MASTECH DIGITAL

2019
Annual Report

MASTECH DIGITAL, INC.

www.mastechdigital.com

CORPORATE OVERVIEW

Mastech Digital (NYSE American: MHH) is a leading provider of Digital Transformation IT Services. The Company offers Data Management and Analytics Solutions, Digital Learning, and IT Staffing Services with a Digital First approach. Backed by robust delivery methodologies and sourcing practices, our vibrant teams spread across the U.S., Canada, EMEA, and India, are able to drive high levels of business efficiencies for our clients globally. A minority-owned enterprise, Mastech Digital is headquartered in Pittsburgh, PA with offices across the U.S., Canada, and India. For more information, visit www.mastechdigital.com.

CORPORATE INFORMATION

Corporate Office
1305 Cherrington Parkway
Building 210, Suite 400
Moon Township, PA 15108

Annual Meeting of Shareholders
The company will hold its annual meeting of shareholders on May 13, 2020, at 9.00 a.m. Eastern Time, at 1305 Cherrington Parkway, Building 210, Suite 400, Moon Township, PA 15108. Shareholders of record as of March 31, 2020 will be invited to attend this meeting.

Transfer Agent
Computershare
P.O Box 505000
Louisville, KY 40233-5000
1.866.204.9008
www.computershare.com/investor

For address changes, registration changes, lost stock certificates, or if you are receiving duplicate copies of the Annual Report, please contact Computershare at the address listed above.

Form 10-K
Additional copies of the company's 2019 Annual Report on Form 10-K, and the exhibits and financial statement schedules listed in that report, are available by writing to Donna Kijowski, Investor Relations Manager, at the Corporate Office. These materials are also available in the EDGAR database at www.sec.gov, the website for the Securities and Exchange Commission, as well as the company's website www.mastechdigital.com, in the Investors section.

Independent Registered Public Accounting Firm
UHY LLP, Farmington Hills, MI

Stock Market Information
The company's common stock trades on the NYSE American under the symbol MHH. The table below sets forth the high and low closing bid prices for the last two completed fiscal years (recast to reflect our July 2018 two-for-one stock split).

Common Stock Market Price	High	Low
2019		
Fourth Quarter	$ 11.07	$ 5.68
Third Quarter	$ 6.34	$ 4.85
Second Quarter	$ 6.25	$ 4.71
First Quarter	$ 8.02	$ 5.97
2018		
Fourth Quarter	$ 8.70	$ 6.11
Third Quarter	$ 11.43	$ 7.79
Second Quarter	$ 9.05	$ 5.85
First Quarter	$ 7.92	$ 4.75

Dear Fellow Shareholders

In 2019, Mastech Digital delivered its most profitable year since going public in 2008. The $11.1 million of net earnings on record revenues of $193.6 million was $4.5 million higher than in 2018. Our earnings per share of $0.99 were up more than 60% compared with the previous year. We drove 9% organic revenue growth across both of our two business segments, Data and Analytics Services and IT Staffing Services. Over the last three years, we have achieved a CAGR of approximately 14%.

As I approach completion of my fourth full year at Mastech Digital, we are clearly a different Company from when I joined. Our journey from a pure-play IT staffing company to an integrated Digital Transformation IT Services Company, focused on Digital Technologies has been impressive. We have made considerable investments and some tough calls along the way and we will continue to make investments and prudent calls in the future to further our aspirations for the Company. As we enter 2020, we see exciting times for Mastech Digital, full of opportunities for our customers, employees and shareholders.

A Digital First Company

In the last three-plus years, we have been changing how we operate in an effort to add value to our customers through digital-led technologies. With Data & Analytics as our core digital service offerings, we have continued to transition the IT Staffing Services organization into more of a of Digital Transformation Services company. In 2019, we renewed our focus on staffing digital technologies under an organization-wide initiative called "Digital First" and broadened our capabilities in staffing skill sets such as cyber-security, analytics, AI and digital learning for our customers. This positioning as a Digital First company has resonated well with our customers, as we saw an uptick in digital revenues during 2019, and this initiative has been enthusiastically embraced by our associates across the organization.

Successful Investments in our Data & Analytics Services Business

Our Data & Analytics business, branded as Mastech InfoTrellis, did exceedingly well during the year. With the appointment of Mr. Paul Burton in early 2019, as the Chief Executive of this business, we immediately saw a positive shift in strategy and execution. Under Paul's direction, we hired a seasoned leadership team across all functional areas - Sales, Analytics, Technology and Delivery. While this investment was significant, payback was almost immediate. With our new leadership in place, we expanded our portfolio of service offerings within our data engineering and analytics practices, which have been very well received by our customers. Additionally, we have started marketing our services on a global basis and you will see us expanding our footprint in Europe, Asia and the Middle East during 2020. The result of these changes has been record revenues, expanded gross margins and higher operating profits - despite a 40% increase in operating expenses, during 2019. More importantly, today we have a Company with a business model that can scale and a sales organization that can effectively function on a global basis. In the fourth quarter of 2019 alone, we secure approximately $23 million of multi-year assignments, which I believe is a good reflection of the potential that this business segment has in the immediate future.

Digital Inclusivity

While we are well positioned as a partner of our customers on their digital journeys, we also look for opportunities within our own organization to increase efficiency and effectiveness with the deployment of digital technologies. Our recruitment processes are using AI-based tools, which produce faster and more reliable screening and sourcing of profiles across our databases, job boards, and other social channels. As a result, we have seen increased throughput in our ability to fulfill staffing requirements. In our Data and Analytics business, we use propriety delivery methodologies which were created and continuously enhanced though analytics and other advanced technologies. We also introduced a new AI-based document management system for our sales organization and are utilizing digital technologies to enhance the performance of our inside-sales team. Additionally, we have automated internal processes, which have increased collaboration between departments using tools such as HubSpot and Slack.

Financial Performance

As I have recapped earlier, 2019 was a record year for Mastech Digital from a financial performance standpoint, with both of our business segments showing improvements over 2018. Revenues in 2019 totaled $193.6 million, as our Data and Analytics Services segment grew YOY by 12% and our IT Staffing Services segment grew YOY by nearly 9%. Gross margins as a percentage of revenues were 24.8%, with Data and Analytics Service margins at 46.7% - a 270-basis point increase from 2018; and IT Staffing Services margins growing to 21.3% - a 40-basis point increase over last year. Operating profits improved from 2018, although investments in the Data and Analytics business did mute profits to some extent. Overall, net income for 2019 was $11.1 million or $0.99 per diluted share - a material improvement over 2018's results.

Our financial position strengthened significantly in 2019. Cash flows from operating activities totaled $16.1 million and we were able to reduce bank debt by over $13 million. At year-end 2019, debt represented 36% of our capital structure compared to 53% at December 31, 2018. Our largest asset, accounts receivable, is in very good shape with our days-sales-outstanding measurement at year-end 2019 improving by 14-days from last year to 55-days.

Corporate Social Responsibility ("CSR")

We continue to take social responsibility seriously and strive to be acknowledged as a "Company with a Heart." We invested over 5,000 man-hours during the year across the U.S. and India in several CSR activities. In India, we conducted a book collection and donation drive for the underprivileged. Part of this collection was also used to replenish public libraries. Voicing a strong opinion against single-use plastic, our associates in India came together to make paper bags for local shops and vendors in the region. In the U.S., we sponsored the Lil' Warriors Classic Golf Tournament in Dallas, TX, the proceeds of which went to support children/families coping with cancer.

Recognitions

The industries in which we operate are recognizing our achievements and thought leadership in both of our business segments. Gartner featured Mastech InfoTrellis in its Market Guide for MDM External Service Provider during the year. With the support of my leadership team and all of our associates, I was recognized by Smart Business and Gallagher, as a top CEO, in driving innovation and thought leadership, for the second consecutive year. I am also pleased that several media houses in the U.S. and India are now taking notice of the successful transformation of the Company. More importantly, we are getting the attention of the investor community, which has been a positive driver of our share price in 2019.

The Road Ahead

With a hugely successful 2019 under our belt, I'm very excited about the prospects and opportunities that lie ahead for our Company. With our Digital and Analytics business model in sharper focus as we enter 2020, and our IT Staffing organization continuing its momentum in securing business around digital technologies, I see a great future for Mastech Digital.

With a plethora of expansion opportunities in our Digital and Analytics segment, in terms of new services and the geographies where those services can be effectively marketed, you will continue to see us aggressively invest in this business organically, and potentially inorganically, in 2020. In our IT Staffing segment, we will make incremental investments to stay ahead of the growth curve. Similar to 2019, we expect an expeditious payback on our investments at both business segments.

In summary, our future has never been brighter. I can confidently say that my leadership team is committed to the success of our Company through innovation and execution – and they are well capable of both. As I have said many times in 2019, **the BEST is yet to come at Mastech Digital!**

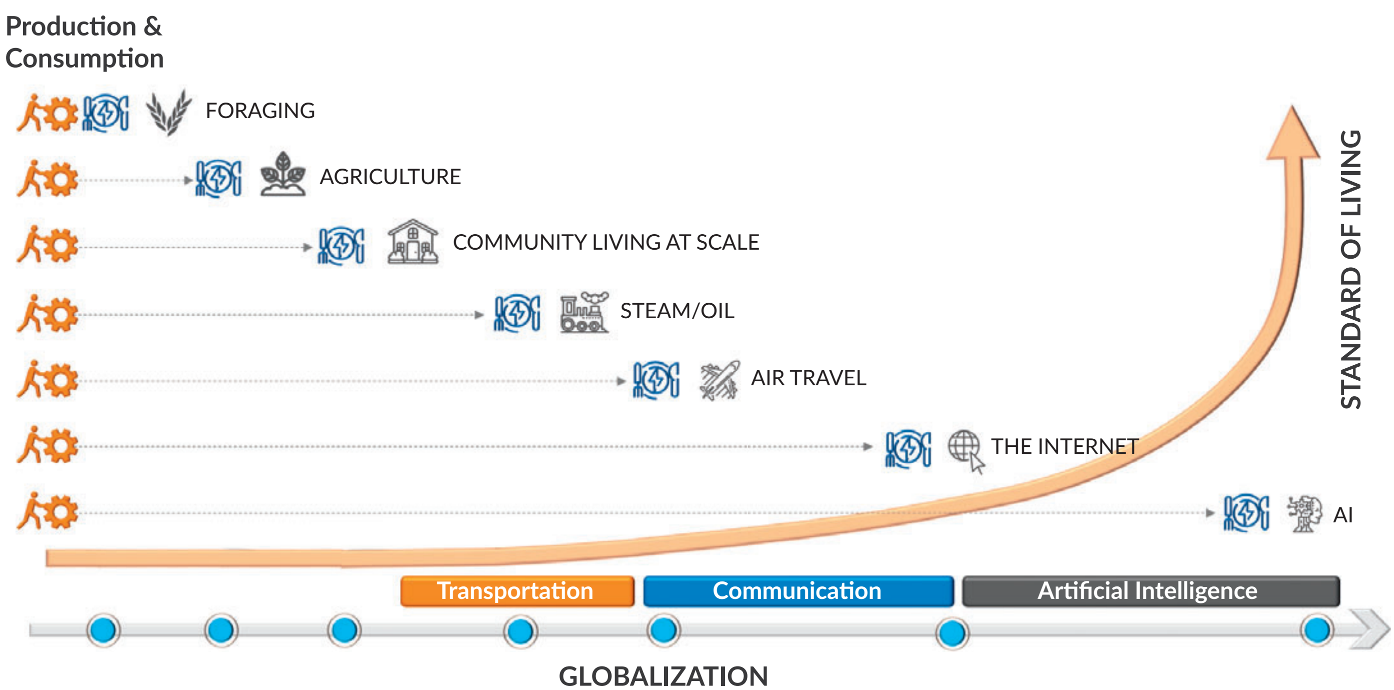
Sincerely,

Vivek Gupta
President, CEO, Mastech Digital, Inc.

The (Inexorable) Evolution of Globalization and the potential of Artificial Intelligence

We often hear that we are in the digital age. Everything is turning digital: businesses, consumerism, literally everything. We also talk about the potential the future holds in terms of data, analytics, and AI. To understand the true potential of data, analytics, and AI we must look at how life has changed over the years and what has caused the change. This will reveal to us the systemic forces that will shape the successful enterprises of the present and the future.

When we speak of the digital age, we are really just speaking of the current manifestation of technology on the quality of our life. Technology has punctuated the (inexorable) evolution of globalization for millennia; moreover, increases to our standard of living have always only correlated with advances in technology.



The Inexorable Evolution of Globalization

Globalization has always been punctuated by advances in technology

A significant increase in our standard of living was not seen until the early 1800s when steam power launched the transportation revolution. Suddenly, with steam power enabling the transportation of large quantities of goods reliably to distant markets, global commerce increased substantially, leading to an increase in labor specialization. This specialization (particularly in the Western World) spawned innovation and produced a surplus of wealth that was recommitted to the economy. Economic growth continued apace. Air travel, while significant, was a continuation of the transportation revolution that deepened commercial linkages among peoples and States as labor and expertise was made more available globally.

The internet, however, significantly changed the game. With real-time communication available between any two points on the earth, business processes could be decomposed, or disaggregated, because the internet provided a means for precisely managing and coordinating the process from afar. This meant that businesses could now functionally decompose their business processes, redistributing process elements to specific locations to leverage cost and factor inputs to their advantage. Consequently, global supply chains took even deeper root and connections hardened, as businesses sunk investments into countries they were betting on. With this new communication technology, the specialization of labor increased still further and more significant innovation now occurred in established and emergent thought centers world-wide. Globalization *writ* large took even deeper root.

With each punctuation to globalization caused by the introduction of a new disruptive technology, labor specialization increased leading directly to further innovation and a still more significant functional decomposition and distribution of industry supply chains. Artificial Intelligence promises more of the same, but with a much greater impact and reach. The impact on our standard of living will correlate with the effect generated.

The internet allowed for the remote control and coordination of business processes, while also seizing ample opportunity for labor arbitrage. Artificial Intelligence will increase automation in the control and coordination of business processes while dislodging significant amounts of labor - at least as relates to many of the “process” roles that labor occupies today. CEOs that understand this and act to rearchitect the business processes that give their businesses form, function, and ultimately profitability, will come out on top. But this means that CEOs must engender a new appreciation for technology generally, and Data and Analytics specifically. Today and into the future all CEOs must be technology savvy more than ever before.

In the era of Artificial Intelligence, all CEOs want and will work to deliver three things:

First, CEOs want high business velocity. CEOs understand that their business is nothing more than an aggregation of business processes that take inputs and produce outputs. Whether the output is a product or service, CEOs need to deliver it fast and tailor it specifically for their client, because if they do not, their competitor will. The only way CEOs can increase their business velocity is to increase the velocity of their business processes. So, CEOs must reimagine their business processes, making maximum use of technology for automation and analytics for intelligence.

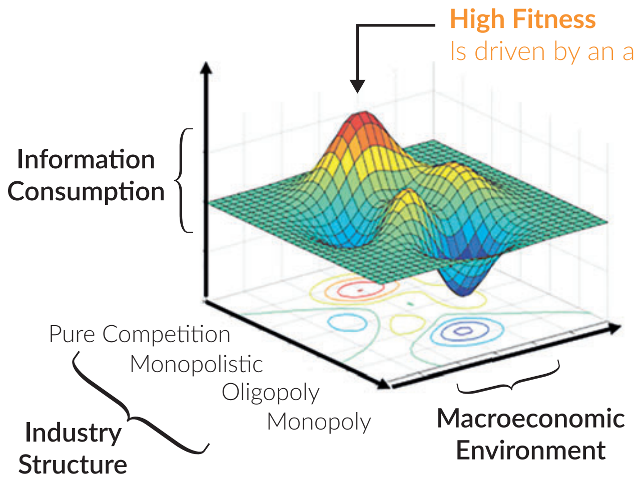
Second, CEOs must consistently reduce costs. The only way to do this is to remove labor from business process, thereby reducing the cost of the process itself. It’s important to understand that process improvement, while always important, generally produces only incremental improvement. When processes become mostly or fully automated, discontinuous benefits accrue. Again, technology for automation is essential here.

Third, and finally, CEOs must ensure enterprise resilience. CEOs achieve this when they infuse intelligence into their business processes, and their processes become reflexive, self-aware, and coevolve with the business environment. Intelligent processes are increasingly table stakes for companies that want to prosper and take share in a market where *the industry’s apex predator is a Technology Company!*

At Mastech InfoTrellis we help our clients Architect Enterprise Intelligence. We do this by helping them leverage their entire corpus of enterprise data, develop insights and knowledge from it, and then use the insights and knowledge to drive smart process automation, achieving better, faster, business outcomes at significantly lower cost. Where a business sits on the fitness landscape will be increasingly determinative of their ability to survive in the digital age we are in.

Where are you on the fitness landscape?

An Enterprise's ability to Learn, Adapt, and, Evolve is influenced By Three Things...



"Ability to consume and act on information is a major competitive advantage."

I am excited with the way we have positioned ourselves at Mastech InfoTrellis. Our entire thought process beginning with strategy, innovation, offerings, and delivery excellence aligns with what has been said above. In all conversations with clients, analysts, partners, and associates, we drive this very clear message: We exist to help our clients Architect Enterprise Intelligence! The result is increased business velocity, reduced cost, and greater enterprise resilience.

I am pleased with the way our journey has taken place over the last year. We have progressed on all fronts since my appointment in January 2019. We have not only sharpened our positioning and offerings, but we have also been joined by an extraordinary set of leaders who take this message to market every day and make a real difference with it to our clients. We have initiated thought provoking conversations with industry analysts and are steadily gaining well differentiated mindshare with current and future clients. I expect 2020 to be a transformative year for Mastech InfoTrellis. Looking forward, I believe the future is bright.

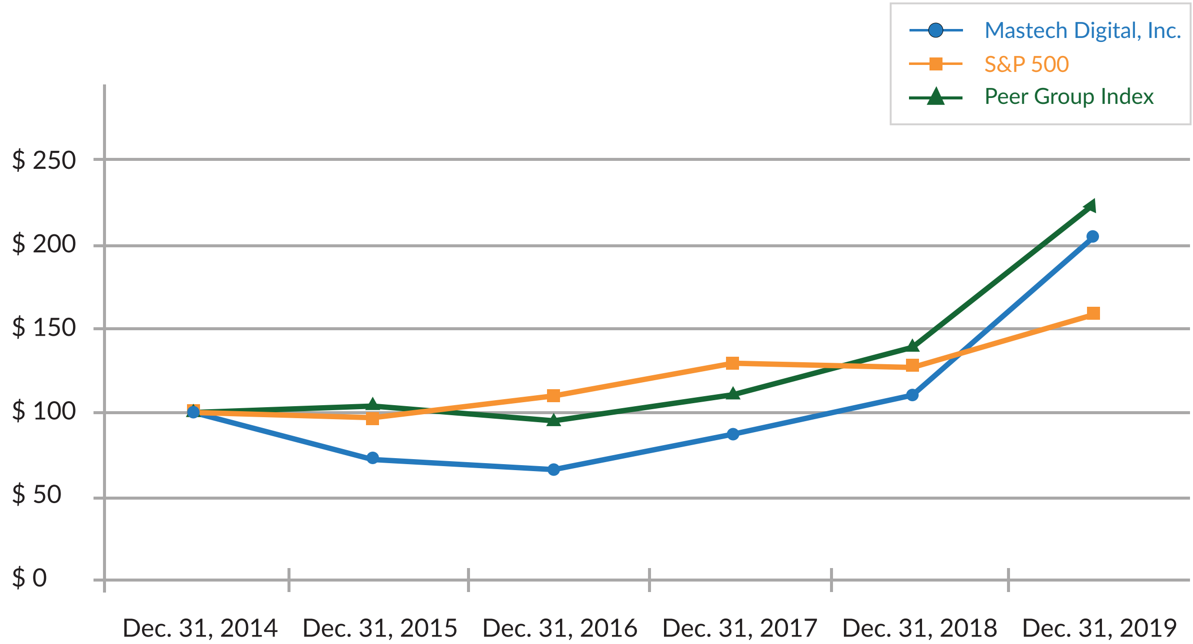
Paul Burton
Chief Executive, Mastech InfoTrellis

STOCK PERFORMANCE GRAPH

The following graph compares the five-year cumulative performance of our common stock with Standard & Poor's Composite 500 Stock Index (S&P 500) and a Peer Group Index (capitalization weight) from December 31, 2014 to December 31, 2019.

Our Peer Group of information technology services companies consists of TSR, Inc., Computer Task Group, Inc., Kforce, Inc. and Perficient, Inc. While all of these organizations have certain attributes and service offerings which are different than ours, we believe that their aggregate performance is representative of the industries in which we operate.

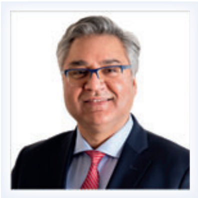
The graph assumes that $100 was invested on December 31, 2014 in each of the three investment options, and that all dividends were reinvested, if any. It should be noted that shareholder returns over the indicated period are based on historical data and should not be considered indicative of future shareholder returns.



Our common stock is currently traded on the NYSE American, under the symbol "MHH".

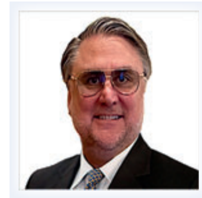
	S&P 500	Peer Group Index	Mastech Digital, Inc.
Dec. 31, 2014	100	100	100
Dec. 31, 2015	99	102	69
Dec. 31, 2016	109	98	64
Dec. 31, 2017	130	109	95
Dec. 31, 2018	122	135	119
Dec. 31, 2019	157	215	208

EXECUTIVE OFFICERS



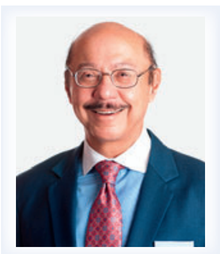
Vivek Gupta
Director, President, and Chief Executive Officer

John J. Cronin, Jr.
Chief Financial Officer and Corporate Secretary



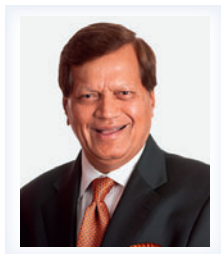
Paul Burton
Chief Executive, Mastech InfoTrellis

DIRECTORS



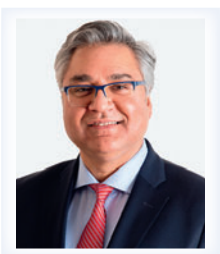
Sunil Wadhwani
Director and Co-Chairman, Mastech Digital

Sunil co-founded Mastech Digital and grew the company from a start-up IT staffing firm into one of the country's leading IT staffing companies. He has also angel-funded over 40 technology start-ups.



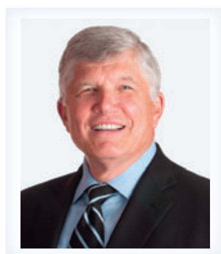
Ashok Trivedi
Director and Co-Chairman, Mastech Digital

Ashok co-founded Mastech Digital and has contributed significantly to the growth of the organization. He has also angel-funded over 50 early-stage technology and financial businesses.



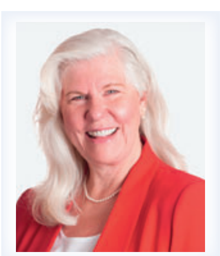
Vivek Gupta
Director, President, and Chief Executive Officer, Mastech Digital

Vivek joined Mastech Digital as the President and CEO in March 2016. He has over three decades of global experience in the technology industry.



John Ausura (1, 2, 3)*
Founder and Former Managing Director, Capital Resolution

John founded Capital Resolution, LLC in 2003, a professional services firm which provides strategy and operations assistance to companies in transition.



Brenda Galilee (1, 2, 3)*
Chief Consulting Officer, Customer Experience Solutions

Brenda is a consultant for Customer Experience Solutions. She was the Chief Executive Officer and Chairman of the Board of InTouch Corporation, a customer acquisition and retention services company.

Gerhard Watzinger (1, 2, 3)*
Chairman, CrowdStrike

Gerhard is the Chairman of CrowdStrike – a cyber-security company. He was earlier the EVP for Corporate Strategy and M&A of the McAfee business unit of Intel Corporation until 2012.

***Committee Assignments**

1. Audit Committee
2. Compensation Committee
3. Nominating and Corporate Governance Committee

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

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

Commission File Number 001-34099

MASTECH DIGITAL, INC.
(Exact name of registrant as specified in its charter)

PENNSYLVANIA **(State or other jurisdiction of incorporation or organization)**	**26-2753540** **(I.R.S. Employer Identification No.)**
1305 Cherrington Parkway, Building 210, Suite 400 **Moon Township, PA** **(Address of principal executive offices)**	**15108** **(Zip Code)**

Registrant's telephone number, including area code: (412) 787-2100

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

Title of each class	Trading Symbol	Name of exchange on which registered
Common Stock, $.01 par value	MHH	NYSE American

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

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or 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.

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 ☒

The aggregate market value of the voting stock held by non-affiliates of the registrant as of June 28, 2019 (based on the closing price on such stock as reported by NYSE American on such date) was $13,847,000

The number of shares of the registrant's Common Stock, par value $.01 per share, outstanding as of March 13, 2020 was 11,195,304 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement, prepared for the Annual Meeting of Shareholders scheduled for May 13, 2020 to be filed with the Commission, are incorporated by reference into Part III of this Annual Report on Form 10-K.

MASTECH DIGITAL, INC.

2019 FORM 10-K

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PART I

Forward-Looking Statements

This Annual Report on Form 10-K contains statements that are not historical facts and that constitute "forward looking statements" within the meaning of such terms under the Private Securities Litigation Reform Act of 1995. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions that are difficult to predict. Actual outcomes and results may differ materially from those expressed in, or implied by, our forward-looking statements. Words such as "expects", "intends", "anticipates", "believes", "estimates", "assumes", "projects" and similar expressions are intended to identify such forward-looking statements. You should not rely solely on the forward-looking statements and should consider all uncertainties and risks throughout this Annual Report on Form 10-K, including those described under "Risk Factors". These statements are based on information currently available, and we undertake no obligation to update any forward-looking statement as circumstances change.

Factors or events that could cause results or performance to differ materially from those expressed in our forward-looking statements include the following:

- changes in general U.S. and global economic conditions and economic conditions in the industries in which we operate;
- our ability to retain existing clients and obtain new clients;
- changes in competitive conditions;
- our ability to introduce new service offerings;
- availability of and retention of skilled technical employees and key personnel;
- technological changes;
- changes in accounting standards, rules and interpretations;
- many of our contracts are terminable by clients without penalty;
- changes in immigration laws, patterns and other factors related to visa holders;
- liabilities and unanticipated developments resulting from litigations, regulatory investigations and similar matters;
- fluctuations due to currency exchange rate variations;
- changes in U.S. laws, rules and regulations, including the Internal Revenue Code;
- changes in India's geopolitical environment, laws, rules and regulations;
- the impact and success of new acquisitions;
- management's ability to identify and manage risks;
- the occurrence of health epidemics or other outbreaks; and
- breach of our systems due to a cyber security attack.

ITEM 1. BUSINESS

Overview

Mastech Digital, Inc. (referred to in this report as "Mastech Digital", "Mastech", the "Company", "us", "our" or "we") is a provider of Digital Transformation IT Services. The Company offers data management and analytics services; other digital transformation services around Salesforce.com and Digital Learning; and IT staffing services for both digital and mainstream technologies. Headquartered near Pittsburgh, Pennsylvania, we have approximately 1,400 consultants that provide services across a broad spectrum of industry verticals. From July 1986 through September 2008, we conducted our business as subsidiaries of iGATE Corporation ("iGATE"). We do not sell, lease or otherwise market computer software or hardware, and essentially 100% of our revenue is derived from the sale of data and analytics, IT staffing and digital transformation services.

Our data and analytics services segment provides specialized capabilities in delivering data management and analytics services to customers globally. This business offers project-based consulting services in the areas of Data Management, Data Engineering and Data Science, all of which can be delivered using onsite and offshore resources.

Our IT staffing segment combines technical expertise with business process experience to deliver a broad range of services in digital and mainstream technologies. Our digital technology stack includes data management and analytics, cloud, mobility, social and automation. Our mainstream technologies include business intelligence / data warehousing; web services; enterprise resource planning & customer resource management; and e-Business solutions. We work with businesses and institutions with significant IT-spend and recurring staffing needs. We also support smaller organizations with their "project focused" temporary IT staffing requirements.

Our digital transformation services include staffing and project-based services around Salesforce.com and Digital Learning.

Sales and marketing of our services are handled by separate and distinct sales organizations within each of our two business segments. Our data and analytic services are marketed through 1) account executives who largely focus on new business development; and 2) technical relationship managers (principals) who focus on growing strong relationships within existing clients. Both account executives and technical relationship managers reside in the U.S., Canada, Singapore or Europe. Our IT staffing and digital transformation services are conducted through account executives across the U.S. who deploy a telesales model, supplemented with client visits. This cost-effective model is aimed at integrator and other staffing clients, with a need to supplement their abilities to attract highly-qualified temporary IT personnel. Additionally, we use a branch service sales model in select geographies within the U.S. The branch services model employs local sales and recruitment resources, aimed at establishing strong relationships with both end-clients and candidates. We recruit through global recruitment centers located in the U.S. and India that deliver a full range of recruiting and sourcing services. Our centers employ approximately 200 recruiters and sourcers that focus on recruiting U.S.-based candidates to service a geographically diverse client base in the U.S. Our ability to respond to client requests from our offshore recruiting centers, with investment in sourcing and recruiting processes, expanded search coverage, round-the-clock sourcing, and frequent candidate contact, gives us the ability to deliver high-quality candidates to our clients in a timely fashion.

History and Developments

Historically, we operated as the former Professional Services segment of iGATE. Mastech Digital, Inc. was incorporated in Pennsylvania as a wholly-owned subsidiary of iGATE on June 6, 2008 in anticipation of our spin-off from iGATE. On September 30, 2008, we spun-off from iGATE and began operating as an independent public company. Our operating subsidiaries have 33 years of history as reliable providers of IT staffing services.

Established in 1986, our business model focused on importing global IT talent to the U.S. to meet the growing demand for IT professionals. In the early 2000s, the demand for IT professionals declined and the supply of IT resources quickly exceeded a declining demand curve. No longer was there a need to recruit abroad for technology talent, as supply was abundant in the U.S. Accordingly, we retooled our recruiting model to focus on the recruitment of local U.S.-based IT talent. Given our reputation with and knowledge of H1-B visas, part of our recruiting efforts focused on attracting H1-B visa holders currently in the U.S. This approach gave us access to a larger and differentiated recruiting pool when compared to many of our competitors.

In 2003, we launched our offshore global recruitment center model in an effort to meet an increase in industry demand with lower cost recruiting resources. Over the last sixteen years, we have made significant investments in our offshore center to improve infrastructure, processes and effectiveness. Additionally, we have made investments in recent years in our domestic recruitment structure, primarily to support our branch service model.

During 2010, we made two strategic moves designed to enhance and expand our service offerings. In January 2010, we acquired Curastat, Inc., an Arizona-based specialized healthcare staffing organization. This acquisition, along with the creation of Mastech Healthcare, Inc., expanded our service offerings into the healthcare staffing space. Also in January 2010, we sold our brokerage staffing business, thus focusing on our IT and healthcare staffing operations.

In August 2013, we sold our healthcare staffing operations to focus entirely on our core IT staffing business.

During the fourth quarter of 2014, we established a technology center to evaluate practice opportunities for high-demand IT skill sets and emerging technologies. In 2015, we embarked on our first technology practice, Salesforce.com.

On June 15, 2015, we completed the acquisition of Hudson Global Resources Management, Inc.'s U.S. IT staffing business ("Hudson IT"). Hudson IT was a domestic IT staffing business with offices in Chicago, Boston, Tampa and Orlando. Hudson IT deployed a branch service business model that targeted clients that are direct end-users of IT staffing services. Additionally, as part of the Hudson IT acquisition, we acquired a digital learning services practice which became our second technology practice.

In 2016, we changed our name to Mastech Digital, Inc. The name change was part of our rebranding initiative that reflects our transformation into a digital technologies company. The rebranding also included a logo change and a refreshed corporate website.

In 2017, we added specialized capabilities in delivering data management and analytics services to a global customer-base through the acquisition of the services division of InfoTrellis, Inc. ("InfoTrellis"), a project-based consulting services company with specialized capabilities in data management and analytics.

In 2018 and particularly in 2019, we significantly expanded our service offerings and capabilities within our Data and Analytics Services segment.

Operating Segments

Our revenues are generated from two business segments: Data and Analytics Services and IT Staffing Services. Details related to these two businesses are discussed separately below, while information about our employees, differentiators, technologies and various other aspects of our business is shown in the aggregate for Mastech Digital, Inc.

Data and Analytics Services

Our Data and Analytics Services segment is the result of the acquisition of the services business of InfoTrellis, Inc., completed in July 2017. The resulting business unit operates under the name of Mastech InfoTrellis, with locations in Atlanta, Toronto, London, Singapore, and Chennai, India. Mastech InfoTrellis is a specialist data management and advanced analytics firm focused on helping companies "Architect Enterprise Intelligence" and realize a disproportionate return on their investment.

Founded by the engineering principals behind IBM's Master Data Management ("MDM") products and Informatica's Customer 360 code-base, Mastech Infotrellis represents one of the largest concentrations of technology-agnostic data management, data engineering, and data science & analytics expertise in the world. We are a preferred IBM global partner for MDM consulting, services, and support. Today, we are led by an executive team of "business transformation" veterans and data science experts, with a track record of delivering positive business outcomes for clients across industry verticals.

Through application of foundational capabilities such as MDM, enterprise data integration, big data, analytics, data science, machine learning, and artificial intelligence, combined with our proprietary Data Architecture and Data Science assets, we support our clients in the realization of discontinuous business performance in the areas of:

- Revenue Growth
- Reduced Operating Costs
- Improved Data Management Effectiveness
- Reduced Risk
- Improved Compliance

Sales and Marketing

Sales and Marketing at Mastech Infotrellis is a single, integrated function spanning across four groups in multiple locations: Marketing, Inside Sales, Principals, and Client Partners.

- Our Marketing team is responsible for designing outbound campaigns around data and business value, for dissemination through our digital channels and industry publications. Our Marketing team also works with our experts and thought leaders to create and disseminate data management, analytics, and data science thought leadership articles and white papers.
- Our Inside Sales team is responsible for operating integrated email-and-voice outbound marketing campaigns targeted at specific industries and functional populations, on an ongoing basis.
- Our onshore team of Principals and Client Partners is responsible for building buyer relationships with prospects and leads, and for converting those conversations into value-positive revenue generating engagements.

In addition to the above, our Partner / Channel Relationships (such as those we have with IBM and Informatica, among others) also provide us with a significant pipeline of opportunities and new business. Furthermore, prospective clients reach us through referrals from our existing client base, our reputation in the data & analytics domain, and through our industry partners.

Once engaged with a prospect, our approach to value-delivery starts with the definition of a discrete business problem. We then Master and Manage our clients' data, engineer and develop data products, and deploy purpose-built advanced analytics, machine learning, and artificial intelligence, to deliver greater business velocity, significant cost reduction, and greater corporate resilience.

Project Delivery

Mastech InfoTrellis' project management methodology is designed around a multi-shore Global Delivery Model that combines strategic leadership, governance, and execution across all operating geographies. The Principals are key leaders, who steer clients throughout the lifecycle of our engagements. All projects follow our proprietary SMART Program Management Methodology.

Service Offerings

Mastech InfoTrellis' technology offerings can be categorized into three major service categories:

- Data Management (including Master Data)
- Data Engineering (including Enterprise Data Integration and Data Cube / Product Design & development)
- Data Science (including Advanced Analytics, Machine Learning & AI)

Under these three categories, Mastech InfoTrellis provides the following services:

- Strategy Consulting
- Needs Assessment
- Program Roadmap
- Solution Architecture
- Design and Implementation
- Performance Tuning
- Production Support
- Health Check
- Solution Upgrade

Technology Focus

Mastech InfoTrellis has expertise across a broad range of technology skill sets and platforms as part of its three key offerings, including the following:

Master Data Management

- Informatica Intelligent Master Data Management
- Informatica Product 360
- IBM InfoSphere® Master Data Management
- Reference Data Management
- Infa Stack Solutions

Data Governance & Enterprise Data Integration

- Collibra Data Governance
- IBM InfoSphere® Information Analyzer
- IBM Information Integration Server
- Informatica Intelligent Data Integration
- Informatica Hybrid Cloud
- Informatica Data Quality
- SAP PI
- Microsoft Integration Technologies

Big Data & Analytics

- Customer 360
- AllSight Customer Intelligence Management System
- Big Data Analytics Hub
- Informatica Intelligent Data Integration
- Data Lakes Development
- IBM Big Data Solutions Apache Hadoop Hortonworks
- Amazon Redshift—Cloud Data Warehouse
- Analytics models in R/Python
- Predictive and Prescriptive modeling

Digital Transformation

- Omni-channel Enablement
- Marketing Automation
- Data Visualization

Mastech InfoTrellis helps customers in strategizing, implementing and supporting programs across these technologies and platforms.

Geographic and Vertical Focus

Mastech InfoTrellis' primary customer geographies are in North America; however, we have customers and prospects in Europe, the Middle East and the Asia-Pacific region. The target clients are largely corporations with revenues exceeding $1 billion. Average deal size ranges from $500,000 to $15 million, depending on the scope and duration of the engagement. From a vertical perspective, customers in the financial services, retail, healthcare, manufacturing and government segments are significant users of our services. Below is a breakdown of customer revenue percentages for each industry vertical in 2019:

Retail	23%	Healthcare	18%
Financial Services	22%	Government	8%
Manufacturing	19%	Other	10%

IT Staffing Services

In our IT Staffing Services business, we typically negotiate our business relationship by using one of three methods to gain agreement on the services to be provided. We either establish our relationship based on a simple standard term sheet; create a Statement of Work ("SOW") specific to a project; or enter into a master service agreement with a client that describes the framework of our relationship. In each case, a client will submit to us positions and / or requirements that they plan on satisfying by using temporary contractors. We propose consultants to the client that we believe satisfy their needs and propose an hourly bill rate for each consultant submitted. The client will select our consultant or a competing firm's consultant based on their view of quality, fit and pricing. Consultant specific contractual details, such as billable rates, are documented as an annex to the agreement type that is chosen by the client. While we have the ability to deliver our digital transformation services on a managed solutions basis, the majority of our assignments have been delivered as staffing assignments.

We generally do not enjoy exclusivity with respect to a client's contractor needs. Most of our clients use multiple suppliers to satisfy their requirements and to ensure a competitive environment. Our success with any particular client is determined by (a) the quality and fit of our consultant; (b) our ability to deliver a quality consultant on a timely basis; and (c) pricing considerations. We invoice our clients on a weekly, bi-weekly or monthly basis, in accordance with the terms of our agreement. Typical credit terms require our invoices to be paid within 30 to 45 days of receipt by the client.

While our primary focus is on contract IT staffing and digital transformation services, we also provide permanent placement services for our clients when opportunities arise. Permanent placement revenues have historically represented less than 1% of our total revenues.

Sales and Marketing

We focus much of our marketing efforts on businesses and institutions with significant budgets and recurring IT staffing and digital transformation needs. We look to develop relationships with new clients. In addition, we work to penetrate our existing client relationships to deeper levels. Most of our strategic relationships are established at the vice president / sales director level.

Selling is conducted through account executives utilizing a sales model which is desirable to our clients' needs. For clients with a need to supplement their own abilities to attract highly-qualified temporary IT personnel and prefer a low-touch sales model, such as integrator and staffing clients, we generally deploy a centralized telesales model, complemented with client visits. We supplement these domestic sales efforts through our sales organization in India, whose account executives target smaller IT staffing clients utilizing a cost-effective offshore telesales model. For end-user clients, who typically prefer a higher-touch sales model, we generally utilize a branch service model which deploys sales and recruitment resources locally, or regionally, in select geographies within the U.S. Account executives generally are responsible for a combination of new business development efforts and expanding existing client relationships. Account executives at our branch operations call on, and meet with, potential new customers and are also responsible for maintaining existing client relationships within their geographic territory. These account executives are paired with recruiters and both receive incentive compensation based on revenue generation activities using a localized sales and recruitment model.

Many large end-users of IT staffing services retain a third party to provide vendor management services to centralize the consultant hiring process and reduce costs. Under this arrangement, the third-party managed service provider ("MSP") retains control of the vendor selection and vendor evaluation process, which somewhat weakens the relationship built with the client. Our lower-cost centralized telesales model and highly efficient offshore recruiting model have better positioned us to respond to the growing use of MSPs.

Recruiting

We operate seven small recruiting centers located in the U.S. and one significantly larger facility in NOIDA, India that deliver a full range of recruiting and sourcing services. Our centers employ approximately 200 recruiters and sourcers who focus on recruiting U.S.-based candidates to service a geographically diverse client base in the U.S. Our ability to respond to client requests faster than the competition is critical for success in our industry as most staffing firms access the same candidate pool via job boards and websites. Our offshore recruiting capabilities, with investment in sourcing and recruiting processes, expanded search coverage, around-the-clock sourcing, and frequent candidate contact, gives us the ability to deliver high-quality candidates to our clients in a timely fashion.

We continue to invest in leading technologies and recruitment tools to enhance efficiencies. For example, we use artificial intelligence and web-based tools to expand the reach of our candidate searches. We also employ a state-of-the-art applicant tracking system that has recently been enhanced with proprietary tool-kits and job board / internet interfacing capabilities, resulting in further operational efficiencies.

In 2016, we closed our offshore recruitment office in Bangalore, India and concentrated all of our offshore recruitment efforts exclusively in NOIDA, a town near New Delhi. In late 2018, we significantly expanded our offshore recruitment offices in NOIDA which gave us the ability to nearly double our recruiter seats. This facility provides our offshore organization with state-of-the-art infrastructure and workforce amenities to attract top-quality recruiters and sourcers. This centralized offshore facility also affords us the ability to improve operational efficiencies compared to operating two offshore facilities.

We have access to a large and differentiated recruiting pool due to our brand recognition with both U.S. citizens and H1-B visa holders in the U.S. Unlike most staffing firms that have a high concentration of either H1-B workers or W-2 hourly U.S. citizens, we have historically maintained a balance of H1-B and W-2 hourly employees. We believe that this balanced mix allows us to access a broader candidate pool than our primary competition.

Technology Focus of our IT Staffing and Digital Transformation Services

Our staffing delivery teams, spread across the U.S. and India, are segmented by technologies, allowing us to reach deep and wide in our understanding of technology domains. The delivery teams work in an integrated manner to provide quality IT talent with a faster turnaround time than many of our competitors. We have long-standing engagements with marquee brands such as Saleforce.com, Inc., Oracle Corporation, Accenture PLC and other premier global enterprises across various industries.

IT Staffing—Digital Technologies

Recognizing that a new breed of IT professionals, who are adept in digital technologies are in high demand, we enhanced our recruitment capabilities to focus on digital technology skill sets. Today, Mastech Digital provides its clients with the ability to secure skill sets that encompass social, mobile, analytics, cloud-based technologies and automation. IT staffing for digital technologies is growing much faster than mainstream technologies, a trend that is expected to continue into the future. Digital technologies include the following areas:

- Social Analytics
- Social Blogging
- Social Campaign Management
- Enterprise Mobility Strategy
- Mobile Application Development
- Artificial Intelligence
- Data Engineering
- Data Analytics
- Decision Science
- Cloud Strategy
- Cloud Implementation and Support
- Machine Learning

IT Staffing—Mainstream Technologies

A large part of our business today comes from IT staffing services around mainstream technologies. We provide services and have strategic relationships in many high-demand mainstream technology areas. Our IT professionals help design, develop, integrate, maintain and support mainstream technologies in the following areas:

- Mainframes
- Databases
- Middleware
- Enterprise Systems
- SoA and Web Services
- Verification and Validation
- Project Management
- Open Source (JAVA)
- Data Warehousing
- Microsoft (C, .NET, SQL)
- IT Administration
- IT Helpdesk and Support
- Business Analysis

Digital Transformation Services

Our Digital Transformation Services focus on providing solutions for CRM on the cloud through Salesforce.com and using digital methods to enhance organizational learning.

Salesforce.com: Mastech Digital has experience and exposure in building the most efficient roadmap for implementation, integration and upgrades of Salesforce.com solutions. Our expertise across the Salesforce.com product suite delivers value that contributes to the digital transformation of our client's enterprise including deployment of Sales Cloud, Service Cloud, Marketing Cloud, Force.com based applications and integration with our mainstream and ERP systems.

Digital Learning Services: Our Digital Learning practice provides custom training programs for different organizational needs. With rich experience and proven success in handling several learning and performance engagements across industries, Mastech Digital's team combines digital and physical modes of learning methods to ensure unified organizational behavior and augmented performance across teams. Mastech Digital's learning paradigm consists of web-based learning, mobile learning, social learning, hybrid learning and virtual learning.

Geographic Presence & Industry Verticals

All of our IT staffing services revenues are generated from services provided in the U.S. We market our services on a national basis and have the ability to provide services in all 50 U.S. States. Our geographical concentration tends to track major client locations, such as California, Texas, Pennsylvania, Florida and Massachusetts, and in large metropolitan areas such as Chicago, New York City and Washington, D.C.

We provide these services across a broad spectrum of industry verticals including: financial services, government, healthcare, manufacturing, retail, technology, telecommunications and transportation. Below is a breakdown of our IT Staffing billable consultant base by industries that represented at least 5% of our billable consultants as of December 31, 2019:

Financial Services	36%	Government	11%
Telecom	13%	Technology	8%
Healthcare	11%	Transportation	7%
		Other	14%

Mastech Digital, Inc.

Employees

At December 31, 2019, we had approximately 1,150 North American employees and 415 employees offshore, in addition to approximately 180 subcontracted professionals. None of our employees are subject to collective bargaining agreements governing their employment with our Company. We employ our consultants on both an hourly and salary basis. A large portion of our salaried employees are H1-B visa holders. We enjoy a good reputation within the H1-B visa community, which allows us to access a very broad candidate pool. The majority of our hourly employees are U.S. citizens. On average, we maintain a balanced composition of salaried and hourly employees. We believe that our employee relations are good.

Intellectual Property Rights

Our intellectual property consists primarily of proprietary processes; client, employee and candidate information; and proprietary rights of third parties from whom we license intellectual property. We also own proprietary knowledge of the frameworks and products that we have built in our Mastech InfoTrellis business segment. We rely upon a combination of nondisclosure and other arrangements to protect our intellectual property.

Seasonality

Our operations are generally not affected by seasonal fluctuations. However, our consultants' billable hours are affected by national holidays and vacation practices. Accordingly, we typically have lower utilization rates during the fourth quarter. Additionally, assignment completions tend to be higher near the end of the calendar year, which largely impact our revenue and gross profit performance during the subsequent quarter.

Our Competitive Position

We operate in highly competitive and fragmented industries, with largely low barriers to entry. In our data and analytics services segment, we primarily compete with IBM Services, Cognizant, Tata Consultancy Services, Deloitte, Accenture, as well as with smaller boutique data and analytics firms. Many competitors are significantly larger and have greater financial resources in comparison to us. Our IT staffing services segment competes for potential clients with providers of outsourcing services, systems integrators, computer systems consultants, other staffing services firms and, to a lesser extent, temporary personnel agencies.

We believe that the principal competitive factors for securing and building client relationships are driven by the ability to precisely comprehend client requirements and by providing highly-qualified personnel who are motivated to meet or exceed a client's expectations. We must be able to do this efficiently to provide speed to market with pricing that is competitive and represents value to our clients. The principal competitive factors in attracting qualified personnel are compensation, availability, location and quality of projects and schedule flexibility. We believe that many of the professionals included in our database may also pursue other employment opportunities. Therefore, our responsiveness to the needs of these professionals is an important factor in our ability to be successful.

Our Strengths

We believe our strengths compared to industry peers include:

Established client base

Our client base consists of large, medium-sized and small companies that span across multiple industry verticals. Long-standing relationships with corporate clients, blue-chip IT integrators and MSPs are a core component of our future growth strategy for our staffing business, while good relationships with customer influencers and decision makers drives our Mastech InfoTrellis business. These relationships, exemplified by our consistently low customer attrition rate, reflect our focus and commitment to our customers.

Operational excellence

In our data and analytics services business, our global delivery model is designed to ensure operational excellence by delivering higher value to our customers on project-based Mastech InfoTrellis engagements. Projects are delivered using our proprietary SMART Implementation Methodology—a multi-phased approach based on parts of the Rational Unified Process (RUP) and Agile development methodologies.

In the staffing services business, operational excellence largely relates to a firm's ability to effectively recruit high quality talent. Our offshore recruitment operation gives us the ability to respond to clients' staffing needs in a timely and cost-effective manner. Investments in sourcing and recruiting processes and leading technologies and recruitment tools have resulted in a highly scalable offshore recruiting model, which has delivered value to our clients.

Additionally, we employ a human resource management model, featuring portal technology as well as immigration support services, for our widely dispersed consultant base. This model enables us to maintain attrition rates that are lower than the industry averages for our salaried workforce.

Minority-owned status

Our businesses benefit with some clients from the fact that we are a large minority-owned staffing firm. We have received multiple awards for our commitment to diversity. We have been certified as a minority-owned business by the National Minority Supplier Development Council ("NMSDC"). This certification is attractive to certain existing and potential clients in the government and public-sector segments, where project dollars are specifically earmarked for diversity spending.

Attractive financial profile

We have historically enjoyed a lower operating cost structure than our industry peers due to our low cost telesales in our IT Staffing Services segment and our offshore delivery models in both of our operating segments. These business models are cost-effective and allow us to quickly adjust our cost structure to changes in our business environment. Our blue-chip client base has ensured high quality accounts receivable and a strong and predictable cash flow conversion metric.

Expertise in high-demand digital transformation IT skills

We have substantial expertise in certain advanced technology IT skills including: cloud, mobile, data & analytics, social media, artificial intelligence/machine learning, Salesforce.com, and digital learning. We also have the capacity to take advantage of demand growth in these sectors, as we are well positioned in terms of scale, technical capabilities, and client base.

Experienced management team

Our management team, comprised of business leaders with deep industry experience, is a unique blend of executives with significant Mastech Digital experience and others who have held leadership roles in other companies. We believe this talent, together with combined experience across a variety of industries, allows us to capitalize on the positives of our existing business models and, at the same time, improve our service offerings, internal processes and long-term strategy for future growth.

Business leaders of our data and analytics services business were part of the original thought leaders in the Master Data Management space, which lends significant credibility to this segment's Master Data service offerings. Today, we are led by an executive team of "business transformation" veterans and data science experts, with a track record of delivering positive business outcomes for clients across industry verticals.

Reportable Financial Segments

The Company has two reportable segments in accordance with Accounting Standards Codification ("ASC") Topic 280 "Disclosures about Segments of an Enterprise and Related Information". Refer to Note 18 "Business Segments and Geographic Information" to our Consolidated Financial Statements included in Item 8 herein for information about our two reportable segments.

Government Regulation

We recruit IT professionals on a global basis from time to time and, therefore, must comply with the immigration laws in the countries in which we operate. As of December 31, 2019, approximately 41% of our workforce were working under Mastech Digital sponsored H1-B temporary work permits. Statutory law limits the number of new H1-B petitions that may be approved in a fiscal year. Legislation could be enacted limiting H1-B visa holders' employment with staffing companies. In recent years, the vast majority of our H1-B hires were not subject to the annual quota limiting H1-B visas because they were already in the U.S. under H1-B visa status with other employers. Additionally, the U.S. Congress has recently considered, and may consider in the future, extensive changes to U.S. immigration laws regarding the admission of high-skilled temporary and permanent workers. Such changes, if enacted, may impact the types of H1-B temporary work permits that could be granted or the number of available H1-B temporary work permits, which in turn may have a negative impact on our revenues and profits.

Available Information

Our headquarters are located at 1305 Cherrington Parkway, Building 210, Suite 400, Moon Township, Pennsylvania 15108, and our telephone number is (412) 787-2100. The Company's website is *www.mastechdigital.com.* Our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to these reports are available free of charge by accessing the Investors page of the Company's website as soon as reasonably practical after such reports are filed with the Securities and Exchange Commission (the "SEC").

ITEM 1A. RISK FACTORS

You should carefully consider each of the following risk factors and all of the other information set forth in this Annual Report on Form 10-K or incorporated by reference herein. Based on the information currently known to us, we believe that the following information identifies the most significant risk factors affecting our company. However, additional risks and uncertainties not currently known to us or that we currently believe to be immaterial may also adversely impact our business.

If any of the following risks and uncertainties develop into actual events, these events could have a material adverse effect on our business, financial condition or results of operations.

Our industries are highly competitive and fragmented, which may limit our ability to increase our prices for services.

The IT staffing services and data analytics services industries are highly competitive and served by numerous global, national, regional and local firms. Primary competitors include participants from a variety of market segments, including the major consulting firms, systems consulting and implementation firms, U.S.-based staffing services companies, data and analytics service companies, applications software firms, service groups of computer equipment companies, specialized consulting firms, programming companies and temporary staffing firms. Many of these competitors have substantially greater financial, technical and marketing resources and greater name recognition than we have. There are relatively few barriers to entry into many of our markets, and as such we may face additional competition from new entrants into our markets. In addition, there is a risk that clients may elect to increase their internal resources to satisfy their staffing and data and analytics needs. There can be no assurance that we will compete successfully with existing or new competitors in the staffing and data analytics services markets.

Lack of success in recruitment and retention of IT and Data and Analytics professionals may decrease our revenues and increase the costs needed to maintain our workforce.

Our business involves the delivery of professional services and is labor-intensive. Our success depends upon our ability to attract, develop, motivate and retain highly skilled professionals who possess the skills and experience necessary to deliver our services. Qualified IT and data and analytics professionals are in demand worldwide and are likely to remain a limited resource for the foreseeable future. There can be no assurance that these qualified professionals will be available to us in sufficient numbers, or that we will be successful in retaining current or future employees. Failure to attract and retain qualified professionals in sufficient numbers may have a material adverse effect on our business, operating results and financial condition. Historically, we have done much of our recruiting from outside of the country where the client work is performed. Accordingly, any perception among our IT professionals, whether or not well founded, that our ability to assist them in obtaining temporary work visas and permanent residency status has been diminished, could lead to significant employee attrition. Any significant employee attrition will increase expenses necessary to replace and retrain our professionals and could decrease our revenues if we are not able to provide sufficient numbers of these resources to our clients.

Government regulation of H-1B visas may materially affect our workforce and limit our supply of qualified IT professionals, or increase our cost of securing workers.

We recruit IT professionals on a global basis and, therefore, must comply with the immigration laws in the countries in which we operate, particularly the U.S. As of December 31, 2019, approximately 41% of our workforce was working under Mastech Digital sponsored H1-B temporary work permits. Statutory law limits the number of new H1-B petitions that may be approved in a fiscal year, and if we are unable to obtain H1-B visas for our employees in sufficient quantities or at a sufficient rate for a significant period of time, our business, operating results and financial condition could be adversely affected. Additionally, legislation could be enacted limiting H1-B visa holders’ employment with staffing and data analytics companies, which could result in reduced revenues and/or a higher cost of recruiting.

In recent years, the vast majority of our H1-B hires were not subject to the annual quota limiting H1-B visas because they were already in the U.S. under H1-B visa status with other employers. As a result, the negative impact on recruiting due to the exhaustion of recent H1-B quotas was not substantial. However, the subject of H1-B visas has recently become a major political discussion point and there are indications that the entire H1-B visa program may be significantly overhauled. If a new or revised H1-B visa program is implemented, there could be elements of the new/revised H1-B visa program that may not be advantageous to our business model thus adversely impacting our business, operating results or financial condition.

Restrictions on immigration or increased enforcement of immigration laws could increase our cost of doing business, cause us to change the way we conduct our business or otherwise disrupt our operations.

The success of our business is dependent on our ability to recruit IT and data and analytics professionals and to mobilize them to meet our clients' needs. Immigration laws in the countries in which we operate are subject to legislative changes, as well as variations in the standards of application and enforcement due to political forces and economic conditions. It is difficult to predict the political and economic events that could affect immigration laws, or the restrictive impact they could have on obtaining or renewing work visas for our professionals.

Immigration reform continues to attract significant attention in the public arena and in the current U.S. administration and Congress. If new immigration legislation is enacted in the U.S. or in the other jurisdictions in which we do business, such legislation may contain provisions that could make it more difficult or costly for us to recruit and retain IT professionals, and to a lesser extent data and analytics professionals. Additionally, there is uncertainty as to the position the U.S. will take with respect to immigration under the Trump administration or any new administration. As a result, we may incur additional costs to run our business or may have to change the way we conduct our operations, either of which could have a material adverse effect on our business, operating results and financial condition. Also, we cannot be assured that the enforcement of immigration laws by governmental authorities will not disrupt our workforce.

The U.S. Congress and Trump administration or a new administration may make substantial changes to fiscal, tax, and other federal policies that may adversely affect our business.

In 2017, U.S. Congress and the Trump administration made substantial changes to U.S. policies, which included comprehensive corporate and individual tax reform. In addition, the Trump administration has called for significant changes to U.S. trade, healthcare, immigration and government regulatory policy. Some of the changes would require Congressional approval, while others have already been, and may in the future be carried out unilaterally by the executive branch of the U.S. government. To the extent the U.S. Congress or Trump administration (or any new administration) implements changes to U.S. policy, those changes may impact, among other things, the U.S. and global economy, international trade relations, unemployment, immigration, healthcare, the U.S. regulatory environment, inflation and other areas. Although we cannot predict the impact, if any of these changes to our business, they could adversely affect our business. Until we know what policy changes are made and how those changes impact our business and the business of our competitors over the long term, we will not know if, overall, we will benefit from them or be negatively affected by them.

Negative economic conditions in North America may adversely affect demand for our services.

Approximately 99% of our revenues are generated from clients located in North America. Our business depends on the overall demand for IT and data and analytics professionals and on the economic health of our clients. Weak economic conditions may force companies to reduce their IT staffing and data and analytics budgets and adversely affect demand for our services, thus reducing our revenues.

We may have difficulty maintaining client relationships if the trend towards utilizing Managed Service Providers continues.

Within our IT staffing segment, many large users of staffing services are employing MSP's to manage their contractor expenses in an effort to drive down overall costs. The general impact of this shift towards the MSP model has been to lower our gross margins. Should this trend towards utilizing the MSP model continue, it is likely that our gross margins will be pressured in the future. In addition, if large users of staffing services continue to employ MSPs, the relationship between us and those large users may be primarily conducted through MSPs, in which case we may have difficulty maintaining those client relationships because the MSP model uses the MSP as an intermediary between the staffing service provider and the end-user, and reduces our direct contact with the end-user.

We are dependent upon our Indian operations and there can be no assurance that our Indian operations will support our growth strategy and historical cost structure.

Our Indian recruitment and delivery centers depend greatly upon business and technology transfer laws in India, and upon the continued development of technology infrastructure. There can be no assurance that our Indian operations will support our growth strategy. The risks inherent in our Indian business activities include:

- unexpected changes in regulatory environments;
- foreign currency fluctuations;
- tariffs and other trade barriers;
- difficulties in managing international operations; and
- the burden of complying with a wide variety of foreign laws and regulations.

Our failure to manage growth, attract and retain personnel or a significant interruption in our ability to transmit data and voice efficiently, could have a material adverse impact on our ability to successfully maintain and develop our global recruitment and delivery centers and could have a material adverse effect on our business, operating results and financial condition.

The Indian rupee may increase in value relative to the dollar, increasing our costs. Although, we receive the vast majority of our revenues in U.S. dollars, we maintain a significant portion of our recruiting and delivery workforces in India, and those employees are paid in rupees. Therefore, any increase in the value of the rupee versus the dollar would increase our expenses, which could have a material adverse effect on our business, operating results and financial condition.

Regional conflicts in South Asia could adversely affect the Indian economy, disrupt our operations and cause our business to suffer.

South Asia has, from time to time, experienced instances of civil unrest and hostilities among neighboring countries, such as between India and Pakistan and even within India. There have been military confrontations along the India-Pakistan border from time to time. The potential for hostilities between the two countries is high due to past terrorist incidents in India, troop mobilizations along the border, and the geopolitical situation in the region. Military activity or terrorist attacks in the future could influence the Indian economy by disrupting communications and making travel more difficult. This, in turn, could have a material adverse effect on our business, operating results and financial condition.

Wage costs in India may increase, which may reduce our operating margins and reduce a competitive advantage of ours.

Our wage costs in India have historically been significantly lower than wage costs in the U.S. for comparably skilled professionals, and this has been one of our competitive advantages with respect to the costs of our Indian recruiting and delivery offices. However, wage increases in India may prevent us from sustaining this competitive advantage and may negatively affect our operating margins. We may need to increase the levels of our employee compensation more rapidly than in the past to retain talent. Unless we are able to continue to increase the efficiency and productivity of our employees, wage increases in the long term may reduce our overall margins.

Our quarterly operating results may be subject to significant variations.

Our revenues and operating results have historically been subject to significant variations from quarter to quarter depending on a number of factors, including the timing and number of client projects commenced and completed during the quarter, the number of working days in a quarter, employee hiring and attrition, and utilization rates during the quarter.

Our multi-year Center of Excellence service offering may be early terminated with a short-notice from the client, which could materially impact our backlog and adversely affect our business and future revenues.

Our Data and Analytics segment markets a multi-year service offering known as a Center of Excellence. This service provides our clients with a virtual extension of their internal team to assist with their data and analytics business strategies and objectives. These engagements are generally multi-year and provide added flexibility to the client by adjusting dedicated readily-available and appropriately skilled resources on an as needed basis. While these engagements provide opportunities to partner with and deeply understand a client's data management and analytics longer-term objectives, these contracts generally can be early terminated by the client with a short-term notice. Should a client terminate an engagement early, this termination could materially impact our backlog of orders and adversely affect our business and future revenues.

Our acquisition of Hudson IT may not provide us with the long-term business advantages that we expected which may result in the slower growth of our business and reduced operating margins.

Our June 15, 2015 acquisition of Hudson IT and the purchase price of such was based on a series of long-term assumptions and estimates. There can be no assurance that these long-term expectations will be completely realized and could result in a material adverse effect on our business, operating results and financial condition.

Our acquisition of InfoTrellis, Inc. may not provide us with the long-term business advantages that we expected which may result in the slower growth of our business and reduced operating margins.

Our July 13, 2017 acquisition of the service division of InfoTrellis, Inc. and the purchase price of such was based on a series of long-term assumptions and estimates. There can be no assurance that these long-term expectations will be completely realized and could result in a material adverse effect on our business, operating results and financial condition.

Our strategy of expansion through the acquisition of additional companies may not be successful and may result in slower growth of our business and reduced operating margins.

We plan to gradually expand our operations through the acquisition of, or investment in, additional businesses and companies. We may be unable to identify businesses that complement our strategy for growth. If we do succeed in identifying a company with such a business, we may not be able to acquire the company, its relevant business or an interest in the company for many reasons, including:

- a failure to agree on the terms of the acquisition or investment;
- incompatibility between us and the management of the company that we wish to acquire or invest;
- competition from other potential acquirers;
- a lack of capital to make the acquisition or investment; or
- the unwillingness of the company to partner with us.

If we are unable to acquire and invest in attractive businesses, our strategy for growth may be impaired. Even if we are able to complete one or more acquisitions, there can be no assurance that those completed acquisitions will result in successful growth, and the costs of completing an acquisition may reduce our margins.

We have made in the past, and may make in the future, acquisitions which could require significant management attention, disrupt our existing business, result in dilution to our shareholders, deplete our cash reserves, increase our debt levels and adversely affect our financial results.

Acquisitions, such as our acquisitions of Hudson IT and the services division of InfoTrellis, Inc., involve numerous risks, including the possibility that:

- we do not successfully integrate the operations, systems, technologies, products, offerings and personnel of the acquired company or companies;
- we do not generate sufficient revenues to offset increased expenses associated with our acquisitions;
- our management's attention is diverted from normal daily operations of our business and the challenges with managing larger and more widespread operations resulting from our acquisitions;
- we experience difficulties entering markets in which we have no or limited direct prior experience and where competitors in such markets have stronger market positions; and
- we lose key employees, customers, distributors, vendors and other business partners of the companies we acquire following and continuing after announcement of acquisition plans.

In addition to the foregoing, acquisitions may also cause us to:

- use a substantial portion of our cash reserves or incur debt;
- issue equity securities or grant equity incentives that dilute our current shareholders' percentage ownership;
- assume liabilities, including potentially unknown liabilities;
- record goodwill and amortizable intangible assets that are subject to impairment testing on a regular basis and potential periodic impairment charges;
- incur amortization expenses related to certain intangible assets;
- incur large and immediate write-offs and restructuring and other related expenses; and
- become subject to intellectual property litigation or other litigation.

Acquisitions of technology companies and assets are inherently risky and subject to many factors outside of our control and no assurance can be given that our recently completed or future acquisitions will be successful and will not materially adversely affect our business, operating results, or financial condition. Failure to manage and successfully integrate acquisitions could materially harm our business and operating results.

Our revenues are highly concentrated, and the loss of a significant client would adversely affect our business and revenues.

Our revenues are highly dependent on clients located in North America, as well as clients concentrated in certain industries. Economic slowdowns, changes in law and other restrictions or factors that affect the economic health of these industries may affect our business. For the year ended December 31, 2019, approximately 45% of our revenues were derived from our top ten clients. Consequently, if our clients reduce or postpone their spending significantly, this may lower the demand for our services and negatively affect our revenues and profitability. Further, any significant decrease in the rate of economic growth may reduce the demand for our services and negatively affect our revenues and profitability.

We have in the past, and may in the future, derive a significant portion of our revenues from a relatively limited number of clients. These contracts are terminable without penalty, as are most of our contracts. The loss of any significant client or major project, or an unanticipated termination of a major project, could result in the loss of substantial anticipated revenues.

Our leverage could materially and adversely affect our financial condition or operating flexibility and prevent us from fulfilling our obligations under our Credit Agreement.

At December 31, 2019, we had outstanding borrowings of $25.5 million under our Credit Agreement with PNC Bank and certain other financial institution lenders (the "Credit Agreement"), which amount consists of $16.0 million of outstanding borrowings under the term loan thereunder and $9.5 million of outstanding borrowings under the revolving credit facility thereunder. Our level of indebtedness could have important consequences on our future operations, including the following:

- increasing the risk that we cannot satisfy our payment or other obligations under our outstanding debt, which may result in defaults;
- subjecting us to increased sensitivity to interest rate increases on our outstanding indebtedness, which could cause our debt service obligations to increase significantly;
- reducing the availability of our cash flows to fund working capital, capital expenditures, acquisitions and other general corporate purposes, and limiting our ability to obtain additional financing for these purposes;
- limiting our flexibility in planning for, or reacting to, and increasing our vulnerability to, changes in our business, the industry in which we operate and general economic conditions;
- placing us at a competitive disadvantage to our competitors that have less debt or are less leveraged; and
- increasing our vulnerability to the impact of adverse economic and industry conditions.

In addition, we may incur additional indebtedness in the future and, if we incur new debt or other liabilities, the related risks that we face could intensify.

Our ability to make required payments or to refinance our indebtedness depends on our future performance, which will be affected by financial, business and economic conditions and other factors, many of which are not in our control. If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay investments and capital expenditures, or to sell assets, seek additional capital, or restructure or refinance our indebtedness. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. In addition, the terms of existing or future debt agreements and other factors may restrict us from pursuing any of these alternatives.

If we are in default under our Credit Agreement due to our inability to make the required payments, or if we otherwise fail to comply with the financial and other covenants contained therein, all of our debt thereunder could be accelerated and the lenders under our Credit Agreement could be permitted to foreclose on our assets securing such debt.

The covenants in our Credit Agreement impose restrictions that may limit our operating and financial flexibility.

The Credit Agreement contains financial covenants, including but not limited to, covenants related to the Company's senior leverage ratio and fixed charge ratio (as defined under the Credit Agreement), and limitations on liens, indebtedness, guarantees and contingent liabilities, loans and investments, distributions, leases, asset sales, stock repurchases and mergers and acquisitions. These covenants and limitations may limit our ability to, among other things:

- create, incur or assume liens;
- make investments and loans;
- create, incur, assume or guarantee additional indebtedness;

- engage in mergers, acquisitions, consolidations, sale-leasebacks and other similar transactions;
- pay dividends, or redeem or repurchase our capital stock;
- alter the business that we conduct;
- engage in certain transactions with officers, directors and affiliates;
- prepay, redeem or purchase other indebtedness;
- enter into certain agreements; and
- make material changes to accounting and reporting practices.

Operating results below current levels or other adverse factors, including increases in interest rates, could result in us being unable to comply with certain covenants contained in our Credit Agreement. If we violate these covenants and are unable to obtain waivers, our debt under the Credit Agreement would be in default, could be accelerated and could permit our lenders to foreclose on our assets securing the debt thereunder. If the indebtedness is accelerated, we may not be able to repay our debt or borrow sufficient funds to refinance it. Even if we are able to obtain new financing, it may not be on commercially reasonable terms or on terms that are acceptable to us. If our debt is in default for any reason, our cash flows, operating results, or financial condition could be materially and adversely affected. In addition, complying with these covenants may also cause us to take actions that may make it more difficult for us to successfully execute our business strategy and compete against companies that are not subject to such restrictions.

We must keep pace with the rapid technological changes that characterize the IT and data and analytics industries and our failure to do so could result in lower demand for services.

The IT staffing and data analytics services industries are characterized by rapid technological change, evolving industry standards, changing client preferences and new product introductions. Our success will depend in part on our ability to keep pace with industry developments. There can be no assurance that we will be successful in addressing these developments on a timely basis or that, if these developments are addressed, we will be successful in the marketplace. In addition, there can be no assurance that products or technologies developed by others will not render our services noncompetitive or obsolete. Our failure to address these developments could have a material adverse effect on our business, operating results and financial condition.

A significant number of organizations are attempting to migrate their IT business applications to advanced technologies. As a result, our ability to remain competitive depends on several factors, including our ability to develop, train and hire employees with skills in advanced technologies. Our failure to hire, train and retain employees with such skills could have a material adverse impact on our future revenues.

Our "preferred vendor" contracts generally result in lower margins. In addition, we may not be able to maintain "preferred vendor" status with existing clients or obtain that status with new clients, which may lead to a decrease in the volume of business we obtain from these clients.

In our IT staffing segments, we are party to several "preferred vendor" contracts, and we are seeking additional similar contracts in order to obtain new or additional business from large and medium-sized clients. Clients enter into these contracts to reduce their number of vendors and obtain better pricing in return for a potential increase in the volume of business to the preferred vendor. While these contracts are expected to generate higher volumes, they generally carry lower margins. Although we attempt to lower costs to maintain margins, there can be no assurance that we will be able to sustain margins on such contracts. In addition, the failure to be designated as a preferred vendor, or the loss of such status, may preclude us from providing services to existing or potential clients, except as a subcontractor, which could have a material adverse effect on the volume of business obtained from such clients.

Our success depends upon the maintenance and protection of our intellectual property rights and processes, and any substantial costs incurred protecting such rights and processes may decrease our operating margins.

Our success depends in part upon certain methodologies and tools we use in designing, developing and implementing application systems and other proprietary intellectual property rights. We rely upon a combination of nondisclosure and other contractual arrangements and trade secrets, copyright and trademark laws to protect our proprietary rights and the proprietary rights of third parties from whom we license intellectual property. We enter into confidentiality agreements with our employees and limit distribution of proprietary information. There can be no assurance that the steps we take in this regard will be adequate to deter misappropriation of proprietary information or that we will be able to detect unauthorized use and take appropriate steps to enforce our intellectual property rights. In the event of an unfavorable resolution of a dispute over our intellectual property rights, we may incur substantial costs or liabilities, which would decrease our operating margins.

Our ownership is highly concentrated in two individuals and the interests of those individual shareholders may not coincide with yours.

Sunil Wadhwani and Ashok Trivedi, co-founders of the Company, own approximate 62% of Mastech Digital's outstanding common stock. Accordingly, Messrs. Wadhwani and Trivedi together have sufficient voting power to elect all the members of the Board of Directors and to effect transactions without the approval of our other shareholders, except for those limited transactions that require a supermajority vote under our bylaws or articles of incorporation. The interests of Messrs. Wadhwani and Trivedi may from time to time diverge from our interests. Mastech Digital's Audit Committee consists of independent directors and addresses certain potential conflicts of interest and related party transactions that may arise between us and our directors, officers or our other affiliates. However, there can be no assurance that any conflicts of interest will be resolved in our favor.

Our business is certified as a minority-owned business, and loss of that certification may impact our ability to gain new customers or expand our business with existing customers.

We are a large minority-owned staffing and data analytics services firm and have been certified as minority-owned by the National Minority Supplier Development Council (the "NMSDC"). NMSDC certification has helped us to expand our business with existing clients as well as obtain new customers. While we cannot quantify the effect of the loss of this status, its loss could adversely affect our ability to expand our business or cause us to lose existing business.

Because the NMSDC certification relies in large part upon Messrs. Wadhwani and Trivedi maintaining their positions as the collective majority holders of our common stock, any decrease in their collective ownership may jeopardize our status as a minority-owned business. There can be no assurance that Messrs. Wadhwani and Trivedi will maintain their majority position in the Company.

Existing and potential customers may consider outsourcing their IT requirements to foreign countries, which could have an adverse effect on our ability to obtain new customers or retain existing customers.

In the past years, more companies started to use low-cost offshore outsourcing centers to perform technology-related work. Should this shift towards moving technology-related work to offshore outsourcing centers continue, our business, operating results and financial condition could be adversely affected.

We may be subject to liability to clients arising from our engagements.

Many of our engagements involve projects that are critical to the operations of our clients' businesses and provide benefits that may be difficult to quantify. Although we attempt to contractually limit our liability for damages arising from errors, mistakes, omissions or negligent acts in rendering our services, there can be no assurance that our attempts to limit liability will be successful. Our failure or inability to meet a client's expectations in the performance of our services could result in a material adverse change to the client's operations and, therefore, could give rise to claims against us or damage our reputation, adversely affecting our business, operating results and financial condition.

Requirements of the Affordable Care Act may continue to increase our employee benefits costs and could negatively affect our operating results, cash flows and financial condition if such costs aren't recovered with increases in client bill rates.

We provide healthcare coverage to our U.S.-based employees that are subject to the Affordable Care Act ("ACA"). Additional provisions of the ACA and the compliance of such may result in higher overall costs to the Company, which could have a negative impact on our operating results, cash flows and financial condition.

Security breaches and other disruptions could compromise our information and expose us to liability, which would cause our business and reputation to suffer.

In the ordinary course of our business, we collect and store sensitive data, including intellectual property, our proprietary business information and that of our customers, suppliers and business partners, and personally identifiable information of our customers and employees, in our data center and on our networks. The secure processing, maintenance and transmission of this information is critical to our operations and business strategy. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, and regulatory penalties, disrupt our operations and the services we provide to customers, and damage our reputation, and cause a loss of confidence in our services, which could adversely affect our operating results and competitive position. We maintain cyber risk insurance, but this insurance may not be sufficient to cover all of our losses from any breaches of our networks.

If our clients are subjected to cyber-attacks or data security breaches, it may result in damage to our business and the disclosure of our confidential information.

In addition to cybersecurity threats posed directly against us, our clients' information systems are also vulnerable to an increasing threat of continually evolving cybersecurity risks. There is no guarantee that our clients have implemented procedures that are adequate to safeguard against all data security breaches. The failure of our clients to adequately safeguard against data security breaches could have a material adverse effect on our business and operations. The theft and/or breach of our clients' data security could cause the disclosure and/or loss of our confidential information and data and result in significant costs. In addition, any cybersecurity damage to the networks or computer systems used by us or our clients could result in a claim for substantial damages against us and significant reputational harm, regardless of our responsibility for the failure.

Our inability to successfully recover should we experience a disaster or other business continuity problem could cause material financial loss, loss of human capital, regulatory actions, reputational harm or legal liability.

Should we experience a disaster or other business continuity problem, such as an earthquake, hurricane, terrorist attack, pandemic, security breach, power loss, telecommunications failure or other natural or man-made disaster, our continued success will depend, in part, on the availability of our personnel, our office facilities, and the proper functioning of our computer, telecommunication and other related systems and operations. In such an event, we could experience near-term operational challenges with regard to particular areas of our operations. In particular, our ability to recover from any disaster, pandemic or other business continuity problem will depend on our ability to protect our technology infrastructure against damage from business continuity events that could have a significant disruptive effect on our operations. We could potentially lose client data or experience material adverse interruptions to our operations or delivery of services to our clients in a disaster. A disaster, or pandemic, on a significant scale or affecting certain of our key operating areas within or across regions, or our inability to successfully recover should we experience a disaster, pandemic or other business continuity problem, could materially interrupt our business operations and cause material financial loss, loss of human capital, regulatory actions, reputational harm, damaged client relationships or legal liability. For example, we are evaluating the potential impact of the coronavirus (COVID-19) outbreak that originated in China, including the impact on our employees, customers and third-party providers and of governmental actions being taken to curtail the spread of the virus. The outbreak has severely restricted the level of economic activity in affected areas and may have an adverse impact on sales of certain of our services.

Negative economic or business conditions brought on by a global health epidemic or outbreak may adversely affect demand for our services.

Our business depends on the overall demand for IT and data and analytics professionals and on the economic health of our clients. Our business could be adversely affected by the effects of the COVID-19 virus or another epidemic or outbreak on the economic and business climate. For example, weak economic conditions brought on by the recent spread of the COVID-19 virus may cause companies to reduce their staffing and data and analytics budgets and adversely affect demand for our services, thus reducing our revenues. Furthermore, the impact of the COVID-19 virus outbreak and the actions taken to curtail the spread of the virus could disrupt or materially impair the ability of our clients to operate their businesses. Any such disruption or impairment could lower the demand for our services, result in collection issues on our outstanding accounts receivable and have a material adverse impact on our revenues and profitability.

Risks posed by climate change may materially increase our compliance costs and adversely impact our profitability.

Climate change vulnerability is posing new threats and opportunities in the global economy. Climate change and measures adopted to address it can affect us, our clients and suppliers in myriad ways, depending on the nature and location of the businesses, the near-term capital expenditure needs, the regulatory environments where they operate and their strategic plans. Generally, climate risks and opportunities for companies and their investors fall into four categories:

- Physical risk from climate change;
- Regulatory risks and opportunities related to existing or proposed greenhouse gas (“GHG”) emissions limits;
- Indirect regulatory risks and opportunities related to products or services from high emitting companies; and
- Litigation risks for emitters of greenhouse gases.

Unmitigated climate change is likely to have severe physical impacts on companies with exposed assets or business operations, including Mastech Digital. Major environmental risks and liabilities can significantly impact future earnings. To the extent we are unable to comply with applicable regulations related to climate change, and such failure to comply results in material increases in compliance costs or litigation expenses, those costs or expenses will have an adverse effect on our profitability.

If our clients are adversely affected by climate change or related compliance costs, this may reduce their spending and demand for our services, leading to a decrease in revenue.

In addition to emissions and climate change risks posed directly to Mastech Digital, we also have clients in varied industries such as healthcare, consumer products, manufacturing, technology, and retail, among others.

Some of the clients may be significantly affected by climate change resulting in greater physical risk. This may lead to a reduction of demand and loss of business from such clients, which would impact our business, results of operations and financial condition.

If our insurance costs increase significantly, these incremental costs could negatively affect our financial results.

We purchase various insurance policies to limit or transfer certain risks inherent in our operations. These costs largely relate to obtaining and maintaining professional and general liability insurance policies. If the costs of carrying these insurance policies increase significantly, due to poor claims history or changes in market conditions, this could have an adverse impact on our profitability and financial condition.

Any disruption in the supply of power, IT infrastructure and telecommunications lines to our facilities could disrupt our business process or subject us to additional costs.

Any disruption in basic infrastructure, including the supply of power, could negatively impact our ability to provide timely or adequate services to our clients. We rely on a number of telecommunication services and other infrastructure providers to maintain communications between our various facilities and clients. Telecommunications networks are subject to failures and periods of service disruption which can adversely affect our ability to maintain active voice and data communications among our facilities and with our clients. This could disrupt our business process or subject us to additional costs, materially adversely affecting our business, results of operations and financial condition.

The broad provisions of the Tax Cuts and Jobs Act of 2017 may negatively impact our ability to receive tax deductions for certain expenses that we incur, which could adversely impact our cash flows, results of operations and financial condition.

The Tax Cuts and Jobs Act of 2017 (the "Tax Cuts and Jobs Act") enacted on December 22, 2017, made broad and complex changes to the U.S. tax code including, but not limited to, the following, which may impact us: 1) reductions in the U.S. federal corporate income tax rate from 35 percent to 21 percent; 2) new limitations on deductible interest expense; 3) limitations on the deductibility of certain executive compensation; and 4) limits on certain other types of deductions. We recorded an aggregate $623,000 tax expense in 2017 and 2018 related to the estimated re-measurement of our deferred tax asset balance and an estimated one-time transition tax applicable to the new dividend exemption rules related to foreign earnings. While the Tax Cuts and Jobs Act reduced the U.S. federal corporate income tax rate applicable to us, it is possible that other provisions of this Act and the absence of guidance on various ambiguities in the application of certain provisions thereunder could have a material adverse effect on our cash flows, results of operations and financial condition.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Information regarding the principal properties leased by us and our subsidiaries as of December 31, 2019 is set forth below:

Location	Principal Use	Occupying Business Segment	Approximate Square Footage
Moon Township, Pennsylvania	Corporate headquarters, executive, human resources, sales, recruiting, marketing and finance	IT Staffing	11,500
Waltham, Massachusetts	Sales and recruiting office	IT Staffing	1,700
Dallas, Texas	Sales and recruiting office	IT Staffing	2,600
Fremont, California	Sales and recruiting office	IT Staffing	2,600
Chicago, Illinois	Sales and recruiting office	IT Staffing	2,600
Tampa, Florida	Sales and recruiting office	IT Staffing	2,100
Orlando, Florida	Sales and recruiting office	IT Staffing	1,000
Atlanta, Georgia	Executive, sales and marketing	Data and Analytics	2,700
Toronto, Canada	Human resources, sales, marketing and delivery	Data and Analytics	1,900
Austin, Texas	Sales office	Data and Analytics	800
NOIDA, India	Sales and recruiting office	IT Staffing	39,900
Chennai, India	Sales and delivery center	Data and Analytics	19,000

ITEM 3. LEGAL PROCEEDINGS

In the ordinary course of our business, we are involved in a number of lawsuits and administrative proceedings. While uncertainties are inherent in the final outcome of these matters, management believes, after consultation with legal counsel, that the disposition of these proceedings should not have a material adverse effect on our financial position, results of operations or cash flows.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded on the NYSE American under the symbol "MHH". We began trading "regular way" on the former American Stock Exchange ("AMEX") on October 1, 2008.

The following table sets forth, for the periods indicated, the range of high and low closing sale prices of the common stock of Mastech during the calendar quarters indicated.

Common Stock Market Price	High	Low
2019:		
Fourth Quarter	$11.07	$5.68
Third Quarter	6.34	4.85
Second Quarter	6.25	4.71
First Quarter	8.02	5.97
2018:		
Fourth Quarter	$ 8.70	$6.11
Third Quarter	11.43	7.79
Second Quarter	9.05	5.85
First Quarter	7.92	4.75

On March 13, 2020, we had 85 registered holders of record of our common stock. This figure excludes an estimate of the indeterminate number of beneficial holders whose shares may be held by brokerage firms and clearing agencies. We currently do not pay recurring dividends on our common stock. However, on October 29, 2013, the Company declared a cash dividend of $0.25 per share (adjusted for stock splits) on common stock, payable on December 20, 2013 to shareholders of record on December 9, 2013. Additionally, on November 29, 2012, the Company declared a special one-time dividend of $.80 per share (adjusted for stock splits) on common stock, payable on December 21, 2012. These dividends should be viewed as non-recurring.

On December 23, 2010, the Company announced a share repurchase program of up to 1.9 million shares of the Company's common stock over a two-year period. On October 23, 2012, the program was extended for an additional two-year period and the number of shares subject to the program was increased by 625,000 shares to 2.5 million shares. On October 22, 2014, the Company's Board of Directors approved the extension of this program through December 22, 2016. Repurchases under the program may be made through open market purchases or privately negotiated transactions in accordance with applicable securities laws. During 2016, we did not purchase any shares under this program and the Board elected to let the program expire as of December 22, 2016.

The Company purchased 2,574 and 2,574 shares in 2019 and 2018 at an average price of $5.05 and $8.01, respectively, to satisfy employee tax obligations related to the vesting of restricted shares, in accordance with the Company's Stock Incentive Plan provisions. These shares were not acquired pursuant to any publicly announced purchase program.

The Company adopted a Stock Incentive Plan in 2008 which, as amended, provides that up to 3,900,000 shares of the Company's common stock shall be allocated for issuance to directors, executive management, and key personnel. The most recent amendment approved by shareholder vote at the Company's Annual Meeting of Shareholders on May 15, 2019 increased the number of shares of common stock that may be issued pursuant to the Plan by 300,000 shares to a total of 3,900,000. Details of shares issued and outstanding under this plan are disclosed in Note 10 "Stock-Based Compensation" to the Consolidated Financial Statements included in Item 8 herein.

In October 2018, the Board of Directors of the Company approved the Mastech Digital, Inc. 2019 Employee Stock Purchase Plan (the “Stock Purchase Plan”). The Stock Purchase Plan is intended to meet the requirements of Section 423 of the Code and required the approval of the Company’s shareholders to be qualified under Section 423 of the Code. On May 15, 2019, the Company’s shareholders approved the Stock Purchase Plan. Under the Stock Purchase Plan, 600,000 shares of Common Stock (subject to adjustment upon certain changes in the Company’s capitalization) are available for purchase by eligible employees who become participants in the Stock Purchase Plan. The purchase price per share is 85% of the lesser of (i) the fair market value per share of Common Stock on the first day of the offering period, or (ii) the fair market value per share of Common Stock on the last day of the offering period. For the year ended December 31, 2019, stock purchases under the Stock Purchase Plan totaled 40,500 shares at an average purchase price of $4.11. At December 31, 2019 there were 559,500 shares available for purchase under the Plan.

On July 7, 2017, the Company entered into Securities Purchase Agreements (the “Securities Purchase Agreements”) with Ashok Trivedi and Sunil Wadhwani, each a co-founder and director of the Company and who together own a majority of the outstanding shares of the Company’s Common Stock (each an “Investor” and collectively the “Investors”), pursuant to which the Company agreed to sell to each of the Investors the number of shares of Common Stock equal to $3.0 million divided by the greater of (i) $3.50 per share of Common Stock and (ii) the closing price of the Common Stock on NYSE American on July 10, 2017, which was $3.18 per share. On July 13, 2017, the Company issued and sold an aggregate 1.7 million shares (the “Shares”) of Common Stock to the Investors for $6.0 million in aggregate gross proceeds pursuant to the terms of the Securities Purchase Agreements and, in connection therewith, entered into a registration rights agreement with the Investors (collectively, the “Private Placement Transactions”). The Company used the proceeds from the Private Placement Transactions to partially fund the purchase price payable at the July 13, 2017 closing of the Company’s acquisition of the services division of InfoTrellis, Inc. The Shares issued to the Investors in connection with the Private Placement Transactions were made in reliance upon an exemption from the regulation requirements of the Securities Act of 1933, as amended (the “Securities Act”), pursuant to Section 4(a)(2) of the Securities Act and Rule 506 promulgated thereunder. The Company relied on this exemption from registration based in part on representations made by the Investors.

ITEM 6. SELECTED FINANCIAL DATA

You should read the information set forth below in conjunction with our Consolidated Financial Statements and accompanying Notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in this Annual Report on Form 10-K.

	Years Ended December 31,				
	2019	2018	2017 (a)	2016	2015 (b)
	(Amounts in thousands, except per share data)				
Income Statement Data:					
Revenues	$193,574	$177,164	$147,882	$132,008	$123,470
Gross profit	47,981	42,528	31,629	26,297	23,799
Operating expense	30,994	30,903	27,548	21,790	19,117
Other income / (expense), net	(1,768)	(2,211)	(1,133)	(487)	(257)
Income before income taxes	15,219	9,414	2,948	4,020	4,425
Income tax expense	4,074	2,723	1,322	1,500	1,672
Net income	$ 11,145	$ 6,691	$ 1,626	$ 2,520	$ 2,753
Earnings per share:					
Basic (c)	$ 1.01	$ .61	$ .16	$ .29	$ .32
Diluted (c)	$ .99	$ .60	$ .16	$ .28	$ .31
Weighted average common shares outstanding:					
Basic (c)	11,029	10,950	9,924	8,786	8,676
Diluted (c)	11,232	11,161	9,998	8,964	8,882
Balance Sheet Data:					
Cash and cash equivalents	$ 2,981	$ 1,294	$ 2,478	$ 829	$ 848
Operating working capital (d)	19,433	26,070	16,089	11,398	9,858
Total bank debt	25,257	38,704	38,152	9,877	12,538
Total liabilities	44,304	58,308	71,451	20,334	22,674
Total assets	90,584	92,584	98,604	39,406	38,477
Shareholders' equity	46,280	34,276	27,153	19,072	15,803

(a) 2017 financial data reflects the Company's July 13, 2017 acquisition of InfoTrellis, Inc. from the acquisition date through December 31, 2017.

(b) 2015 financial data reflects the Company's June 15, 2015 acquisition of Hudson IT from the acquisition date through December 31, 2015.

(c) Weighted average common shares outstanding has been adjusted for all periods presented for the Company's July 2018 two-for-one stock split.

(d) Operating working capital represents current assets, excluding cash and cash equivalents, minus current liabilities, excluding the current portion of long-term debt.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview:

We are a provider of Digital Transformation IT Services to mostly large and medium sized organizations.

Our portfolio of offerings includes data management and analytics services; other digital transformation services such as Salesforce.com, and Digital Learning services; and IT staffing services.

With the July 13, 2017 acquisition of InfoTrellis, we now operate in two reporting segments—Data and Analytics Services; and IT Staffing Services. Our data and analytics services are marketed on a global basis under the brand Mastech InfoTrellis and are delivered largely on a project basis with on-site and off-shore resources. These capabilities and expertise were acquired through our acquisition of InfoTrellis and enhanced and expanded during 2018 and 2019. Our IT staffing business combines technical expertise with business process experience to deliver a broad range of staffing services in digital and mainstream technologies, as well as our other digital transformation services.

Both business segments provide their services across various industry verticals including: financial services; government; healthcare; manufacturing; retail; technology; telecommunications; and transportation. Within each reporting segment, we evaluate our revenues and gross profits largely by sales channel responsibility. This analysis within both our reporting segments is multi-purposed and includes technologies employed, client relationships, and sales channel accountability.

Economic Trends and Outlook

Generally, our business outlook is highly correlated to general North American economic conditions, particularly in the United States. During periods of increasing employment and economic expansion, demand for our services tends to increase. Conversely, during periods of contracting employment and / or a slowing domestic economy, demand for our services tends to decline. As the economy slowed during the last half of 2007 and recessionary conditions emerged in 2008 and during much of 2009, we experienced less demand for our staffing services. During the second half of 2009, we began to see signs of market stabilization and a modest pick-up in activity levels within certain sales channels and technologies and in 2010, market conditions continued to strengthen over the course of the year. In 2011 through 2013, activity levels continued to trend up in most technologies and sales channels. During 2014 and 2015, we continued to see a steady flow of solid activity in our contract staffing business; however, tightness in the supply side (skilled IT professionals) of our business during these years negatively impacted our new assignment successes. Solid activity levels in our contract staffing business continued in 2016 through 2019; however, recruitment challenges remained due to the tightness in the supply of skilled IT professionals. As we enter 2020, we are encouraged by continued growth in the domestic job markets and an expanding U.S. economy, which we believe are positive factors for both our IT staffing services and data and analytics services businesses. We expect supply side pressures to persist in both of our business segments, particularly in our IT staffing services segment. Additionally, with more opportunities coming from international clients in the data and analytics services segment, the health of the global economy is becoming a larger data point with respect to our market dynamics.

In addition to tracking general economic conditions in the markets that we service, a large portion of our revenues is generated from a limited number of clients (see Item 1A, the Risk Factor entitled "Our revenues are highly concentrated and the loss of a significant client would adversely affect our business and revenues"). Accordingly, our trends and outlook are additionally impacted by the prospects and well-being of these specific clients. This "account concentration" factor may result in our results of operations deviating from the prevailing economic trends from time to time.

Within our IT staffing segment, a larger portion of our revenues has come from strategic relationships with systems integrators and other staffing organizations. Additionally, many large end users of IT staffing services are employing MSP's to manage their contractor spending. Both of these dynamics may pressure our IT staffing gross margins in the future.

Recent growth in advanced technologies (social, cloud, analytics, mobility, automation) is providing opportunities within our IT staffing services segment. However, supply side challenges are acute with respect to many of these technologies.

In December 2019, a new strain of the coronavirus (COVID-19) was reported to have spread to over 100 countries, territories or areas worldwide. Initially, the negative business impact of the coronavirus outbreak was most pronounced in the Asia Pacific Region, and in particular China and Hong Kong. In recent weeks and days, however, the impact has become more global. Recently, select governments and companies have implemented social distancing – restricting either travel or in person individual or group face-to-face interaction. The extent to which further, incremental measures are put in place or additional government bodies adopt such measures is unknown. The measures taken to date will impact our business. We expect our business segments across all of our geographies will be impacted to some degree, but the significance of the impact of the coronavirus outbreak on our business and the duration for which it may have an impact cannot be determined at this time.

Results of Operations

As described herein, since the July 13, 2017 closing of the InfoTrellis acquisition, we operate in two reporting segments – Data and Analytics Services and IT Staffing Services. The 2017 results of operations for our Data and Analytics Services segment cover the period from the July 13, 2017 closing through December 31, 2017.

Below is a tabular presentation of revenues and gross profit margins by segment for the periods discussed:

Revenues & Gross Margin by Segment
(Revenues in millions)

	Years Ended December 31,		
Revenues	**2019**	**2018**	**2017**
Data and Analytics Services	$ 26.7	$ 23.8	$ 9.2
IT Staffing Services	166.9	153.4	138.7
Total Revenues	**$193.6**	**$177.2**	**$147.9**
Gross Margin %			
Data and Analytics Services	46.7%	44.0%	44.8%
IT Staffing Services	21.3%	20.9%	19.8%
Total Gross Margin%	**24.8%**	**24.0%**	**21.4%**

Below is a tabular presentation of operating expenses by sales, operations, amortization of acquired intangible assets, acquisition transaction expenses, revaluation of contingent consideration, goodwill impairment and general and administrative categories for the periods discussed:

Selling, General & Administrative ("S,G&A") Expense Details
(Amounts in millions)

	Years Ended December 31,		
	2019	**2018**	**2017**
Data and Analytics Services Segment			
Sales and Marketing	$ 3.4	$ 2.7	$ 0.8
Operations	1.0	0.3	0.1
Amortization of Acquired Intangible Assets	2.0	2.0	0.9
Acquisition Transaction Expenses	(0.1)	(0.1)	2.0
Revaluation of Contingent Consideration	(6.1)	(11.1)	—
Goodwill Impairment	—	9.7	—
General & Administrative	2.5	1.8	0.7
Subtotal Data and Analytics Services	**$ 2.7**	**$ 5.3**	**$ 4.5**
IT Staffing Services Segment			
Sales and Marketing	$ 8.6	$ 8.6	$ 8.3
Operations	10.2	8.8	8.2
Amortization of Acquired Intangible Assets	0.7	0.8	0.8
General & Administrative	8.8	7.4	5.7
Subtotal IT Staffing Services	**$28.3**	**$ 25.6**	**$23.0**
Total S,G&A Expenses	**$31.0**	**$ 30.9**	**$27.5**

2019 Compared to 2018

Revenues

Revenues for the year ended December 31, 2019 totaled $193.6 million, compared to $177.2 million for the year-ended December 31, 2018. This 9% increase in revenues reflected revenue growth of 12% in our data and analytics services segment and approximately 9% revenue growth in our IT staffing services segment. In our data and analytics services segment, new service- offerings helped drive 2019 revenues, particularly during the second half of the year. Revenue growth in our IT staffing services segment reflected a 65-consultant expansion of our billable consultant-base and a higher average bill rate. Utilization in 2019 was slightly below 2018 levels due to more downtime related to the fourth quarter holiday season. Our average IT staffing bill rate for 2019 increased to $74.97 per hour in 2019 from $73.01 per hour in 2018 – an increase of about 3%. This bill rate increase was reflective of the types of skill sets that we deployed on new assignments during 2019.

In 2019 and 2018, we had one client that exceeded 10% of total revenues (CGI = 11.3% and 12.8%, respectively). Our top ten clients represented 45% of total revenues in 2019 compared to 47% of total revenues in 2018.

Gross Margin

Gross profit increased to $48.0 million in 2019 compared to $42.5 million in 2018. Gross profit as a percentage of revenue totaled 24.8% in 2019 compared to 24.0% in 2018. The increase in gross profit dollars reflected higher revenues in 2019. The improvement in our gross margin percentage reflected margin expansion in both of our business segments. In our data and analytics services segment, gross margins increased by

270-basis points to 46.7%, due to lower bench costs and higher margins on new assignments secured during the year. In our IT staffing services segment, gross margins increased by 40-basis points to 21.3% largely due to higher margins on digital technology assignments.

Selling, General and Administrative ("S,G&A") Expenses

S,G&A expenses in 2019 totaled $31.0 million and represented 16.0% of total revenues, compared to $30.9 million or 17.4% of revenues in 2018. When excluding acquisition transaction expenses; the revaluation of contingent consideration; goodwill impairment; and the amortization of acquired intangible assets, adjusted S,G&A expenses related to operations, as a percentage of revenues was 17.8% in 2019 versus 16.7% in 2018. The increase in adjusted S,G&A as a percentage of revenues was largely due to investments made to our data and analytics services segment's sales and delivery organizations and higher recruitment and general & administrative expenses in our IT staffing services business.

Fluctuations within S,G&A expense components during 2019 compared to 2018 included the following:

- Sales expense increased by $0.7 million compared to the previous year. The entire increase related to investments made to our data and analytic services business during the year. IT staffing sales expenses were flat compared to 2018, with higher commission expenses offset by lower headcount.
- Operations expense increased by $2.1 million compared to 2018. Approximately $0.7 million was related to investments made to our data and analytics services segment in the areas of delivery and analytics. The increased expense in our IT staffing services business in 2019 totaled $1.4 million and was due to staff expansion at our offshore recruitment center, higher recruiter commissions, an increase in H1-B processing fees, and higher facility expenses.
- Amortization of acquired intangible assets was $2.7 million in 2019 versus $2.8 million in 2018. The slight decline was related to certain intangibles from our 2015 acquisition becoming fully amortized.
- Acquisition transaction expenses were negative $0.1 million in both 2019 and 2018 and related to lower investment banking fees due to the non-payment of contingent consideration.
- The revaluation of a contingent consideration liability, net of goodwill impairment charges was a $6.1 million credit to S,G&A expenses in 2019 compared to a $1.4 million credit to S,G&A expense in 2018. This was driven by the difference between short-term results, which impacted the attainment of contingent consideration, and long-term forecasts and assumptions used in assessing goodwill impairment.
- General & administrative expenses increased by $2.1 million in 2019 compared to 2018. Our data and analytics services segment was responsible for $0.7 million of this increase and reflected higher executive leadership compensation expense and stock-based compensation expenses in 2019 versus 2018. Our IT staffing services segment had higher general and administrative expenses in 2019 of $1.4 million due to higher compensation expense, system support costs, depreciation expense and higher travel and event expenses.

Other Income / (Expense) Components

In 2019, other income / (expense) consisted of interest expense of ($1.8 million) and foreign exchange gains of $11,000. In 2018, other income / (expense) consisted of interest expense of ($2.2 million) and foreign exchange losses of ($40,000). The decline in interest expense was due to lower average outstanding borrowings resulting from debt repayments made during the year and a lower effective interest rate. Net foreign exchange gains /(losses) in 2019 and 2018 largely reflected exchange rate variations between the Indian rupee and the Canadian dollar compared to the U.S. dollar.

Income Tax Expense

Income tax expense for 2019 was $4.1 million and represented an effective tax rate on pre-tax income of 26.8% compared to $2.7 million in 2018, which represented an effective tax rate on pre-tax income of 28.9%. The 2019 effective tax rate was lower than 2018 because 2018 income tax expense included U.S. tax reform transition taxes.

2018 Compared to 2017

Revenues

Revenues for the year ended December 31, 2018 totaled $177.2 million, compared to $147.9 million for the year ended December 31, 2017. This 20% increase in revenues reflects our July 13, 2017 acquisition of the InfoTrellis' data and analytics services business and 11% organic revenue growth achieved in our IT staffing services segment. Organic revenue growth in our IT staffing services business reflected a 117-consultant expansion of our billable consultant-base, partially offset by a lower average bill rate. Utilization in 2018 was improved from 2017 levels, whose levels were impacted by weather-related business disruptions and higher down-time in our digital learning practice. Our average bill rate for 2018 decreased from $73.55 per hour in 2017 to $73.01 per hour in 2018. This rate decline was due to lower bill rates on new assignments during 2018 and is reflective of the types of skill sets that we deployed on such new assignments during the year.

In 2018, we had one client that exceeded 10% of total revenues (CGI = 12.8%). In 2017, we had two clients that exceeded 10% of total revenues (CGI = 12.6% and Accenture PLC = 10.7%). Our top ten clients represented 47% of total revenues in 2018 compared to 47% of total revenues in 2017.

Gross Margin

Gross profit increased to $42.5 million in 2018 compared to $31.6 million in 2017. Gross profit as a percentage of revenue totaled 24.0% in 2018 compared to 21.4% one-year earlier. The increase in gross profit dollars reflected our higher revenues in 2018. The improvement in our gross margin percentage reflected the full-year inclusion of the financial results of our data and analytics services segment in 2018, which segment has a much higher gross margin profile than our IT staffing services segment. Additionally, our gross margins in our IT staffing services segment expanded by 110-basis points in 2018 compared to 2017. Strong direct hire revenues and higher margins on new assignments were responsible for much of this gross margin improvement in our IT staffing segment.

Selling, General and Administrative ("S,G&A") Expenses

S,G&A expenses in 2018 totaled $30.9 million and represented 17.4% of total revenues, compared to $27.5 million or 18.6% of revenues in 2017. When excluding acquisition transaction expenses; the revaluation of contingent consideration; goodwill impairment; and the amortization of acquired intangible assets, adjusted S,G&A expenses related to operations, as a percentage of revenues was 16.7% in 2018 versus 16.1% in 2017. The increase in adjusted S,G&A as a percentage of revenues was largely due to the full year 2018 consolidation of the data and analytics services segment, which has an operating cost structure that is higher than our IT staffing services business.

Fluctuations within S,G&A expense components during 2018 compared to 2017 included the following:

- Sales expense increased by $2.2 million compared to the previous year. Approximately $1.9 million was related to our new data and analytics services segment. The increase reflected a full year of operations in 2018 versus a partial year in 2017. Additionally, investments were made to expand our sales organization in 2018. In the IT staffing segment, higher sales commissions were responsible for the $0.3 million increase in 2018.

- Operations expense increased by $0.8 million compared to 2017. Approximately $0.2 million was related to our new data and analytics services segment and $0.6 million was due to staff expansion at our offshore center, higher recruiter commissions and an increase in H1-B processing fees.
- Amortization of acquired intangible assets was $2.8 million in 2018 compared to $1.7 million in 2017. The increase of $1.1 million was due to the acquisition of the data and analytics business.
- Acquisition transaction expenses were $2.1 million lower in 2018 compared to 2017.
- Revaluation of a contingent consideration liability and a goodwill impairment charge netted to a $1.4 million credit to S,G&A expense in 2018.
- General & administrative expenses increased by $2.8 million from 2017. Our new data and analytics services segment was responsible for $1.1 million and reflected a full year of operations in 2018. Our IT staffing services segment had higher general and administrative expenses in 2018 due to the following: 1) higher variable and stock-based compensation expense of $0.6 million; 2) higher professional services fees of $0.4 million; 3) expenses related to system support costs of $0.3 million; and 4) higher travel and event expenses of $0.4 million.

Other Income / (Expense) Components

In 2018, other income / (expense) consisted of interest expense of ($2.2 million) and foreign exchange losses of ($40,000). In 2017, other income / (expense) consisted of interest expense of ($1.1 million) and foreign exchange losses of ($2,000). The increase in interest expense was due to higher average outstanding borrowings resulting from our debt financing of the InfoTrellis acquisition in July 2017. Net foreign exchange losses in 2018 and 2017 largely reflected exchange rate variations between the Indian rupee and the Canadian dollar compared to the U.S. dollar.

Income Tax Expense

Income tax expense for 2018 was $2.7 million and represented an effective tax rate on pre-tax income of 28.9% compared to $1.3 million in 2017, which represented an effective tax rate on pre-tax income of 44.8%. The lower effective tax rate was largely due to a lower U.S. federal tax rate in 2018 and lower U.S. tax reform transition taxes in 2018 versus 2017.

Liquidity and Capital Resources

Financial Conditions and Liquidity

At December 31, 2019, we had outstanding bank debt, net of cash balances on hand, of approximately $22.5 million and approximately $13 million of borrowing capacity under our existing credit facility. During 2019, our outstanding bank debt, net of cash balances on hand, declined by approximately $15 million and is reflective of net cash flows provided by operating activities. Reductions in operating working capital levels provided $5.1 million of cash, as our cash conversion issues as a result of the 2018 implementation of our new Cloud-based ERP platform were resolved and accounts receivable levels returned to a normal state.

Historically, we have funded our business needs with cash generation from operating activities. In the data and analytics services and IT staffing services industries, investment in operating working capital levels (defined as current assets excluding cash and cash equivalents minus current liabilities, excluding short-term borrowings) is a significant use of cash. Controlling our operating working capital levels by closely managing our accounts receivable balance is an important element of cash preservation. Our accounts receivable "days sales outstanding" measurement ("DSO") was 55-days at year-end 2019 and 69-days at year-end 2018. The higher DSO measurement in 2018 reflected cash conversion disruptions related to our Cloud-based ERP platform implementation.

Cash provided by operating activities, our cash and cash equivalent balances on hand at December 31, 2019 and current availability under our existing credit facility are expected to be adequate to fund our business needs over the next 12 months, absent any acquisition-related activities.

Below is a tabular presentation of cash flow activities for the periods discussed:

Cash Flows Activities	Years Ended December 31, 2019	2018	2017
	(Amounts in millions)		
Operating activities	$ 16.1	$(0.5)	$ 3.4
Investing activities	(0.9)	(1.1)	(36.0)
Financing activities	(13.4)	0.6	34.2

Operating Activities

Cash provided by (used in) operating activities for the years ended December 31, 2019, 2018 and 2017 totaled $16.1 million, ($0.5 million) and $3.4 million, respectively. In 2019, cash flows from operating activities included net income of $11.1 million, non-cash charges of ($0.1 million) and reductions in operating working capital of $5.1 million. In 2018, cash flows from operating activities included net income of $6.7 million and non-cash charges of $2.7 million, offset by an increase in operating working capital of ($9.9 million). In 2017, cash flows from operating activities included net income of $1.6 million and non-cash charges of $2.3 million, partially offset by an increase in operating working capital of ($0.5 million). The 2019 decline in operating working capital was reflective of the resolution of cash conversion disruptions related to our 2018 Cloud-based ERP platform implementation.

We would expect operating working capital levels to increase should revenue growth continue in 2020. Accordingly, an increase in operating working capital would result in a reduction in cash generated from operating activities. We believe DSO's will remain at current levels during 2020.

Investing Activities

Cash (used in) investing activities for the years ended December 31, 2019, 2018 and 2017 totaled ($0.9 million), ($1.1 million) and ($36.0 million), respectively. In 2019, cash (used in) investing activities included capital expenditures of ($1.0 million), partially offset by $0.1 million of recoveries of non-current deposits (office lease deposits). In 2018, cash (used in) investing activities included capital expenditures of ($0.8 million) and increases in non-current deposits of ($0.3 million). In 2017, the acquisition of InfoTrellis was responsible for ($34.8 million) of cash usage, with capital expenditures of approximately ($1.2 million) accounting for the balance. In 2019, 2018 and 2017, capital expenditures were largely related to system upgrade expenditures.

Financing Activities

In 2019, cash (used in) financing activities totaled ($13.4 million) and largely consisted of net repayments under the Company's revolving credit facility of ($4.0 million) and ($9.6 million) of term-loan repayments, partially offset by $0.2 million of proceeds from the issuance of common stock. In 2018, cash provided by financing activities totaled $0.6 million and largely consisted of net borrowings under the Company's revolving credit facility of $4.5 million, and $0.1 million of proceeds from the exercise of stock options, partially offset by ($4.0 million) of term loan repayments. In 2017, cash provided by financing activities totaled $34.2 million and consisted of net borrowings under the Company's credit facilities of $28.6 million; $6.0 million of proceeds from the issuance of common stock; proceeds from the exercise of stock options of $0.1 million; partially offset by payment of deferred financing costs and purchase of treasury stock totaling ($0.5 million).

Other than the factors discussed in this section and the potential impacts of the coronavirus on our business, we are not aware of any other trends, demands or commitments that would materially affect liquidity or those that relate to our resources as of December 31, 2019.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Inflation

We do not believe that inflation had a significant impact on our results of operations for the periods presented. On an ongoing basis, we attempt to minimize any effects of inflation on our operating results by controlling operating costs and, whenever possible, seek to ensure that billing rates reflect increases in costs due to inflation.

Seasonality

Our operations are generally not affected by seasonal fluctuations. However, our consultants' billable hours are affected by national holidays and vacation patterns. Accordingly, we typically have lower utilization rates and higher benefit costs during the fourth quarter. Additionally, assignment completions tend to be higher near the end of the calendar year, which largely impacts our revenue and gross profit performance during the subsequent quarter.

Critical Accounting Policies and Estimates

Certain accounting policies are particularly important to the portrayal of our financial position, results of operations and cash flows and require the application of significant judgment by management, and as a result, are subject to an inherent degree of uncertainty. In applying these policies, our management uses judgment to determine the appropriate assumptions to be used in the determination of certain estimates. These estimates are based on our historical experience, terms of existing contracts, observances of industry trends and other available information from outside sources, as appropriate. The following explains our most critical accounting policies. See the Notes to the Consolidated Financial Statements, contained in Item 8, of this Annual Report on Form 10-K for a complete description of our significant accounting policies.

Revenue Recognition

The Company recognizes revenue on time-and-material contracts as services are performed and expenses are incurred. Time-and-material contracts typically bill at an agreed-upon hourly rate, plus out-of-pocket expense reimbursement. Out-of-pocket expense reimbursement amounts vary by assignment, but on average represent less than 2% of total revenues. Revenue is earned when the Company's consultants are working on projects. Revenue recognition is negatively impacted by holidays and consultant vacation and sick days.

The Company recognizes revenue on fixed price contracts as services are rendered and uses a cost-based input method to measure progress. Determining a measure of progress requires management to make judgments that affect the timing of recognizing revenue. Under the cost-based input method, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. The Company has determined that the cost-based input method provides a faithful depiction of the transfer of goods or services to the customer. Estimated losses are recognized immediately in the period in which current estimates indicate a loss. We record deferred revenues when cash payments are received or due in advance of our performance, including amounts which may be refundable.

In certain situations related to client direct hire assignments, where the Company's fee is contingent upon the hired resources' continued employment with the client, revenue is not fully recognized until such employment conditions are satisfied.

Accounts Receivable and Allowance for Uncollectible Accounts

The Company extends credit to clients based upon management's assessment of their creditworthiness. A substantial portion of the Company's revenue, and the resulting accounts receivable, are from Fortune 1000 companies, major systems integrators and other staffing organizations. The Company does not generally charge interest on delinquent accounts receivable.

Unbilled receivables represent amounts recognized as revenues based on services performed and, in accordance with the terms of the client contract, will be invoiced in a subsequent period.

Accounts receivable are reviewed periodically to determine the probability of loss. The Company records an allowance for uncollectible accounts when it is probable that the related receivable balance will not be collected based on historical collection experience, client-specific collection issues, and other matters the Company identifies in its collection monitoring.

Goodwill and Intangible Assets

Identifiable intangible assets are recorded at fair value as of the closing date when acquired in a business combination. Identifiable intangible assets related to our Hudson IT and InfoTrellis acquisitions consisted of client relationships, covenants not-to-compete, trade names and, in the case of the InfoTrellis acquisition, technology; all of which are being amortized using the straight-line method over their estimated useful lives ranging from three years to twelve years, as more fully described in Note 3 "Business Combinations" to the Notes to the Consolidated Financial Statements.

Excess purchase price over the fair value of net tangible assets and identifiable intangible assets acquired are recorded as goodwill. Goodwill is not amortized but is tested for impairment at least on an annual basis. If impairment is indicated, a write-down to fair value is recorded based on the excess of the carrying value of the asset over its fair market value.

We review goodwill and intangible assets for impairment annually as of October 1st or more frequently if events or changes in circumstances indicate that the carrying value of the assets may not be recoverable. The impairment test is performed at the reporting unit (business segment) level. Determination of recoverability is based on the lowest level of identifiable estimated future discounted cash flows resulting from use of the assets and their eventual disposition. Measurement of any impairment loss is based on the excess carrying value of the assets over their fair market value.

In conducting our annual impairment testing, we have the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not (more than 50%) that the estimated fair value of a reporting unit is less than its carrying amount. If not, no further goodwill impairment testing is required. If it is more likely than not that a reporting unit's fair value is less than its carrying amount, we are then required to perform a quantitative impairment test. We also may elect not to perform the qualitative assessment, and instead, proceed directly to the quantitative impairment test.

In 2019 and 2018, we performed a quantitative impairment test related to our June 2015 acquisition of Hudson IT. The results of this testing indicated no impairment associated with the carrying amount of goodwill and intangible assets.

Additionally in 2019 and 2018, we performed quantitative impairment tests related to our July 2017 acquisition of InfoTrellis. The results of the 2019 testing indicated no impairment associated with the carrying amount of goodwill and intangible assets in 2019. The results of the 2018 testing indicated an impairment associated with the carrying amount of goodwill in 2018, and a goodwill impairment charge of $9.7 million as recorded in 2018 and is reflected in selling, general and administrative expenses in the Company's Consolidated Statements of Operations, in Item 8, herein.

Leases

The Company adopted ASU No. 2016-02, "Leases (Topic 842)" on January 1, 2019 using the additional transition method noted in ASU 2018-11. The adoption of the new standard resulted in the Company recording a lease right-of-use asset and related lease liability of $5.7 million as of January 1, 2019. The cumulative effect of initially applying the new guidance had an immaterial impact on the opening balance of our retained earnings. The Company does not expect the guidance to have a material impact on its consolidated net earnings in future periods. We elected the package of practical expedients permitted under the transition guidance within the new standard, which allowed us to carry-forward the historical lease classification, among other things.

Business Combinations

The Company accounts for acquisitions in accordance with guidance found in ASC 805, *Business Combinations* ("ASC 805"). This guidance requires consideration given (including contingent consideration), assets acquired and liabilities assumed to be valued at their fair market values at the acquisition date. The guidance further provides that: (1) in-process research and development will be recorded at fair value as an indefinite-lived intangible asset; (2) acquisition-related transaction costs will generally be expensed as incurred; (3) restructuring costs associated with a business combination will generally be expensed subsequent to the acquisition date; and (4) changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date generally will effect income tax expense.

ASC 805 requires that any excess purchase price over fair value of assets acquired (including identifiable intangibles) and liabilities assumed be recognized as goodwill. Additionally, any excess fair value of acquired net assets over acquisition consideration results in a bargain purchase gain. Prior to recording a gain, the acquiring entity must reassess whether all acquired assets and assumed liabilities have been identified and must perform re-measurements to verify that the consideration paid, assets acquired and liabilities assumed have all been properly valued.

The InfoTrellis financial results are included in the Company's Consolidated Financial Statements from the date of the acquisition of July 13, 2017. The Hudson IT financial results are included in the Company's Consolidated Financial Statements from the date of the acquisition of June 15, 2015.

Stock-Based Compensation

Effective October 1, 2008, the Company adopted a Stock Incentive Plan (the "Plan") which, as amended, provides that up to 3,900,000 shares (adjusted for the 2018 two-for-one stock split) of the Company's common stock shall be allocated for issuance to directors, executive management and key personnel. Grants under the Plan can be made in the form of stock options, stock appreciation rights, performance shares or stock awards. The Plan is administered by the Compensation Committee of the Board of Directors. Stock options are granted at an exercise price equal to the closing share price of the Company's common stock at the grant date and generally vest over a three to five-year period.

In October 2018, the Board of Directors of the Company approved the Mastech Digital, Inc. 2019 Employee Stock Purchase Plan (the "Stock Purchase Plan"). The Stock Purchase Plan is intended to meet the requirements of Section 423 of the Code and required the approval of the Company's shareholders to be qualified under Section 423 of the Code. On May 15, 2019, the Company's shareholders approved the Stock Purchase Plan. Under the Stock Purchase Plan, 600,000 shares of Common Stock (subject to adjustment upon certain changes in the Company's capitalization) are available for purchase by eligible employees who become participants in the Stock Purchase Plan. The purchase price per share is 85% of the lesser of (1) the fair market value per share of Common Stock on the first day of the offering period, or (ii) the fair market value per share of Common Stock on the last day of the offering period.

The Company accounts for stock-based compensation expense in accordance with ASC Topic 718 "*Share-based Payments*" which requires us to measure all share-based payments based on their estimated fair value and recognize compensation expense over the requisite service period. The fair value of our stock options and shares issued under the Company's Stock Purchase Plan is determined at the date of grant using the Black-Scholes option pricing model.

Income Taxes

The Company records an estimated liability for income and other taxes based on what management determines will likely be paid in the various tax jurisdictions in which we operate. Management uses its best judgment in the determination of these amounts. However, the liabilities ultimately realized and paid are dependent on various matters, including the resolution of the tax audits in the various affected tax jurisdictions, and may differ from the amounts recorded. An adjustment to the estimated liability would be recorded through income in the period in which it becomes probable that the amount of the actual liability differs from the amount recorded.

Management determines the Company's income tax provision using the asset and liability method. Under this method, deferred income taxes are provided for the temporary differences between the financial reporting basis and the tax basis of the Company's assets and liabilities. The Company measures deferred tax assets and liabilities using enacted tax rates in effect for the year in which we expect to recover or settle the temporary differences. The effect of a change in tax rates on deferred taxes is recognized in the period that the change is enacted. The Company evaluates its deferred tax assets and records a valuation allowance when, in management's opinion, it is more likely than not that some portion or all of the deferred tax assets will not be realized. For the periods presented, no valuation allowance has been provided.

In 2017, the Company incurred an estimated one-time charge of $372,000 related to the enactment of the Tax Cuts and Jobs Act of 2017 ("TCJA"). This charge is related to the re-measurement of the Company's deferred tax assets arising from a lower U.S. corporate tax rate of $294,000 and a $78,000 charge related to a one-time transition tax applicable to the new dividend exemption system related to foreign earnings. In 2018, the Company finalized this estimate and recorded an additional expense of $86,000 related to the re-measurement of the Company's deferred tax assets and a $165,000 charge related to a one-time transition tax applicable to the new dividend exemption system related to foreign earnings. No transition tax charges were incurred in 2019.

The TCJA also created a new requirement that certain income earned by foreign subsidiaries, known as global intangible low-tax income ("GILTI"), must be included in the gross income of their U.S. shareholder. The FASB allows an accounting policy election of either recognizing deferred taxes for temporary differences expected to reverse as GILTI in future years or recognizing such taxes as a current-period expense when incurred. We have elected to treat the tax effect of GILTI as a current-period expense as incurred.

The Company accounts for uncertain tax positions in accordance with ASC Topic 740-10, "*Accounting for Uncertainty in Income Taxes*". Accordingly, the Company has reported a liability for unrecognized tax benefits resulting from uncertain tax positions taken, or expected to be taken, in a tax return. As of December 31, 2019 and 2018, the Company provided $20,000 and $263,000 for uncertain tax positions, including interest and penalties, related to various federal and state income tax matters.

The Company's 2015 federal income tax return is under audit by the Internal Revenue Service ("IRS"). In fourth quarter 2019, the Company and the IRS agreed to certain adjustments related to the Company's 2015 and 2016 income tax returns. The impact of this settlement on the Company's tax provision in 2019 was not material.

Contingent Consideration Liability

In connection with the InfoTrellis acquisition, the Company had an obligation to pay consideration that was contingent upon the achievement of specified earnings before interest and taxes objectives ("EBIT"). As of the acquisition date, the Company recorded a contingent consideration liability representing the estimated fair value of the contingent consideration that was expected to be paid. The fair value of the contingent consideration liability was estimated by utilizing a probability weighted simulation model to determine the fair value of contingent consideration. We re-measured this liability and recorded changes in the fair value when it was more likely than not that the future payments based on EBIT estimates had changed. Increases or decreases in the fair value of contingent consideration resulted from changes in timing and amounts of revenue and earnings estimates.

In 2019 and 2018, the Company revalued the contingent consideration liability after determining that relevant conditions for payment of such liability were not satisfied. The revaluation resulted in a $6.1 million and $11.1 million reduction to the contingent consideration liability in 2019 and 2018, respectively, which is reflected in selling, general and administrative expenses in the Company's Consolidated Statements of Operations, in Item 8, herein. No contingent consideration liability remains outstanding as of December 31, 2019.

Derivative Instruments and Hedging Activities—Interest Rate Swap Contracts

Concurrent with the Company's borrowings on July 13, 2017 under its new credit facility, the Company entered into an interest-rate swap to convert the debt's variable interest rate to a fixed rate of interest. These swap contracts have been designated as a cash flow hedging instrument and qualified as effective hedges at inception under ASC Topic 815 "Derivatives and Hedging". These contracts are recognized on the balance sheet at fair value. The effective portion of the changes in fair value on these contracts is recorded in other comprehensive income (loss) and is reclassified into the Consolidated Statements of Operations as interest expense in the same period in which the underlying transaction affects earnings.

With respect to derivatives designated as hedges, the Company formally documents all relationships between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking such transactions. The Company evaluates hedge effectiveness at the time a contract is entered into and on an ongoing basis. If a swap contract is deemed ineffective, the change in the fair value of the derivative is recorded in the Consolidated Statement of Operations as interest expense.

Foreign Currency Translation

The reporting currency of the Company and its subsidiaries is the U.S. dollar. The functional currency of the Company's Indian subsidiaries is their local currency. The results of operations of the Company's Indian subsidiaries are translated at the monthly average exchange rates prevailing during the period. The financial position of the Company's Indian subsidiaries is translated at the current exchange rates at the end of the period, and the related translation adjustments are recorded as a component of accumulated other comprehensive income (loss) within Shareholders' Equity. Gains and losses resulting from foreign currency transactions are included as a component of other income (expense), net in the Consolidated Statements of Operations, and have not been material for all periods presented.

Recently Issued Accounting Standards

Recent accounting pronouncements are described in Note 1 to the Consolidated Financial Statements contained in Item 8, herein.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Cash and cash equivalents are defined as cash and highly liquid investments with maturities of three months or less when purchased. Cash equivalents are stated at cost, which approximates market value. Our cash flows and earnings are subject to fluctuations due to exchange rate variations. Foreign currency risk exists by nature of our global recruitment and delivery centers. In 2012 through 2015, we attempted to limit our exposure to currency exchange fluctuations in the Indian rupee via the purchase of foreign currency forward contracts. The Company elected not to engage in currency hedging activities for 2016 through 2019 given management's assessment of the likelihood of a material appreciation in the Indian rupee against the U.S. dollar.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial statements and supplementary data required by this item are filed as part of this Annual Report on Form 10-K. See Index to Consolidated Financial Statements on page 41 of this Annual Report on Form 10-K.

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The accompanying Consolidated Financial Statements of Mastech Digital, Inc. and subsidiaries have been prepared by management, which is responsible for their integrity and objectivity. The statements have been prepared in conformity with accounting principles generally accepted in the United States of America and necessarily include amounts based on management's best estimates and judgments.

The Company's Consolidated Financial Statements for the year ended December 31, 2019 have been audited by UHY LLP, an Independent Registered Public Accounting Firm, whose report thereon appears on page 42 of this Annual Report on Form 10-K.

The Board of Directors pursues its responsibility for the Company's financial reporting and accounting practices through its Audit Committee, all of the members of which are independent directors. The Audit Committee's duties include recommending to the Board of Directors the Independent Registered Public Accounting Firm to audit the Company's financial statements, reviewing the scope and results of the independent accountants' activities and reporting the results of the committee's activities to the Board of Directors. The Independent Registered Public Accounting Firm has met with the Audit Committee in the presence of management representatives to discuss the results of their audit work. Additionally, the Independent Registered Public Accounting Firm has direct access to the Audit Committee.

Vivek Gupta
President and Chief Executive Officer

John J. Cronin, Jr.
Chief Financial Officer

MASTECH DIGITAL, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

UHY LLP
Certified Public Accountants

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of
Mastech Digital, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Mastech Digital, Inc. and Subsidiaries (the "Company") as of December 31, 2019 and 2018, and the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes and Schedule II, Valuation and Qualifying Accounts listed in the index at item 15(a)(2) (collectively referred to as the "consolidated financial statements"). In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Mastech Digital, Inc. and Subsidiaries at December 31, 2019 and 2018, and the consolidated results of their operations and their 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.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("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 consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ UHY LLP

We have served as the Company's auditor since 2008.

Farmington Hills, Michigan
March 30, 2020

MASTECH DIGITAL, INC.

CONSOLIDATED BALANCE SHEETS
(Amounts in thousands, except share and per share data)

	At December 31, 2019	At December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 2,981	$ 1,294
Accounts receivable, net of allowance for uncollectible accounts of $338 in 2019 and $408 in 2018	22,345	28,913
Unbilled receivables	10,007	9,167
Prepaid and other current assets	1,597	1,321
Total current assets	36,930	40,695
Equipment, enterprise software, and leasehold improvements, at cost:		
Equipment	1,871	1,538
Enterprise software	2,728	2,096
Leasehold improvements	496	464
	5,095	4,098
Less – accumulated depreciation and amortization	(2,619)	(1,890)
Net equipment, enterprise software, and leasehold improvements	2,476	2,208
Operating lease right-of-use assets	4,617	—
Deferred income taxes	—	297
Non-current deposits	405	540
Goodwill, net of impairment	26,106	26,106
Intangible assets, net	20,050	22,738
Total assets	$90,584	$92,584
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	$ 4,575	$ 4,575
Accounts payable	4,027	4,127
Accrued payroll and related costs	7,902	7,728
Current portion of operating lease liability	1,396	—
Other accrued liabilities	954	1,218
Deferred revenue	237	258
Total current liabilities	19,091	17,906
Long-term liabilities:		
Long-term debt, less current portion, net	20,682	34,129
Contingent consideration liability	—	6,069
Long-term operating lease liability, less current portion	3,321	—
Long-term accrued income taxes	185	204
Long-term deferred income taxes	1,025	—
Total liabilities	44,304	58,308
Commitments and contingent liabilities (Note 8)		
Shareholders' equity:		
Preferred Stock, no par value; 20,000,000 shares authorized; none outstanding	—	—
Common Stock, par value $.01; 250,000,000 shares authorized and 12,700,660 shares issued as of December 31, 2019 and 12,636,332 shares issued as of December 31, 2018	127	126
Additional paid-in-capital	21,939	20,829
Retained earnings	28,759	17,614
Accumulated other comprehensive income (loss)	(358)	(119)
Treasury stock, at cost; 1,646,420 shares as of December 31, 2019 and 1,643,846 shares as of December 31, 2018	(4,187)	(4,174)
Total shareholders' equity	46,280	34,276
Total liabilities and shareholders' equity	$90,584	$92,584

The accompanying notes are an integral part of these Consolidated Financial Statements.

MASTECH DIGITAL, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
(Amounts in thousands, except per share data)

	Years Ended December 31,		
	2019	2018	2017
Revenues	$193,574	$177,164	$147,882
Cost of revenues	145,593	134,636	116,253
Gross profit	47,981	42,528	31,629
Selling, general and administrative expenses:			
Operating expenses	37,063	32,221	27,548
Impairment of goodwill	—	9,738	—
Revaluation of contingent consideration liability	(6,069)	(11,056)	—
Total selling, general and administrative expenses	30,994	30,903	27,548
Income from operations	16,987	11,625	4,081
Interest income (expense), net	(1,779)	(2,171)	(1,131)
Other income (expense), net	11	(40)	(2)
Income before income taxes	15,219	9,414	2,948
Income tax expense	4,074	2,723	1,322
Net income	$ 11,145	$ 6,691	$ 1,626
Earnings Per Share:			
Basic	$ 1.01	$ .61	$ .16
Diluted	$ .99	$ .60	$ .16
Weighted average common shares outstanding:			
Basic	11,029	10,950	9,924
Diluted	11,232	11,161	9,998

The accompanying notes are an integral part of these Consolidated Financial Statements.

MASTECH DIGITAL, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Amounts in thousands)

	Years Ended December 31, 2019	2018	2017
Net income	$11,145	$6,691	$1,626
Other comprehensive income (loss):			
Net unrealized gain (loss) on interest rate swap contracts	(149)	96	21
Foreign currency translation adjustments	(129)	(207)	10
Total pretax net unrealized gain (loss)	(278)	(111)	31
Income tax expense (benefit)	(39)	25	7
Total other comprehensive income (loss), net of taxes	$ (239)	$ (136)	$ 24
Total comprehensive income	$10,906	$6,555	$1,650

The accompanying notes are an integral part of these Consolidated Financial Statements

MASTECH DIGITAL, INC.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(Amounts in thousands)

	Common Stock	Additional Paid-in Capital	Accumulated Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (loss)	Total Shareholders' Equity
Balances, December 31, 2016	$106	$13,810	$ 9,297	$(4,134)	$ (7)	$19,072
Net income	—	—	1,626	—	—	1,626
Proceeds from issuance of common stock	18	5,982	—	—	—	6,000
Other comprehensive income, net of taxes	—	—	—	—	24	24
Stock-based compensation expense	—	381	—	—	—	381
Stock options exercised	2	68	—	—	—	70
Purchase of treasury stock	—	—	—	(20)	—	(20)
Balances, December 31, 2017	$126	$20,241	$10,923	$(4,154)	$ 17	$27,153
Net income	—	—	6,691	—	—	6,691
Other comprehensive (loss), net of taxes	—	—	—	—	(136)	(136)
Stock-based compensation expense	—	470	—	—	—	470
Stock options exercised	—	118	—	—	—	118
Purchase of treasury stock	—	—	—	(20)	—	(20)
Balances, December 31, 2018	$126	$20,829	$17,614	$(4,174)	$(119)	$34,276
Net income	—	—	11,145	—	—	11,145
Other comprehensive (loss), net of taxes	—	—	—	—	(239)	(239)
Stock-based compensation expense	—	936	—	—	—	936
Employee common stock purchases	1	167	—	—	—	168
Stock options exercised	—	7	—	—	—	7
Purchase of treasury stock	—	—	—	(13)	—	(13)
Balances, December 31, 2019	$127	$21,939	$28,759	$(4,187)	$(358)	$46,280

The accompanying notes are an integral part of these Consolidated Financial Statements.

MASTECH DIGITAL, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in thousands)

	Years Ended December 31,		
	2019	2018	2017
OPERATING ACTIVITIES:			
Net income	$ 11,145	$ 6,691	$ 1,626
Adjustments to reconcile net income to net cash provided by (used in) operating activities:			
Depreciation and amortization	3,434	3,182	1,942
Bad debt expense	80	10	10
Interest amortization of deferred financing costs	104	100	99
Stock-based compensation expense	936	470	381
Deferred income taxes, net	1,322	171	(234)
Impairment of goodwill	—	9,738	—
Revaluation of contingent consideration liability	(6,069)	(11,056)	—
Operating lease assets and liabilities, net	100	—	—
Loss on disposition of fixed assets	—	7	4
Long-term accrued income taxes	(19)	136	68
Working capital items:			
Accounts receivable and unbilled receivables	5,648	(7,428)	(3,322)
Prepaid and other current assets	(386)	283	(618)
Accounts payable	(100)	(901)	1,685
Accrued payroll and related costs	174	(1,241)	472
Other accrued liabilities	(264)	(461)	1,000
Deferred revenue	(21)	(172)	234
Net cash flows provided by (used in) operating activities	16,084	(471)	3,347
INVESTING ACTIVITIES:			
Acquisition of InfoTrellis, Inc. (net of cash acquired and issuance of contingent consideration)	—	—	(34,799)
Recovery of (payments for) non-current deposits	135	(285)	(8)
Capital expenditures	(1,014)	(771)	(1,127)
Net cash flows (used in) investing activities	(879)	(1,056)	(35,934)
FINANCING ACTIVITIES:			
Borrowing (repayments) on revolving credit facility, net	(3,976)	4,526	5,364
Borrowing on term loan facility	—	—	30,500
(Repayments) on term loan facility	(9,575)	(4,003)	(7,253)
Proceeds from the issuance of common stock	168	—	6,000
Payment of deferred financing costs	—	(71)	(435)
Purchase of treasury stock	(13)	(20)	(20)
Proceeds from the exercise of stock options	7	118	70
Net cash flows provided by (used in) financing activities	(13,389)	550	34,226
Effect of exchange rate changes on cash and cash equivalents	(129)	(207)	10
Net change in cash and cash equivalents	1,687	(1,184)	1,649
Cash and cash equivalents, beginning of period	1,294	2,478	829
Cash and cash equivalents, end of period	$ 2,981	$ 1,294	$ 2,478
SUPPLEMENTAL DISCLOSURE:			
Cash payments for interest expense	$ 1,780	$ 2,060	$ 925
Cash payments for income taxes	$ 2,634	$ 2,031	$ 1,506
NON-CASH TRANSACTIONS:			
Capital expenditures in accounts payable	$ —	$ —	$ 312

The accompanying notes are an integral part of these Consolidated Financial Statements.

MASTECH DIGITAL, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. **Summary of Significant Accounting Policies:**

Basis of Presentation

References in this Annual Report on Form 10-K to "we", "our", "Mastech Digital", "Mastech" or "the Company" refer collectively to Mastech Digital, Inc. and its wholly-owned operating subsidiaries, which are included in these Consolidated Financial Statements (the "Financial Statements").

Description of Business

We are a provider of Digital Transformation IT Services.

Our portfolio of offerings include data and analytics services; other digital transformation services such as Salesforce.com and Digital Learning services; and IT staffing services that span across digital and mainstream technologies.

Reflective of our 2017 acquisition of the services division of Canada-based InfoTrellis, Inc., we have added specialized capabilities in delivering data and analytics services to our customers globally. This business offers project-based consulting services in the areas of Data Management, Data Engineering and Data Science, with such services delivered using on-site and offshore resources.

Our IT staffing business combines technical expertise with business process experience to deliver a broad range of staffing services in digital and mainstream technologies. Our digital technologies include data management, analytics, cloud, mobility, social and artificial intelligence. We work with businesses and institutions with significant IT spending and recurring staffing service needs. We also support smaller organizations with their "project focused" temporary IT staffing requirements.

Accounting Principles

The Company's Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP").

Principles of Consolidation

The Consolidated Financial Statements include the accounts of the Company and its wholly-owned subsidiaries. All material intercompany transactions and balances have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the periods presented. Actual results could differ from these estimates.

Cash and Cash Equivalents

Cash and cash equivalents are defined as cash and highly liquid debt investments with maturities of three months or less when purchased. Cash equivalents are stated at cost, which approximates market value.

Accounts Receivable and Unbilled Receivables

The Company extends credit to clients based upon management's assessment of their creditworthiness. A substantial portion of the Company's revenue, and the resulting accounts receivable, are from Fortune 1000 companies, major systems integrators and other staffing organizations. The Company does not generally charge interest on delinquent accounts receivable.

Unbilled receivables represent amounts recognized as revenues based on services performed and, in accordance with the terms of the client contract, will be invoiced in a subsequent period.

See Note 2 "Revenue from Contracts with Customers" for further details.

Allowance for Uncollectible Accounts

Accounts receivable are reviewed periodically to determine the probability of loss. The Company records an allowance for uncollectible accounts when it is probable that the related receivable balance will not be collected based on historical collection experience, client-specific collection issues, and other matters the Company identifies in its collection monitoring.

The Allowance for Uncollectible Accounts was $338,000 and $408,000 at December 31, 2019 and 2018, respectively. There were $80,000, $10,000 and $10,000 of bad debt expense charges for the years ended December 31, 2019, 2018 and 2017, respectively, which amounts are reflected in the Consolidated Statements of Operations.

Equipment, Enterprise Software and Leasehold Improvements

Equipment, enterprise software and leasehold improvements are stated at historical cost. The Company provides for depreciation using the straight-line method over the estimated useful lives of the assets. Leasehold improvements are amortized over the shorter of (a) the remaining term of the lease or (b) the estimated useful life of the improvements. Repairs and maintenance, which do not extend the useful life of the respective assets, are charged to expense as incurred. Upon disposal, assets and related accumulated depreciation are removed from the Company's accounts and the resulting gains or losses are reflected in the Company's Consolidated Statement of Operations.

The estimated useful lives of depreciable assets are primarily as follows:

Laptop Computers	18 months
Equipment	3-5 years
Enterprise Software	3-5 years

The Company capitalizes certain external and internal computer software and software development costs incurred during the application development stage. The application development stage generally includes software design and configuration, coding, testing and installation activities. Capitalized costs include only external direct cost of material and services consumed in developing or obtaining internal-use software, and payroll and payroll-related costs for employees who are directly associated with and devote time to the internal-use software project. Capitalization of such costs ceases no later than the point at which the project is substantially complete and ready for its intended use. Training and maintenance costs are expensed as incurred, while upgrades and enhancements are capitalized if it is probable that such expenditures will result in additional functionality.

The Company implemented new enterprise software applications to its backbone systems environment. The Company has capitalized $0.6 million and $1.8 million, respectively, related to this endeavor for which the core system was placed in service on July 1, 2018. The Company started amortizing these costs commencing with this go-live implementation date.

Depreciation and amortization expense related to fixed assets totaled $746,000 $455,000 and $232,000 for the years ended December 31, 2019, 2018 and 2017, respectively.

Goodwill and Intangible Assets

Identifiable intangible assets are recorded at fair value as of the closing date when acquired in a business combination. Identifiable intangible assets related to our Hudson IT and InfoTrellis acquisitions consisted of client relationships, covenants not-to-compete, trade names and in the case of the InfoTrellis acquisition, technology, which are being amortized using the straight-line method over their estimated useful lives ranging from three years to twelve years, as more fully described in Note 3 “Business Combinations” to the Notes to the Consolidated Financial Statements.

Excess purchase price over the fair value of net tangible assets and identifiable intangible assets acquired are recorded as goodwill. Goodwill is not amortized but is tested for impairment at least on an annual basis. If impairment is indicated, a write-down to fair value is recorded based on the excess of the carrying value of the asset over its fair market value.

We review goodwill and intangible assets for impairment annually as of October 1st or more frequently if events or changes in circumstances indicate that the carrying value of the assets may not be recoverable. The impairment test is performed at the reporting unit (business segment) level. Determination of recoverability is based on the lowest level of identifiable estimated future discounted cash flows resulting from use of the assets and their eventual disposition. Measurement of any impairment loss is based on the excess carrying value of the assets over their fair market value.

In conducting our annual impairment testing, we have the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not (more than 50%) that the estimated fair value of a reporting unit is less than its carrying amount. If not, no further goodwill impairment testing is required. If it is more likely than not that a reporting unit’s fair value is less than its carrying amount, we are then required to perform a quantitative impairment test. We also may elect not to perform the qualitative assessment, and instead, proceed directly to the quantitative impairment test.

In 2019 and 2018, we performed quantitative impairment tests related to our June 2015 acquisition of Hudson Global Resources Management, Inc.’s U.S. IT staffing business (“Hudson IT”). The results of each of these testings indicated no impairment associated with the carrying amount of goodwill.

Additionally in 2019 and 2018, we performed quantitative impairment tests related to our July 2017 acquisition of InfoTrellis. The results of the 2019 testing indicated no impairment associated with the carrying amount of goodwill. The results of the 2018 testing indicated an impairment associated with the carrying amount of goodwill in 2018, and a goodwill impairment charge of $9.7 million was recorded in 2018 and is reflected in selling, general and administrative expenses in the Company’s Consolidated Statements of Operations in Item 8, herein.

Business Combinations

The Company accounts for acquisitions in accordance with guidance found in ASC 805, *Business Combinations* (“ASC 805”). This guidance requires consideration given (including contingent consideration), assets acquired and liabilities assumed to be valued at their fair market values at the acquisition date. The guidance further provides that: (1) in-process research and development will be recorded at fair value as an indefinite-lived intangible asset; (2) acquisition-related transaction costs will generally be expensed as incurred; (3) restructuring costs associated with a business combination will generally be expensed subsequent to the acquisition date; and (4) changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date generally will effect income tax expense.

ASC 805 requires that any excess purchase price over fair value of assets acquired (including identifiable intangibles) and liabilities assumed be recognized as goodwill. Additionally, any excess fair value of acquired net assets over acquisition consideration results in a bargain purchase gain. Prior to recording a gain, the acquiring entity must reassess whether all acquired assets and assumed liabilities have been identified and must perform re-measurements to verify that the consideration paid, assets acquired and liabilities assumed have all been properly valued.

The InfoTrellis financial results are included in the Company's Consolidated Financial Statements from the date of the acquisition of July 13, 2017.

Leases

The Company adopted ASU No. 2016-02, "Leases (Topic 842)" on January 1, 2019 using the additional transition method noted in ASU 2018-11. The adoption of the new standard resulted in the Company recording a lease right-of-use asset and related lease liability of $5.7 million as of January 1, 2019. The cumulative effect of initially applying the new guidance had an immaterial impact on the opening balance of retained earnings. The Company does not expect the guidance to have a material impact on its consolidated net earnings in future periods. We elected the package of practical expedients permitted under the transition guidance within the new standard, which allowed us to carry-forward the historical lease classification, among other things.

Income Taxes

The Company records an estimated liability for income and other taxes based on what management determines will likely be paid in the various tax jurisdictions in which we operate. Management uses its best judgment in the determination of these amounts. However, the liabilities ultimately realized and paid are dependent on various matters, including the resolution of the tax audits in the various affected tax jurisdictions, and may differ from the amounts recorded. An adjustment to the estimated liability would be recorded through income in the period in which it becomes probable that the amount of the actual liability differs from the amount recorded.

Management determines the Company's income tax provision using the asset and liability method. Under this method, deferred income taxes are provided for the temporary differences between the financial reporting basis and the tax basis of the Company's assets and liabilities. The Company measures deferred tax assets and liabilities using enacted tax rates in effect for the year in which we expect to recover or settle the temporary differences. The effect of a change in tax rates on deferred taxes is recognized in the period that the change is enacted. The Company evaluates its deferred tax assets and records a valuation allowance when, in management's opinion, it is more likely than not that some portion or all of the deferred tax assets will not be realized. For the periods presented, no valuation allowance has been provided.

In 2017, the Company incurred an estimated one-time charge of $372,000 related to the enactment of the Tax Cuts and Jobs Act of 2017 ("TCJA"). This charge is related to the re-measurement of the Company's deferred tax assets arising from a lower U.S. corporate tax rate of $294,000 and a $78,000 charge related to a one-time transition tax applicable to the new dividend exemption system related to foreign earnings. In 2018, the Company finalized this estimate, thus recording an additional expense of $86,000 related to the re-measurement of the Company's deferred tax assets and a $165,000 charge related to a one-time transition tax applicable to the new dividend exemption system related to foreign earnings. No transition tax charges were incurred in 2019.

The TCJA also created a new requirement that certain income earned by foreign subsidiaries, known as global intangible low-tax income ("GILTI"), must be included in the gross income of their U.S. shareholder. The FASB allows an accounting policy election of either recognizing deferred taxes for temporary differences expected to reverse as GILTI in future years or recognizing such taxes as a current-period expense when incurred. We have elected to treat the tax effect of GILTI as a current-period expense as incurred.

The Company accounts for uncertain tax positions in accordance with ASC Topic 740-10, "*Accounting for Uncertainty in Income Taxes*". Accordingly, the Company has reported a liability for unrecognized tax benefits resulting from uncertain tax positions taken, or expected to be taken, in a tax return. As of December 31, 2019 and 2018, the Company provided $20,000 and $263,000 for uncertain tax positions, including interest and penalties, related to various federal and state income tax matters.

The Company's 2015 federal income tax return was under audit by the Internal Revenue Service ("IRS"). In the fourth quarter 2019, the Company and the IRS agreed to certain adjustments related to the Company's 2015 and 2016 income tax returns. The impact of this settlement on the Company's tax provision in 2019 was not material.

Deferred Financing Costs

The Company capitalizes expenses directly related to securing its credit facilities. These deferred costs are amortized as interest expense over the term of the underlying facilities. Unamortized deferred financing costs are included as reductions in the long-term debt caption in the Consolidated Balance Sheets.

Contingent Consideration Liability

In connection with the InfoTrellis acquisition, the Company had an obligation to pay consideration that was contingent upon the achievement of specified earnings before interest and taxes objectives ("EBIT"). As of the acquisition date, the Company recorded a contingent consideration liability representing the estimated fair value of the contingent consideration that was expected to be paid. The fair value of the contingent consideration liability was estimated by utilizing a probability weighted simulation model to determine the fair value of contingent consideration. We re-measured this liability and recorded changes in the fair value when it was more likely than not that the future payments based on EBIT estimates had changed. Increases or decreases in the fair value of contingent consideration can result from changes in timing and amounts of revenue and earnings estimates.

In 2019 and 2018, the Company revalued the contingent consideration liability after determining that relevant conditions for payment of such liability were not satisfied. The revaluation resulted in a $6.1 million and $11.1 million reduction to the contingent consideration liability in 2019 and 2018, respectively, which is reflected in selling, general and administrative expenses in the Company's Consolidated Statements of Operations, in Item 8, herein. No contingent consideration liability remains outstanding as of December 31, 2019.

Segment Reporting

Subsequent to the July 13, 2017 InfoTrellis acquisition, the Company has two reportable segments, in accordance with ASC Topic 280 "Disclosures About Segments of an Enterprise and Related Information": Data and Analytics Services (which segment represents the acquired InfoTrellis business); and IT Staffing Services.

Revenue Recognition

The Company recognizes revenue on time-and-material contracts over time as services are performed and expenses are incurred. Time-and-material contracts typically bill at an agreed upon hourly rate, plus out-of-pocket expense reimbursement. Out-of-pocket expense reimbursement amounts vary by assignment, but on average represent less than 2% of total revenues. Revenue is earned when the Company's consultants are working on projects. Revenue recognition is negatively impacted by holidays and consultant vacation and sick days.

The Company recognizes revenue on fixed price contracts over time as services are rendered and uses a cost-based input method to measure progress. Determining a measure of progress requires management to make judgments that affect the timing of recognizing revenue. Under the cost-based input method, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. The Company has determined that the cost-based input method provides a faithful depiction of the transfer of goods or services to the customer. Estimated losses are recognized immediately in the period in which current estimates indicate a loss. We record deferred revenues when cash payments are received or due in advance of our performance, including amounts which may be refundable.

In certain situations related to client direct hire assignments, where the Company's fee is contingent upon the hired resources' continued employment with the client, revenue is not fully recognized until such employment conditions are satisfied.

Stock-Based Compensation

Effective October 1, 2008, the Company adopted a Stock Incentive Plan (the "Plan") which, as amended, provides that up to 3,900,000 shares (adjusted for the 2018 two-for-one stock split) of the Company's common stock shall be allocated for issuance to directors, executive management and key personnel. Grants under the Plan can be made in the form of stock options, stock appreciation rights, performance shares or stock awards. The Plan is administered by the Compensation Committee of the Board of Directors. Stock options are granted at an exercise price equal to the closing share price of the Company's common stock at the grant date and generally vest over a three to five-year period.

In October 2018, the Board of Directors of the Company approved the Mastech Digital, Inc. 2019 Employee Stock Purchase Plan (the "Stock Purchase Plan"). The Stock Purchase Plan is intended to meet the requirements of Section 423 of the Code and required the approval of the Company's shareholders to be qualified under Section 423 of the Code. On May 15, 2019, the Company's shareholders approved the Stock Purchase Plan. Under the Stock Purchase Plan, 600,000 shares of Common Stock (subject to adjustment upon certain changes in the Company's capitalization) are available for purchase by eligible employees who become participants in the Stock Purchase Plan. The purchase price per share is 85% of the lesser of (1) the fair market value per share of Common Stock on the first day of the offering period, or (ii) the fair market value per share of Common Stock on the last day of the offering period.

The Company accounts for stock-based compensation expense in accordance with ASC Topic 718 "*Share-based Payments*" which requires us to measure all share-based payments based on their estimated fair value and recognize compensation expense over the requisite service period. The fair value of our stock options and shares issued under the Company's Stock Purchase Plan is determined at the date of grant using the Black-Scholes option pricing model.

Treasury Stock

The Company maintained a stock repurchase program which expired on December 22, 2016. Under the program, the Company made treasury stock purchases in the open market, subject to market conditions and normal trading restrictions. Upon expiration, the program was not extended by the Company's Board of Directors. Additionally, the Company makes stock purchases from time to time to satisfy employee tax obligations related to its Stock Incentive Plan. At December 31, 2019 and 2018, the Company held 1.6 million shares in its treasury at a cost of approximately $4.2 million.

Comprehensive Income

Comprehensive income as presented in the Consolidated Statements of Comprehensive Income consists of net income, unrealized gains or losses, net of tax, on cash flow hedging transactions and foreign currency translation adjustments.

Derivative Instruments and Hedging Activities – Interest Rate Swap Contracts

Concurrent with the Company's borrowings on July 13, 2017 under its new credit facility, the Company entered into an interest-rate swap to convert the debt's variable interest rate to a fixed rate of interest. These swap contracts have been designated as cash flow hedging instruments and qualified as effective hedges at inception under ASC Topic 815, "Derivatives and Hedging". These contracts are recognized on the balance sheet at fair value. The effective portion of the changes in fair value on these contracts is recorded in other comprehensive income (loss) and is reclassified into the Consolidated Statements of Operations as interest expense in the same period in which the underlying transaction affects earnings.

With respect to derivatives designated as hedges, the Company formally documents all relationships between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking such transactions. The Company evaluates hedge effectiveness at the time a contract is entered into and on an ongoing basis. If a swap contract is deemed ineffective, the change in the fair value of the derivative is recorded in the Consolidated Statement of Operations as interest expense.

Foreign Currency Translation

The reporting currency of the Company and its subsidiaries is the U.S. dollar. The functional currency of the Company's Indian subsidiaries is their local currency. The results of operations of the Company's Indian subsidiaries are translated at the monthly average exchange rates prevailing during the period. The financial position of the Company's Indian subsidiaries is translated at the current exchange rates at the end of the period, and the related translation adjustments are recorded as a component of accumulated other comprehensive income (loss) within Shareholders' Equity. Gains and losses resulting from foreign currency transactions are included as a component of other income (expense), net in the Consolidated Statements of Operations, and have not been material for all periods presented.

Earnings Per Share

Basic earnings per share are computed using the weighted-average number of common shares outstanding during the period. Diluted earnings per share are computed using the weighted-average number of common shares outstanding during the period, plus the incremental shares outstanding assuming the exercise of dilutive stock options and the vesting of restricted shares and performance shares, calculated using the treasury stock method.

Recently Issued Accounting Standards

Recently Adopted Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board ("FASB") issued ASU No. 2016-02, "Leases (Topic 842)". The main difference between the current requirement under GAAP and ASU 2016-02 is the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases. ASU 2016-02 requires that a lessee recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term (other than leases that meet the definition of a short-term lease). In July 2018, the FASB issued ASU 2018-10, "Codification Improvements to Topic 842, Leases" and ASU 2018-11, "Leases (Topic 842): Targeted Improvements". The amendments in these ASUs clarify narrow aspects of the guidance issued in ASU No. 2016-02 "Leases (Topic 842)" and provide an additional transition method to adopt the new leases standard. The new transition method allows an entity to recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. In December 2018, the FASB issued ASU 2018-20, "Narrow-Scope Improvements for Lessors". The amendments in this ASU clarify how lessors account for sales tax, certain lessor costs and variable payments. In March 2019, the FASB issued ASU No. 2019-01, "Leases (Topic 842) Codification Improvements". The amendments in this ASU clarify fair value determinations by certain lessors, provide guidance on statement of cash flow disclosure for certain leases, and provide an exception to prior period comparative disclosure requirements for transition reporting. These ASUs are effective for annual and interim periods beginning after December 15, 2018 and 2019 with early adoption permitted. The Company adopted the new Lease guidance on January 1, 2019 using the additional transition method noted in ASU 2018-11. The adoption of the new standard resulted in the Company recording a lease asset and related lease liability of $5.7 million as of January 1, 2019. The cumulative effect of initially applying the new guidance had an immaterial impact on the opening balance of retained earnings. The Company does not expect the guidance to have a material impact on its consolidated net earnings in future periods. Additional disclosures have been included in Note 4 in accordance with the requirements of the new guidance.

In August 2017, the FASB issued ASU 2017-12, "Derivatives and Hedging (Topic 815); Targeted Improvements to Accounting for Hedging Activities". The amendments in this ASU better align an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. To meet that objective, the amendments expand and refine hedge accounting for both nonfinancial and financial risk components and align the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. 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". This ASU permits the use of the OIS Rate based on SOFR as a U.S. benchmark interest rate for hedge accounting purposes. The amendments in these ASUs are effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. We adopted this ASU on January 1, 2019 with no material impact on our consolidated financial statements.

In February 2018, the FASB issued ASU 2018-02, "Income Statement—Reporting Comprehensive Income (Topic 220); Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income". The amendments in this ASU allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act of 2017. Consequently, the amendments eliminate the stranded tax effects resulting from this Act and will improve the usefulness of information reported to financial statement users. The amendments in this ASU are effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company adopted this ASU on January 1, 2019 with no material impact on its consolidated financial statements.

In June 2018, the FASB issued ASU 2018-07, "Compensation — Stock Compensation (Topic 718); Improvements to Nonemployee Share-Based Payment Accounting". The amendments in this ASU improve the accounting of nonemployee share-based payments issued to acquire goods and services used in an entity's operations. Nonemployee share-based payment awards within the scope of Topic 718 are measured at the grant-date fair value of the equity instruments that an entity is obligated to issue when the good has been delivered or the service has been rendered. The amendments in this ASU are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We adopted this ASU on January 1, 2019 with no material impact on our consolidated financial statements.

In July 2018, the FASB issued ASU 2018-09, "Codification Improvements". The amendments in this ASU represent changes to clarify, correct errors in, or make minor improvements to the Codification. Topics covered include comprehensive income, investments, debt, stock compensation, income taxes, business combinations and fair value measurement. Some of the amendments in this ASU are effective immediately, however many are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company adopted this ASU on January 1, 2019 with no material impact on its consolidated financial statements.

Recent Accounting Pronouncements not yet adopted

In January 2017, the FASB issued ASU 2017-04, "Intangibles—Goodwill and Other (Topic 350): Simplifying the Accounting for Goodwill Impairment", which removes the requirement to perform a hypothetical purchase price allocation to measure goodwill impairment. Under this ASU, a goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. ASU 2017-04 is effective for annual and interim periods beginning January 1, 2020, with early adoption permitted, and applied prospectively. We do not expect ASU 2017-04 to have a material impact on our financial statements.

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement". The amendments in this ASU modify the disclosure requirements on fair value measurements in Topic 820, Fair Value Measurement. The amendments in this ASU are effective for annual and interim periods beginning after December 15, 2019. Early adoption is permitted. The Company does not expect this ASU to have a material impact on its financial statements.

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 (a consensus of the FASB Emerging Issues Task Force)". The amendments in this ASU align 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 amendments in this ASU are effective for annual and interim periods beginning after December 15, 2019. Early adoption is permitted. The Company does not expect this ASU to have a material impact on its financial statements.

In April 2019, the FASB issued ASU 2019-04, "Codification Improvements to Topic 326, Financial Instruments—Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments". The amendments in this ASU clarify a variety of topics previously covered in Update 2016-13 "Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments", Update 2017-12 "Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities", and Update 2016-01 "Financial Instruments—Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities". The amendments in this ASU are effective for annual and interim periods beginning after December 15, 2019. Early adoption is permitted. The Company does not expect this ASU to have a material impact on its financial statements.

In December 2019, the FASB issued ASU 2019-12, "Income Taxes (Topic 740)". The amendments in this ASU simplify the accounting for income taxes by removing certain exceptions to the general principles in Topic 740 and by clarifying and amending other areas of Topic 740. The amendments in this ASU are effective for annual and interim periods beginning after December 15, 2020. Early adoption is permitted. The Company does not expect this ASU to have a material impact on its financial statements.

A variety of proposed or otherwise potential accounting standards are currently under consideration by standard-setting organizations and certain regulatory agencies. Because of the tentative and preliminary nature of such proposed standards, management has not yet determined the effect, if any that the implementation of such proposed standards would have on the Company's consolidated financial statements.

2. Revenue from Contracts with Customers

As of January 1, 2018, the Company adopted ASU 2014-09, "Revenue from Contracts with Customers," using the modified retrospective method. The core principle of this standard is that a company should recognize revenue to depict the transfer of promised services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those services. The implementation of this standard had no impact on the measurement of recognition of revenue of prior periods and we expect the impact of this new standard to be immaterial to us on an ongoing basis. Additional disclosures have been added in accordance with the ASU.

The Company recognizes revenue on time-and-material contracts over time as services are performed and expenses are incurred. Time-and-material contracts typically bill at an agreed-upon hourly rate, plus out-of-pocket expense reimbursement. Out-of-pocket expense reimbursement amounts vary by assignment, but on average represent less than 2% of total revenues. Revenue is earned on a per transaction or labor hour basis, as that amount directly corresponds to the value of the Company's performance. Revenue recognition is negatively impacted by holidays and consultant vacation and sick days.

In certain situations related to client direct hire assignments, where the Company's fee is contingent upon the hired resources continued employment with the client, revenue is not fully recognized until such employment conditions are satisfied.

The Company recognizes revenue on fixed price contracts over time as services are rendered and uses a cost-based input method to measure progress. Determining a measure of progress requires management to make judgments that affect the timing of revenue recognized. Under the cost-based input method, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. The Company has determined that the cost-based input method provides a faithful depiction of the transfer of goods or services to the customer. Estimated losses are recognized immediately in the period in which current estimates indicate a loss. We record deferred revenues when cash payments are received or due in advance of our performance, including amounts which may be refundable.

We do not sell, lease or otherwise market computer software or hardware, and essentially 100% of our revenue is derived from the sale of data and analytics, IT staffing and digital transformation services. We expense sales commissions in the same period in which revenues are realized. These costs are recorded within selling, general and administrative expenses.

Our data and analytics services segment provides specialized capabilities in delivering data management and analytics services to customers globally. This business offers project-based consulting services in the areas of Master Data Management, Enterprise Data Integration, Big Data, Analytics and Digital Transformation, which can be delivered using onsite and offshore resources.

Our IT staffing business combines technical expertise with business process experience to deliver a broad range of services in digital and mainstream technologies. Our digital technology stack includes data management and analytics, cloud, mobility, social and automation. Our mainstream technologies include business intelligence / data warehousing; web services; enterprise resource planning & customer resource management; and e-Business solutions. We work with businesses and institutions with significant IT-spend and recurring staffing needs. We also support smaller organizations with their "project focused" temporary IT staffing requirements.

The following table depicts the disaggregation of our revenues by contract type and operating segment:

	Years Ended December 31,		
	2019	2018	2017
	(Amounts in thousands)		
Data and Analytics Services Segment			
Time-and-material Contracts	$ 18,732	$ 18,919	$ 7,755
Fixed-price Contracts	7,931	4,884	1,430
Subtotal Data and Analytics Services	**$ 26,663**	**$ 23,803**	**$ 9,185**
IT Staffing Services Segment			
Time-and-material Contracts	$166,911	$153,361	$138,594
Fixed-price Contracts	—	—	103
Subtotal IT Staffing Services	**$166,911**	**$153,361**	**$138,697**
Total Revenues	**$193,574**	**$177,164**	**$147,882**

The Company had one client that exceeded 10% of total revenues in 2019 and 2018 (CGI = 11.3% and 12.8%, respectively). The Company had two clients that exceeded 10% of total revenues in 2017 (CGI=12.6% and Accenture PLC=10.7%). Additionally, CGI accounted for 10.3% and 17.9% of the Company's accounts receivable balance at December 31, 2019 and 2018, respectively.

The Company's top ten clients represented approximately 45%, 47% and 47% of total revenues in 2019, 2018 and 2017, respectively.

The following table presents our revenue from external customers disaggregated by geography, based on the work location of our customers:

	Years Ended December 31,		
	2019	2018	2017
	(Amounts in thousands)		
United States	$188,710	$172,610	$145,513
Canada	2,918	3,125	1,729
India and Other	1,946	1,429	640
Total	**$193,574**	**$177,164**	**$147,882**

3. Business Combinations

On July 7, 2017, Mastech Digital, Inc., through its wholly-owned subsidiaries Mastech InfoTrellis, Inc., Mastech InfoTrellis Digital, Ltd., Mastech Digital Data, Inc. and Mastech Digital Private Limited (collectively, the "Company Entities"), entered into two Asset Purchase Agreements and a Share Purchase Agreement (collectively, the "Purchase Agreements") to acquire substantially all of the assets comprising the consulting services business in the areas of master data management, data integration and big data (the "Acquired Business") of InfoTrellis Inc., InfoTrellis, Inc. and 2291496 Ontario Inc., including all outstanding shares of InfoTrellis India Private Limited (collectively, "InfoTrellis"). The aforementioned transaction was closed on July 13, 2017.

Under the terms of the Purchase Agreements, the Company Entities paid at the closing of the acquisition $35.75 million in cash, less certain working capital adjustments which totaled $861,000. The Purchase Agreements also provided for contingent consideration of $19.25 million in deferred cash payments, with up to $8.25 million payable if the EBIT of the Acquired Business for the 12-month period beginning on August 1, 2017 (the "Actual Year 1 EBIT") equals $10.0 million and up to $11.0 million payable if the EBIT of the

Acquired Business for the 12-month period beginning on August 1, 2018 (the "Actual Year 2 EBIT") equals $10.7 million. The deferred amount payments were subject to adjustments under the terms of the Purchase Agreements based upon, among other items, the amount of the Actual Year 1 EBIT and the amount of the Actual Year 2 EBIT.

To fund the acquisition, the Company entered into a new credit agreement on July 13, 2017 with PNC Bank, National Association, as administrative agent, swing loan lender and issuing lender, PNC Capital Markets LLC, as sole lead arranger and sole book runner, and certain financial institutions party thereto as lenders. The Credit Agreement provides for a total aggregate commitment of $65.0 million, consisting of (i) a revolving credit facility in an aggregate principal amount not to exceed $27.5 million, subject to increases to an aggregate amount not to exceed $37.5 million upon satisfaction of certain conditions; (ii) a $30.5 million term loan facility; and (iii) a $7.0 million delayed draw term loan facility to be used exclusively toward contingent consideration payments. In addition, the Company entered into Securities Purchase Agreements with Ashok Trivedi and Sunil Wadhwani (collectively, the "Investors") on July 7, 2017 pursuant to which the Company issued and sold an aggregate 1.7 million shares (the "Shares") of its common stock, par value $0.01 per share (the "Common Stock"), to the Investors on July 13, 2017 for $6.0 million in aggregate gross proceeds (the "Private Placement Transactions"). The Company used the proceeds from the Private Placement Transactions to fund a portion of the cash paid at the closing of the acquisition.

On April 20, 2018, we entered into an amendment to the Credit Agreement. This amendment: (i) reduced the aggregate commitment amount of the revolving credit facility from $27.5 million to $22.5 million, which amount is subject to increase to an aggregate commitment amount not exceeding $32.5 million upon satisfaction of certain conditions; (ii) increased the aggregate commitment amount of the swing loan sub-facility under the revolving credit facility from $3.0 million to $5.0 million; and (iii) amended the financial covenant in the Credit Agreement related to the Company's leverage ratio (as defined in the Credit Agreement) by increasing the maximum permitted leverage ratio for each of the fiscal quarters ending on or prior to September 30, 2019. Our desired results of entering into this amendment were to increase our financial flexibility; lower our unused line fees and improve the mechanics of how we manage our cash balances.

The acquisition was accounted for using the acquisition method of accounting. The acquisition method of accounting requires that the assets acquired and liabilities assumed be measured at their fair value as of the closing date.

The following table summarizes the fair value of consideration for the Acquired Business on the July 13, 2017 closing date:

(in thousands)	Amounts
Cash purchase price at closing	$35,750
Working capital adjustments	(861)
Estimated payout of contingent consideration (1)	17,125
Total Fair Value of Consideration	$52,014

(1) Based on a valuation conducted by an independent third party, the fair value of contingent consideration at the closing date was determined to be $17,125,000.

The cash purchase price at closing was paid with funds obtained from the following sources:

(in thousands)	Amounts
Cash balances on hand	$ 341
Sale of common stock in a private placement transactions	6,000
Term loan debt facility	30,500
Revolving line of credit	9,000
Payoff of Mastech Digital's previous credit facility	(10,091)
Cash paid at Closing	$ 35,750

The allocation of the purchase price was based on estimates of the fair value of assets acquired and liabilities assumed as of July 13, 2017, as set forth below. The excess purchase price over the fair values of the net tangible assets and identifiable intangible assets was recorded as goodwill, which includes value associated with the assembled workforce. Goodwill is expected to be largely deductible for tax purposes. The valuation of net assets acquired is as follows:

(in thousands)	Amounts
Current Assets	**$ 6,909**
Fixed Assets and Other	**215**
Identifiable intangible assets:	
Client relationships	16,671
Covenant not-to-compete	761
Trade name	1,221
Technology	1,209
Total identifiable intangible assets	**19,862**
Goodwill	**27,417**
Current liabilities	**(2,389)**
Net Assets Acquired	**$52,014**

The fair value of identifiable intangible assets has been estimated using the income approach through a discounted cash flow analysis. Specifically, the Company used the income approach through an excess earnings analysis to determine the fair value of client relationships. The value applied to the covenant not-to-compete was based on an income approach using a "with or without" analysis of this covenant in place. The trade name and technology were valued using the income approach—relief from royalty method. All identifiable intangibles are considered level 3 inputs under the fair value measurement and disclosure guidance.

The Company incurred $2.0 million of transaction expenses related to the acquisition in 2017. In 2018 and 2019, the Company reversed transaction expenses of $140,000 and $110,000, respectively that did not materialize. This credit expense related to investment banker fees that were tied to the contingent consideration liability. These expenses are included in selling, general and administrative expenses in the accompanying Consolidated Statement of Operations.

Included in the Consolidated Statement of Operations for year ended December 31, 2017 are revenues of $9.2 million and net income of approximately $1.1 million applicable to the InfoTrellis operations from our July 13, 2017 acquisition date through December 31, 2017.

The following reflects the Company's unaudited pro forma results had the results of InfoTrellis been included from January 1, 2017 for all periods presented:

	Years Ended December 31,		
	2019	2018	2017
	(Amounts in thousands, except per share data)		
Revenue	$193,574	$177,164	$158,785
Net income	$ 11,145	$ 6,691	$ 2,388
Earnings per share—diluted	$ .99	$ .60	$ .22

The information above does not reflect all of the operating efficiencies or inefficiencies that may have resulted from the InfoTrellis acquisitions in those periods prior to the acquisition. Therefore, the unaudited pro forma information above is not necessarily indicative of results that would have been achieved had the business been combined during all periods presented.

4. Goodwill and Other Intangible Assets, net

Goodwill related to our June 15, 2015 acquisition of Hudson IT totaled $8.4 million. Goodwill related to our July 13, 2017 acquisition of the services division of InfoTrellis totaled $27.4 million. During 2018, the Company recorded a goodwill impairment related to the InfoTrellis acquisition of $9.7 million. The impairment was attributable to a lower recovery in revenues from levels present at closing. Based upon the business performance subsequent to the acquisition date, we reduced our near-term outlook and lowered our revenue projections from original expectations. Also, we factored into our current assessment of discounted cash flows, additional investments to the sales organization and other necessary investments which were not initially considered.

A reconciliation of the beginning and ending amounts of goodwill by operating segment for the three years ended December 31, 2019 is as follows:

	Years Ended December 31,		
	2019	2018	2017
	(Amounts in thousands)		
IT Staffing Services:			
Beginning balance	$ 8,427	$ 8,427	$ 8,427
Goodwill recorded	—	—	—
Impairment	—	—	—
Ending balance	$ 8,427	$ 8,427	$ 8,427

	Years Ended December 31,		
	2019	2018	2017
	(Amounts in thousands)		
Data and Analytics:			
Beginning balance	$17,679	$27,417	$ —
Goodwill recorded	—	—	27,417
Impairment	—	(9,738)	—
Ending balance	$17,679	$17,679	$27,417

The Company is amortizing the identifiable intangible assets on a straight-line basis over estimated average lives ranging from 3 to 12 years. Identifiable intangible assets were comprised of the following as of December 31, 2019 and 2018:

	As of December 31, 2019			
(Amounts in thousands)	Amortization Period (In Years)	Gross Carrying Value	Accumulative Amortization	Net Carrying Value
IT Staffing Services:				
Client relationships	12	$ 7,999	$3,027	$ 4,972
Covenant-not-to-compete	5	319	290	29
Trade name	3	249	249	—
Data and Analytics Services:				
Client relationships	12	16,671	3,415	13,256
Covenant-not-to-compete	5	761	374	387
Trade name	5	1,221	600	621
Technology	7	1,209	424	785
Total Intangible Assets		**$28,429**	**$8,379**	**$20,050**

	As of December 31, 2018			
(Amounts in thousands)	Amortization Period (In Years)	Gross Carrying Value	Accumulative Amortization	Net Carrying Value
IT Staffing Services:				
Client relationships	12	$ 7,999	$2,361	$ 5,638
Covenant-not-to-compete	5	319	226	93
Trade name	3	249	249	—
Data and Analytics Services:				
Client relationships	12	16,671	2,025	14,646
Covenant-not-to-compete	5	761	222	539
Trade name	5	1,221	356	865
Technology	7	1,209	252	957
Total Intangible Assets		**$28,429**	**$5,691**	**$22,738**

Amortization expense for the years ended December 31, 2019, 2018 and 2017 totaled $2.7 million, $2.7 million and $1.7 million, respectively and is included in selling, general and administrative expenses in the Consolidated Statement of Operations.

The estimated aggregate amortization expense for intangible assets for the years ending December 31, 2020 through 2024 is as follows:

	Years Ended December 31,				
	2020	2021	2022	2023	2024
	(Amounts in thousands)				
Amortization expense	$2,654	$2,625	$2,443	$2,229	$2,149

5. Cash and Cash Equivalents

The Company had cash and cash equivalents consisting of cash balances on hand and money market funds that totaled $3.0 million at December 31, 2019 and $1.3 million at December 31, 2018. There were no restrictions on the Company's cash balances during the periods presented.

6. Credit Facility

On July 13, 2017, the Company entered into a Credit Agreement (the "Credit Agreement") with PNC Bank, as administrative agent, swing loan lender and issuing lender, PNC Capital Markets LLC, as sole lead arranger and sole book-runner, and certain financial institution parties thereto as lenders (the "Lenders"). The Credit Agreement provides for a total aggregate commitment of $60 million, consisting of (i) a revolving credit facility (the "Revolver") in an aggregate principal amount not to exceed $22.5 million (subject to increase by up to an additional $10 million upon satisfaction of certain conditions); (ii) a $30.5 million term loan facility (the "Term Loan"); and a (iii) $7.0 million delayed draw term loan facility (the "Delayed Draw Term Loan"), as more fully described in Exhibit 10.1 to the Company's Forms 8-K, filed with the SEC on July 19, 2017 and April 25, 2018.

The Revolver expires in July 2022 and includes swing loan and letter of credit sub-limits in the aggregate amount not to exceed $5.0 million for swing loans and $5.0 million for letters of credit. Borrowings under the Revolver may be denominated in U.S. dollars or Canadian dollars. The maximum borrowings in U.S. dollars may not exceed the sum of 85% of eligible U.S. accounts receivable and 60% of eligible U.S. unbilled receivables, less a reserve amount established by the administrative agent. The maximum borrowings in Canadian dollars may not exceed the lesser of (i) $10.0 million; and (ii) the sum of 85% of eligible Canadian receivables, plus 60% of eligible Canadian unbilled receivables, less a reserve amount established by the administrative agent.

Amounts borrowed under the Term Loan are required to be repaid in consecutive quarterly installments through and including July 1, 2022 and on the maturity date of July 13, 2022. The principal amount of each quarterly installment payable on the Term Loan equals the product of $30.5 million, multiplied by (i) 3.75% for quarterly installments payable through and including July 1, 2021; and (ii) 5.00% for quarterly installments payable on October 1, 2021 through and including the maturity date, with the maturity date payment equal to the outstanding amount of the loan on that date. The Delayed Draw Term Loan was not accessed and was cancelled effective July 2019.

Borrowings under the revolver and the term loan, at the Company's election, bear interest at either (a) the higher of PNC's prime rate or the federal funds rate plus 0.50%, plus an applicable margin determined based upon the Company's senior leverage ratio or (b) an adjusted London Interbank Offered Rate ("LIBOR"), plus an applicable margin determined based upon the Company's senior leverage ratio. The applicable margin on the base rate is between 0.50% and 1.25% on revolver borrowings and between 1.75% and 2.50% on term loans. The applicable margin on the adjusted LIBOR is between 1.50% and 2.25% on revolver borrowings and between 2.75% and 3.50% on term loans. A 20 to 30 basis point per annum commitment fee on the unused portion of the revolver facility is charged and due monthly in arrears. The applicable commitment fee is determined based upon the Company's senior leverage ratio.

The Company pledged substantially all of its assets in support of the Credit Agreement. The credit agreement contains standard financial covenants, including, but not limited to, covenants related to the Company's senior leverage ratio and fixed charge ratio (as defined under the credit agreement) and limitations on liens, indebtedness, guarantees, contingent liabilities, loans and investments, distributions, leases, asset sales, stock repurchases and mergers and acquisitions. As of December 31, 2019, the Company was in compliance with all provisions under the facility.

In connection with securing the commitments under the Credit Agreement and the April 20, 2018 amendment to the Credit Agreement, the Company paid a commitment fee and incurred deferred financing costs totaling $506,000, which were capitalized and are being amortized as interest expense over the life of the facility. Deferred financing costs of $263,000 and $367,000 (net of amortization) as of December 31, 2019 and December 31, 2018, respectively, are presented as reductions in long-term debt in the Company's Consolidated Balance Sheets.

As of December 31, 2019 and 2018, the Company's outstanding borrowings under the Revolver totaled $9.5 million and $13.6 million, respectively; and unused borrowing capacity available was approximately

$13.0 million and $9.0 million, respectively. The Company's outstanding borrowings under the term loan were $16.0 million and $25.5 million at December 31, 2019 and 2018, respectively. In the fourth quarter of 2019, the Company early paid $5.0 million of the term loan with a corresponding increase to the Revolver as the term loan accrues interest at a higher rate than the Revolver. The Company may make another early payment on the term loan of approximately $4.0 million in the first quarter of 2020. The Company believes the eligible borrowing base on the revolver will not fall below current outstanding borrowings for a period of time exceeding one year and has classified the $9.5 million net outstanding debt balance at December 31, 2019 as long-term.

As of December 31, 2019, the annual aggregate maturities of our outstanding debt (exclusive of deferred financing costs amortization) during each of the next five years are as follows:

	Total Amount
	(Amounts in thousands)
2020	$ 4,575
2021	4,956
2022	15,989
2023	—
2024	—
Total	$25,520

7. Leases

The Company rents certain office facilities and equipment under noncancelable operating leases. Approximately 88,000 square feet of office space is utilized for the Company's sales and recruiting offices, delivery centers, and corporate headquarters as of December 31, 2019. All of our leases are classified as operating leases. The average initial lease term is approximately five years. Several leases have an option to renew, at our sole discretion, for an additional term. Our present lease terms range from less than one year to 4.7 years with an average of two years. Leases with an initial term of twelve months or less are not recorded on the balance sheet.

The Company adopted ASU No. 2016-02, "Leases (Topic 842)" on January 1, 2019 using the additional transition method noted in ASU 2018-11. The adoption of the new standard resulted in the Company recording a lease right-of-use asset and related lease liability of $5.7 million as of January 1, 2019. The cumulative effect of initially applying the new guidance had an immaterial impact on the opening balance of our retained earnings. The Company does not expect the guidance to have a material impact on its consolidated net earnings in future periods. The Company elected the package of practical expedients permitted under the transition guidance within the new standard, which allowed us to carry-forward the historical lease classification, among other things.

The following table summarizes the balance sheet classification of the lease asset and related lease liability:

	December 31, 2019
	(in thousands)
Assets:	
Long-term operating lease right-of-use assets	$4,617
Liabilities:	
Short-term operating lease liability	$1,396
Long-term operating lease liability	3,321
Total Liabilities\	$4,717

Future minimum rental payments for office facilities and equipment under the Company's noncancelable operating leases are as follows:

	Amount as of December 31, 2019
	(in thousands)
2020	$1,615
2021	1,144
2022	1,118
2023	1,098
2024	288
Thereafter	—
Total	$5,263
Less: Imputed interest	(546)
Present value of operating lease liabilities	$4,717

The weighted average discount rate used to calculate the present value of future lease payments was 5.4%.

We recognize rent expense for these leases on a straight-line basis over the lease term. Rental expense for the years ended December 31, 2019, 2018 and 2017, totaled $1.6 million, $1.4 million and $1.2 million, respectively.

8. Commitment and Contingencies

In the ordinary course of business, the Company is involved in a number of lawsuits and administrative proceedings. While uncertainties are inherent in the final outcome of these matters, management believes, after consultation with legal counsel, that the disposition of these proceedings should not have a material adverse effect on our financial position, results of operations or cash flows.

9. Employee Benefit Plan

The Company provides an Employee Retirement Savings Plan (the "Retirement Plan") under Section 401(k) of the Internal Revenue Code of 1986, as amended (the "Code"), that covers substantially all U.S.-based salaried employees. Concurrent with the acquisition of Hudson IT, the Company expanded employee eligibility under the Retirement Plan to include all U.S. based W-2 hourly employees. Employees may contribute a percentage of eligible compensation to the Retirement Plan, subject to certain limits under the Code. For Hudson IT employees enrolled in the Hudson Employee Retirement Savings Plan at the acquisition date, the Company provides a matching contribution of 50% of the first 6% of the participant's contributed pay, subject to vesting based on their combined tenure with Hudson and Mastech. For all other employees, the Company did not provide for any matching contributions for the three years ended December 31, 2019. Mastech's total contributions to the Retirement Plan related to the qualified Hudson IT employees totaled $55,000, $79,000 and $89,000 for the three years ended December 31, 2019, 2018 and 2017, respectively. Effective January 2020, the Company eliminated the 401(k) match for Hudson IT employees.

10. Stock-Based Compensation

Effective October 1, 2008, the Company adopted a Stock Incentive Plan (the "Plan") which, as amended, provides that up to 3,900,000 shares (adjusted for the 2018 two-for-one stock split) of the Company's common stock shall be allocated for issuance to directors, executive management and key personnel. Grants under the Plan can be made in the form of stock options, stock appreciation rights, performance shares or stock awards. As of December 31, 2019, the Company had 3,180,000 outstanding and/or exercised stock options, 260,000 vested performance shares and 243,000 outstanding and/or released restricted stock units that were issued under the Plan. Thus, as of December 31, 2019, the Company has 217,000 shares available for future grants under the Plan.

The Plan is administered by the Compensation Committee of the Board of Directors. All grants awarded under the Plan are recommended by the Committee to the Board of Directors for approval. The exercise price of stock options is set on the grant date and is not to be less than the fair market value per share of our closing stock price on that date. Grants of stock options and restricted stock awards generally vest over a three to five-year period and options expire after ten years from the grant date. Performance shares vest upon the achievement of the performance criteria and approval by the Compensation Committee of the Board of Directors.

Following is a summary of the Company's stock option activity for the three years ended December 31, 2019:

	Number of Options	Weighted Average Exercise Price
Outstanding at December 31, 2016	890,000	$2.80
Granted	—	—
Exercised	(180,000)	0.43
Cancelled / forfeited	(36,000)	2.90
Outstanding at December 31, 2017	674,000	3.43
Granted	495,000	6.72
Exercised	(52,000)	2.08
Cancelled / forfeited	(6,000)	3.20
Outstanding at December 31, 2018	1,111,000	4.95
Granted	683,000	6.48
Exercised	(6,000)	1.18
Cancelled / forfeited	(67,000)	6.35
Outstanding at December 31, 2019	1,721,000	$5.52

As of December 31, 2019, the Company's outstanding "in the money" stock options using the year-end share price of $11.07 had an aggregate intrinsic value of $9.6 million. As of December 31, 2019, the intrinsic value of vested stock options totaled $3.0 million. The total intrinsic value of options exercised during 2019, 2018 and 2017 totaled $44,000, $373,000 and $522,000, respectively. The measurement date fair value of stock options vested during 2019, 2018 and 2017 totaled $529,000, $228,000 and $198,000, respectively.

The table below summarizes information regarding the Company's outstanding and exercisable stock options as of December 31, 2019:

Range of Exercise Prices:	Options Outstanding	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price
$2.01 to $4.00	610,000	6.2	$3.55
$4.01 to $6.00	130,000	9.6	5.65
$6.01 to $8.00	981,000	8.7	6.72
	1,721,000	7.9	**$5.52**

Range of Exercise Prices:	Options Exercisable	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price
$2.01 to $4.00	343,000	6.2	$3.58
$4.01 to $6.00	—	—	—
$6.01 to $8.00	92,000	8.3	6.75
	435,000	6.7	**$4.25**

Stock options of 683,000 units were issued during the year ended December 31, 2019 and vest over a five year period. Stock options of 495,000 units were issued during the year ended December 31, 2018 and vest over a five year period. No stock options were issued for the year ended December 31, 2017. The Company used the following average assumptions with respect to the Black-Scholes option pricing model for Mastech Digital stock options issued during 2019 and 2018.

	Years Ended December 31,		
	2019	2018	2017
Stock option grants:			
Weighted-average risk-free interest rate	2.4%	2.8%	—
Weighted-average dividend yield	0.0%	0.0%	—
Expected volatility	49.7%	50.6%	—
Expected term (in years)	5.0	5.0	—
Weighted-average fair value	$2.95	$3.15	$—

Risk-free interest rate – The risk-free rate for stock options granted during the period was determined by using a U.S. Treasury rate for the period that coincided with the expected term of the options.

Expected dividend yield – The Company did not contemplate a recurring dividend program. Accordingly, the dividend yield assumption used was 0.0%.

Expected volatility –Expected volatility was determined based on the historical volatility of Mastech Digital's common stock.

Expected term – Mastech Digital's expected term was based on the exercise history of our employees and the vesting term of our stock options.

Following is a summary of Mastech's restricted stock activity for the three years ended December 31, 2019:

	Years Ended December 31,		
	2019	2018	2017
Beginning outstanding balance	34,380	30,500	65,110
Awarded	16,365	25,380	—
Released	(17,460)	(21,500)	(34,610)
Forfeited	—	—	—
Ending outstanding balance	33,285	34,380	30,500

The aggregate intrinsic value of restricted stock units outstanding at December 31, 2019 was $368,000. The total intrinsic value of restricted shares released during 2019 totaled $111,000.

In October 2018, the Board of Directors of the Company approved the Mastech Digital, Inc. 2019 Employee Stock Purchase Plan (the "Stock Purchase Plan"). The Stock Purchase Plan is intended to meet the requirements of Section 423 of the Code and had to be approved by the Company's shareholders to be qualified. On May 15, 2019, the Company's shareholders approved the Stock Purchase Plan. Under the Stock Purchase Plan, 600,000 shares of Common Stock (subject to adjustment upon certain changes in the Company's capitalization) are available for purchase by eligible employees who become participants in the Stock Purchase Plan. The purchase price per share is 85% of the lesser of (i) the fair market value per share of Common Stock on the first day of the offering period, or (ii) the fair market value per share of Common Stock on the last day of the offering period.

During the year ended December 31, 2019, the Company issued 40,500 shares under the Stock Purchase Plan at an average share of $4.11. At December 31, 2019, there were 559,500 shares available for purchases under the Plan.

The Company's eligible full-time employees are able to contribute up to 15% of their base compensation into the employee stock purchase plan, subject to an annual limit of $25,000 per person. Employees are able to purchase Company common stock at a 15% discount to the lower of the fair market value of the Company's common stock on the initial or final trading dates of each six-month offering period. Offering periods begin on January 1 and July 1 of each year. The Company uses the Black-Scholes option pricing model to determine the fair value of employee stock purchase plan share-based payments. The fair value of the six-month "look-back" option in the Company's employee stock purchase plans is estimated by adding the fair value of $0.15 of one share of stock to the fair value of $0.85 of an option on one share of stock. The Company utilized U.S. Treasury yields as of the grant date for its risk-free interest rate assumption, matching the Treasury yield terms to the six-month offering period. The Company utilized historical company data to develop its dividend yield and expected volatility assumptions.

Stock-based compensation expense of $936,000, $470,000 and $381,000 was recognized in the Consolidated Statements of Operations for the years ended December 31, 2019, 2018, and 2017, respectively. The Company has recognized related tax benefits associated with its share-based compensation arrangements for the years ended December 31, 2019, 2018, and 2017 of $252,000, $128,000, and $141,000, respectively. As of December 31, 2019, the total remaining unrecognized compensation expense related to non-vested stock options totaled $3.0 million and the total remaining unrecognized compensation expense related to restricted stock units amounted to $133,000 which will be amortized over the weighted-average remaining requisite service period of 3.6 years.

11. Income Taxes

The components of income before income taxes as shown in the accompanying Consolidated Statement of Operations, consisted of the following for the years ended December 31, 2019, 2018 and 2017:

	Years Ended December 31,		
	2019	2018	2017
	(Amounts in thousands)		
Income before income taxes:			
Domestic	$ 6,787	$7,520	$1,875
Foreign	8,432	1,894	1,073
Income before income taxes	$15,219	$9,414	$2,948

The Company has foreign subsidiaries in Canada and India, both of which generate revenues from foreign clients. Additionally, the Company has foreign subsidiaries in Canada and India which provide services to its U.S. operations. Accordingly, the Company allocates a portion of its income to these subsidiaries based on a "transfer pricing" model and reports such income as foreign in the above table.

The provision for income taxes, as shown in the accompanying Consolidated Statement of Operations, consisted of the following for the years ended December 31, 2019, 2018 and 2017:

	Years Ended December 31,		
	2019	2018	2017
	(Amounts in thousands)		
Current provision:			
Federal	$1,555	$1,494	$1,101
State	406	273	159
Foreign	751	807	276
Total current provision	2,712	2,574	1,536
Deferred provision:			
Federal	(13)	317	(205)
State	(4)	96	(73)
Foreign	1,379	(264)	64
Total deferred provision	1,362	149	(214)
Total provision for income taxes	$4,074	$2,723	$1,322

The reconciliation of income taxes computed using our statutory U.S. income tax rate and the provision for income taxes for the years ended December 31, 2019, 2018 and 2017 were as follows:

	Years Ended December 31,					
(Amounts in thousands)	2019		2018		2017	
Income taxes computed at the federal statutory rate	$3,196	21.0%	$1,977	21.0%	$1,002	34.0%
State income taxes, net of federal tax benefit	404	2.7	387	4.1	116	3.9
Excess tax benefits from stock options/restricted shares	(9)	(0.1)	(93)	(1.0)	(140)	(4.7)
Estimated charge for U.S. tax reform	—	—	251	2.7	372	12.6
Charge for global intangible low-taxed income (“GILTI”)	69	0.5	—	—	—	—
Difference in tax rate on foreign earnings/other	414	2.7	201	2.1	(28)	(1.0)
	$4,074	26.8%	$2,723	28.9%	$1,322	44.8%

The components of the deferred tax assets and liabilities were as follows:

	At December 31,	
	2019	2018
	(Amounts in thousands)	
Deferred tax assets:		
Allowance for doubtful accounts	$ 88	$ 109
Accrued vacation and bonuses	315	228
Stock-based compensation expense	396	194
Acquisition-related transaction costs	414	507
Total deferred tax assets	1,213	1,038
Deferred tax liabilities:		
Prepaid expenses	221	186
Depreciation, intangibles and contingent consideration	2,017	555
Total deferred tax liabilities	2,238	741
Net deferred tax asset (liability)	$(1,025)	$ 297

A reconciliation of the beginning and ending amounts of unrecognized tax benefits related to uncertain tax positions, including interest and penalties, for the three years ended December 31, 2019 is as follows:

	Years Ended December 31,		
(Amounts in thousands)	**2019**	**2018**	**2017**
Unrecognized tax benefits, beginning balance	$ 263	$ 95	$128
Additions related to current period	—	208	—
Additions related to prior periods	—	—	—
Reductions related to prior periods	(243)	(40)	(33)
Unrecognized tax benefits, ending balance	$ 20	$263	$ 95

The Company recognizes accrued interest and penalties related to unrecognized tax benefits as income tax expense. As of December 31, 2019, 2018 and 2017, the Company had $5,000, $10,000 and $12,000, respectively, accrued for interest and penalties.

12. Derivative Instruments and Hedging Activities

Interest Rate Risk Management

Concurrent with the Company's July 13, 2017 borrowings under its new credit facility, the Company entered into a 44–month interest-rate swap to convert the debt's variable interest rate to a fixed rate of interest. Under the swap contracts, the Company pays interest at a fixed rate of 1.99% and receives interest at a variable rate equal to the daily U.S. LIBOR on an initial notional amount of $15.0 million. Notional amounts were $10.3 million and $12.6 million at December 31, 2019 and 2018, respectively. These swap contracts have been designated as cash flow hedging instruments and qualified as effective hedges at inception under ASC Topic 815, "Derivatives and Hedging". These contracts are recognized on the balance sheet at fair value. The effective portion of the changes in fair value on these instruments is recorded in other comprehensive income (loss) and is reclassified into the Consolidated Statements of Operations as interest expense in the same period in which the underlying hedge transaction affects earnings. Changes in the fair value of interest-rate swap contracts deemed ineffective are recognized in the Consolidated Statements of Operations as interest expense. Prior to July 13, 2017, the Company had outstanding interest-rate swap contracts related to term loan borrowings under the Company's previous credit agreement. The fair value of the interest-rate swap contracts at December 31, 2019 and 2018 was a liability of $43,000 and an asset of $106,000, respectively, and is reflected in the Consolidated Balance Sheets as other current liabilities in 2019 and other current assets in 2018.

The effect of derivative instruments on the Consolidated Statements of Operations and Comprehensive Income ("OCI") for the year ended December 31, 2019 (in thousands):

Derivatives in ASC Topic 815 Cash Flow Hedging Relationships	**Amount of Gain / (Loss) recognized in OCI on Derivatives**	**Location of Gain / (Loss) reclassified from Accumulated OCI to Income**	**Amount of Gain / (Loss) reclassified from Accumulated OCI to Income**	**Location of Gain / (Loss) reclassified in Income on Derivatives**	**Amount of Gain /(Loss) recognized in Income on Derivatives**
	(Effective Portion)	(Effective Portion)	(Effective Portion)	(Ineffective Portion/Amounts excluded from effectiveness testing)	
Interest-Rate Swap Contracts	$(149)	Interest Expense	$32	Interest Expense	$—

The effect of derivative instruments on the Consolidated Statements of Operations and Comprehensive Income ("OCI") for the year ended December 31, 2018 (in thousands):

Derivatives in ASC Topic 815 Cash Flow Hedging Relationships	Amount of Gain / (Loss) recognized in OCI on Derivatives	Location of Gain / (Loss) reclassified from Accumulated OCI to Income	Amount of Gain / (Loss) reclassified from Accumulated OCI to Income	Location of Gain / (Loss) reclassified in Income on Derivatives	Amount of Gain /(Loss) recognized in Income on Derivatives
	(Effective Portion)	(Effective Portion)	(Effective Portion)	(Ineffective Portion/Amounts excluded from effectiveness testing)	
Interest-Rate Swap Contracts	$96	Interest Expense	$(2)	Interest Expense	$—

Information on the location and amounts of derivative fair values in the Consolidated Balance Sheets (in thousands):

	December 31, 2019		December 31, 2018	
Derivative Instruments	**Balance Sheet Location**	**Fair Value**	**Balance Sheet Location**	**Fair Value**
Interest-Rate Swap Contracts	Other Current Liabilities	$43	Other Current Assets	$106

The estimated amount of pretax (loss) as of December 31, 2019 that is expected to be reclassified from other comprehensive income into earnings, within the next 12 months is approximately ($16,000).

13. Shareholders' Equity

On July 7, 2017 the Company entered into Securities Purchase Agreements with Ashok Trivedi and Sunil Wadhwani pursuant to which the Company agreed to sell to each the number of shares of Company common stock ("Common Stock") equal to $3.0 million divided by the greater of (i) $3.50 per share of Common Stock and (ii) the closing price of the Common Stock on the NYSE American on July 10, 2017, which was $3.18 per share. On July 13, 2017, the Closing Date of the Company's acquisition of InfoTrellis' services division, the Company issued and sold an aggregate of approximately 1.7 million shares of Common Stock to Ashok Trivedi and Sunil Wadhwani for $6.0 million in aggregate gross proceeds. The Company used the proceeds from the private placement to fund a portion of the closing date purchase price of the InfoTrellis acquisition.

The Company purchased 2,574 and 2,574 shares in 2019 and 2018 at an average price of $5.05 and $8.01, respectively to satisfy employee tax obligations related to its Stock Incentive Plan. These shares were not acquired pursuant to any publicly announced purchase program.

14. Earnings per Share

The computation of basic earnings per share ("EPS") is based on the Company's net income divided by the weighted average number of common shares outstanding. Diluted earnings per share reflects the potential dilution that could occur if outstanding stock options and restricted share units were exercised / released. The dilutive effect of stock options and restricted share units were calculated using the treasury stock method.

For the years ended December 31, 2019, 2018 and 2017, there were 518,000, 141,000 and nil anti-dilutive stock options that were excluded from the computation of diluted earnings per share, respectively.

The following table sets forth the denominators of the basic and diluted EPS computations.

(Amounts in thousands)	Years Ended December 31, 2019	2018	2017
Weighted-average shares outstanding:			
Basic	11,029	10,950	9,924
Stock options and restricted share units	203	211	74
Diluted	11,232	11,161	9,998

The following table sets forth the computation of basic EPS utilizing net income and the Company's weighted-average common stock outstanding:

(Amounts in thousands, except per share data)	Years Ended December 31, 2019	2018	2017
Net income	$11,145	$ 6,691	$1,626
Basic weighted-average shares outstanding	11,029	10,950	9,924
Basic EPS	$ 1.01	$ .61	$ .16

The following table sets forth the computation of diluted EPS utilizing net income and the Company's weighted-average common stock outstanding plus the weighted-average of stock options, restricted shares and performance shares:

(Amounts in thousands, except per share data)	Years Ended December 31, 2019	2018	2017
Net income	$11,145	$ 6,691	$1,626
Diluted weighted-average shares outstanding	11,232	11,161	9,998
Diluted EPS	$ .99	$ .60	$ .16

15. Other Comprehensive Income (Loss)

The changes in accumulated other comprehensive income (loss) for the years ended December 31, 2019, 2018 and 2017 were as follows:

(in thousands)	Foreign Currency Translation Adjustments	Derivative Financial Instruments Designated as Cash Flow Hedges	Total
Balance at December 31, 2016	**$ —**	**$ (7)**	**$ (7)**
Gain arising during the period	10	77	87
Reclassification to earnings for (loss) realized	—	(56)	(56)
Income tax (expense)	—	(7)	(7)
Net other comprehensive income – Year 2017	10	14	24
Balance at December 31, 2017	**$ 10**	**$ 7**	**$ 17**
Gain (loss) arising during the period	(207)	98	(109)
Reclassification to earnings for (loss) realized	—	(2)	(2)
Income tax (expense)	—	(25)	(25)
Net other comprehensive income (loss) – Year 2018	(207)	71	(136)
Balance at December 31, 2018	**$ (197)**	**$ 78**	**$ (119)**
(Loss) arising during the period	(129)	(181)	(310)
Reclassification to earnings for gains realized	—	32	32
Income tax benefit	—	39	39
Net other comprehensive (loss) – Year 2019	(129)	(110)	(239)
Balance at December 31, 2019	**$ (326)**	**$ (32)**	**$ (358)**

Generally, the assets and liabilities of foreign operations are translated into U.S. dollars using the current exchange rate. For those operations, changes in exchange rates generally do not affect cash flows; therefore, resulting translation adjustments are made in shareholders' equity rather than in net income.

See Note 12 for information regarding hedging activities.

16. Fair Value Measurements

The Company has adopted the provisions of ASC 820, "*Fair Value Measurements and Disclosures*" ("ASC 820"), related to certain financial and nonfinancial assets and liabilities. ASC 820 establishes the authoritative definition of fair value; sets out a framework for measuring fair value; and expands the required disclosures about fair value measurements. The valuation techniques required by ASC 820 are based on observable and unobservable inputs using the following three-tier hierarchy:

- Level 1 – Inputs are observable quoted prices (unadjusted) in active markets for identical assets and liabilities.
- Level 2 – Inputs are observable, other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are directly or indirectly observable in the marketplace.
- Level 3 – Inputs are unobservable that are supported by little or no market activity.

The following table summarizes the basis used to measure financial assets and (liabilities) at fair value on a recurring basis:

(Amounts in thousands)	Fair Value as of December 31, 2019			
	Level 1	Level 2	Level 3	Total
Interest-Rate Swap Contracts	$—	$ (43)	$ —	$ (43)
Contingent consideration liabilities	$—	$—	$ —	$ —

(Amounts in thousands)	Fair Value as of December 31, 2018			
	Level 1	Level 2	Level 3	Total
Interest-Rate Swap Contracts	$—	$106	$ —	$ 106
Contingent consideration liabilities	$—	$—	$(6,069)	$(6,069)

The fair value of interest rate swap contracts are based on quoted prices for similar instruments from a commercial bank, and therefore, the fair value measurement is considered to be within Level 2.

The fair value of the contingent consideration liability was estimated by utilizing a probability weighted simulation model to determine the fair value of contingent consideration, and therefore, the fair value measurement is considered to be within Level 3.

In 2019 and 2018, the Company revalued the contingent consideration liability after determining that relevant conditions for payment of such liability were not satisfied. The revaluation resulted in a $6.1 million and $11.1 million reduction to the contingent consideration liability in 2019 and 2018, respectively, which is reflected in selling and administrative expenses in the Company's Consolidated Statements of Operations, in Item 8 herein.

The following table provides information regarding changes in the Company's Level 3 fair values for the contingent consideration liability for the three years ended December 31, 2019:

	Years Ended December 31,		
	2019	2018	2017
	(Amounts in thousands)		
Beginning balance	$ 6,069	$ 17,125	$ —
Contingent consideration incurred	—	—	17,125
Payments made	—	—	—
Revaluation	(6,069)	(11,056)	—
Ending balance	$ —	$ 6,069	$17,125

At December 31, 2019 and December 31, 2018, the Company carried the following financial assets (liabilities) at fair value measured on a non-recurring basis (in thousands):

(Amounts in thousands)	Fair Value as of December 31, 2018			
	Level 1	Level 2	Level 3	Total
Goodwill	$—	$—	$26,106	$26,106

During the year ended December 31, 2018, the Company recorded a goodwill impairment related to the InfoTrellis acquisition of $9.7 million. No impairment was incurred in the year ended December 31, 2019.

17. (Unaudited) Quarterly Financial Information (Amounts in thousands, except per share data):

Year Ended December 31, 2019	Revenues	Gross Profit	Net Income	Earnings Per Share Basic	Earnings Per Share Diluted
First quarter	$ 45,199	$10,835	$ 964	$ .09	$.09
Second quarter	48,472	12,054	5,958	.54	.53
Third quarter	49,543	12,329	1,949	.18	.17
Fourth quarter	50,360	12,763	2,274	.21	.20
Annual	$193,574	$47,981	$11,145	$1.01	$.99

Year Ended December 31, 2018	Revenues	Gross Profit	Net Income	Earnings Per Share Basic	Earnings Per Share Diluted
First quarter	$ 43,333	$10,261	$1,380	$.13	$.12
Second quarter	44,894	10,892	2,817	.26	.25
Third quarter	44,292	10,710	1,620	.15	.14
Fourth quarter	44,645	10,665	874	.08	.08
Annual	$177,164	$42,528	$6,691	$.61	$.60

18. Business Segments and Geographic Information

Our reporting segments are: 1) Data and Analytics Services; and 2) IT Staffing Services.

The data and analytics services segment was acquired through the July 13, 2017 acquisition of the services division of Canada-based InfoTrellis, Inc. This segment is a project-based consulting services business with specialized capabilities in data management and analytics. The business is marketed as Mastech InfoTrellis and utilizes a dedicated sales team with deep subject matter expertise. Mastech InfoTrellis has offices in Atlanta, Georgia, Toronto, Canada and Austin, Texas and a global delivery center in Chennai, India. Project-based delivery reflects a combination of on-site resources and offshore resources. Assignments are secured on both a time and material and fixed price basis.

The IT staffing services segment offers staffing services in digital and mainstream technologies; and digital transformation services focused on providing CRM on the cloud through Salesforce.com and using digital methods to enhance organizational learning. These services are marketed using a common sales force and delivered via our domestic and global recruitment centers. While the vast majority of our assignments are based on time and materials, we do have the capabilities to deliver our digital transformation services on a fixed price basis.

Below are the operating results of our reporting segments:

	At December 31, 2019	2018	2017
	(Amounts in thousands)		
Revenues:			
Data and analytics services	$ 26,663	$ 23,803	$ 9,185
IT staffing services	166,911	153,361	138,697
Total revenues	$193,574	$177,164	$147,882
Gross Margin %:			
Data and analytics services	46.7%	44.0%	44.8%
IT staffing services	21.3%	20.9%	19.8%
Total gross margin %	24.8%	24.0%	21.4%
Segment operating income:			
Data and analytics services	$ 5,495	$ 5,710	$ 2,531
IT staffing services	8,001	7,184	5,279
Subtotal	13,496	12,894	7,810
Amortization of acquired intangible assets	(2,688)	(2,727)	(1,710)
Revaluation of contingent consideration liability	6,069	11,056	—
Goodwill impairment	—	(9,738)	—
Acquisition-related transaction expenses	110	140	(2,019)
Interest expenses and other, net	(1,768)	(2,211)	(1,133)
Income before income taxes	$ 15,219	$ 9,414	$ 2,948

Below is a reconciliation of total assets, depreciation and amortization and capital expenditures by segment:

	Total Assets			Depreciation & Amortization			Capital Expenditures		
Amounts in thousands	2019	2018	2017	2019	2018	2017	2019	2018	2017
Data and Analytics Services	$41,527	$43,182	$53,683	$2,078	$2,051	$ 925	$ 203	$175	$ 11
IT Staffing Services	49,057	49,402	44,921	1,356	1,131	1,017	811	596	1,428
Total	$90,584	$92,584	$98,604	$3,434	$3,182	$1,942	$1,014	$771	$1,439

Below is geographic information related to our revenues from external customers and fixed assets, net (equipment, enterprise software and leasehold improvements):

	Revenues			Equipment, Enterprise Software and Leasehold Improvements, net		
Amounts in thousands	2019	2018	2017	2019	2018	2017
United States	$188,710	$172,610	$145,513	$2,095	$1,956	$1,730
Canada	2,918	3,125	1,729	8	17	19
India and Other	1,946	1,429	640	373	235	150
Total	$193,574	$177,164	$147,882	$2,476	$2,208	$1,899

19. Subsequent Event

On March 11, 2020, the World Health Organization declared COVID-19 a pandemic. The extent of COVID-19's effect on the Company's operational and financial performance will depend on future developments, including the duration, spread and intensity of the pandemic, all of which are uncertain and difficult to predict considering the rapidly evolving landscape. As a result, it is not currently possible to ascertain the overall impact of COVID-19 on the Company's business. However, if the pandemic continues to evolve into a severe worldwide health crisis, the disease could have a material adverse effect on the Company's business, results of operations, financial condition and cash flows.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that the Company files or submits under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

As of the end of the period covered by this report, the Company carried out an evaluation, under the supervision and with the participation of Company management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures pursuant to Exchange Act Rules 13a-15(b) and 15d-15(b). Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective. The results of management's assessment were reviewed with the Company's Audit Committee.

The certifications required by Section 302 of the Sarbanes-Oxley Act of 2002 are filed as exhibits 31.1 and 31.2, respectively, to this Annual Report on Form 10-K.

Management's Report on Internal Controls Over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. The 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. Internal control over financial reporting includes the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for preparation of our financial statements; providing reasonable assurance that receipts and expenditures of Company assets are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use, or disposition of company assets that could have a material effect on our financial statements would be prevented or detected on a timely basis. 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 ineffective because of changes in conditions or that the degree of compliance with established policies or procedures may deteriorate.

The Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2019. In making its assessment of internal control over financial reporting, management used the criteria described in the *Internal Control-Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO-2013"). Based upon this assessment, management has concluded and hereby reports that the Company's internal control over financial reporting was effective as of December 31, 2019.

This Annual Report on Form 10-K does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's independent registered public accounting firm pursuant to rules of the SEC that permit the Company to provide only management's report in this Annual Report on Form 10-K.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information required by this Item, not set forth below, is incorporated herein by reference from the Company's definitive proxy statement relating to the Annual Meeting of Shareholders scheduled for May 13, 2020, which will be filed with the Commission within 120 days after the close of the Company's fiscal year ended December 31, 2019 (the "Proxy Statement") under the headings "Proposal No. 1 – Election of Directors", "Executive Officers", "Section 16(a) Beneficial Ownership Reporting Compliance" and "Board Committees and Meetings".

We have adopted a code of ethics applicable to all of our employees, including our principal executive officer, principal financial officer and principal accounting officer, titled Code of Conduct Policy. The Code of Conduct Policy is posted on the Company's website, *www.mastechdigital.com* (under the "Corporate Governance" caption of the Investor Relations page). The Company intends to satisfy the disclosure requirement regarding certain amendments to, or waivers from, provisions of its code of ethics by posting such information on the Company's website.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the Proxy Statement under the headings "Compensation Discussion And Analysis", "Summary Compensation Table", "Grants Of Plan-Based Awards", "Outstanding Equity Awards At Fiscal Year-End", "Potential Payments Upon Termination Or Change In Control", "Option Exercises And Stock Vested" and "Director Compensation".

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED SHAREHOLDER MATTERS

The information required by this item is hereby incorporated by reference to the Proxy Statement under the headings "Security Ownership of Certain Beneficial Owners and Management".

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is hereby incorporated by reference to the Proxy Statement under the headings "Board Committees and Meetings" and "Policies and Procedures for Approving Related Person Transactions".

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is hereby incorporated by reference to the Proxy Statement under the heading "Independent Registered Public Accountants".

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

1. *Financial Statements*

The following Consolidated Financial Statements of the registrant and its subsidiaries are included on pages 43 to 77 and the report of Independent Registered Public Accounting Firm is included on page 42 in this Annual Report on Form 10-K.

Report of Independent Registered Public Accounting Firm.

Consolidated Balance Sheets – December 31, 2019 and 2018.

Consolidated Statements of Operations – Years ended December 31, 2019, 2018 and 2017.

Consolidated Statements of Comprehensive Income – Years ended December 31, 2019, 2018 and 2017.

Consolidated Statements of Shareholders' Equity – Years ended December 31, 2019, 2018 and 2017.

Consolidated Statements of Cash Flows – Years ended December 31, 2019, 2018 and 2017.

Notes to Consolidated Financial Statements

2. *Consolidated Financial Statement Schedules*

The following Consolidated Financial Statement schedules shown below should be read in conjunction with the Consolidated Financial Statements on pages 43 to 77 in this Annual Report on Form 10-K. All other schedules are omitted because they are not applicable or not required or the required information is shown in the Consolidated Financial Statements or notes thereto.

The following items appear immediately on the following page:

Financial Statement Schedules:

Schedule II – Valuation and Qualifying Accounts for the years ended December 31, 2019, 2018 and 2017.

3. *Exhibits*

Exhibits required by Item 601 of Regulation S-K are listed in the Exhibit Index, which is incorporated herein by reference.

MASTECH DIGITAL, INC.

SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS

FOR THE YEARS ENDED DECEMBER 31, 2019, 2018 AND 2017
(Amounts in thousands)

	Balance at beginning of period	Charged to expense (credited)	Recoveries/ (Write-offs)	Balance at end of period
Allowance for Doubtful Accounts:				
Year ended December 31, 2019	$408	$80	$(150)	$338
Year ended December 31, 2018	398	10	—	408
Year ended December 31, 2017	388	10	—	398

Exhibit	Index Description Exhibit
2.1**	Asset Purchase Agreement, dated as of May 8, 2015, by and among Hudson Global, Inc., Hudson Global Resources Management, Inc. and Mastech, Inc., incorporated by reference to Exhibit 2.1 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on May 11, 2015
2.2**	Asset Purchase Agreement, dated July 7, 2017, by and among Mahmood Abbas, Zahid Naeem, Sachin Wadhwa, Infotrellis Inc. and Mastech InfoTrellis Digital, Ltd., incorporated by reference to Exhibit 2.1 to Mastech Digital, Inc.'s Current Report on Form 8-K, filed with the SEC on July 13, 2017
2.3**	Asset Purchase Agreement, dated July 7, 2017, by and among Mahmood Abbas, Zahid Naeem, Sachin Wadhwa, Infotrellis Inc. and Mastech InfoTrellis, Inc., incorporated by reference to Exhibit 2.2 to Mastech Digital, Inc.'s Current Report on Form 8-K, filed with the SEC on July 13, 2017
2.4**	Share Purchase Agreement, dated July 7, 2017, by and amongst Mastech Digital Data, Inc., 2291496 Ontario Inc., InfoTrellis India Private Limited, Mastech Digital Private Limited and Kumaran Sasikanthan, incorporated by reference to Exhibit 2.3 to Mastech Digital, Inc.'s Current Report on Form 8-K, filed with the SEC on July 13, 2017
3.1	Amended and Restated Articles of Incorporation of Mastech Digital, Inc., incorporated by reference to Exhibit 3.1 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on September 12, 2016
3.2	Amended and Restated Bylaws of Mastech Digital, Inc., incorporated by reference to Exhibit 3.2 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on September 12, 2016
4.1	Form of Common Stock Certificate of Mastech Digital, Inc., incorporated by reference to Exhibit 4.1 to Mastech Digital, Inc.'s Annual Report on Form 10-K filed with the SEC on March 24, 2017
4.2	Registration Rights Agreement, dated July 13, 2017, by and between Mastech Digital, Inc., Ashok Trivedi, as trustee of the Ashok K. Trivedi Revocable Trust, and Sunil Wadhwani, as trustee of The Revocable Declaration of Trust of Sunil Wadhwani, incorporated by reference to Exhibit 4.1 to Mastech Digital, Inc.'s Quarterly Report on Form 10-Q filed with the SEC on November 14, 2017
4.3	Description of Securities Registered under Section 12 of the Securities Exchange Act of 1934
10.1†	Mastech Digital, Inc.'s Stock Incentive Plan (as amended and restated), effective as of May 14, 2014, incorporated by reference to Exhibit 10.2 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on May 23, 2016
10.2†	Amendment to Mastech Digital, Inc.'s Stock Incentive Plan (as amended and restated), executed May 18, 2016, incorporated by reference to Exhibit 10.1 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on May 23, 2016
10.3†	Second Amendment to Mastech Digital, Inc.'s Stock Incentive Plan (as amended and restated), executed May 16, 2018, incorporated by reference to Exhibit 10.1 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on May 18, 2018
10.4†	Third Amendment to Mastech Digital, Inc.'s Stock Incentive Plan (as amended and restated), executed May 15, 2019, incorporated by reference to Exhibit 10.1 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on May 15, 2019
10.5	Credit Agreement, dated July 13, 2017, by and among Mastech Digital, Inc., certain subsidiaries of Mastech Digital, Inc., PNC Bank, National Association, as administrative agent, swing loan lender and issuing lender, PNC Capital Markets LLC, as sole lead arranger and sole bookrunner, and certain financial institutions party thereto as lenders, incorporated by reference to Exhibit 10.1 to Mastech Digital, Inc.'s Current Report on Form 8-K, filed with the SEC on July 19, 2017

Exhibit	Index Description Exhibit
10.6	First Amendment to Credit Agreement, dated November 2017, by and among Mastech Digital, Inc., PNC Bank, National Association, as administrative agent and a lender, and certain financial institutions party thereto as lenders, incorporated by reference to Exhibit 10.3 to Mastech Digital, Inc.'s Quarterly Report on Form 10-Q, filed with the SEC on May 11, 2018
10.7	Second Amendment to Credit Agreement, dated April 20, 2018, by and among Mastech Digital, Inc., PNC Bank, National Association, as administrative agent and a lender, and certain financial institutions party thereto as lenders, incorporated by reference to Exhibit 10.1 to Mastech Digital, Inc.'s Current Report on Form 8-K, filed with the SEC on April 25, 2018
10.8	Pledge Agreement, dated July 13, 2017, made by Mastech Digital, Inc. and certain subsidiaries of Mastech Digital, Inc., incorporated by reference to Exhibit 10.2 to Mastech Digital, Inc.'s Current Report on Form 8-K, filed with the SEC on July 19, 2017
10.9	Securities Purchase Agreement, dated July 7, 2017, by and between Mastech Digital, Inc. and Ashok Trivedi, as trustee of the Ashok K. Trivedi Revocable Trust, incorporated by reference to Exhibit 10.1 to Mastech Digital, Inc.'s Current Report on Form 8-K, filed with the SEC on July 13, 2017
10.10	Securities Purchase Agreement, dated July 7, 2017, by and between Mastech Digital, Inc. and Sunil Wadhwani, as trustee of The Revocable Declaration of Trust of Sunil Wadhwani, incorporated by reference to Exhibit 10.2 to Mastech Digital, Inc.'s Current Report on Form 8-K, filed with the SEC on July 13, 2017
10.11†	Fourth Amended and Restated Executive Employment Agreement, dated as of March 20, 2019, between Mastech Digital Technologies, Inc., Mastech Digital, Inc. and Vivek Gupta, incorporated by reference to Exhibit 10.1 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on March 21, 2019
10.12†	Third Amended and Restated Executive Employment Agreement, dated as of March 20, 2019, between Mastech Digital Technologies, Inc., Mastech Digital, Inc. and John J. Cronin, Jr., incorporated by reference to Exhibit 10.2 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on March 21, 2019
10.14	Lease Agreement, dated April 2, 2014, between PIBP 210 LLP and Mastech Digital, Inc., incorporated by reference to Exhibit 10.1 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on April 7, 2014
10.15†	Form of Restricted Stock Agreement under the Mastech Digital, Inc. Stock Incentive Plan (as amended and restated), incorporated by reference to Exhibit 10.9 to Mastech Digital, Inc.'s Annual Report on Form 10-K filed with the SEC on March 24, 2017
10.16†	Form of Non-Qualified Stock Option Agreement under the Mastech Digital, Inc. Stock Incentive Plan (as amended and restated), incorporated by reference to Exhibit 10.10 to Mastech Digital, Inc.'s Annual Report on Form 10-K filed with the SEC on March 24, 2017
10.17†	Mastech Digital, Inc. 2019 Employee Stock Purchase Plan, executed on May 15, 2019, incorporated by reference to Exhibit 10.2 to Mastech Digital, Inc.'s Current Report on Form 8-K filed with the SEC on May 15, 2019
10.18†	Summary of Director Compensation Arrangements
14.1	Mastech Digital, Inc.'s Code of Business Conduct and Ethics, as adopted on September 15, 2016, incorporated by reference to Exhibit 14.1 to Mastech Digital, Inc.'s Annual Report on Form 10-K filed with the SEC on March 24, 2017

Exhibit	Index Description Exhibit
21.1	List of Subsidiaries of Mastech Digital, Inc.
23.1	Consent of UHY LLP, Independent Registered Public Accounting Firm
31.1	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 by Chief Executive Officer
31.2	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 by Chief Financial Officer
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Chief Executive Officer
32.2	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Chief Financial Officer
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

† Designates the Company's management contracts or compensation plans or arrangements for its executive officers.

* XBRL (eXtensible Business Reporting Language) information is furnished and not filed herewith.

** Pursuant to Item 601(b)(2) of Regulation S-K, certain schedules and exhibits to these agreements have not been filed. Mastech Digital, Inc. hereby agrees to furnish supplementally a copy of any omitted schedule or exhibit to the SEC upon request.

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, on this 30th day of March, 2020.

MASTECH DIGITAL, INC.

/s/ VIVEK GUPTA

Vivek Gupta
President and Chief 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 indicated and on this 30th day of March, 2020.

/s/ VIVEK GUPTA

Vivek Gupta
President, Chief Executive Officer and Director
(Principal Executive Officer)

/s/ JOHN J. CRONIN, JR.

John J. Cronin, Jr.
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

/s/ SUNIL WADHWANI

Sunil Wadhwani
Co-Chairman of the Board of Directors, and Director

/s/ ASHOK TRIVEDI

Ashok Trivedi
Co-Chairman of the Board of Directors, and Director

/s/ GERHARD WATZINGER

Gerhard Watzinger
Director

/s/ JOHN AUSURA

John Ausura
Director

/s/ BRENDA GALILEE

Brenda Galilee
Director

MASTECH DIGITAL

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