>

- (1) As of December 31, 2019, the state income taxes reflect the recognition of a \$2.0 million tax benefit from change in state tax apportionment, change in state tax laws, and tax rates applied against the Company's deferred tax balance.

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%

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

15. INCOME TAXES (Continued)

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.

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,	
	2019	2018
Components of deferred tax assets and liabilities		
Deferred tax assets:		
Operating lease liabilities	\$ 18,524	\$ —
Unrealized gains and losses in other comprehensive income	12,568	3,200
Interest expense carryforwards	9,079	11,278
Net operating loss carryforwards	6,975	17,258
Tax credit carryforwards	4,156	3,114
Stock-based compensation	4,078	3,553
Accrued expenses and reserves	2,196	4,571
Other	1,297	2,634
Total deferred tax assets	58,873	45,608
Deferred tax liabilities:		
Intangibles	113,978	127,272
Property, equipment and capitalized software	22,606	26,612
Operating lease right-of-use assets	15,300	—
Prepays and other	4,453	2,092
Total deferred tax liabilities	156,337	155,976
Net deferred tax liabilities before valuation allowance	97,464	110,368
Valuation allowance	229	301
Net deferred tax liabilities	\$ 97,693	\$ 110,669

As of December 31, 2019, the Company has U.S. federal and state net operating loss carryforwards of approximately \$2.9 million and \$5.1 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, 2019, the Company has interest expense carryforwards of approximately \$9.1 million that can be carried forward indefinitely. As of December 31, 2019, the Company has U.S. federal and state tax credit carryforwards of approximately \$4.0 million and \$0.6 million, respectively, gross of any uncertain tax position considerations. The tax credit carryforwards will expire between 2020 and 2039. 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— 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):

	2019	2018	2017
January 1	\$ 1,158	\$ —	\$ 80
Gross increases in tax positions in current period	2	—	—
Gross increase in tax positions in prior period	37	32	291
Gross decrease in tax positions in prior period	(1)	(1)	(160)
Gross increase in tax positions from acquisitions	16	1,162	—
Settlement	—	—	(211)
Lapse of statute of limitations	(51)	(35)	—
Uncertain tax position at December 31	\$ 1,161	\$ 1,158	\$ —

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

15. 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, 2019	\$ 3,350	\$ 5,895	\$ 1,855	\$ (7,749)	\$ 3,351
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

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 19, 2020

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 19, 2020

**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, 2019 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 19, 2020

**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, 2019 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

Chief Financial Officer

(Principal Financial Officer & Principal Accounting Officer)

Date: February 19, 2020

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NON-GAAP RECONCILIATION

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

	Year Ended December 31,				
	2019	2018	2017	2016	2015
	(in thousands)				
Reconciliation of Net income (loss) to Adjusted EBITDA:					
Net income (loss)	\$ 7,775	\$ (39,164)	\$ 34,818	\$ 27,104	\$ 66,063
Depreciation and amortization	108,250	96,725	53,089	37,284	22,633
Interest income	(2,242)	(2,181)	(5,429)	(5,792)	(3,003)
Interest expense	65,831	50,898	6,225	5,065	4,420
Other expense, net	20	2,255	406	(538)	328
(Benefit from) Provision for income taxes	(1,897)	(14,393)	(2,231)	11,795	48,648
EBITDA	177,737	94,140	86,878	74,918	139,089
Stock-based compensation	20,230	16,162	17,318	10,054	7,415
Acquisition costs:					
Transaction costs	898	6,654	1,177	1,622	1,483
Integration costs	6,160	6,788	1,805	—	—
Contingent consideration accretion	(255)	7,306	(5,200)	706	—
Compensatory contingent consideration	66	1,674	1,966	10,258	2,938
Restructuring expense	—	9,500	—	—	—
Tax on equity exercises	—	—	32	127	697
Other non-comparable items ⁽¹⁾	5,835	9,721	5,038	2,259	—
Adjusted EBITDA	\$ 210,671	\$ 151,945	\$ 109,014	\$ 99,944	\$ 151,622
Adjusted EBITDA margin	32.8%	28.8%	24.3%	23.4%	34.7%

(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.

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

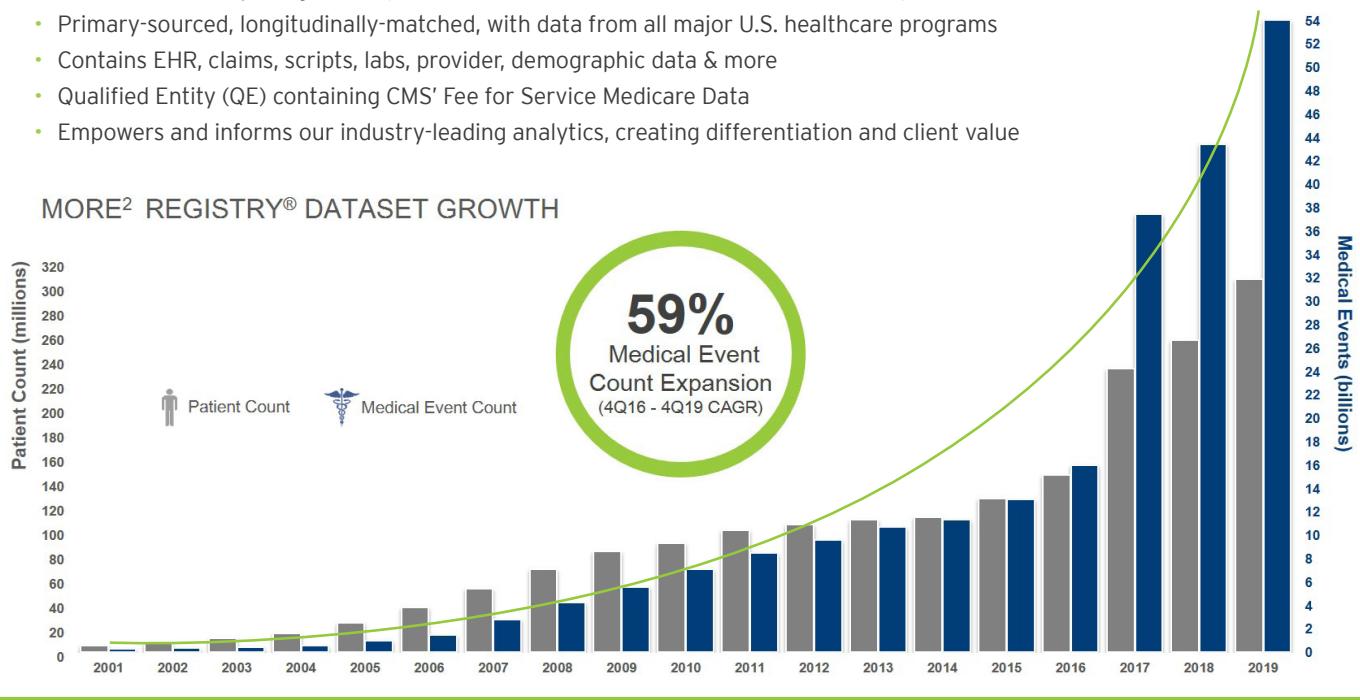
	Year Ended December 31,				
	2019	2018	2017	2016	2015
	(in thousands)				
Reconciliation of Net income (loss) to Non-GAAP net income:					
Net income (loss)	\$ 7,775	\$ (39,164)	\$ 34,818	\$ 27,104	\$ 66,063
Stock-based compensation	20,230	16,162	17,318	10,054	7,415
Acquisition costs:					
Transaction costs	898	6,654	1,177	1,622	1,483
Integration costs	6,160	6,788	1,805	—	—
Contingent consideration accretion	(255)	7,306	(5,200)	706	—
Compensatory contingent consideration	66	1,674	1,966	10,258	2,938
Amortization of acquired intangible assets	52,302	43,983	15,236	9,206	3,412
Amortization of debt issuance costs and debt discount	4,598	3,138	—	—	—
Restructuring expense	—	9,500	—	—	—
Tax on equity exercises	—	—	32	127	697
Other non-comparable items ⁽¹⁾	5,835	9,721	5,038	2,259	—
Tax impact of add-back items	(20,123)	(26,441)	(14,949)	(10,383)	(6,656)
Tax Act benefit	—	—	(15,461)	—	—
Non-GAAP net income	\$ 77,486	\$ 39,321	\$ 41,780	\$ 50,953	\$ 75,352

(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 Non-GAAP net income in order to more effectively assess the Company’s period-over-period and ongoing operating performance.

MORE² REGISTRY® DATASET EXPANSION

- One of the industry's largest independent healthcare datasets, with more than **314M patients** and **53B medical events**
- Primary-sourced, longitudinally-matched, with data from all major U.S. healthcare programs
- Contains EHR, claims, scripts, labs, provider, demographic data & more
- Qualified Entity (QE) containing CMS' Fee for Service Medicare Data
- Empowers and informs our industry-leading analytics, creating differentiation and client value

MORE² REGISTRY® DATASET GROWTH

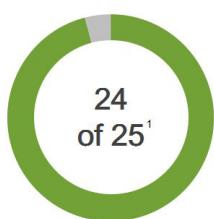


Please see the Company's filings with the Securities and Exchange Commission (SEC), including the Form 10-K filed on February 19, 2020, for further information on this and other key metrics.

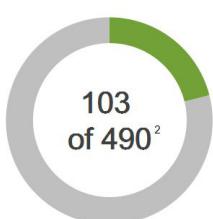
LEADING CLIENT PRESENCE ACROSS VERTICALS

Reflecting Inovalon's differentiated capabilities, the Company's significant client base includes 24 of the Top 25 health plans by size in the nation, 22 of the Top 25 global pharmaceutical companies, 19 of the Top 25 healthcare provider systems, and more than 76,000 U.S. provider sites.

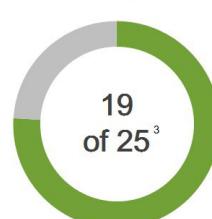
Top 25 U.S.
Health Plans



Total U.S.
Health Plans



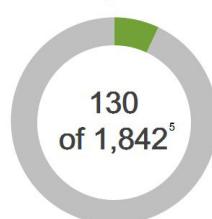
Top 25 U.S. Healthcare
Provider Systems



Top-25 Global
Pharma Companies



Pharma / Life Sciences
Companies



¹) Top 25 health plans based on AIS 2018 directory and CMS data; ²) Total U.S. health plans based on AIS 2018 directory; ³) Sites of care as of September 2018 based on CMS data; combined Inovalon and ABILITY site count of >50,000; ⁴) Top 25 pharmaceutical companies based on PharmExec's Top 50 Companies 2018; ⁵) Avalere client database

CORPORATE INFORMATION

HEADQUARTERS

4321 Collington Road
Bowie, Maryland 20716
Phone: 301-809-4000
www.inovalon.com

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Deloitte & Touche LLP
7900 Tysons One Place, Suite 800
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
inovalonshareholder@inovalon.com

STOCK TRANSFER AGENT

American Stock Transfer & Trust Company, LLC
Operations Center
6201 15th Avenue
Brooklyn, New York 11219

Toll Free: 800-937-5449*
International: +1-718-921-8124*
TTY-Hearing Impaired Toll Free: *
1-866-703-9077
TTY-Hearing Impaired*
International:
+1-718-921-8386

WEBSITE

www.astfinancial.com

STOCK LISTING

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



ANNUAL MEETING

The 2019 annual meeting of stockholders will be held on Wednesday, June 17, 2020 at 10 a.m. ET at The Jefferson, Washington, DC located at 1200 16th St NW Washington, DC 20036.

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.



HEADQUARTERS

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