



# Mufson Howe Hunter

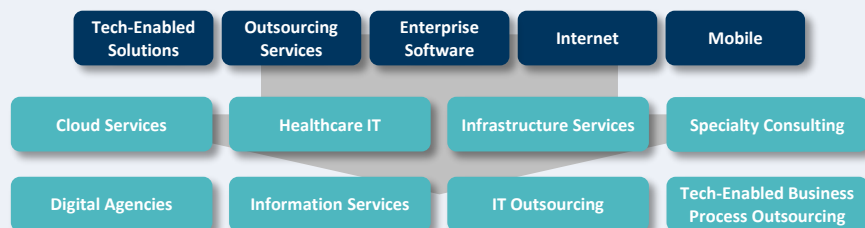
INVESTMENT BANKERS FOR GROWTH

*TECHNOLOGY SERVICES MONTHLY*  
*Robotic Process Automation (“RPA”)*

*July 2018*

## Welcome to the MHH Technology Services Newsletter!

Welcome to the July edition of the Mufson Howe Hunter Technology Services Monthly. This month, we highlight key themes and growth drivers in the Robotic Process Automation space. Each month, our team aims to provide you with a newsletter that contains thought-provoking content and analysis, as well as updates on macroeconomic themes, equity capital market performance, private capital market trends and noteworthy M&A activity—all of which is relevant to our core industry sectors:



We hope you find this information valuable, and we welcome any comments or suggestions.

Sincerely,

Brandon K. Eck  
Managing Director, Head of Technology Services

## What we are reading...



- [The next acronym you need to know about: RPA \(robotic process automation\)](#)
- [The Internet of Things You Don't Really Need](#)
- [The Truth About Blockchain](#)
- [Health Catalyst launches new hospital safety surveillance analytics](#)

## Select 2018 Franchise Themes



**Digital Transformation & Advisory:** Business processes will continue to migrate from legacy systems to modern technology (cloud, edge computing, analytics, IoT, blockchain, AI, etc.). We expect to see continued growth in the digital transformation consulting (DTC) channel. Trusted advisors with the ability to sell across senior business stakeholders within an organization (CMO, CRO, CCO, COO, CIO) and who provide thought leadership, commercial insights, targeted research and proprietary IP will be leaders in the category. For additional insight see our [November 2017 TSM](#).



**Regulation Technology:** The rapid proliferation of new and increasingly complex regulations will continue to drive demand for RegTech solutions that provide operational efficiencies and cost benefits when applied to compliance and risk management practices. Increased regulation isn't just a temporary challenge for global financial institutions – it's the new reality. Financial services firms' average costs to meet their obligations are \$60 million; some are spending up to \$500 million on compliance with KYC and Customer Due Diligence (Thomson Reuters). For additional insight see our [August 2017 TSM](#).



**Healthcare IT:** The sweeping paradigm shift toward population health management and value-based reimbursement models – will continue to drive robust demand for healthcare IT products and services. Consulting Services, Data Analytics and Patient Engagement Technology will comprise a growing portion of the overall HCIT market, reaching an estimated \$74 billion in annual spending by 2021 (Markets and Markets and MHH calculations). Service providers and solutions that improve interoperability among myriad disparate systems will be in high demand for many years to come. For additional insight see our [May 2017](#) and [September 2017 TSM](#).



**IoT-Optimized Infrastructure Services:** "Connected things" will streamline vendor operational models while reducing customer costs. IoT will introduce tons of useful data to the cloud that needs to be captured and effectively managed. IaaS and PaaS companies will be a direct beneficiary of this trend. Cisco expects database, analytics and IoT workloads to account for 22% of total workloads by 2020 (Cisco, 2016). For additional insight, see our [June 2017 TSM](#).



**Blockchain in Financial Services & Beyond:** Although most widely associated with cryptocurrencies, some of the largest financial services firms are exploring using blockchain technology to improve high-risk and/or time-consuming operations, including cross-border payments, AML & KYC compliance, IAM security protocols and smart contracts. We also expect to see further adoption across a variety of other industries, including healthcare, automotive, manufacturing and retail, among others. For additional insight see our [December 2017 TSM](#).

# TECHNOLOGY SERVICES PRACTICE OVERVIEW

The Mufson Howe Hunter Technology Services Group serves growth-oriented, rapidly scalable businesses that leverage proprietary and enabling technologies to address the evolving needs of modern enterprise customers. We apply deep industry expertise and broad transaction experience to provide thoughtful, tailored advice and solutions for our clients. **Our clients turn to us for outstanding M&A advisory and capital-raising execution.**

## Senior Banking Team



**Brandon Eck**  
Managing Director,  
Head of Technology Services

215.399.5411 | beck@mhhco.com

### Prior Experience:

- Managing Director, Head of Technology & Services, Janney Montgomery Scott
- Principal, Catalyst Securities
- Principal, RCW Mirus

### Education:

- Gettysburg College (BA)

18+ Years of  
Experience

60+ Transactions  
Completed



**Andrew Wilson**  
Vice President,  
Technology Services

215.399.5406 | awilson@mhhco.com

### Prior Experience:

- Senior Associate, Technology & Services, Janney Montgomery Scott
- Associate, TMT, J.P. Morgan
- Attorney, M&A, Wilson Sonsini Goodrich & Rosati

### Education:

- Duke University (JD, MBA)
- U. North Carolina, Chapel Hill (BA)

8+ Years of  
Experience

20+ Transactions  
Completed

## Sector Coverage

# Mufson Howe Hunter

- Sell-side Advisory
- Private Placements
- Financial Advisory
- Buy-side Assignments
- Recapitalizations
- Fairness Opinions



## Business Model Coverage

Tech-Enabled Solutions

Outsourcing Services

Enterprise Software

Internet

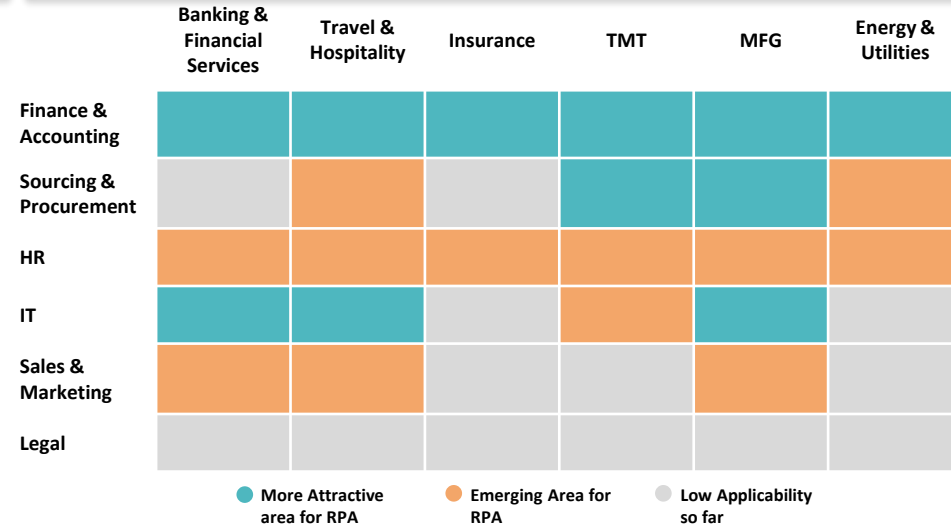
Mobile

# ROBOTIC PROCESS AUTOMATION

## What is Robotic Process Automation?

- **Robotic Process Automation (RPA)** refers to the application of technology governed by business logic and structured inputs in order to automate various business processes. Using RPA tools, a company can configure software, or “robots”, to capture and interpret transactions, manipulate data and communicate with other digital systems.<sup>1</sup>
- There are three classes of RPA technology:
  - **Rules-based automation:** Macros, screen scraping and business workflow technologies in the presentation layer (10% - 20% estimated cost saving).<sup>2</sup>
  - **Enhanced and intelligent process automation:** Technologies using natural language processing; able to understand unstructured data (35% - 60% estimated cost saving).<sup>3</sup>
  - **Cognitive platforms:** Cognitive computing systems attempt to solve problems by learning from experience and acting on that learning (>60% estimated cost saving).<sup>4</sup>
- Total global expenditures on RPA technology is expected to reach **\$5.0 billion** by 2020, achieving a **60.5% CAGR** from 2013 to 2020.<sup>5</sup>

## Application Across Industries<sup>8</sup>

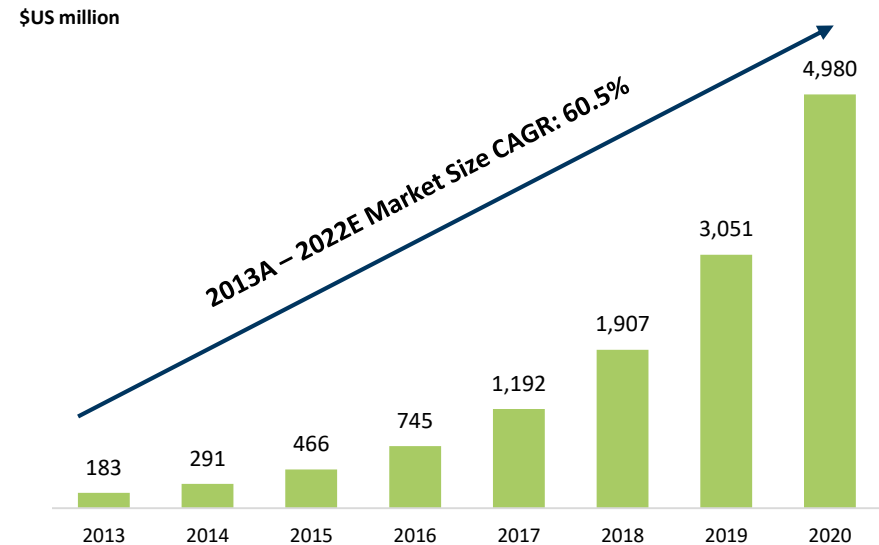


## Robotic Automated Processing Value Propositions

Operational efficiencies and cost benefits derived from RPA include:

- **Decreased operational costs:** Whereas U.S. multinationals have hired 2.4 million offshore employees, RPA has proven to cut offshore FTE to half.<sup>6</sup>
- **Data analytics capability:** As work processes are tightly managed and tracked, companies will be able to track gaps for incremental optimization and improve decision-making.
- **Improved regulatory compliance:** A fully RPA automated process would enable adopters to track every step of the process and document systematically.
- **Increased efficiency:** Software robots do not require time off. Typically, a single software robot can replace between two to five FTEs.<sup>7</sup>
- **Increased employee productivity (flexibility & multi-tasking):** Employees can focus more on value-added tasks.
- **Reduced error rate and delivery risk:** Software robots eliminate processing errors.
- **Logistics advantages:** RPA eliminates challenges associated with working in different time zones.

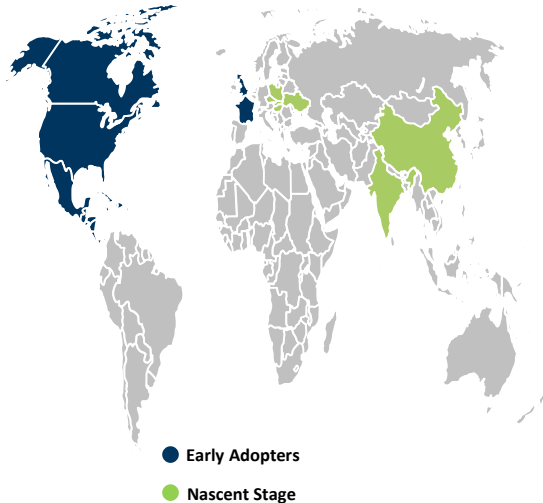
## Global Expenditures on RPA Technology<sup>9</sup>



1, 2, 3, 4, 5, 6 Robotic process automation primer June 2015, IRPA | 7 Robotics process automation ushering innovation, cost Savings, Xchanging | 8, 9 Robotic process automation, White Paper 03-Dec-2015, Ernst & Young, LLP

# ROBOTIC PROCESS AUTOMATION

## Adoption by Geographical Location <sup>1</sup>





Note: Approximately 68% RPA customers are based in North America and the UK.

<sup>1,2</sup> Robotic process automation primer June 2015, IRPA


## Function Application <sup>2</sup>


### IT

 **Installation**  
(e.g. Single click installation of complex system)


 **Email Related**  
(e.g. Open e-mail attachment and complete e-forms)


### Finance

 **Procure-to-Pay**  
(e.g. Extract invoice and payment data from ERP)


 **Collection**  
(e.g. Collect invoices from various customers)


### Supply Chain

 **Work-Order Mgmt.**  
(e.g. Automatically update work order)


 **Freight Mgmt.**  
(e.g. Identify docs, process letter and invoices)


### Sales/Marketing

 **Vendor Mgmt.**  
(e.g. Automatically update vendor records)


 **Sales Order**  
(e.g. Create and deliver invoices; update CRM)


### Human Resource

 **Payroll**  
(e.g. Streamline processes and reduce repetitive tasks)















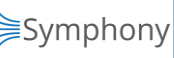

 **On-boarding**  
(e.g. Automate new-hire paperwork, IT set-up, etc.)

### Legal

 **Payment Processing**  
(e.g. Automate periodic payments)

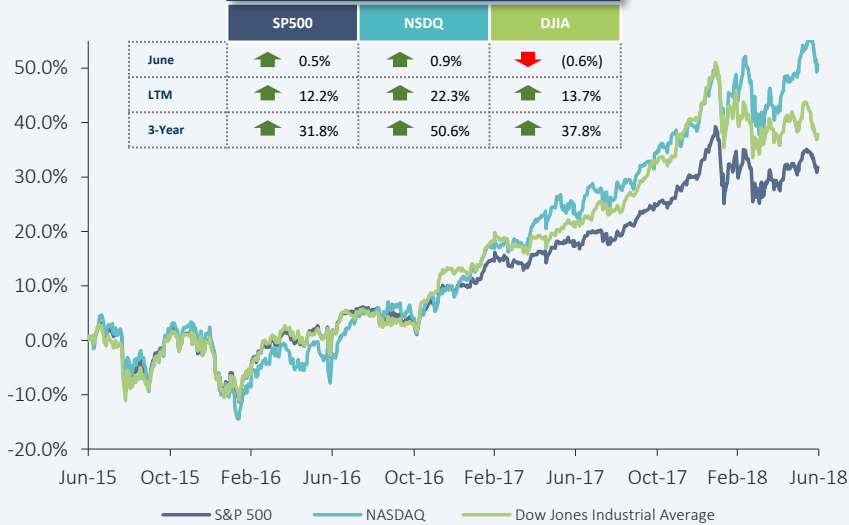
 **Appeal**  
(e.g. Automate compliance applications for insurance policies)

## Recent Relevant Investments

| Investor    |   |   |    |   |                                       |   |    |   |
|-------------|--|--|---|--|--|--|---|--|
| Target      | <br>Jul-2018  | <br>May-2018  | <br>Apr-2018                                   | <br>Mar-2018                                | <br>Oct-2017                        | <br>Oct-2017                                      | <br>Aug-2017                                       | <br>Apr-2016  |
| Description | <ul style="list-style-type: none"> <li>• Later Stage VC</li> <li>• Provider of robotic process automation to do repetitive work</li> </ul> | <ul style="list-style-type: none"> <li>• Seed Round</li> <li>• Developer of a voice-powered healthcare platform, using robotic process automation</li> </ul> | <ul style="list-style-type: none"> <li>• Secondary Transaction</li> <li>• Offers software development and RPA globally</li> </ul> | <ul style="list-style-type: none"> <li>• Early Stage VC</li> <li>• Developer of robotic process automation software</li> </ul> | <ul style="list-style-type: none"> <li>• Seed Round</li> <li>• Developer of an automated bookkeeping software</li> </ul> | <ul style="list-style-type: none"> <li>• Early Stage VC</li> <li>• Provides intelligent robotic process automation platform</li> </ul> | <ul style="list-style-type: none"> <li>• PE Growth/Expansion</li> <li>• Developer of robotic process automation (RPA) models</li> </ul> | <ul style="list-style-type: none"> <li>• Merger/Acquisition</li> <li>• Provider of robotic process automation and work analytics software</li> </ul> |

# U.S. ECONOMIC INDICATORS

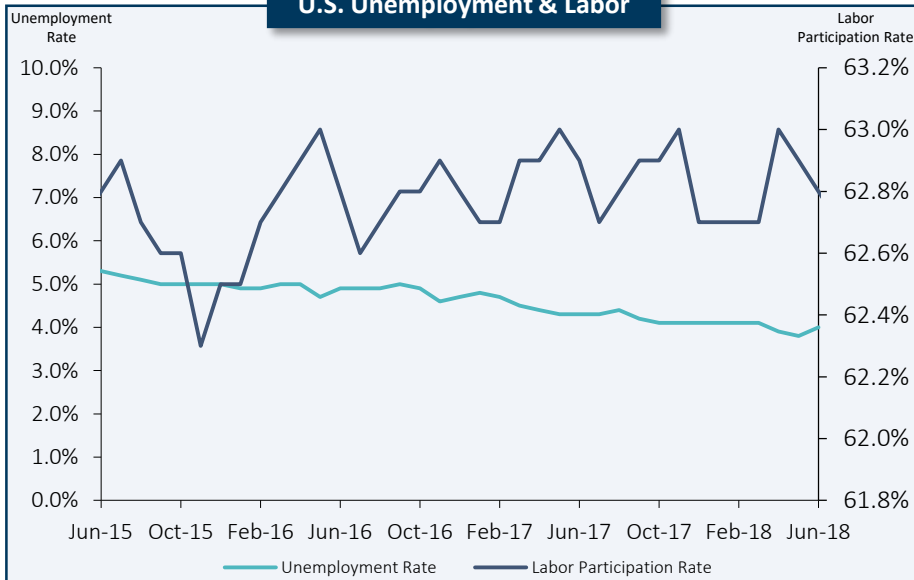
## U.S. Market Indices



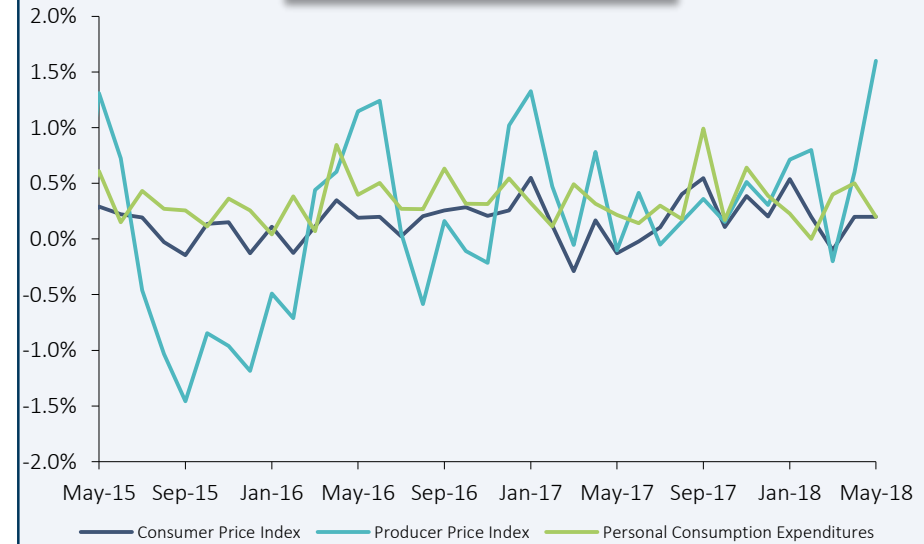
## 10-Year Treasury Rate



## U.S. Unemployment & Labor



## U.S. PPI, CPI and PCE



Sources: CapitalIQ, Federal Reserve Bank of St. Louis



# U.S. TECH SERVICES MIDDLE-MARKET PRIVATE EQUITY: BUY-OUT ACTIVITY

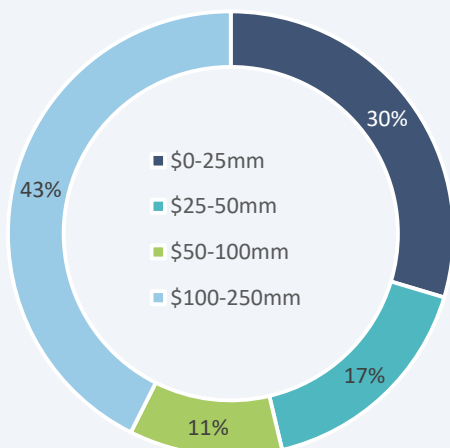
## Select Jun. 2018 Buy-Outs\*\*

| Company            | Investor                         | Date    | Sector                       |
|--------------------|----------------------------------|---------|------------------------------|
| riskinternational  | bv INVESTMENT PARTNERS           | June 28 | IT Outsourcing               |
| morpace            | STG SPINWORKS TECHNOLOGY GROUP   | June 26 | Information Services         |
| iMANAGED solutions | BLUFFPOINT ASSOCIATES<br>NETGAIN | June 25 | Healthcare IT                |
| SWERDLIN & COMPANY | ascensus<br>GENSTAR              | June 19 | Business Process Outsourcing |
| BetterDoctor       | Quest Analytics<br>VCP           | June 18 | Healthcare IT                |
| PALADINA HEALTH    | NEA New Enterprise Associates    | June 6  | Healthcare IT                |

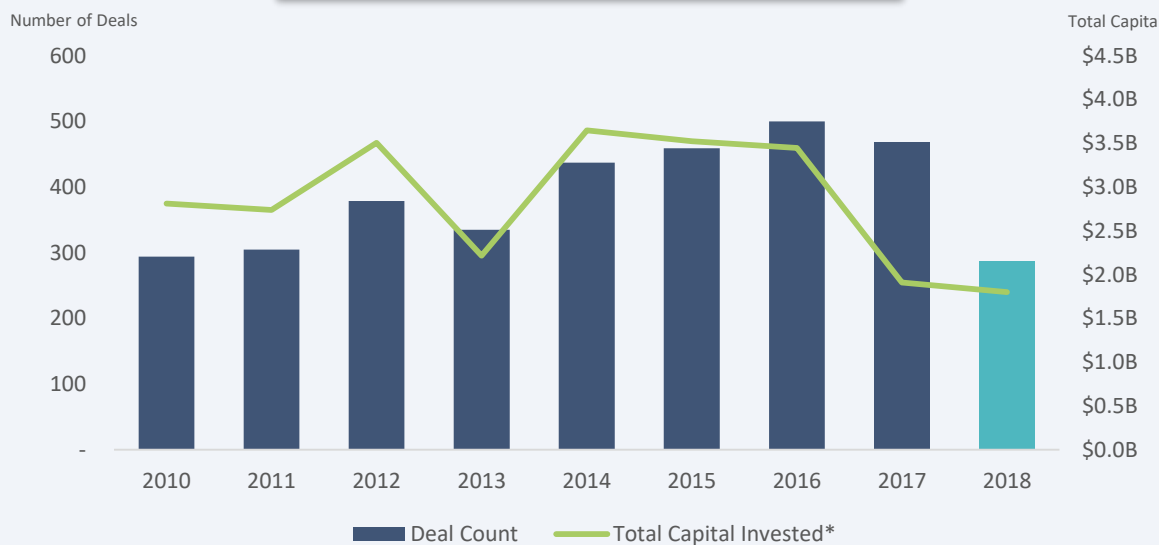
## PE Buy-Outs, Trailing 8 Quarters, as of Jun. 30



## PE Buy-Outs, by Deal Size



## PE Buy-Outs, Historical Annual, as of Jun. 30









Source: Pitchbook

\*For deals with announced transaction value

\*\*Please contact the MHH Technology Services Group directly for any information regarding valuation and deal size

# U.S. TECH SERVICES MIDDLE-MARKET PRIVATE EQUITY: MINORITY ACTIVITY

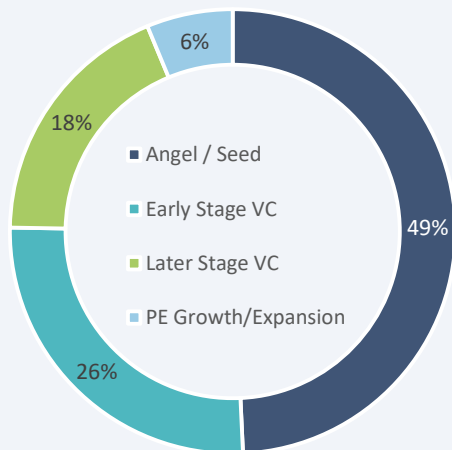
Select Jun. 2018 Minority Deals\*\*

| Company   | Stage          | Date    | Sector                  |
|---|----------------|---------|-------------------------|
|  fasetto              | Angel          | June 27 | Infrastructure Services |
|  relevant medsystems  | Late Stage VC  | June 26 | Healthcare IT           |
|  Cedar Healthcare     | Early Stage VC | June 25 | Healthcare IT           |
|  CROWDSTRIKE          | Late Stage VC  | June 21 | IT Outsourcing          |
|  emulate              | Late Stage VC  | June 19 | Healthcare IT           |
|  WindMIL THERAPEUTICS | Early Stage VC | June 18 | Healthcare IT           |

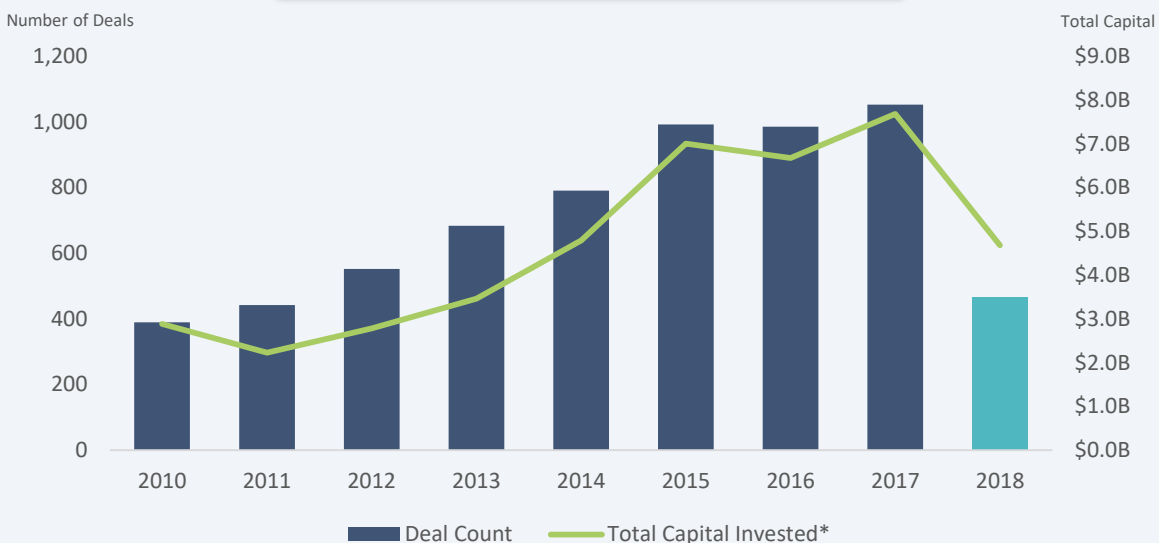
PE Minority, Trailing 8 Quarters, as of Jun. 30



PE Minority, by Stage



PE Minority, Historical Annual, as of Jun. 30



Source: Pitchbook

\*For deals with announced transaction value

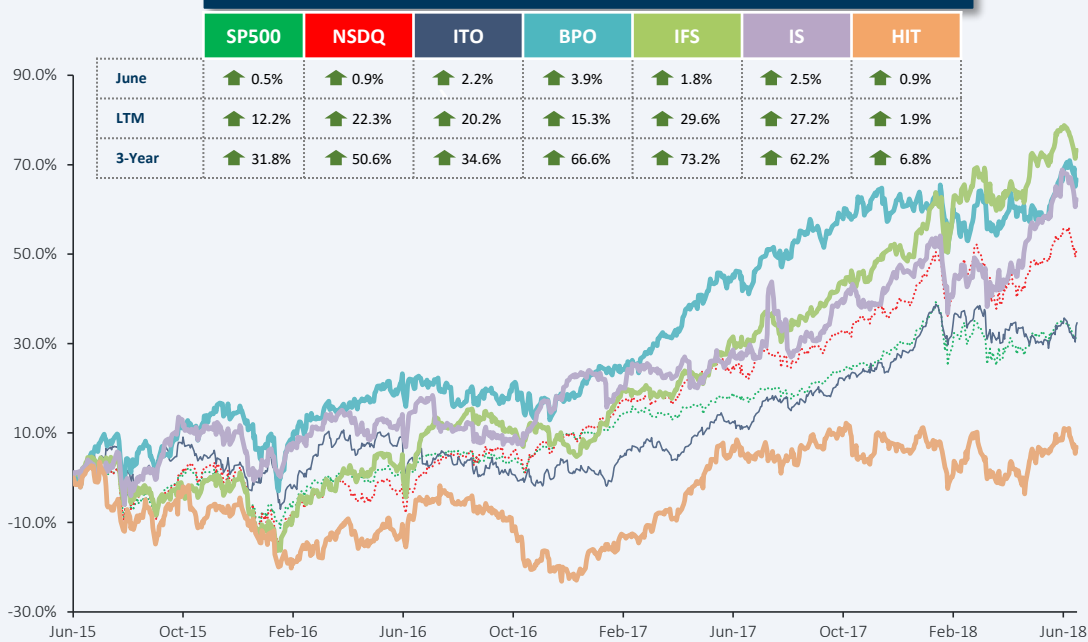
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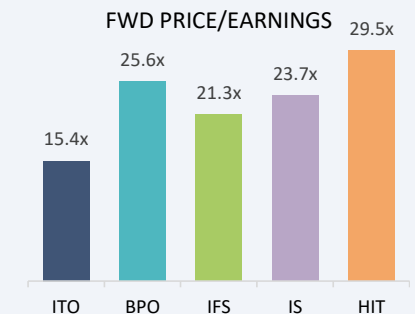
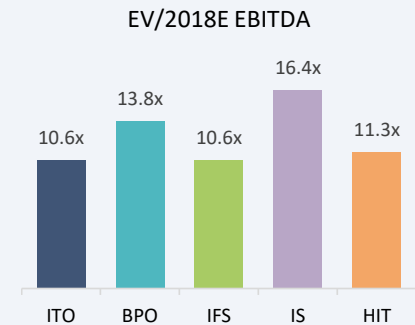
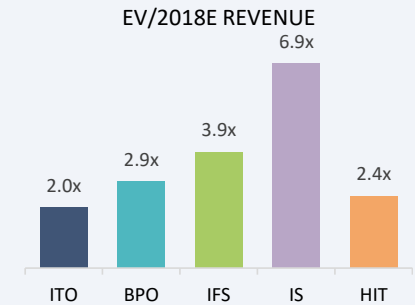
# VALUATION & PERFORMANCE METRICS

|     |   |
|-----|---|
| ITO | <b>IT Outsourcing:</b> technology services and consulting solutions, including engineering, application development, knowledge management and business process management   |
| BPO | <b>Business Process Outsourcing:</b> services for administering and managing select technology-enabled business processes, including outsourced product development, finance and accounting, human resources, research and analytics, and other industry-specific processes |
| IFS | <b>Infrastructure Services:</b> providers of managed, hosting and consulting services around planning, designing, implementing and managing mission-critical IT infrastructure  |
| IS  | <b>Information Services:</b> providers of independent rating, benchmarking, research and data analytic services   |
| HIT | <b>Healthcare IT:</b> software and technology-related services focused on the design, development, creation, use and maintenance of information systems for the healthcare industry   |

## Sector Indices Performance, as of Jun. 30, 2018

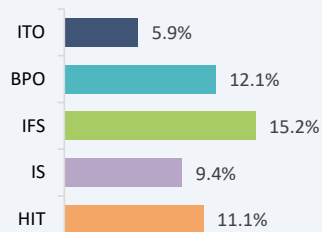


## Median Valuation Metrics

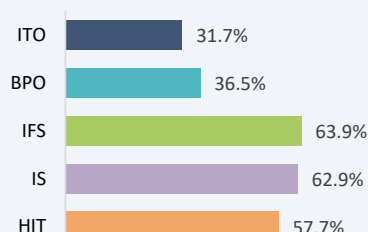


## Median Operational KPIs

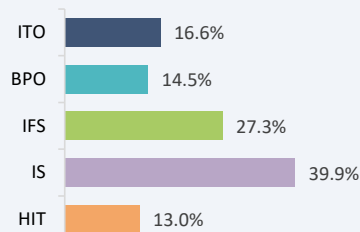
### 2018E REVENUE GROWTH



### LTM GROSS MARGIN



### LTM EBITDA MARGIN



# IT OUTSOURCING

## Valuation Metrics

(\$ in millions)

| (\$ in millions)                                  | Operating Metrics         |          |          |                  |                       |         |                   | Valuation Multiples |       |       |             |        |        |
|---|---------------------------|----------|----------|------------------|-----------------------|---------|-------------------|---------------------|-------|-------|-------------|--------|--------|
| Company   | Market Cap <sup>(1)</sup> | Revenue  |          | LTM Gross Margin | EBITDA <sup>(2)</sup> |         | LTM EBITDA Margin | EV / Revenue        |       |       | EV / EBITDA |        |        |
|   |                           | 2018E    | 2019E    |                  | 2018E                 | 2019E   |                   | LTM                 | 2018E | 2019E | LTM         | 2018E  | 2019E  |
| Accenture plc (ACN)                               | \$99,290                  | \$38,945 | \$41,604 | 31.7%            | \$6,731               | \$7,281 | 16.3%             | 2.7x                | 2.5x  | 2.3x  | 14.4 x      | 14.3 x | 13.2 x |
| Cognizant Technology Solutions Corporation (CTSH) | \$48,232                  | \$16,226 | \$17,662 | 38.2%            | \$3,459               | \$3,947 | 20.5%             | 3.0x                | 2.7x  | 2.5x  | 13.5 x      | 12.7 x | 11.2 x |
| Infosys Limited (INFY)                            | \$39,071                  | \$11,334 | \$12,183 | 35.0%            | \$2,991               | \$3,251 | 26.9%             | 3.3x                | 3.1x  | 2.9x  | 12.3 x      | 11.9 x | 10.9 x |
| DXC Technology Company (DXC)                      | \$29,294                  | \$24,201 | \$23,951 | 25.4%            | \$5,057               | \$5,168 | 15.7%             | 1.8x                | 1.5x  | 1.5x  | 10.8 x      | 7.0 x  | 6.8 x  |
| HCL Technologies Limited (HCLTECH)                | \$20,070                  | \$8,272  | \$9,073  | 33.9%            | \$1,866               | \$2,032 | 22.6%             | 2.5x                | 2.3x  | 2.1x  | 11.2 x      | 10.4 x | 9.5 x  |
| CGI Group Inc. (GIB.A)                            | \$16,608                  | \$8,864  | \$9,146  | 29.8%            | \$1,623               | \$1,699 | 16.6%             | 2.0x                | 2.0x  | 2.0x  | 11.5 x      | 11.0 x | 10.5 x |
| Wipro Limited (BSE:507685)                        | \$20,198                  | \$8,737  | \$9,276  | 29.0%            | \$1,792               | \$1,834 | 19.7%             | 2.1x                | 2.0x  | 1.9x  | 10.4 x      | 9.9 x  | 9.7 x  |
| Atos SE (ATO)                                     | \$13,925                  | \$15,645 | \$16,035 | 14.5%            | \$2,195               | \$2,289 | 12.6%             | 0.9x                | 0.9x  | 0.9x  | 7.0 x       | 6.5 x  | 6.2 x  |
| Syntel, Inc. (SYNT)                               | \$2,228                   | \$932    | \$952    | 38.0%            | \$233                 | \$242   | 26.9%             | 2.7x                | 2.6x  | 2.6x  | 9.6 x       | 10.6 x | 10.2 x |
| Virtusa Corporation (VRTU)                        | \$1,404                   | \$1,154  | \$1,255  | 28.7%            | \$95                  | \$118   | 6.9%              | 1.5x                | 1.3x  | 1.2x  | 15.7 x      | 15.2 x | 12.2 x |
| Perficient, Inc. (PRFT)                           | \$680                     | \$482    | \$504    | 34.2%            | \$77                  | \$83    | 11.3%             | 1.6x                | 1.5x  | 1.5x  | 10.9 x      | 9.7 x  | 8.9 x  |
| Mean  | \$26,455                  | \$12,254 | \$12,876 | 30.7%            | \$2,375               | \$2,540 | 17.8%             | 2.2x                | 2.0x  | 1.9x  | 11.6x       | 10.8x  | 9.9x   |
| Median  | \$20,070                  | \$8,864  | \$9,276  | 31.7%            | \$1,866               | \$2,032 | 16.6%             | 2.1x                | 2.0x  | 2.0x  | 11.2x       | 10.6x  | 10.2x  |

NA = Not Available; NM = Not Meaningful; LTM = Latest Twelve Months

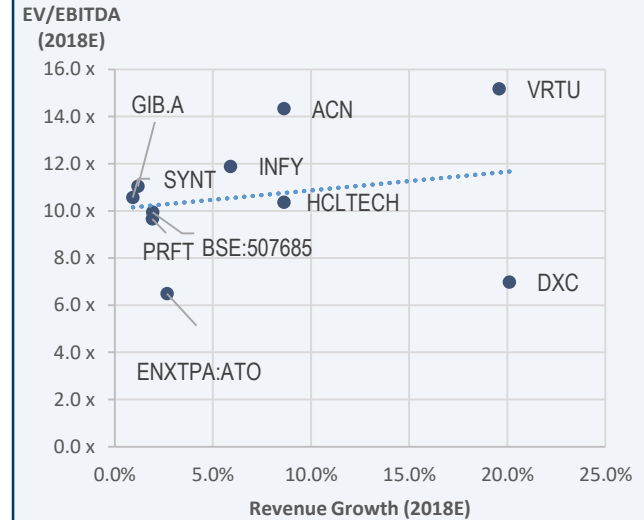
‡ = excluded from Mean and Median calculations

Source: Public Filings, Press Releases and Published Research Reports

(1) As of close June 29, 2018.

(2) Excludes non-recurring, discontinued operations and stock-based compensation

## Relative Valuation

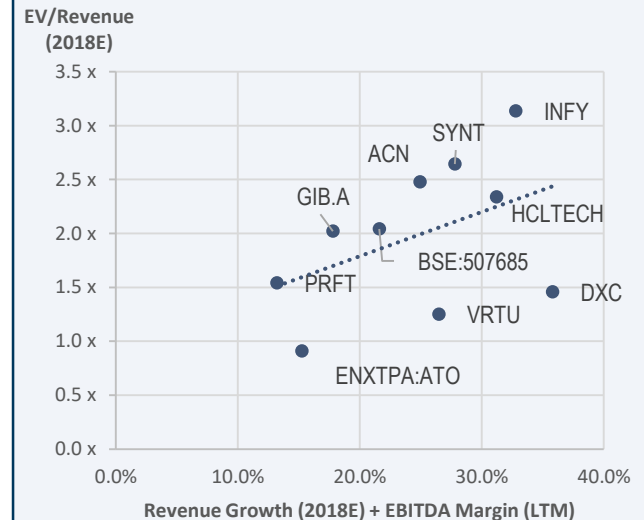


## Select Jun. 2018 Precedent Transactions\*

| Announced | Acquirer | Target | Description   |
|-----------|----------|--------|---|
| June 27   |          |        | Provides process and organizational consulting services |
| June 26   |          |        | Offers AI-based cyber security solutions                |
| June 18   |          |        | Provides cyber security consultancy services            |
| June 18   |          |        | Offers Internet Technology solutions                    |
| June 8    |          |        | Provides design consultancy services                    |

Source: CapitalIQ

\*Please contact the MHH Technology Services Group directly for any information regarding valuation and deal size



# BUSINESS PROCESS OUTSOURCING

## Valuation Metrics

(\$ in millions)

| Company                               | Market Cap <sup>(1)</sup> | Operating Metrics |          |                  |                       |         |                   | Valuation Multiples |       |       |             |        |        |
|---------------------------------------|---------------------------|-------------------|----------|------------------|-----------------------|---------|-------------------|---------------------|-------|-------|-------------|--------|--------|
|                                       |                           | Revenue           |          | LTM Gross Margin | EBITDA <sup>(2)</sup> |         | LTM EBITDA Margin | EV / Revenue        |       |       | EV / EBITDA |        |        |
|                                       |                           | 2018E             | 2019E    |                  | 2018E                 | 2019E   |                   | LTM                 | 2018E | 2019E | LTM         | 2018E  | 2019E  |
| Automatic Data Processing, Inc. (ADP) | \$52,341                  | \$13,723          | \$14,555 | 42.8%            | \$2,956               | \$3,218 | 21.3%             | 4.0x                | 3.8x  | 3.6x  | 17.9 x      | 17.8 x | 16.3 x |
| Genpact Limited (G)                   | \$6,126                   | \$2,975           | \$3,210  | 37.8%            | \$494                 | \$542   | 14.9%             | 2.4x                | 2.3x  | 2.1x  | 15.0 x      | 13.8 x | 12.6 x |
| EPAM Systems, Inc. (EPAM)             | \$6,100                   | \$1,847           | \$2,243  | 36.0%            | \$326                 | \$405   | 14.5%             | 3.6x                | 3.0x  | 2.5x  | 20.0 x      | 17.0 x | 13.7 x |
| WNS (Holdings) Limited (WNS)          | \$2,468                   | \$801             | \$885    | 33.6%            | \$172                 | \$204   | 14.5%             | 3.1x                | 2.9x  | 2.6x  | 16.7 x      | 13.6 x | 11.5 x |
| ExlService Holdings, Inc. (EXLS)      | \$1,997                   | \$847             | \$919    | 34.5%            | \$150                 | \$167   | 14.4%             | 2.3x                | 2.1x  | 2.0x  | 13.3 x      | 11.9 x | 10.7 x |
| Globant S.A. (GLOB)                   | \$1,636                   | \$508             | \$608    | 36.5%            | \$86                  | \$104   | 13.6%             | 3.6x                | 3.1x  | 2.6x  | 20.5 x      | 18.4 x | 15.2 x |
| Luxoft Holding, Inc. (LXFT)           | \$1,364                   | \$995             | \$1,139  | 37.5%            | \$152                 | \$191   | 10.6%             | 1.5x                | 1.3x  | 1.1x  | 10.5 x      | 8.5 x  | 6.8 x  |
| Mean                                  | \$10,290                  | \$3,099           | \$3,365  | 37.0%            | \$620                 | \$690   | 14.8%             | 2.9x                | 2.7x  | 2.4x  | 16.3x       | 14.4x  | 12.4x  |
| Median                                | \$2,468                   | \$995             | \$1,139  | 36.5%            | \$172                 | \$204   | 14.5%             | 3.1x                | 2.9x  | 2.5x  | 16.7x       | 13.8x  | 12.6x  |

NA = Not Available; NM = Not Meaningful; LTM = Latest Twelve Months

‡ = excluded from Mean and Median calculations

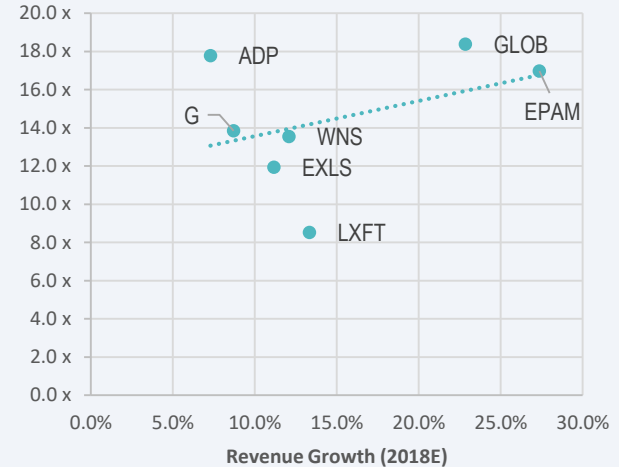
Source: Public Filings, Press Releases and Published Research Reports

(1) As of close June 29, 2018.











(2) Excludes non-recurring, discontinued operations and stock-based compensation

## Relative Valuation

EV/EBITDA  
(2018E)



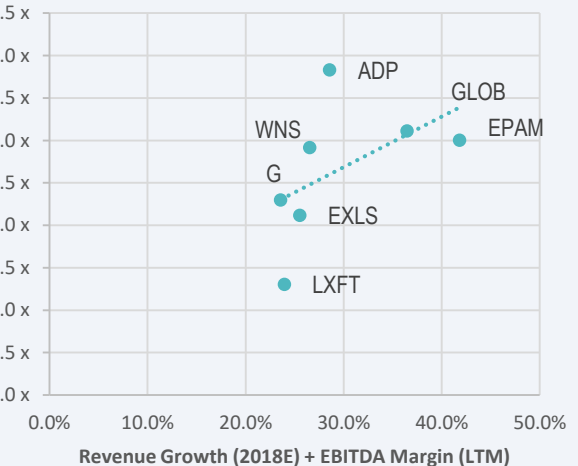
## Select Jun. 2018 Precedent Transactions\*

| Announced | Acquirer  | Target  | Description  |
|-----------|---|---|--|
| June 28   |    |    | Develops websites and design brands                  |
| June 26   |  |  | Provides managed and cloud services                  |
| June 20   |  |  | Operates certification and licensure testing company |
| June 18   |  |  | Provides fulfillment and procurement solutions       |
| June 11   |  |  | Develops cloud-based drug safety analytics platform  |

Source: CapitalIQ

\*Please contact the MHH Technology Services Group directly for any information regarding valuation and deal size

EV/Revenue  
(2018E)



# INFRASTRUCTURE SERVICES

## Valuation Metrics

(\$ in millions)

| Company   | Market Cap <sup>(1)</sup> | Operating Metrics |         |                  |                       |         |                   | Valuation Multiples |       |       |             |        |        |
|---|---------------------------|-------------------|---------|------------------|-----------------------|---------|-------------------|---------------------|-------|-------|-------------|--------|--------|
|   |                           | Revenue           |         | LTM Gross Margin | EBITDA <sup>(2)</sup> |         | LTM EBITDA Margin | EV / Revenue        |       |       | EV / EBITDA |        |        |
|   |                           | 2018E             | 2019E   |                  | 2018E                 | 2019E   |                   | LTM                 | 2018E | 2019E | LTM         | 2018E  | 2019E  |
| Equinix, Inc. (REIT) (EQIX)                         | \$31,065                  | \$5,043           | \$5,556 | 49.8%            | \$2,399               | \$2,694 | 43.4%             | 9.1x                | 7.9x  | 7.2x  | 19.2 x      | 16.6 x | 14.7 x |
| United Internet AG (UTDI)                           | \$13,611                  | \$6,223           | \$6,630 | 35.3%            | \$1,510               | \$1,687 | 22.0%             | 3.3x                | 2.6x  | 2.4x  | 14.8 x      | 10.6 x | 9.5 x  |
| Zayo Group Holdings, Inc. (ZAYO)                    | \$8,893                   | \$2,660           | \$2,758 | 63.9%            | \$1,349               | \$1,434 | 45.8%             | 5.7x                | 5.4x  | 5.2x  | 11.5 x      | 10.6 x | 9.9 x  |
| VeriSign, Inc. (VRSN)                               | \$11,268                  | \$1,208           | \$1,252 | 83.4%            | \$858                 | \$898   | 65.0%             | 9.7x                | 9.3x  | 9.0x  | 13.9 x      | 13.1 x | 12.5 x |
| GoDaddy Inc. (GDDY)                                 | \$8,011                   | \$2,599           | \$2,887 | 65.3%            | \$714                 | \$825   | 13.1%             | 4.5x                | 3.9x  | 3.5x  | 27.5 x      | 14.2 x | 12.3 x |
| Wix.com Ltd. (WIX)                                  | \$3,412                   | \$594             | \$743   | 83.7%            | \$106                 | \$166   | -10.4%            | 7.5x                | 5.4x  | 4.3x  | NM          | 30.0 x | 19.1 x |
| Endurance International Group Holdings, Inc. (EIGI) | \$1,034                   | \$1,154           | \$1,169 | 50.6%            | \$332                 | \$346   | 24.0%             | 2.4x                | 2.5x  | 2.5x  | 8.4 x       | 8.7 x  | 8.3 x  |
| Web.com Group, Inc. (WEB)                           | \$770                     | \$762             | \$791   | 68.4%            | \$192                 | \$208   | 20.0%             | 1.9x                | 1.8x  | 1.8x  | 8.1 x       | 7.3 x  | 6.7 x  |
| Interap Corporation (INAP)                          | \$257                     | \$324             | \$342   | 53.0%            | \$111                 | \$119   | 30.6%             | 2.7x                | 2.3x  | 2.2x  | 8.5 x       | 6.8 x  | 6.3 x  |
| Mean  | \$8,702                   | \$2,285           | \$2,459 | 61.5%            | \$841                 | \$931   | 29.2%             | 5.2x                | 4.6x  | 4.2x  | 14.0x       | 13.1x  | 11.1x  |
| Median  | \$8,011                   | \$1,208           | \$1,252 | 63.9%            | \$714                 | \$825   | 27.3%             | 4.5x                | 3.9x  | 3.5x  | 12.7x       | 10.6x  | 9.9x   |

NA = Not Available; NM = Not Meaningful; LTM = Latest Twelve Months

‡ = excluded from Mean and Median calculations

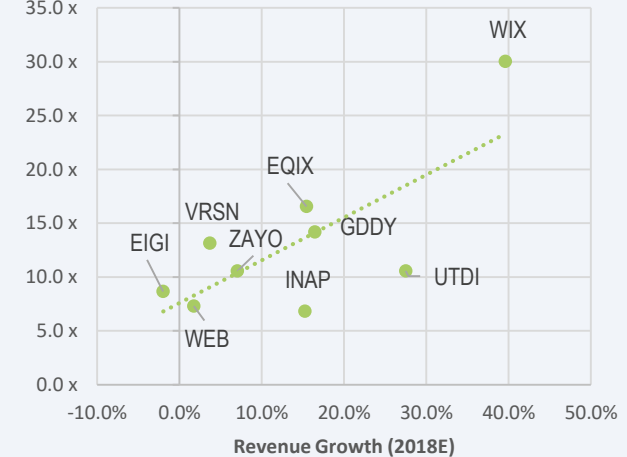
Source: Public Filings, Press Releases and Published Research Reports

(1) As of close June 29, 2018.

(2) Excludes non-recurring, discontinued operations and stock-based compensation

## Relative Valuation

EV/EBITDA  
(2018E)



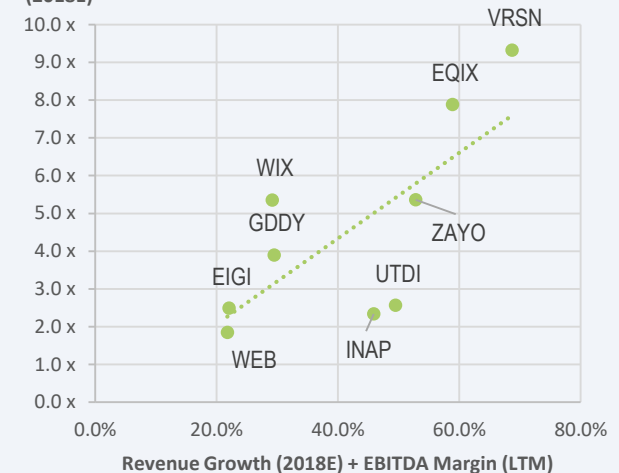
## Select Jun. 2018 Precedent Transactions\*

| Announced | Acquirer                      | Target            | Description   |
|-----------|-------------------------------|-------------------|---|
| June 27   | WPengine                      | STUDIOPRESS       | ▪ Develops WordPress suites   |
| June 11   | workday                       | Adaptive Insights | ▪ Offers corporate performance management and business intelligence solutions |
| June 6    | IRIDEOS<br>connessi al domani | Enter             | ▪ Operates as an internet service provider                                    |
| June 4    | Microsoft                     | GitHub            | ▪ Provides code hosting services  |
| June 1    | box                           | PROGRESSLY        | ▪ Develops central platform for business process                              |

Source: CapitalIQ

\*Please contact the MHH Technology Services Group directly for any information regarding valuation and deal size

EV/Revenue  
(2018E)



# INFORMATION SERVICES

## Valuation Metrics

(\$ in millions)

| Company                             | Market Cap <sup>(1)</sup> | Operating Metrics |          |                  |                       |         |                   | Valuation Multiples |       |       |             |       |       |     |       |       |
|-------------------------------------|---------------------------|-------------------|----------|------------------|-----------------------|---------|-------------------|---------------------|-------|-------|-------------|-------|-------|-----|-------|-------|
|                                     |                           | Revenue           |          | LTM Gross Margin | EBITDA <sup>(2)</sup> |         | LTM EBITDA Margin | EV / Revenue        |       |       | EV / EBITDA |       |       | LTM | 2018E | 2019E |
|                                     |                           | 2018E             | 2019E    |                  | 2018E                 | 2019E   |                   | 2018E               | 2019E | 2019E | 2018E       | 2019E | 2019E |     |       |       |
| S&P Global Inc. (SPGI)              | \$48,698                  | \$6,433           | \$6,825  | 71.7%            | \$3,181               | \$3,405 | 48.3%             | 8.4x                | 7.9x  | 7.5x  | 16.8x       | 16.0x | 14.9x |     |       |       |
| Moody's Corporation (MCO)           | \$31,891                  | \$4,703           | \$4,989  | 70.9%            | \$2,286               | \$2,456 | 47.3%             | 8.7x                | 7.8x  | 7.3x  | 17.3x       | 16.0x | 14.8x |     |       |       |
| IQVIA Holdings Inc. (Q)             | \$20,477                  | \$10,029          | \$10,565 | 42.7%            | \$2,199               | \$2,378 | 21.1%             | 3.7x                | 3.0x  | 2.8x  | 16.6x       | 13.6x | 12.6x |     |       |       |
| IHS Markit Ltd. (INFO)              | \$18,796                  | \$3,846           | \$4,066  | 62.3%            | \$1,520               | \$1,651 | 31.1%             | 6.4x                | 5.9x  | 5.6x  | 16.6x       | 15.0x | 13.9x |     |       |       |
| Verisk Analytics, Inc. (VRSK)       | \$16,863                  | \$2,361           | \$2,525  | 63.5%            | \$1,147               | \$1,240 | 46.0%             | 9.2x                | 8.4x  | 7.8x  | 20.0x       | 17.2x | 15.9x |     |       |       |
| MSCI Inc. (MSCI)                    | \$12,729                  | \$1,442           | \$1,580  | 78.5%            | \$790                 | \$881   | 51.7%             | 10.9x               | 9.7x  | 8.8x  | 20.0x       | 17.6x | 15.8x |     |       |       |
| Garmin, Inc. (IT)                   | \$10,301                  | \$4,147           | \$4,598  | 60.1%            | \$776                 | \$873   | 11.5%             | 3.9x                | 3.1x  | 2.8x  | 28.3x       | 16.8x | 14.9x |     |       |       |
| FactSet Research Systems Inc. (FDS) | \$7,929                   | \$1,373           | \$1,464  | 53.2%            | \$469                 | \$499   | 33.9%             | 6.5x                | 6.0x  | 5.6x  | 17.8x       | 17.6x | 16.5x |     |       |       |
| Mean                                | \$20,961                  | \$4,292           | \$4,576  | 62.9%            | \$1,546               | \$1,673 | 36.4%             | 7.2x                | 6.5x  | 6.0x  | 19.2x       | 16.2x | 14.9x |     |       |       |
| Median                              | \$17,830                  | \$3,996           | \$4,332  | 62.9%            | \$1,334               | \$1,446 | 39.9%             | 7.5x                | 6.9x  | 6.5x  | 17.5x       | 16.4x | 14.9x |     |       |       |

NA = Not Available; NM = Not Meaningful; LTM = Latest Twelve Months

‡ = excluded from Mean and Median calculations

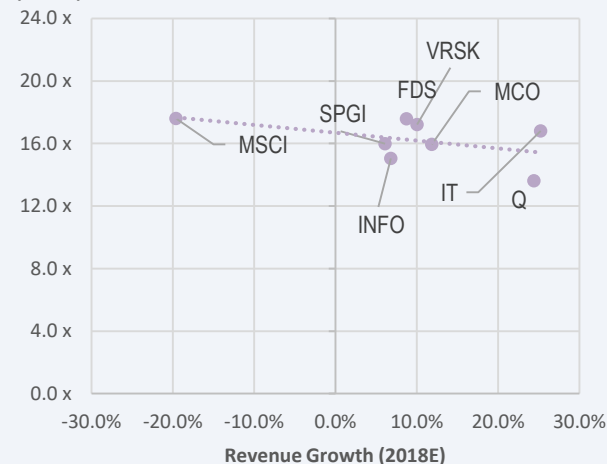
Source: Public Filings, Press Releases and Published Research Reports

(1) As of close June 29, 2018.

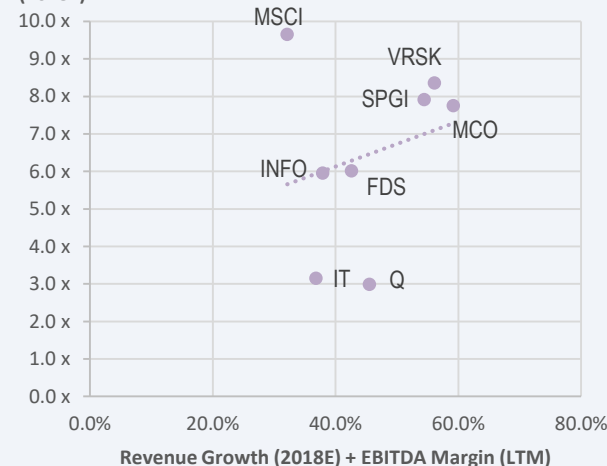
(2) Excludes non-recurring, discontinued operations and stock-based compensation

## Relative Valuation

EV/EBITDA  
(2018E)



EV/Revenue  
(2018E)



## Select Jun. 2018 Precedent Transactions\*

| Announced | Acquirer           | Target  | Description  |
|-----------|--------------------|---|--|
| June 21   | <b>Gentrack</b>    | <b>evolve analytics</b><br>A GENTRACK PRODUCT | • Provides data analytics services                   |
| June 19   | <b>Deloitte</b>    | <b>connected ANALYTICS</b>                    | • Provides risk consulting services                  |
| June 15   | <b>IBM</b>         | <b>ONIQUA ANALYTICS SOLUTION</b>              | • Provides asset performance management solutions    |
| June 12   | <b>software AG</b> | <b>TrendMiner</b>                             | • Develops data search and mining software solutions |
| June 5    | <b>MERCER</b>      | <b>EVOLVE</b>                                 | • Provides research and intelligence services        |

Source: CapitalIQ

\*Please contact the MHH Technology Services Group directly for any information regarding valuation and deal size

## Valuation Metrics

(\$ in millions)

| Company                                      | Market Cap <sup>(1)</sup> | Operating Metrics |         |                  |                       |         |                   | Valuation Multiples |       |       |             |        |        |
|--|---------------------------|-------------------|---------|------------------|-----------------------|---------|-------------------|---------------------|-------|-------|-------------|--------|--------|
|  |                           | Revenue           |         | LTM Gross Margin | EBITDA <sup>(2)</sup> |         | LTM EBITDA Margin | EV / Revenue        |       |       | EV / EBITDA |        |        |
|  |                           | 2018E             | 2019E   |                  | 2018E                 | 2019E   |                   | LTM                 | 2018E | 2019E | LTM         | 2018E  | 2019E  |
| Cerner Corporation (CERN)                    | \$19,324                  | \$5,369           | \$5,830 | 84.5%            | \$1,626               | \$1,783 | 26.2%             | 3.8x                | 3.5x  | 3.3x  | 13.4 x      | 11.7 x | 10.7 x |
| Veeva Systems Inc. (VEEV)                    | \$9,986                   | \$819             | \$964   | 69.2%            | \$266                 | \$317   | 24.1%             | 13.5x               | 11.3x | 9.6x  | 42.1 x      | 34.6 x | 29.1 x |
| athenahealth, Inc. (ATHN)                    | \$4,949                   | \$1,356           | \$1,490 | 54.1%            | \$374                 | \$428   | 16.8%             | 4.0x                | 3.7x  | 3.4x  | 18.9 x      | 13.6 x | 11.9 x |
| Allscripts Healthcare Solutions, Inc. (MDRX) | \$2,068                   | \$2,178           | \$2,289 | 49.6%            | \$433                 | \$469   | 7.6%              | 2.1x                | 1.8x  | 1.7x  | 20.9 x      | 9.1 x  | 8.5 x  |
| Inovalon Holdings, Inc. (INOV)               | \$1,450                   | \$566             | \$639   | 66.3%            | \$161                 | \$192   | 12.8%             | 2.8x                | 2.2x  | 1.9x  | 16.7 x      | 7.6 x  | 6.4 x  |
| Quality Systems, Inc. (QSII)                 | \$856                     | \$538             | \$556   | 55.4%            | \$81                  | \$85    | 9.7%              | 1.7x                | 1.6x  | 1.6x  | 14.1 x      | 10.8 x | 10.2 x |
| National Research Corporation (NRC)          | \$686                     | NA                | NA      | 58.2%            | NA                    | NA      | 32.1%             | 5.5x                | NM    | NM    | 16.4 x      | NM     | NM     |
| HealthStream, Inc. (HSTM)                    | \$749                     | \$229             | \$239   | 57.3%            | \$39                  | \$43    | 11.0%             | 2.2x                | 2.4x  | 2.3x  | 18.8 x      | 14.1 x | 12.9 x |
| Computer Programs and Systems, Inc. (CPSI)   | \$411                     | \$291             | \$300   | 55.6%            | \$52                  | \$52    | 13.1%             | 1.9x                | 1.9x  | 1.8x  | 12.3 x      | 10.5 x | 10.7 x |
| Castlight Health, Inc. (CSLT)                | \$509                     | \$154             | \$181   | 61.4%            | (\$14)                | \$7     | -38.1%            | 3.0x                | 2.7x  | 2.3x  | NM          | NM     | NM     |
| Mean   | \$4,099                   | \$1,278           | \$1,388 | 61.2%            | \$335                 | \$375   | 11.5%             | 4.0x                | 3.5x  | 3.1x  | 19.3x       | 14.0x  | 12.5x  |
| Median                                       | \$1,153                   | \$566             | \$639   | 57.7%            | \$161                 | \$192   | 13.0%             | 2.9x                | 2.4x  | 2.3x  | 16.7x       | 11.3x  | 10.7x  |

NA = Not Available; NM = Not Meaningful; LTM = Latest Twelve Months

‡ = excluded from Mean and Median calculations

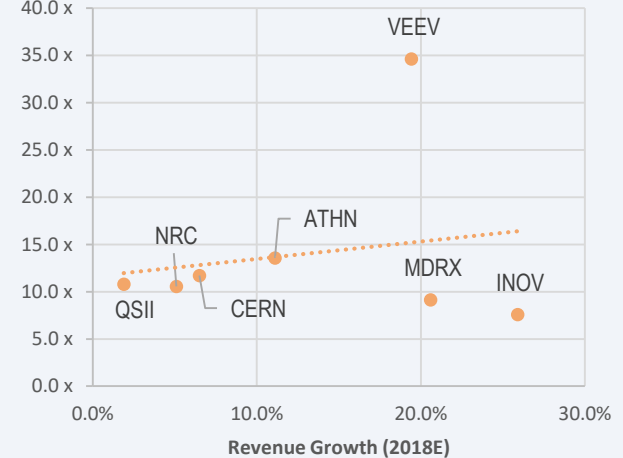
Source: Public Filings, Press Releases and Published Research Reports

(1) As of close June 29, 2018.

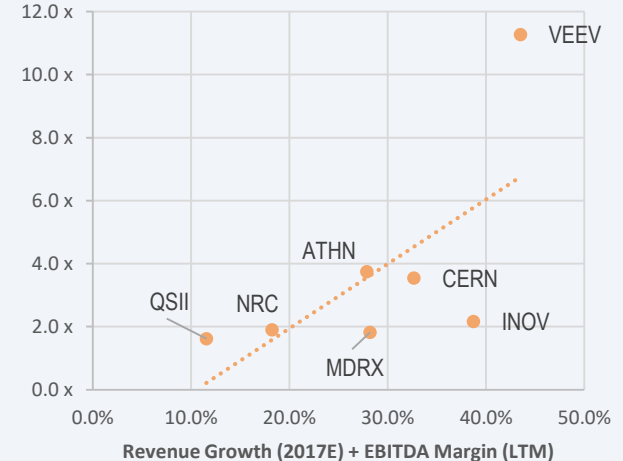
(2) Excludes non-recurring, discontinued operations and stock-based compensation

## Relative Valuation\*\*

EV/EBITDA  
(2018E)



EV/Revenue  
(2017E)



## Select Jun. 2018 Precedent Transactions\*

| Announced | Acquirer | Target | Description   |
|-----------|----------|--------|---|
| June 19   |          |        | • Provides payment solutions for healthcare sector                                |
| June 13   |          |        | • Provides population health management solutions                                 |
| June 12   |          |        | • Provides cloud-based data and analytics solutions to the life sciences industry |
| June 11   |          |        | • Offers information systems consulting for healthcare providers                  |
| June 4    |          |        | • Develops data and analytics software for eye care professionals                 |

Source: CapitalIQ

\*Please contact the MHH Technology Services Group directly for any information regarding valuation and deal size

\*\*Excluded: CSLT

# TECHNOLOGY SERVICES MONTHLY

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# Mufson Howe Hunter

## INVESTMENT BANKERS FOR GROWTH

### The Mufson Howe Hunter Technology Services Indices

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