Appendix—Full survey results
Technology in the mid-market—Closing the gap
A Deloitte Growth Enterprise Services report
November 2017
From July 14 to July 24, 2017, a Deloitte survey of mid-market companies was conducted by OnResearch, a market research firm. The survey examined technology trends taking place in this market segment to determine the role that technology plays and how it influences business decisions.

The 500 survey respondents represented mid-market companies with annual revenues ranging from $100 million to a little over $1 billion. Half of the respondents were C-suite executives, while the remaining executives held other management roles. Seventy-nine percent of the respondents represented companies that are privately held, while the remainder were publicly-traded firms. Thirty-four percent of the respondents were from consumer and industrial products companies; 25 percent represented technology, media and telecommunications companies; the remainder were divided among energy and resources, financial services, life sciences and health care, and other industries.

The full survey results are included in a separate appendix; some percentages in the charts throughout this report may not add up to 100 percent due to rounding, or for questions where survey participants had the option to choose multiple responses.

The report based on these survey findings, Technology in the mid-market—Closing the gap, can be found on our website at www.deloitte.com/us/mid-market-technology.
Business environment

Over the past 12 months, my company’s revenue growth has been:

- **31% or higher**: 4.4% (2017), 2.6% (2016), 6.0% (2015)
- **21% - 30%**: 13.8% (2017), 17.2% (2016), 8.6% (2015)
- **16% - 20%**: 16.2% (2017), 16.6% (2016), 20.2% (2015)
- **5% - 10%**: 32.2% (2017), 29.8% (2016), 25.8% (2015)
- **1% - 4%**: 9.2% (2017), 8.4% (2016), 10.0% (2015)
- **0%**: 0.6% (2017), 0.4% (2016), 1.4% (2015)
- **Negative 1% - 4%**: 2.6% (2017), 2.2% (2016), 2.4% (2015)
- **Negative 5% - 9%**: 1.2% (2017), 0.8% (2016), 0.8% (2015)
- **Negative 10% or lower**: 1.0% (2017), 0.6% (2016), 0.6% (2015)

My company’s business outlook over the next 12 months appears to be:

- **Highly optimistic**: 31.8% (2017), 35.8% (2016), 34.4% (2015)
- **Cautiously optimistic**: 57.4% (2017), 52.2% (2016), 52.0% (2015)
- **Neutral**: 8.6% (2017), 8.8% (2016), 10.8% (2015)
- **Pessimistic**: 1.8% (2017), 2.2% (2016), 2.2% (2015)
- **Highly pessimistic**: 0.4% (2017), 1.0% (2016), 0.6% (2015)
Role and value of technology

Who leads the adoption of new and emerging technologies within your company?

- Business leaders (CEO, CFO, COO, business unit leaders): 23.2%
- IT leaders (CTO, CIO, IT department leaders): 43.0%
- Both Business and IT: 33.6%
- Other: 0.2%

How would you describe the role of executive leadership in your organization with regard to emerging and next-generation technologies (including cloud, mobile, and social)?

- They are leading the charge: 26.6%
- They are actively engaged: 57.4%
- They are passive, but willing to be engaged: 12.8%
- They have bigger fish to fry: 2.0%
- They are actively obstructing change: 0.8%
- Not applicable/don't know: 0.0%

What do you expect will be the most significant impact of digital disruption on your organization in the next 12 months?

- Enable new ways to interact with customers: 20.0%
- Streamline or reduce operational cost: 17.8%
- Help create new lines of services/business: 17.2%
- Increase worker productivity: 16.6%
- Improve business process alignment: 15.4%
- Speed the pace of transactions and business interactions: 12.8%
Role and value of technology (cont.)

What is the biggest IT challenge faced by your organization? Select only one.

- Information security
  - 2015: 26.2%
  - 2017: 28.0%

- Keeping up with new technology
  - 2015: 18.6%
  - 2017: 19.2%
  - 2016: 30.2%

- Budget to implement new technology
  - 2015: 17.8%
  - 2017: 18.8%
  - 2016: 22.2%

- Integrating with legacy systems
  - 2015: 14.6%
  - *Response not offered in prior years.

- Technical complexity
  - 2015: 9.8%
  - *Response not offered in prior years.

- Business partners investing at the same pace as our organization
  - 2015: 7.0%
  - *Response not offered in prior years.

- Not having the right talent/skill set
  - 2015: 5.4%
  - 2016: 4.4%
  - 2017: 10.0%

- Tactical hurdles
  - 2015: 0.0%
  - 2016: 10.8%
  - 2017: 16.8%

- Leadership support
  - 2015: 0.0%
  - 2016: 9.6%
  - 2017: 9.6%

- Understanding ROI
  - 2015: 0.0%
  - 2016: 0.1
  - 2017: 9.6%

- Other
  - 2015: 0.6%
  - 2016: 0.0
  - 2017: 1.6%

Which of the following statements is true about your IT department’s involvement with the end customer of your organization? Select all that apply.

- Our IT department is focused on delivering seamless/integrated customer experiences
  - 2015: 51.8%
  - 2016: 50.2%
  - 2017: 48.4%

- We are actively building technology platforms to better engage with customers
  - 2015: 47.2%
  - 2016: 47.0%
  - 2017: 51.0%

- Our IT department is involved in designing of products and customer solutions
  - 2015: 44.4%
  - 2016: 45.0%
  - 2017: 45.0%

- Our corporate strategy emphasizes customer acquisition, retention and loyalty
  - 2015: 43.0%
  - 2016: 42.4%
  - 2017: 38.6%

- Gathering and analyzing customer data is a priority for the IT organization
  - 2015: 41.4%
  - 2016: 39.4%
  - 2017: 41.3%

- Technology and Marketing departments have established joint processes and governance
  - 2015: 30.6%
  - 2016: 34.0%
  - 2017: 31.8%

- Our IT department has no involvement with the end customer*
  - 2015: 3.2%
  - 2016: 3.2%

None of the above
- 2015: 0.4%
  - 2016: 0.2%
  - 2017: 3.8%

  - 2017
  - 2016
  - 2015
Role and value of technology (cont.)

How would you describe the current state of IT governance within your organization?

Mature with established processes

- 2017: 21.4%
- 2016: 37.0%
- 2015: 34.2%

Building and developing IT governance and processes and structures

- 2017: 46.2%
- 2016: 51.2%
- 2015: 46.8%

Investigating IT process and improvement, but no formal governance in place

- 2017: 24.0%
- 2016: 9.8%
- 2015: 13.8%

Little to no formal IT processes, structures, or awareness

- 2017: 8.4%
- 2016: 2.0%
- 2015: 3.6%

Don't know/Not sure

- 2017: 0.0%
- 2016: 0.0%
- 2015: 1.6%

<table>
<thead>
<tr>
<th>Year</th>
<th>Mature</th>
<th>Building</th>
<th>Investigating</th>
<th>Little</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>21.4%</td>
<td>46.2%</td>
<td>24.0%</td>
<td>8.4%</td>
<td>0.0%</td>
</tr>
<tr>
<td>2016</td>
<td>37.0%</td>
<td>51.2%</td>
<td>9.8%</td>
<td>2.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>2015</td>
<td>34.2%</td>
<td>46.8%</td>
<td>13.8%</td>
<td>3.6%</td>
<td>1.6%</td>
</tr>
</tbody>
</table>
Technology in the mid-market—Closing the gap

Technology spend

What is your company’s current “spend” on technology?

- We do not currently have a separate, identifiable spend
  - 5.0%
  - 7.7%
  - 9.0%

- Our spend is negligible (< 1% of revenue)
  - 9.2%
  - 17.0%
  - 13.8%

- We spend between 1-5% of revenue on technology
  - 50.2%
  - 47.8%
  - 47.4%

- Our spend is above 5% of revenue
  - 35.6%
  - 27.6%
  - 29.9%

- Don’t know
  - 4.6%
  - 0.8%
  - 9.2%

Compared to last year, my company’s current level of technology spend is:

- Significantly higher
  - 11.5%
  - 19.4%
  - 14.6%

- Higher
  - 58.4%
  - 54.1%
  - 52.3%

- About the same
  - 28.6%
  - 24.7%
  - 30.9%

- Lower
  - 1.5%
  - 1.5%
  - 1.7%

- Significantly lower
  - 0.0%
  - 0.2%
  - 0.5%
## Technology spend (cont.)

What areas were the focus of your company’s information technology budget spend in the past 12 months? Select all that apply.

<table>
<thead>
<tr>
<th>Area</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of new information security processes</td>
<td>60.5%</td>
<td>61.2%</td>
</tr>
<tr>
<td>Investing in hardware to mitigate security risks</td>
<td>55.1%</td>
<td>46.2%</td>
</tr>
<tr>
<td>Threat prevention (monitoring/ detection)</td>
<td>54.1%</td>
<td>53.5%</td>
</tr>
<tr>
<td>Investing in software to mitigate security risks</td>
<td>52.0%</td>
<td>51.4%</td>
</tr>
<tr>
<td>Educating employees about risks and adhering to security protocols</td>
<td>51.0%</td>
<td>53.5%</td>
</tr>
<tr>
<td>Hiring or contracting with cybersecurity specialists to address security risk</td>
<td>19.9%</td>
<td>12.6%</td>
</tr>
</tbody>
</table>
Technology trends

What will be your organization’s top three technology priorities for the next 12 months? Select up to three.

- Managing cyber-security and information security risk: 48.0%
- Business innovation - developing new products and services: 35.6%
- Reducing IT costs and simplifying IT architecture: 35.2%
- Aligning business processes to capitalize on technology-enabled opportunities: 34.0%
- Using analytics to anticipate business trends and/or predict business outcomes: 33.4%
- Simplifying IT architecture, infrastructure, and applications: 32.4%
- Moving toward a cloud-first (or cloud-only) architecture: 29.8%
- Redesigning current IT operating and talent model: 18.2%
- Other: 0.4%

Given the rapid pace of change in technology architecture, which IT investment has the potential to produce the greatest benefit for your company?

- Business innovation – developing new products and services: 16.2%
- Aligning business processes to capitalize on technology-enabled opportunities: 15.0%
- Managing cyber-security and information security risk: 14.0%
- Using analytics to anticipate business trends and/or predict business outcomes: 13.8%
- Reducing IT costs and simplifying IT architecture: 12.2%
- Moving toward a cloud-first (or cloud-only) architecture: 11.8%
- Simplifying IT architecture, infrastructure and applications: 11.2%
- Redesigning current IT operating and talent model: 5.8%
Technology trends (cont.)

Which response best describes your organization’s plans to use blockchain?

- Storing and securing digital records (providing control of both data and assets) 33.6%
- Executing smart contracts (automates contracts and compliance streamlining business processes) 24.4%
- Exchanging digital assets (transferring ownership without banks or payment processors) 18.8%
- We are not planning to use blockchain technologies 14.0%
- Other 0.4%
- Don't know/not sure 8.8%
## Technology trends (cont.)

Which of the following technology-related trends had the most significant impact on your business in the past 12 months? (Top ranked responses shown.)

<table>
<thead>
<tr>
<th>Technology</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information security</td>
<td>14.8%</td>
</tr>
<tr>
<td>Cloud infrastructure</td>
<td>11.4%</td>
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<tr>
<td>Analytics</td>
<td>9.6%</td>
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<tr>
<td>Big Data</td>
<td>8.4%</td>
</tr>
<tr>
<td>Cloud integration</td>
<td>7.6%</td>
</tr>
<tr>
<td>Social business/social media</td>
<td>5.8%</td>
</tr>
<tr>
<td>Mobility</td>
<td>5.8%</td>
</tr>
<tr>
<td>Internet of Things (IoT)</td>
<td>5.8%</td>
</tr>
<tr>
<td>Cloud ERP or hybrid cloud applications</td>
<td>5.4%</td>
</tr>
<tr>
<td>Legacy (core) system modernization</td>
<td>5.4%</td>
</tr>
<tr>
<td>Machine intelligence (hardware/device-based AI)</td>
<td>5.4%</td>
</tr>
<tr>
<td>Artificial intelligence</td>
<td>4.0%</td>
</tr>
<tr>
<td>Mixed reality</td>
<td>2.4%</td>
</tr>
<tr>
<td>3D printing (additive manufacturing)</td>
<td>2.0%</td>
</tr>
<tr>
<td>Wearable technologies</td>
<td>1.2%</td>
</tr>
<tr>
<td>None of the above</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

Which of the following technology-related trends will have the most significant impact on your business in the next 12 months? (Top ranked responses shown.)

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<tr>
<td>3D printing (additive manufacturing)</td>
<td>3.2%</td>
</tr>
<tr>
<td>Wearable technologies</td>
<td>3.0%</td>
</tr>
<tr>
<td>None of the above</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

Which of the following technology-related trends currently have the most significant impact on your workforce? (Top ranked responses shown.)

<table>
<thead>
<tr>
<th>Technology</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information security</td>
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<tr>
<td>Analytics</td>
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</tr>
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<td>Internet of Things (IoT)</td>
<td>7.6%</td>
</tr>
<tr>
<td>Mobility</td>
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</tr>
<tr>
<td>Big Data</td>
<td>6.8%</td>
</tr>
<tr>
<td>Social business/social media</td>
<td>6.2%</td>
</tr>
<tr>
<td>Cloud integration</td>
<td>6.2%</td>
</tr>
<tr>
<td>Legacy (core) system modernization</td>
<td>6.0%</td>
</tr>
<tr>
<td>Machine intelligence (hardware/device-based AI)</td>
<td>5.8%</td>
</tr>
<tr>
<td>Cloud ERP or hybrid cloud applications</td>
<td>5.4%</td>
</tr>
<tr>
<td>Artificial intelligence</td>
<td>4.2%</td>
</tr>
<tr>
<td>Wearable technologies</td>
<td>3.4%</td>
</tr>
<tr>
<td>Mixed reality</td>
<td>2.6%</td>
</tr>
<tr>
<td>3D printing (additive manufacturing)</td>
<td>1.2%</td>
</tr>
<tr>
<td>None of the above</td>
<td>5.4%</td>
</tr>
</tbody>
</table>
Which of the following technology-related trends currently have the most significant impact on your customers? (Top ranked responses shown.)

- Information security (cyber intelligence) 13.4%
- Social business/social media 11.2%
- Analytics 9.2%
- Mobility 8.4%
- Internet of Things (IoT) 7.8%
- Cloud infrastructure 6.2%
- Big Data 5.8%
- Cloud integration (cloud-to-cloud package integration) 5.6%
- Artificial intelligence 5.4%
- Machine intelligence (hardware/device-based AI) 4.4%
- Cloud ERP or hybrid cloud applications 3.8%
- Legacy (core) system modernization 3.4%
- Mixed reality (virtual and augmented reality combined with IoT) 3.2%
- Wearable technologies 3.0%
- 3D printing (additive manufacturing) 1.0%
- None of the above 8.2%

Which of the following technology-related trends have the potential to produce the greatest productivity gains for your organization? Select all that apply.

- Cloud infrastructure 37.6%
- Big data 37.0%
- Analytics 36.6%
- Information security (cyber intelligence) 33.4%
- Cloud integration (cloud-to-cloud package integration) 31.8%
- Mobility 29.6%
- Internet of Things (IoT) 28.8%
- Social business/social media 26.6%
- Cloud ERP or hybrid cloud applications 24.6%
- Artificial intelligence 24.0%
- Machine intelligence (hardware/device-based AI) 21.8%
- Legacy (core) system modernization 17.2%
- Wearable technologies 15.8%
- 3D printing (additive manufacturing) 12.8%
- Mixed reality (virtual and augmented reality combined with IoT) 11.2%
- None 0.8%
# Cyber and information security

## Of your company’s technology spend, what percentage is tied to information security? Select only one.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our spend is negligible (&lt; 1% of overall technology spend)</td>
<td>11.0%</td>
<td>15.5%</td>
<td>20.6%</td>
</tr>
<tr>
<td>We spend between 1-5% of overall technology spend on information security</td>
<td>26.4%</td>
<td>22.1%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Our spend on information security is above 5% of overall technology spend</td>
<td>59.9%</td>
<td>61.1%</td>
<td>56.6%</td>
</tr>
<tr>
<td>Don’t know/Not sure</td>
<td>2.6%</td>
<td>1.3%</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

## What are the data privacy and security risk issues of concern to your company? Select all that apply.

<table>
<thead>
<tr>
<th>Risk Issue</th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phishing and targeted attacks*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee-introduced risk compromising data or infrastructure**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Migration to cloud</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration with external systems (business partners, customers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal access controls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cloud-to-cloud vendor package integration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leveraging external cloud hosting providers (e.g., Amazon, MS, Google)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Response not offered in prior years.*

**Employee-introduced risk compromising data or infrastructure**

- 2017: 51.4%, 48.6%, 60.1%
- 2016: 48.0%, 46.8%
- 2015: 0.0%

- 2017: 40.8%, 41.6%, 47.5%
- 2016: 39.2%, 40.0%
- 2015: 52.5%

- 2017: 30.4%, 35.4%
- 2016: 46.2%
- 2015: 46.2%

- 2017: 30.2%
- 2016: 36.8%
- 2015: 38.6%

- 2017: 28.0%
- 2016: 26.4%
- 2015: 26.4%
How does your company mitigate information security risks? Select all that apply.

- We encrypt sensitive information
  - 2017: 53.4%, 2016: 57.8%, 2015: 44.0%

- We have a plan in place to manage internal information security threats
  - 2017: 53.4%, 2016: 51.0%, 2015: 60.8%

- We have a plan in place to manage external information security threats
  - 2017: 50.8%, 2016: 52.0%, 2015: 66.6%

- We offer education and training on information security matters
  - 2017: 48.6%, 2016: 46.8%, 2015: 29.6%

- We have governance structures and procedures in place concerning information security threats
  - 2017: 44.2%, 2016: 43.6%, 2015: 47.4%

- We share threat information with law enforcement and industry peers to avoid risk isolation
  - 2017: 30.2%

  Response not offered in prior years.

- We do not currently have plans in place to mitigate information security risks
  - 2017: 0.0%, 2016: 1.0%, 2015: 0.0%

Other
  - 2017: 0.0%, 2016: 0.2%, 2015: 0.0%

Don't know/Not sure
  - 2017: 0.0%, 2016: 0.0%, 2015: 4.0%
Augmented, virtual and mixed reality

Which term most closely describes your organization’s current use of mixed reality (augmented or virtual reality combined with IoT)?

Mature – successful deployments in production
- 13.6%

Building – in the deployment phase of an AR/VR solution
- 33.2%

Experimenting – pilot projects started or being planned in AR/VR
- 20.2%

Investigating – interested in the potential opportunities augmented or virtual reality offers
- 15.8%

Waiting – no action taken yet
- 9.4%

No action planned – not relevant to our business strategy
- 7.8%

How is your company using mixed reality to support its business goals?

Employee training, education, and learning (e.g., working remotely, virtual meetings, recruiting, learning)
- 52.8%

Operations (e.g., field technicians, warehouse workers using IoT-enabled apps tailored to their unique tasks, advanced machine operation)
- 52.2%

Communication and collaboration (e.g., virtual meetings, simulated training environments)
- 46.3%

Marketing and customer service (e.g., virtual demos, tours, product displays, virtual design walk-through)
- 43.6%

Other
- 0.3%
Cloud

What is the preferred architectural model/approach for cloud within your business?

On-premises: systems, hardware and support staff at your physical location

- 2017: 27.6%
- 2016: 33.8%
- 2015: 36.8%

Hosted solutions: pre-built system run, located and operated at a fixed monthly fee

- 2017: 36.4%
- 2016: 32.8%
- 2015: 26.2%

Hybrid: A mix of on-premises, off-premises solutions based on your application and business needs

- 2017: 26.6%
- 2016: 21.6%
- 2015: 20.6%

Off-premises: systems applications run and managed in the cloud using Software as a Service (SaaS) approach

- 2017: 8.4%
- 2016: 11.4%
- 2015: 13.4%

Don't know

- 2017: 1.0%
- 2016: 0.4%
- 2015: 3.0%

If your preference is off-premises, what are your goals?

Increase flexibility to scale, acquire, divest

- 2017: 42.9%
- 2016: 56.1%
- 2015: 44.8%

Reduce IT CapEx/OpEx costs

- 2017: 33.3%
- 2016: 24.6%
- 2015: 38.8%

Readiness for IFRS

- 2017: 11.9%
- 2016: 3.5%
- 2015: 4.5%

Quickly obtain SOX compliance

- 2017: 9.5%
- 2016: 10.5%
- 2015: 11.9%

Don't know

- 2017: 0.0%
- 2016: 5.3%
- 2015: 0.0%

- 2017
- 2016
- 2015
Cloud (cont.)

If you prefer a hybrid approach, what is most important to your company?

Ability to quickly adjust to a business need/change
- 42.9% (2017)
- 38.0% (2016)
- 40.8% (2015)

Ability to customize
- 21.1% (2017)
- 26.9% (2016)
- 28.2% (2015)

Ability to have IT own your system
- 21.1% (2017)
- 23.1% (2016)
- 19.4% (2015)

Greater control over disaster recovery
- 13.5% (2017)
- 11.1% (2016)
- 8.7% (2015)

Other
- 1.5% (2017)
- 0.0% (2016)
- 1.0% (2015)

Don't know
- 0.0% (2017)
- 0.9% (2016)
- 1.9% (2015)
Cloud (cont.)

For each of the following functions, please describe each function’s relationship to the cloud.

- **Financials and Accounting**
  - Mature: 44.4%
  - Building: 24.4%
  - Experimenting: 15.6%
  - Investigating: 9.6%
  - No action: 3.6%
  - No need: 2.4%

- **Enterprise Resource Planning (ERP)**
  - Mature: 22.6%
  - Building: 41.6%
  - Experimenting: 16.4%
  - Investigating: 10.0%
  - No action: 4.8%
  - No need: 4.6%

- **Customer Relationship Management (CRM)**
  - Mature: 26.0%
  - Building: 35.0%
  - Experimenting: 22.8%
  - Investigating: 9.6%
  - No action: 4.6%
  - No need: 2.0%

- **Human Resources**
  - Mature: 26.2%
  - Building: 29.6%
  - Experimenting: 18.4%
  - Investigating: 17.2%
  - No action: 4.6%
  - No need: 4.0%

- **Enterprise Performance Management (ERM)**
  - Mature: 23.8%
  - Building: 28.0%
  - Experimenting: 20.2%
  - Investigating: 13.0%
  - No action: 9.4%
  - No need: 5.6%

- **Manufacturing Resource Planning (MRP)**
  - Mature: 15.0%
  - Building: 33.4%
  - Experimenting: 17.6%
  - Investigating: 15.0%
  - No action: 5.4%
  - No need: 13.6%

- **Supply Chain Management (SCM)**
  - Mature: 22.4%
  - Building: 25.4%
  - Experimenting: 22.0%
  - Investigating: 13.0%
  - No action: 7.2%
  - No need: 10.0%

- **Knowledge Management System (KMS)**
  - Mature: 19.2%
  - Building: 29.4%
  - Experimenting: 21.8%
  - Investigating: 14.4%
  - No action: 7.0%
  - No need: 8.2%

- **Sales Force Automation (SFA)**
  - Mature: 24.2%
  - Building: 29.2%
  - Experimenting: 22.2%
  - Investigating: 9.6%
  - No action: 7.6%
  - No need: 7.2%

- **Data Warehouse/Analytics**
  - Mature: 25.2%
  - Building: 36.6%
  - Experimenting: 18.8%
  - Investigating: 10.2%
  - No action: 3.4%
  - No need: 5.8%
Cloud (cont.)

What do you consider to be your top three challenges in using cloud-based services? (Top ranked responses shown.)

Confidence in information security
- 2017: 15.2%
- 2016: 18.2%

Ensuring data integrity and reliability
- 2017: 15.0%
- 2016: 14.6%

Cost
- 2017: 14.6%
- 2016: 18.6%

Lack of IT talent with appropriate skill sets
- 2017: 11.0%
- 2016: N/A (Response not offered in 2016)

Cloud-to-cloud application integration
- 2017: 9.6%
- 2016: 9.8%

Complexity of integration with core systems
- 2017: 9.2%
- 2016: 14.0%

Business partner integration
- 2017: 8.4%
- 2016: 6.8%

Business processes and workflow management
- 2017: 7.8%
- 2016: 9.2%

Lack of maturity of cloud vendor solutions
- 2017: 7.8%
- 2016: 7.4%

Don’t know/Not sure
- 2017: 0.8%
- 2016: 1.4%

Please rank your top three reasons to select cloud-based applications. (Top ranked responses shown.)

Improve speed of implementation (time to value)
- 2017: 21.2%
- 2016: 20.8%

Reduce concerns about data security
- 2017: 20.2%
- 2016: 17.0%

Reduce operational expenditure
- 2017: 17.6%
- 2016: 15.2%

Address growth needs-scaling, M&A activity, etc.
- 2017: 16.4%
- 2016: 13.6%

Reduce capital expenditure
- 2017: 13.2%
- 2016: 16.2%

Enable global expansion
- 2017: 11.2%
- 2016: 15.6%
Cloud (cont.)

If you are using or considering more than one cloud-based application or package, what would you say is the greatest challenge?

Integration across all packages
- 2017: 38.2%
- 2016: 40.0%

The ability to manage multiple cloud vendors
- 2017: 21.4%
- 2016: 20.8%

Management of differing cloud solution upgrade cycles
- 2017: 20.6%
- 2016: 22.2%

Resource knowledge (internal or external)
- 2017: 15.8%
- 2016: 15.6%

Other
- 2017: 0.6%
- 2016: 0.2%

Don't know/Not sure
- 2017: 3.4%
- 2016: 1.2%

What items are being hosted in the cloud for your organization? Select all that apply.

- Applications (e.g., email, ERP, CRM): 73.9%
- Infrastructure (virtualized servers and data): 67.2%
- Dev Ops or Testing systems: 39.2%

Related series: 42-45
Internet of Things

As growing numbers of devices are networked, internet-enabled and take action without human intervention, which term most closely describes your organization’s current use of the “Internet of Things” (IoT)?

- Mature — effective deployments
  - 2017: 14.4%
  - 2016: 19.4%
  - 2015: 18.6%

- Building — in the deployment phase of production for Internet of Things
  - 2017: 37.6%
  - 2016: 37.2%
  - 2015: 29.6%

- Experimenting — pilot projects started or being planned
  - 2017: 24.0%
  - 2015: 22.0%
  - 2014: 23.2%

- Investigating — interested in the potential opportunities Internet of Things offers
  - 2017: 15.2%
  - 2016: 15.4%
  - 2015: 14.4%

- Waiting — no action taken yet
  - 2017: 5.8%
  - 2016: 3.8%
  - 2015: 8.0%

- No action planned — not relevant to our business strategy
  - 2017: 3.0%
  - 2016: 2.2%
  - 2015: 6.2%

What type of device or sensor-aware products is your company deploying that can be linked to the “Internet of Things?”

- Machine intelligence sensors (products that provide cognitive contextual monitoring and self-aware data capture)
  - 2017: 62.4%

- Industrial devices (e.g., HVAC, environment sensors, chemical sensors, smart metering, logistics or supply chain tracking)
  - 2017: 57.1%

- Wearable devices provided to employees for work or health tracking (e.g., health/activity sensors, trackers, or security devices like body cams, etc.)
  - 2017: 37.1%

Other
  - 2017: 0.8%
Social media

Which of the following is most important to your company with regard to the use of social platforms for your customer interactions?

- Greater customer intimacy (e.g., sales responsiveness, connectivity) 34.2%
- Monitoring and addressing consumer feedback around product experience 24.6%
- Monitoring and addressing consumer feedback around brand 22.4%
- Delivery and reinforcement of marketing messages 18.0%
- Other 0.2%

How does your organization manage its social media reputation?

- We have teams that monitor messages about our brand (e.g., online mentions on social platforms, tracking social shares) 48.2%
- We engage internally through surveys, polls, contests, etc. 37.8%
- We evaluate online mentions on a case-by-case basis, but don’t have a defined strategy 34.4%
- We use automated tools to monitor messages about our brand 33.6%
- We engage externally through surveys, polls, contests, etc. 33.0%
- We do not have a dedicated team that manages our social strategy 15.8%
- Other 0.4%
Analytics

How is your company using data analytics?
Select all that apply.

- Increase accuracy in forecasting and reporting business results
  - 2017: 64.8%
  - 2016: 61.2%
- Predictive client, customer, or business behavior analysis
  - 2017: 56.4%
  - 2016: 54.2%
- Understanding internal operational patterns and behaviors
  - 2017: 52.4%
  - 2016: 52.4%
- Exposing the value of data to make sound business decisions
  - 2017: 50.0%
  - 2016: 52.0%

Don’t know/Not sure
- 2017: 0.0%
- 2016: 1.2%

We do not use data analytics
- 2017: 0.6%
- 2016: 1.4%


Which business areas are using or leveraging data analytics within your company? Select all that apply.

Sales/customer management
- 2017: 57.6%
- 2016: 57.9%
- 2015: 60.1%

Marketing
- 2017: 46.0%
- 2016: 43.9%
- 2015: 49.1%

Manufacturing
- 2017: 41.8%
- 2016: 40.8%
- 2015: 32.7%

Finance/tax
- 2017: 31.4%
- 2016: 38.8%
- 2015: 42.4%

Human resources
- 2017: 31.4%
- 2016: 35.7%
- 2015: 32.9%

Other
- 2017: 2.4%
- 2016: 1.6%
- 2015: 2.1%

Don’t know/not applicable
- 2017: 0.0%
- 2016: 0.8%
- 2015: 2.1%
Analytics (cont.)

Within Human Resources, which are the areas where your company leverages data analytics? Select all that apply.

<table>
<thead>
<tr>
<th>Area</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance and productivity</td>
<td>66.2%</td>
<td></td>
</tr>
<tr>
<td>Workforce planning</td>
<td>52.9%</td>
<td>62.6%</td>
</tr>
<tr>
<td>Compensation and benefits</td>
<td>49.0%</td>
<td>59.8%</td>
</tr>
<tr>
<td>Talent retention and attrition prediction</td>
<td>44.6%</td>
<td>54.0%</td>
</tr>
<tr>
<td>Talent sourcing and acquisition</td>
<td>43.9%</td>
<td>59.2%</td>
</tr>
<tr>
<td>Leadership talent recognition</td>
<td>39.5%</td>
<td></td>
</tr>
</tbody>
</table>

Machine intelligence requires a new way of thinking about data analysis, more as a way to automate tasks and gain efficiencies. Which one of the following approaches could be most beneficial in your organization in the next 24 months?

<table>
<thead>
<tr>
<th>Approach</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive insights</td>
<td>43.2%</td>
</tr>
<tr>
<td>Cognitive engagement</td>
<td>32.8%</td>
</tr>
<tr>
<td>Cognitive automation</td>
<td>17.8%</td>
</tr>
</tbody>
</table>

We don't anticipate using cognitive machine intelligence in the next 24 months

6.2%

How is your company using machine intelligence?

<table>
<thead>
<tr>
<th>Approach</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automating the analysis of data to anticipate business outcomes</td>
<td>62.0%</td>
</tr>
<tr>
<td>Cognitive interpretation of images, text, or data to create outcomes to support data categorization, mapping, and retrieval</td>
<td>53.7%</td>
</tr>
<tr>
<td>Robotic process automation to mimic human behaviors or tasks</td>
<td>33.3%</td>
</tr>
<tr>
<td>Natural language engines to interpret spoken words to accelerate processing</td>
<td>32.4%</td>
</tr>
<tr>
<td>Other</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

We are not currently using machine intelligence

4.3%

Don't know/not

0.4%
### Survey respondent demographics

#### What was your company’s 2016 annual revenue in U.S. dollars?

<table>
<thead>
<tr>
<th>Revenue Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between $100 million and $249.99 million</td>
<td>22.4%</td>
</tr>
<tr>
<td>Between $250 million and $499.99 million</td>
<td>22.6%</td>
</tr>
<tr>
<td>Between $500 million and $749.99 million</td>
<td>23.2%</td>
</tr>
<tr>
<td>Between $750 million and $1 billion</td>
<td>21.0%</td>
</tr>
<tr>
<td>More than $1 billion</td>
<td>10.8%</td>
</tr>
</tbody>
</table>

#### Which of the following best describes your title?

<table>
<thead>
<tr>
<th>Title</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner/partner</td>
<td>9.4%</td>
</tr>
<tr>
<td>CEO</td>
<td>13.8%</td>
</tr>
<tr>
<td>President</td>
<td>1.8%</td>
</tr>
<tr>
<td>CFO</td>
<td>2.8%</td>
</tr>
<tr>
<td>CIO</td>
<td>8.6%</td>
</tr>
<tr>
<td>COO</td>
<td>1.2%</td>
</tr>
<tr>
<td>CTO</td>
<td>9.6%</td>
</tr>
<tr>
<td>Other C-level</td>
<td>1.0%</td>
</tr>
<tr>
<td>Senior vice president/vice president</td>
<td>5.4%</td>
</tr>
<tr>
<td>Head of business unit</td>
<td>2.8%</td>
</tr>
<tr>
<td>Head of department</td>
<td>7.8%</td>
</tr>
<tr>
<td>Controller</td>
<td>0.4%</td>
</tr>
<tr>
<td>Senior director/director</td>
<td>12.0%</td>
</tr>
<tr>
<td>Senior manager/manager</td>
<td>21.6%</td>
</tr>
<tr>
<td>Chief Diversity/Inclusion Officer</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

#### Approximately how many full-time staff are employed by your business?

<table>
<thead>
<tr>
<th>Number of Staff</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 100</td>
<td>3.2%</td>
</tr>
<tr>
<td>100-499</td>
<td>17.0%</td>
</tr>
<tr>
<td>500-999</td>
<td>24.6%</td>
</tr>
<tr>
<td>1,000-2,999</td>
<td>31.4%</td>
</tr>
<tr>
<td>3,000 or more</td>
<td>23.8%</td>
</tr>
</tbody>
</table>

#### In which sector does your company operate?

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer &amp; Industrial Products</td>
<td>33.8%</td>
</tr>
<tr>
<td>Energy &amp; Resources</td>
<td>5.4%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>18.8%</td>
</tr>
<tr>
<td>Life Sciences &amp; Health Care</td>
<td>11.6%</td>
</tr>
<tr>
<td>Technology, Media &amp; Telecommunications</td>
<td>25.4%</td>
</tr>
<tr>
<td>Business Services</td>
<td>2.8%</td>
</tr>
<tr>
<td>Other</td>
<td>2.2%</td>
</tr>
</tbody>
</table>
Survey respondent demographics (cont.)

Which of the following describes your level of knowledge regarding your organization's information technology?

- I am very knowledgeable about our information technology: 79.8%
- I am somewhat knowledgeable: 20.2%

Is your company private or public?

- Private: 78.8%
- Public: 21.2%

If private, which category best describes your company?

- Family-owned: 20.1%
- Closely held (excl. family-owned): 31.5%
- Private equity owned: 47.5%
- Other: 1.0%

In which state is your company's headquarters located? (Number of respondents shown.)
Perspectives
This report is just one example of Deloitte research on topics of interest to mid-market companies, including private enterprises. Presented by Deloitte Growth Enterprise Services, Perspectives is a multifaceted program that utilizes live events, signature reports, research publications, webcasts, newsletters, and other vehicles to deliver tailored and relevant insights in an integrated fashion.

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Acknowledgment
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Contacts

Roger Nanney  
National Managing Partner  
Deloitte Growth Enterprise Services  
Deloitte LLP  
rnanney@deloitte.com

Doug Beaudoin  
National Consulting Leader  
Deloitte Growth Enterprise Services  
Deloitte Consulting LLP  
dbeaudoin@deloitte.com

Anthony Stephan  
Technology Strategy and Transformation Leader  
Deloitte Consulting LLP  
astephan@deloitte.com

Chris Jackson  
Chief of Staff  
Deloitte Growth Enterprise Services  
Deloitte Consulting LLP  
cajackson@deloitte.com

Matt Law  
Cloud Market Offering leader  
Deloitte Consulting LLP  
mlaw@deloitte.com

John Little  
National Risk and Financial Advisory Leader  
Deloitte Growth Enterprise Services  
Deloitte Transactions & Business Analytics LLP  
jolittle@deloitte.com

Eric Piscini  
Global FSI Digital Transformation and Blockchain Leader  
Deloitte Consulting LLP  
episcini@deloitte.com

Bob Rosone  
Managing Director  
Deloitte Growth Enterprise Services  
Deloitte LLP  
rrosone@deloitte.com

Research and editorial lead
Janet Hastie  
Senior Marketing Manager  
Deloitte Services LP

Report design  
Isaac Brynjegard-Bialik  
Senior Manager  
Deloitte LLP