INNODATA INC
Form 10-K
March 26, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

þ   Annual report under section 13 or 15(d) of the securities exchange act of 1934

For the fiscal year ended **December 31, 2018**

¨   Transition report under section 13 or 15(d) of the securities exchange act of 1934

Commission file number 001-35774

INNODATA INC.

(Exact name of registrant as specified in its charter)

Delaware   **13-3475943**
 (State or other jurisdiction of   (I.R.S. Employer Identification No.)
incorporation or organization)

55 Challenger Road
Ridgefield Park, New Jersey   **07660**
 (Address of principal executive offices) (Zip Code)

(201) 371-8000
 (Registrant's telephone number)

Securities registered under Section 12(b) of the Exchange Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock $.01 par value	The Nasdaq Stock Market LLC
Preferred Stock Purchase Right	The Nasdaq Stock Market LLC

Securities registered under Section 12(g) of the Exchange 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 þ

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

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 past twelve 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 þ 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 þ No ¨

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

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

Large accelerated filer ¨   Accelerated filer ¨ Non-accelerated filer þ Smaller reporting company þ
Emerging growth company o

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. o

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

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant (based on the closing price reported on The Nasdaq Stock Market on June 30, 2018) was $24,699,712.

The number of outstanding shares of the registrant's common stock, $.01 par value, as of March 21, 2019 was 25,952,454.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive proxy statement for the 2019 Annual Meeting of Stockholders are incorporated by reference in Items 10,11,12,13 and 14 of Part III of this Form 10-K.

INNODATA INC.

Form 10-K

For the Year Ended December 31, 2018

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PART I

Disclosures in this Form 10-K contain certain forward-looking statements, including without limitation, statements concerning our operations, economic performance, and financial condition. These forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. The words "project," "head start," "believe," "expect," "should," "anticipate," "indicate," "point to," "forecast," "likely," "goals," "optimistic," "foster," "estimate," "plan" and other similar expressions generally identify forward-looking statements, which speak only as of their dates.

These forward-looking statements are based largely on our current expectations and are subject to a number of risks and uncertainties, including without limitation, that contracts may be terminated by clients; projected or committed volumes of work may not materialize; the primarily at-will nature of contracts with our Digital Data Solutions clients and the ability of these clients to reduce, delay or cancel projects; continuing Digital Data Solutions segment revenue concentration in a limited number of clients; continuing Digital Data Solutions segment reliance on project-based work; inability to replace projects that are completed, canceled or reduced; our dependency on content providers in our Agility segment; difficulty in integrating and deriving synergies from acquisitions, joint venture and strategic investments; potential undiscovered liabilities of companies and businesses that we may acquire; potential impairment of the carrying value of goodwill and other acquired intangible assets of companies and businesses that we acquire; changes in our business or growth strategy; depressed market conditions; changes in external market factors; the ability and willingness of our clients and prospective clients to execute business plans which give rise to requirements for our services; changes in our business or growth strategy; the emergence of new or growing competitors; various other competitive and technological factors; and other risks and uncertainties indicated from time to time in our filings with the Securities and Exchange Commission.

Our actual results could differ materially from the results referred to in the forward-looking statements. In light of these risks and uncertainties, there can be no assurance that the results referred to in the forward-looking statements contained in this Form 10-K will occur.

We undertake no obligation to update or review any guidance or other forward-looking information, whether as a result of new information, future developments or otherwise.

Item 1. Business.

Business Overview

Innodata Inc. (NASDAQ: INOD) is a global services and technology company. We combine human expertise with deep learning technologies to power leading information products and enterprise artificial intelligence (AI)/digital transformation.

The Company, founded in 1988 and headquartered in northern New Jersey, features a 3,500-strong global delivery and technology team spanning ten offices globally and a research and technology incubator, Innodata Labs, which focuses on applied machine learning and emerging artificial intelligence.

Our core services are (i) data acquisition, transformation, and enrichment at scale; (ii) digital operations management and analytics; and (iii) content applications. We report our core business as the Digital Data Solutions (DDS) segment.

We also have venture businesses that leverage our core capabilities to provide specific industry solutions. Our Synodex venture business delivers a SaaS platform and managed services for digital transformation of medical data. Our Agility PR Solutions (Agility) venture business delivers a SaaS platform and managed service for delivering news, information, and content to targeted journalists and influencers as well as monitoring and analyzing coverage across traditional and social media sources. Each venture business is reported as a separate segment.

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Our Core Business (Digital Data Solutions (DDS) Segment)

We specialize in combining *deep neural networks* and *human expertise* in multiple domains (including health, science, and law) to make "unstructured information" (sometimes referred to as "content") useable. For business information companies, "useable" means that the content can be sold via subscription to a *digital product*. For enterprises, "useable" means that the content can drive *digital process transformation* and *AI*. We work with all classes of data, including sensitive and protected data.

We also develop digital products for business information companies and digital systems which replace legacy systems and processes.

In 2018, we continued to implement a strategy we initiated in 2017 focused on technology differentiation, increasingly taking an innovation-led approach to create value for clients while driving leaner, more cost-effective operations.

Our Approach: Deep Neural Networks and Experts-in-the-loop

Finding the right approach for mixing machines and experts-in-the-loop for each customer requirement is one of our core competencies. On the human side, we have over three thousand staff with deep domain expertise in legal, tax, regulatory, scientific, technical, and health-related content. Many hold advanced degrees. They work from our global operations centers in North and South America, Europe, Israel, India, Sri Lanka and the Philippines. Our operations centers in Asia are ISO 27001 certified. On the technology side, we use deep learning, a sophisticated machine learning technique which is a branch of artificial intelligence that has enjoyed great success in real-world applications.

In our approach, content is fed first into our deep learning machines that automate much of the work, but distinguish between what they can automatically process and what requires human intervention. Work that requires humans is "pushed" to human experts. Once human experts perform tasks, their output is then fed back to the machines, which, as a result, become "smarter" and achieve over time progressively greater levels of automation. (*See "Our Technology and Infrastructure", below.*)

Our Customers

Our customers include leading digital businesses in banking and financial services, technology, and digital retailing and four of the largest information industry companies in the world, spanning financial, legal, healthcare and scientific

vertical markets.[1] Our customers often seek to use digital data in combination with AI to support their businesses or to digitally transform operations. Our information industry customers sell subscriptions to data products that require enhanced digital data.

[1] According to Outsell Inc., business information is a $1.7 trillion industry consisting of more than 7,000 publishers, information providers and software service firms worldwide. Many of our clients specialize in the scientific, technical and health (STH) area (estimated revenues of $14.6 billion) and the legal and regulatory (L&R) area (estimated revenues of $24.3 billion). "Information Industry Outlook 2019 – Trust is the New Algorithm." (October 3, 2018).

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Our Services

(i)   *Data Acquisition, Transformation, and Enrichment at Scale*

In order to use content in an information product or in AI, there are often significant obstacles that must be overcome: the content may be contained in multiple websites; it may be in disparate formats; and it may lack the necessary semantics and metadata to make it product- or AI-ready. Innodata overcomes these obstacles by combining advanced technology and human subject matter experts, enabling us to produce highly refined product- and AI-ready content efficiently and at scale.

Acquiring unstructured data often involves monitoring thousands of sources such as websites in real-time for new or changing content and then automatically extracting the changed content. One of the challenges with web data monitoring and extraction is that the HTML code underlying web pages often changes, causing programs and scripts to break. We overcome this by using enterprise-class tools for content change detection and extraction. These tools use both machine learning-based visual data abstraction combined with traditional programmatic approaches. With visual abstraction, the technology knows what the content "looks like" and recognizes when a data element moves from one spot on a Web page to another.

Digital data transformation can refer to a large number of very specific tasks necessary to create well-structured, valid XML, such as text zoning, editing, format tagging, format conversion, extraction, cross-reference capture, and linking.

Digital data enrichment often includes structural tagging as well as semantic enrichment such as entity tagging and normalization. Data enrichment also includes text categorization - classifying content to systems that organize knowledge such as ontologies and knowledge graphs. This kind of enrichment enables powerful information retrieval and discovery and provides hooks for integration and interoperability.

(ii)   *Digital Operations Management and Analytics*

We provide digital operations management and analytics for an increasing diversity of complex functions. At present, these include IP rights management, contract management, customer relations, data processing, regulatory reporting, publishing workflow management, publisher relationship management, and transaction management. Our services draw on a combination of industry and functional expertise from our thousands of global delivery resources, many with advanced degrees, augmented by sophisticated machine learning and robotics process automation (RPA) technology.

Our digital operations management solutions often leverage our core competency in augmenting human expert effort with advanced technology and configuring the technology to continually improve as a result of expert feedback. In this way, we provide high-quality, cost-effective solutions for our customers that become increasingly automated, resulting in further cost and improvements in both productivity and response time.

Many of the operations we manage are mission-critical for our customers (as opposed to back-office), are unique, and have multiple contingencies and potential points of failure. To manage this complexity, we have developed methodologies and best practices around process management and risk mitigation, and we work with clients at a strategic business and technology level.

Examples of recent deployments:

· Digitally transforming and managing a complex operation for rights and royalty management for a leading provider of print and interactive online properties.

· Migrating a large-scale scanning and metadata capture center owned by a nonprofit digital library to one of the Company's Philippine facilities, assuming responsibility for managing complex logistics, technology, and productivity.

· Provisioning the entire back-end production capabilities for an online learning platform providing over 24 million course-specific study resources.

· Providing customer support and AI model training for a Chinese multinational conglomerate specializing in e-commerce.

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(iii)   *Content Applications*

We develop and maintain applications used in conjunction with product- or AI-ready content we create. Our content applications address knowledge representation, search/discovery, and digital transformation of customer workflows. Our scope of services spans full-stack development, knowledge engineering, and integration support.

Examples of recent engagements:

· As part of a digital transformation initiative for a national standards body, developing a content workflow management solution using MarkLogic and RSuite that automated content ingestion and managed multi-channel delivery.
· Building a content workflow management solution and automated distribution system to manage multi-channel delivery for the principal professional association for scholars of language and literature with 25,000 members in 100 countries.
· Developing a regulatory content management solution that includes business activity monitoring and reporting for one of the "Big Four" accounting and professional services firms.

Our Technology and Infrastructure

Our deep learning technologies are built on frameworks such as TensorFlow and Torch that layer algorithms to create artificial neural networks that continuously learn on the job, constantly improving the quality and accuracy of results.

Our content processing application infrastructure consists of three integrated tiers. The first tier is an <u>orchestration layer</u> featuring a console we use to configure our workflow engines. Each workflow is customized around the content acquisition, transformation, and enrichment tasks required to transform a specific input into a specific output. This is where we oversee and manage AI, setting our accuracy thresholds and quality assurance parameters to decide when cognitive tasks that have been performed by machines are sent for human review.

The second tier of our data processing application infrastructure is a <u>microservices layer</u> of deep learning networks which perform discrete tasks automatically. Microservices are invoked by workflows via RESTful APIs. Our deep neural networks are trained to understand domain-specific terms and meaning and can be deployed to enforce privacy and maintain customer-proprietary learning. We have built domain-specific and task-specific microservices that perform deep sequence labelling, text categorization, and computer vision. The technology works by observing text patterns using algorithms and assigning labels based on these observed values.

For each cognitive decision, the machines provide a result together with a confidence score. A high confidence score means the machine is confident that it has performed accurately and the content is ready to be deployed in an information product or for AI. A low confidence score means expert review is required.

Our third layer is human experts-in-the-loop. When an expert review is required, the human experts use tools we refer to as "workbenches" to apply their expertise to a task. The workbenches are integrated with the microservice endpoints in one of two ways. In one deployment, only low-confidence data is sent to workbenches for human review. In an alternative deployment, we send both high-confidence and low-confidence data back to the workbench, displaying the confidence level for each decision taken by the machine. In both of these deployments, human-reviewed work is retroactively fed back into the deep neural network, enabling it to get smarter. The result is continuous, predicable improvement and progressively greater levels of automation.

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Our data storage and application hosting platform has been built utilizing an innovative enterprise infrastructure platform enabling robust performance scaling, strong security, high availability, and advanced business continuity. We support a range of strategies to suit our customers' needs for data security, compliance, scalability and reliability. We can host data and applications in our own data centers at our production facilities or we can utilize third-party cloud services which provide the benefit of "infinite scalability" of hardware resources. When we are processing sensitive information for banks and insurance companies, we utilize U.S.-based, co-located data centers in combination with advanced data encryption (both at rest and in motion to the AES 256 or similar standard) and desktop virtualization technologies, ensuring that data never leaves secured environments in the U.S. We employ a range of security features including monitored firewalls and intrusion detection devices. We can deploy on-premises, as well, and our machine learning microservices can be consumed via API.

We comply with the requirements of the United States Health Insurance Portability and Accountability Act of 1996 as amended (HIPAA) (including by the Health Information Technology for Economic and Clinical Health Data (HITECH)) and the United Kingdom's Data Protection Act 2018, as applicable. Innodata Inc. is certified to the EU-U.S. Privacy Shield framework, which certification includes Synodex and Agility as covered entities.

Our DDS segment includes our Innodata docGenix, LLC subsidiary (docGenix). As of December 31, 2018, Innodata Inc. owned 94% of docGenix.

Our Venture Businesses

Our venture businesses provide specific industry solutions. We have chosen to invest in these businesses because they leverage one or more of our core capabilities (typically data acquisition/transformation/enrichment at scale, content applications, and global workforce deployment), have attractive business models such as SaaS (software-as-a-service), and expand our addressable market. Each venture business is reported as its own business segment.

Synodex Segment

Synodex (www.synodex.com) enables clients in the insurance and healthcare sectors to transform medical records into useable digital data and to apply technologies to the digital data to augment decision support.

The main focus of the Synodex business is the extraction and classification of data from unstructured medical records in an innovative way to provide improved data service capabilities for insurance underwriting, insurance claims, medical records management, life settlement claims, and clinical trial support services. Synodex has developed and deployed its APS.Extract® product for specific use with life insurance underwriting and claims.

Our Synodex segment operates through our Innodata Synodex, LLC subsidiary. As of December 31, 2018, Innodata Inc. owned 92.5% of Innodata Synodex, LLC, an increase of 1.5% from December 31, 2017.

At the end of 2018, Synodex had 11 clients, including RGA Reinsurance Company and John Hancock Insurance. RGA Reinsurance Company is the principal operating subsidiary of Reinsurance Group of America, Incorporated (NYSE: RGA), one of the top 10 largest providers of life reinsurance in the world according to A.M. Best. John Hancock Insurance is the insurance operating unit of John Hancock Financial (a division of Manulife) and one of the largest life insurers in the United States. Synodex is engaged in business discussions with other reinsurance companies and insurance carriers that have expressed interest in utilizing its services.

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Agility Segment

Agility PR Solutions (www.agilitypr.com) provides tools and related professional services that enable public relations (PR) and communications professionals to discover influencers, amplify messages, monitor coverage, and measure the impact of campaigns. Agility has been ranked as the #1 easiest to use media database and as a leader in media and influencer targeting and media monitoring, out-performing significantly larger, more established competitors.[2] The media intelligence solutions market is estimated to be $3.2 billion and growing 7% annually.[3] The market is highly fragmented, with only a limited number of providers of integrated solutions such as Agility.

Agility's software-as-a-service (SaaS) tools include:

· An influencer targeting solution to help PR professionals identify influencers. The Agility media database includes detailed contact information for over 840,000 unique influencers globally including journalists, outlets, and bloggers. Live social media streams to allow users to research influencers by tracking activity and keywords across multiple social media channels.

· An outreach and content amplification solution enabling PR professionals to distribute news, information, and content to targeted influencers.

· Integrated newswire services.

· A media monitoring solution to help PR professionals track what is being said about their brand, industry or competitors and track engagement. Users can monitor and report on coverage across print, broadcast, online and social media sources, including AI-powered image monitoring. The self-serve monitoring tool enables users to create alerts, compile and share coverage briefings and clipbooks.

· A media analysis solution to help PR professionals analyze coverage, determine PR campaign reach and effectiveness, and create and distribute reports.

Agility's professional services include:

· Media monitoring and PR measurement services delivered by a team of media analysts who use our SaaS monitoring solution to pull coverage and curate daily news briefs. This powerful media monitoring solution is for clients with complex monitoring or reporting requirements.

· Advanced PR reporting and measurement services including custom reports, PR measurement and social media / influencer analysis.

To provision our services, we maintain a big data engine that stores and indexes media content. We index approximately two billion media items each year.

Bulldog Reporter, a publisher of PR-related news and a popular e-newsletter, and the Bulldog Awards, a PR awards program that recognizes outstanding performance among PR and communications professionals and agencies, are properties of Agility.

Our Opportunity

Digital data has gained an increasing role across enterprises that seek to use AI to drive analytics and enhance operational excellence. At the same time, information companies are seeking to shift from products that are exclusively discovery-based products to products that provide predictive and prescriptive value. To accomplish these objectives, businesses often seek the ability to aggregate, integrate, transform and enhance data on a massive scale.

[2] G2 Crowd

[3] Burton-Taylor

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At the same time, digital businesses are pushing the boundaries of how technology can improve process and operational efficiencies. To accomplish these objectives, businesses often seek the ability to manage complex operations leveraging the benefits of sophisticated technologies.

We believe that we are well-poised to benefit from these global trends, enabling us to enhance our existing services as our customers' needs evolve and to increase our addressable market opportunity by developing new solution offerings and expanding into adjacent markets.

Clients

Two clients in our DDS segment each generated more than 10% of our total revenues in the 2018 and 2017 fiscal years. In 2018, revenues from Wolters Kluwer affiliated companies (the "WK Clients") were approximately $10.6 million or 19% of total revenues, and revenues from Reed Elsevier affiliated companies (the "RE Clients") were approximately $6.4 million, or 11% of total revenues. No other client generated more than 10% of our total revenues in 2018. These two clients together generated approximately 30% of our total revenues in each of the fiscal years ended December 31, 2018 and 2017.

We have long-standing relationships with many of our clients, and we have provided services to the two clients mentioned in the preceding paragraph for over ten years. Our track record of delivering high-quality services helps us to solidify client relationships. Many of our clients are recurring clients, meaning that they have continued to provide additional projects to us after our initial engagement with them.

Our contractual arrangements with the RE Clients during 2018 consisted of three master services agreements ("MSAs") and separately agreed to statements of work ("SOWs") for specific services. Two of the MSAs have indefinite terms and the third MSA has a term that ends on October 31, 2019. RE Clients may terminate the MSAs on notice periods ranging from zero to six months, and they may terminate certain individual SOWs on notice periods of up to 90 days. They may also terminate certain of the MSAs and SOWs on notice periods of three months or less for "cause" and for insolvency related events, and on changes of control, force majeure and the imposition of certain price increases by the Company that are not acceptable to them. We may terminate two of the MSAs on notice periods of 180 days, and we may also terminate certain MSAs and SOWs for "cause", insolvency related events affecting the RE Clients, and other defined events. The MSAs contain confidentiality, limitation of liability, indemnification and other standard provisions.

Our contractual arrangements with the WK Clients during calendar year 2018 consisted of four MSAs and separately agreed to SOWs for specific services. Two MSAs have indefinite terms, one MSA continues in effect until the completion of all services performed under the MSA, and the fourth MSA has a term that ends on the later of March 2, 2020 or the expiration date of all SOWs issued under the MSA. WK Clients may terminate certain MSAs on notice

periods of 30 days, and they may terminate certain individual SOWs on notice periods ranging from 10 days to six months. WK Clients may also terminate certain of the MSAs and SOWs on notice periods of 60 days or less for "cause" and for insolvency related events, and on changes of control, force majeure and the imposition of certain price increases by the Company that are not acceptable to them. We may terminate certain of the MSAs on notice periods of 30 days, and we may also terminate certain MSAs and SOWs for "cause", insolvency related events affecting the WK Clients, and other defined events. The MSAs contain confidentiality, limitation of liability, indemnification and other standard provisions.

Our agreements with our other clients are in many cases terminable on 30 to 90 days' notice. A substantial portion of the services we provide to our clients is subject to their requirements.

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Competitive Strengths

Our expertise in digital data. We are primarily focused on helping clients across multiple vertical industries by supplying enriched digital data at a lower cost which is either incorporated in clients' information products or used for AI.

Our focus on applied machine learning and emerging artificial intelligence (AI). Our Innodata Labs develops machine learning and deep learning-based technologies that we utilize in our operations and with our customers. Our engineering and IT teams create workbench tools that integrate with our machine learning and deep learning microservices to enable human review where necessary.

Our focus on human expertise. We have a large global staff in multiple domains (including health, science, and law). We integrate human experts with our machine learning and deep learning-based technologies to create superior outcomes for our clients that require enriched content that is product- and AI-ready.

Our focus on quality. We have achieved a reputation with our clients for consistent high-quality. We maintain independent quality assurance capabilities in all geographies where we have delivery centers. Our quality assurance teams in Asia are compliant and certified to the ISO 9001:2008 quality management system standards.

Our global delivery models. We have operations in eight countries in North America, Europe and Asia. We provide services to our clients through a comprehensive global delivery model that integrates both local and global resources to obtain the best economic results.

Our proven track record and reputation. By consistently providing high-quality services, we have achieved a track record of client successes. This track record is reflected in our reputation as a leading service provider within the media, publishing and information services sector. Our reputation and brand connote an assurance of expertise, quality execution and risk mitigation.

Our long-term relationships with clients. We have long-term relationships with many of our clients, who frequently retain us for additional projects after a successful initial engagement. We believe there are significant opportunities for additional growth with our existing clients, and we seek to expand these relationships by increasing the depth and breadth of the services we provide. This strategy allows us to use our in-depth client-specific knowledge to provide more fully integrated services and develop closer relationships with those clients.

Our ability to scale. We have demonstrated the ability to expand our teams and facilities to meet the needs of our clients. By virtue of the significant numbers of professional staff working on projects, we are able to build teams for new engagements quickly. We have also demonstrated the ability to hire and train staff quickly in order to service diverse and often large-scale needs of our clients.

Our internal infrastructure. We own and operate some of the most advanced content delivery centers in the world, which are linked by multi-redundant data connections. Our Wide Area Network – along with our Local Area Networks, Storage Area Networks and data centers – is configured with industry standard redundancy, often with more than one backup to help ensure 24x7 availability. Our infrastructure is built to accommodate advanced tools, processes and technologies that support our content and technical experts. We encrypt all individual protected health information, both at rest and in motion, to the AES 256 or similar standard, and we employ a range of security features including managed firewalls and intrusion services.

Sales and Marketing

For our DDS and Synodex segments we market and sell our services directly through our professional staff, senior management and direct sales personnel operating primarily from various locations in the U.S., and for our Agility segment we market and sell our services primarily from our offices in Canada and the United Kingdom and through our personnel in the U.S. In addition, we are increasingly developing and expanding our use of strategic partnerships and channel relationships for the establishment and development of new and existing customers. Our corporate headquarters is located at Ridgefield Park, New Jersey, just outside New York City. During 2018, we had four executive-level business development and marketing professionals and approximately 55 sales and marketing personnel. We also deploy solutions architects, technical support experts and consultants who support the development of new clients and new client engagements. These resources work within teams (both permanent and ad hoc) that provide support to clients.

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Our marketing department and sales professionals work together to generate leads. Our sales professionals identify and qualify prospects, securing direct personal access to decision makers at existing and prospective clients. They facilitate interactions between client personnel and our service teams to define ways in which we can assist clients with their goals. For each prospective client engagement, we assemble a team of our senior employees drawn from various disciplines within our Company. The team members assume assigned roles in a formalized process, using their combined knowledge and experience to understand the client's goals and collaborate with the client on a solution.

Our marketing organization is responsible for developing and increasing the visibility and awareness of our brand and our service offerings, defining and communicating our value proposition, generating qualified, early-stage leads and furnishing effective sales support tools.

As part of our marketing strategy we partner with media organizations to build awareness, establish a reputation as an industry thought leader, and generate leads. Media partners include trade associations and publications, trade show producers and consulting organizations. These partnerships are particularly valuable in enterprise industries as we build our presence among digital content leaders and decision makers.

Primary marketing outreach activities include content marketing, event marketing (including exhibiting at trade shows, conferences and seminars), direct and database marketing, public and media relations (including speaking engagements), and web marketing (including integrated marketing campaigns, search engine optimization, search engine marketing and the maintenance and continued development of external websites).

Sales activities include lead generation, nurturing leads, engaging in discussions with prospective customers to understand their needs, demonstrating our products, designing solutions, responding to requests for proposals, and managing account and client relationships and activities.

Personnel from our solutions analysis group, our client services group and our engineering services group closely support our direct sales effort. These individuals assist the sales force in understanding the technical needs of clients and providing responses to these needs, including demonstrations, prototypes, pricing quotations and time estimates. In addition, account managers from our customer service group support our direct sales effort by providing ongoing project-level support to our clients.

Competition

Our Digital Data Solutions segment operates in a highly competitive, fragmented and intense market. Major competitors in data services include Apex CoVantage, Aptara, Cenveo, Infosys, HCL Technologies, Macmillan India,

SPI Technologies, JSI S.A.S. Groupe Jouve and Thomson Digital. Major competitors in operations management and analytics include Cognizant Technology Solutions, ExlService Holdings, Inc., Genpact Limited, Infosys, and Tata Consultancy Services.

We compete in this market by offering high-quality services and competitive pricing that leverage our technical skills, IT infrastructure, offshore model and economies of scale. Our competitive advantages are especially attractive to clients for undertakings that are technically challenging, are sizable in scope or scale, are continuing, or that require a highly fail-safe environment with technology redundancy.

The Synodex segment competes in the insurance data analysis industry with an initial focus on applying innovative technology to speed accurate decision making and to improve productivity in the processing of medical files for the life insurance industry. Major competitors are Risk Righter, EMSI, Parameds, and other BPO companies all of whom are large firms with established client bases. We also compete with in-house personnel at existing or prospective clients who may attempt to duplicate our services in-house or use alternative approaches to fulfill their needs.

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For our Agility segment, our primary competitors are companies such as Meltwater, Cision, Kantar, Infomart, Nasdaq, Intelligent I.Q., Trendkite and Custom Scoop, several of which are large firms with established customer bases, as well as PR firms that provide media monitoring and analysis services and journalist and influencer databases. Our competitors also include social media listening companies and start-ups offering platforms to amplify messages by targeting social media influencers.

Locations

We are headquartered in Ridgefield Park, New Jersey, just outside New York City. Our Agility business is headquartered in Ottawa, Canada and we have an additional location in London, the United Kingdom. We have ten delivery centers in the Philippines, India, Sri Lanka, Canada, Germany, the United Kingdom and Israel.

Employees

As of December 31, 2018, we employed approximately 147 persons in the United States, Canada and the United Kingdom, and over 3,000 persons in ten global delivery centers in the Philippines, India, Sri Lanka, Canada, Germany, the United Kingdom and Israel. As of December 31, 2018, approximately 212 of our employees were dedicated to the Synodex segment, and approximately 261 of our employees were dedicated to the Agility segment. Most of our employees have graduated from at least a two-year college program. Many of our employees hold advanced degrees in law, business, technology, medicine and social sciences. No employees are currently represented by a labor union, and we believe that our relations with our employees are satisfactory.

Corporate Information

Our principal executive offices are located at 55 Challenger Road, Ridgefield Park, New Jersey 07660, and our telephone number is (201) 371-8000. Our website is www.innodata.com; information contained on our website is not included as a part of, or incorporated by reference into, this Annual Report on Form 10-K. There we make available, free of charge, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after we electronically file that material with, or furnish it to, the Securities and Exchange Commission (SEC). Our SEC reports can be obtained through the Investor Relations section of our website or from the Securities and Exchange Commission at www.sec.gov.

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Item 1A. Risk Factors.

We have historically relied on a very limited number of clients that have accounted for a significant portion of our revenues, and our results of operations could be adversely affected if we were to lose one or more of these significant clients.

We have historically relied on a very limited number of clients that have accounted for a significant portion of our revenues. Two clients in our DDS segment generated approximately 30% of our total revenues in each of the fiscal years ended December 31, 2018 and 2017, respectively. No other client accounted for 10% or more of total revenues during these periods. Further, in the years ended December 31, 2018 and 2017, revenues from non-US clients accounted for 56% and 51%, respectively, of our revenues. We may lose any of these clients, or our other major clients, as a result of our failure to meet or satisfy our client's requirements, the completion or termination of a project or engagement, or the client's selection of another service provider.

In addition, the volume of work performed for our major clients may vary from year to year, and services they require from us may change from year to year. They may also request that we modify certain key terms of our agreements with them as a condition of continuing to do business with us. If the volume of work performed for our major clients varies, if the services they require from us change, or if they require price concessions, our revenues and results of operations could be adversely affected, and we may incur a loss from operations. If certain key terms of our agreements with our major clients are modified, our revenues and results of operations may be adversely affected. Our services are typically subject to client requirements, and in many cases are terminable upon 30 to 90 days' notice.

We have no bank facilities or line of credit.

We believe that our existing cash and cash equivalents and internally generated funds will provide sufficient sources of liquidity to satisfy our financial needs for the next 12 months. However, we have no bank facilities or lines of credit, and reductions in our cash and cash equivalents from operating losses, capital expenditures, adverse legal decisions, acquisitions or otherwise could materially and adversely affect the Company. See "Management Discussion and Analysis – Liquidity and Capital Resources" for additional information.

Our common stock may become subject to delisting from The Nasdaq Stock Market.

Nasdaq may under Nasdaq Listing Rule 5810 delist the Company's common stock if the closing bid price for its common stock is less than $1.00 per share for 30 consecutive business days and the Company does not thereafter cure all listing deficiencies during Nasdaq-designated compliance periods.

A portion of our services is provided on a non-recurring basis for specific projects, and our inability to replace large projects when they are completed or otherwise terminated has adversely affected, and could in the future adversely affect, our revenues and results of operations.

We provide a portion of our services for specific projects that generate revenues that terminate on completion of a defined task. While we seek, wherever possible, on completion or termination of large projects, to counterbalance periodic declines in revenues with new arrangements to provide services to the same client or others, our inability to obtain sufficient new projects to counterbalance any decreases in such work may adversely affect our future revenues and results of operations.

A portion of our revenue is generated from projects which we characterize as recurring in nature. Projects that we characterize as recurring are nevertheless subject to termination.

Our operating performance is materially dependent on the continuation of these projects. However, we are exposed to risks where these projects could be terminated by our clients and we may not be able to replace these terminated projects with new recurring projects with similar profitability or clients may ask for a price reduction which could adversely affect our revenue and results of operations.

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Our solutions for the Agility segment are sold pursuant to subscription agreements, and if subscription clients elect either not to renew these agreements, or to renew these agreements for less expensive services, our revenues and results of operations will be adversely affected.

Our Agility segment derives its revenues primarily from subscription arrangements. Our clients may choose not to renew subscription agreements when they expire or may renew them at lower prices or for a significantly narrower scope of work. If large numbers of existing subscription clients do not renew these agreements or renew these agreements on terms less favorable to us, and if we cannot replace or supplement those non-renewals with new subscription agreements generating the same or greater level of revenue, our revenues and results of operations will be adversely affected.

New acquisitions, joint ventures or strategic investments or partnerships could harm our operating results.

We may pursue acquisitions, joint ventures or engage in strategic investments or partnerships to grow and enhance our capabilities. We cannot assure that we will successfully consummate any acquisitions or joint ventures, or profit by strategic investments, or achieve desired financial and operating results. Further, such activities involve a number of risks and challenges, including proper evaluation, diversion of management's attention and proper integration with our current business. Accordingly, we might fail to realize the expected benefits or strategic objectives of any such venture we undertake. If we are unable to complete the kind of acquisitions for which we plan, we may not be able to achieve our planned rates of growth, profitability or competitive position in specific markets or services.

A large portion of our accounts receivable is payable by a limited number of clients; the inability of any of these clients to pay its accounts receivable would adversely affect our results of operations.

Several significant clients account for a large percentage of our accounts receivable. If any of these clients were unable, or refused, for any reason, to pay our accounts receivable, our financial condition and results of operations would be adversely affected. As of December 31, 2018, 48% or $5.1 million, of our accounts receivable was due from three clients. See "Management Discussion and Analysis – Liquidity and Capital Resources."

In addition, we evaluate the financial condition of our clients and usually bill and collect on relatively short cycles. We maintain specific allowances against doubtful receivables. Actual losses on client balances could differ from those that we currently anticipate and, as a result, we might need to adjust our allowances. There is no guarantee that we will accurately assess the creditworthiness of our clients. Macroeconomic conditions could also result in financial difficulties, including limited access to the credit markets, insolvency or bankruptcy, for our clients, and, as a result, could cause clients to delay payments to us, request modifications to their payment arrangements that could increase our receivables balance, or default on their payment obligations to us. If we are unable to collect timely from our clients, our cash flows could be adversely affected.

Quarterly fluctuations in our revenues and results of operations could make financial forecasting difficult and could negatively affect our stock price.

We have experienced, and expect to continue to experience, significant fluctuations in our quarterly revenues and results of operations. During the past eight quarters, our net income ranged from a profit of approximately $693,000 in the third quarter of 2018 to a loss of approximately $2.1 million in the fourth quarter of 2017.

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We experience fluctuations in our revenue and earnings as we replace and begin new projects, which may have some normal start-up delays, or we may be unable to replace a project entirely or on terms that are as attractive to us as the project that is being replaced. These and other factors may contribute to fluctuations in our results of operations from quarter to quarter.

A high percentage of our operating expenses, particularly personnel and rent, are relatively fixed in advance of any particular quarter. As a result, unanticipated variations in the number and timing of our projects, or in employee wage levels and utilization rates, may cause us to significantly underutilize our production capacity and employees, resulting in significant variations in our operating results in any particular quarter, and have resulted in losses.

The economic environment and pricing pressures could negatively impact our revenues and operating results.

Due to the intense competition involved in outsourcing and information technology services, we generally face pricing pressures from our clients. Our ability to maintain or increase pricing is restricted as clients generally expect to receive volume discounts or special pricing incentives as we do more business with them; moreover, our large clients may exercise pressure for discounts outside of agreed terms.

Our profitability could suffer if we are not able to maintain pricing on our existing projects and win new projects at appropriate margins.

Our profit margin, and therefore our profitability, is dependent on the rates we are able to recover for our services. If we are not able to maintain pricing on our existing services and win new projects at profitable margins, or if we underestimate the costs or complexities of new projects and incur losses, our profitability could suffer. The rates we are able to recover for our services are affected by a number of factors, including competition, volume fluctuations, productivity of employees and processes, the value our client derives from our services and general economic and political conditions.

If our pricing structures do not accurately anticipate the cost and complexity of performing our work, then our contracts could be unprofitable.

We provide services either on a time-and-materials basis or on a fixed-price basis. Our pricing is highly dependent on our internal forecasts and predictions about our projects, which might be based on limited data and could turn out to be inaccurate. If we do not accurately estimate the costs and timing for completing projects, our contracts could prove unprofitable for us or yield lower profit margins than anticipated.

We may not be able to obtain price increases that are necessary to offset the effect of wage inflation and other government mandated cost increases.

We have experienced wage inflation and other government mandated cost increases in the Asian countries where we have the majority of our operations. In addition, we may experience adverse fluctuations in foreign currency exchange rates. These global events have put pressure on our profitability and our margins. Although we have tried to partially offset wage increases, foreign currency fluctuations and other such increases through price increases and improving our efficiency, we cannot ensure that we will be able to continue to do so in the future, which would negatively impact our results of operations.

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If our clients are not satisfied with our services, they may terminate our contracts with them or our services, which could have an adverse impact on our business.

Our business model depends in large part on our ability to attract additional work from our base of existing clients. Our business model also depends on relationships our account teams develop with our clients so that we can understand our clients' needs and deliver solutions and services that are tailored to those needs. If a client is not satisfied with the quality of work performed by us, or with the type of services or solutions delivered, then we could incur additional costs to address the situation, the profitability of that work might be impaired, and the client's dissatisfaction with our services could damage our ability to obtain additional work from that client. In particular, clients that are not satisfied might seek to terminate existing contracts, which would mean that we could incur costs for the services performed with no associated revenue upon termination of a contract. This could also direct future business to our competitors. In addition, negative publicity related to our client services or relationships, regardless of its accuracy, may further damage our business by affecting our ability to compete for new contracts with current and prospective clients.

Our new clients may sunset their products because of lack of sufficient revenues or declining revenues, and this may result in termination of our work for these clients.

As we obtain new opportunities and win new business, our clients may not generate the level of revenues that we initially anticipated at the time of signing a contract with them, or our clients may experience declining revenues with their existing products. This could be du