Appendix—Full survey results
Technology in the mid-market—Taking ownership
A Deloitte Growth Enterprise Services report
August 2016
From June 17 to July 5, 2016, 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 more than $1 billion. Nearly six out of every 10 respondents were C-suite executives, while the remaining executives held other management roles. Eighty percent of the respondents represented companies that are privately held, while the remainder represented publicly-traded firms. Just over one third of the respondents were from technology, media and telecommunications companies; one quarter hailed from consumer and industrial products 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 this appendix; some percentages in the charts throughout this appendix may not add 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—Taking ownership, 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:**

<table>
<thead>
<tr>
<th>Growth Rate</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>31% or higher</td>
<td>2.6%</td>
<td>6.0%</td>
<td>6.8%</td>
</tr>
<tr>
<td>21% - 30%</td>
<td>17.2%</td>
<td>8.6%</td>
<td>12.2%</td>
</tr>
<tr>
<td>16% - 20%</td>
<td>16.6%</td>
<td>20.2%</td>
<td>11.0%</td>
</tr>
<tr>
<td>11% - 15%</td>
<td>21.4%</td>
<td>24.2%</td>
<td>22.6%</td>
</tr>
<tr>
<td>5% - 10%</td>
<td>29.8%</td>
<td>25.8%</td>
<td>28.2%</td>
</tr>
<tr>
<td>1% - 4%</td>
<td>8.4%</td>
<td>10.0%</td>
<td>12.2%</td>
</tr>
<tr>
<td>0%</td>
<td>0.4%</td>
<td>1.4%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

**How has your company’s headcount changed over the last 12 months?**

- **Increased 10% or more**
  - 2016: 15.0%
  - 2015: 15.2%
  - 2014: 16.4%

- **Increased between 6% and 9%**
  - 2016: 22.4%

- **Increased up to 5%**
  - 2016: 34.2%
  - 2015: 34.2%
  - 2014: 32.8%

- **No change/stayed the same**
  - 2016: 10.6%
  - 2015: 20.2%
  - 2014: 23.6%

- **Decreased by 5% or less**
  - 2016: 5.4%
  - 2015: 5.2%
  - 2014: 8.8%

- **Decreased between 6% and 9%**
  - 2016: 0.8%
  - 2015: 2.2%
  - 2014: 2.2%

- **Decreased 10% or more**
  - 2016: 1.0%
  - 2015: 0.8%
  - 2014: 1.0%

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

- **Highly optimistic**
  - 2016: 35.8%
  - 2015: 34.4%
  - 2014: 23.8%

- **Cautiously optimistic**
  - 2016: 52.2%
  - 2015: 52.0%
  - 2014: 58.4%

- **Neutral**
  - 2016: 8.8%
  - 2015: 10.8%
  - 2014: 14.8%

- **Pessimistic**
  - 2016: 2.2%
  - 2015: 2.2%
  - 2014: 2.8%

- **Highly pessimistic**
  - 2016: 1.0%
  - 2015: 0.6%
  - 2014: 0.2%
Business environment (cont.)

Please indicate your level of agreement with the following statement: “Operating globally is important to my company’s overall strategy.”

Strongly agree
- 46.0%
- 38.0%
- 33.6%

Agree
- 41.6%
- 37.0%
- 32.4%

Neither agree nor disagree
- 6.2%
- 11.2%
- 13.8%

Disagree
- 4.0%
- 9.8%
- 12.6%

Strongly disagree
- 2.2%
- 4.0%
- 7.6%
Technology trends

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

- We do not currently have a separate, identifiable spend: 14.2%
- Our spend is negligible (<1% of revenue): 18.6%
- We spend between 1-5% of revenue on technology: 47.8%
- Our spend is above 5% of revenue: 29.9%
- Don’t know: 0.8%

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

- Significantly higher: 19.4%
- Higher: 54.1%
- About the same: 30.9%
- Lower: 3.4%
- Significantly lower: 0.2%

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

- Business leaders (CEO, CFO, COO, business unit): 26.6%
- IT leaders (CTO, CIO, IT department leaders): 49.0%
- Both Business and IT: 24.2%
- Other: 0.2%

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

- Implementation of new information security processes: 61.2%
- Threat prevention (monitoring/detection): 53.5%
- Educating employees about risks and adhering to security protocols: 53.5%
- Investing in software to mitigate security risks: 51.4%
- Investing in hardware to mitigate security risks: 46.2%
- Hiring or contracting with cybersecurity specialists to address security risks: 12.6%
Technology trends (cont.)

<table>
<thead>
<tr>
<th>How does your organization handle adoption of new technology trends?</th>
<th>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)?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Driven by IT leadership</strong></td>
<td>They are leading the charge</td>
</tr>
<tr>
<td><img src="image1" alt="Percentage" /></td>
<td><img src="image2" alt="Percentage" /></td>
</tr>
<tr>
<td><img src="image3" alt="Percentage" /></td>
<td><img src="image4" alt="Percentage" /></td>
</tr>
<tr>
<td><strong>We have processes in place for exploring emerging technologies</strong></td>
<td>They are actively engaged</td>
</tr>
<tr>
<td><img src="image5" alt="Percentage" /></td>
<td><img src="image6" alt="Percentage" /></td>
</tr>
<tr>
<td><img src="image7" alt="Percentage" /></td>
<td><img src="image8" alt="Percentage" /></td>
</tr>
<tr>
<td><strong>Driven largely by business leadership direction</strong></td>
<td>They are passive, but willing to be engaged</td>
</tr>
<tr>
<td><img src="image9" alt="Percentage" /></td>
<td><img src="image10" alt="Percentage" /></td>
</tr>
<tr>
<td><img src="image11" alt="Percentage" /></td>
<td><img src="image12" alt="Percentage" /></td>
</tr>
<tr>
<td><strong>Specialized business units are focused on innovation</strong></td>
<td>They have bigger fish to fry</td>
</tr>
<tr>
<td><img src="image13" alt="Percentage" /></td>
<td><img src="image14" alt="Percentage" /></td>
</tr>
<tr>
<td><img src="image15" alt="Percentage" /></td>
<td><img src="image16" alt="Percentage" /></td>
</tr>
<tr>
<td><strong>Reactionary (driven by customer/supplier need or demand)</strong></td>
<td>They are actively obstructing change</td>
</tr>
<tr>
<td><img src="image17" alt="Percentage" /></td>
<td><img src="image18" alt="Percentage" /></td>
</tr>
<tr>
<td><img src="image19" alt="Percentage" /></td>
<td><img src="image20" alt="Percentage" /></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Not applicable/don't know</td>
</tr>
<tr>
<td><img src="image21" alt="Percentage" /></td>
<td><img src="image22" alt="Percentage" /></td>
</tr>
<tr>
<td><img src="image23" alt="Percentage" /></td>
<td><img src="image24" alt="Percentage" /></td>
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</table>
Technology trends (cont.)

Technology is often perceived differently in organizations. How does your company's leadership value the role that technology plays? Select only one.

- Critical (differentiator and key to growth)
  - 2016: 35.8%
  - 2015: 48.0%
  - 2014: 40.8%

- Strategic (not an expense, but more of an investment)
  - 2016: 52.0%
  - 2015: 35.6%
  - 2014: 37.8%

- Necessary (sometimes an investment, but often seen as an expense)
  - 2016: 11.0%
  - 2015: 15.2%
  - 2014: 19.8%

- Not critical (necessary but certainly not an investment, only an expense)
  - 2016: 1.2%
  - 2015: 1.2%
  - 2014: 1.8%

How would you describe your organization’s spend on the maintenance of existing systems as compared to investment in the implementation of the latest technology (e.g., an 80-20 mix will include 80% of budget spend on maintenance, with 20% invested in the implementation of new technology)?

- 80-20
  - 2016: 15.1%
  - 2015: 20.9%

- 60-40
  - 2016: 33.0%
  - 2015: 29.5%

- 50-50
  - 2016: 26.4%
  - 2015: 25.7%

- 40-60
  - 2016: 16.6%
  - 2015: 14.1%

- 20-80
  - 2016: 6.6%
  - 2015: 5.5%

Other
  - 2016: 1.5%
  - 2015: 1.9%

Don’t know
  - 2016: 0.9%
  - 2015: 2.4%
Technology trends (cont.)

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
  - 2016: 50.2%, 2015: 48.4%

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

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

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

- Gathering and analyzing customer data is a priority for the IT organization
  - 2016: 39.4%, 2015: 41.8%

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

- Our IT department has no involvement with the end customer*
  - 2016: 3.2%, 2015: 0.0%

None of the above
  - 2016: 0.2%, 2015: 3.8%

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

- Information security*
  - 2016: 28.0%, 2015: 0.0%

- Keeping up with new technology
  - 2016: 30.2%, 2015: 24.2%

- Budget to implement new technology
  - 2016: 18.9%, 2015: 22.2%

- Tactical hurdles
  - 2016: 16.8%, 2015: 13.4%

- Leadership support
  - 2016: 9.6%, 2015: 8.8%

- Understanding ROI
  - 2016: 12.4%, 2015: 8.8%

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

- Other
  - 2016: 1.6%, 2015: 1.6%

*Response not offered in prior years
Technology trends (cont.)

Please indicate how technology has generated changes within your business. Select all that apply.

- Increased overall productivity to free up talent to assume new or additional responsibilities
  - 49.6%
  - 55.0%

- Enhanced business planning and execution of strategies
  - 49.2%
  - 48.0%

- Streamlined business processes to reduce cost
  - 46.4%
  - 50.4%

- Increased customer conversion or retention by detecting patterns of behaviors
  - 45.0%
  - 48.0%

- Simplified maintenance of business assets, equipment
  - 43.8%
  - 47.8%

- Detection of anomalies, disruptions, threats to the business
  - 35.4%
  - 36.4%

Other
- 0.2%
- 6.0%

Don't know/Not sure
- 0.0%
- 2.0%

Not applicable
- 0.8%
- 1.8%

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

- Mature with established processes
  - 37.0%
  - 34.2%
  - 36.2%

- Building and developing IT governance and processes and structures
  - 51.2%
  - 46.8%
  - 47.8%

- Investigating IT process and improvement, but no formal governance in place
  - 9.8%
  - 13.8%
  - 11.2%

- Little to no formal IT processes, structures, or awareness
  - 2.0%
  - 3.6%
  - 4.8%

- Don't know/Not sure
  - 0.0%
  - 1.6%
  - 0.0%

- 2016
- 2015
- 2014
Technology trends (cont.)

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

- Managing cybersecurity and information risk: 35.8% (2016), 35.2% (2015)
- Improving existing business processes: 33.6% (2016), 38.8% (2015)
- Reducing IT costs and driving efficiency: 31.6% (2016), 27.0% (2015)
- Maintaining availability and performance of IT systems: 27.2% (2016), 27.4% (2015)
- Simplifying IT infrastructure and applications: 26.0% (2016), 25.0% (2015)
- Assisting in business innovation - developing new products and services: 25.2% (2016), 25.4% (2015)
- Adjusting/redesigning current IT operating model: 24.6% (2016), 17.0% (2015)
- Driving large complex technology implementation projects: 22.8% (2016), 22.4% (2015)
- Developing/improving the organization’s digital capability: 21.4% (2016), 23.4% (2015)
- Providing timely and relevant information to business stakeholders: 16.4% (2016), 23.8% (2015)

Other: 0.0% (2016), 0.6% (2015)

Don’t know/Not sure: 0.0% (2016), 2.0% (2015)
Technology trends (cont.)

What are the biggest drivers of technology investment at your organization? Select and rank the top three.

**Ranked #1**
- Increase productivity* 23.6%
- Improve information security* 18.1%
- Increase revenue 40.8%
- Increase customer base 25.2%
- Comply with government regulations* 10.7%
- Reduce capital expenditures 17.0%
- Reduce operating expenditures 12.5%
- Other 1.7%
- Don't know / Not sure 2.9%

**Ranked #2**
- Increase productivity* 17.2%
- Improve information security* 18.6%
- Increase revenue 28.1%
- Increase customer base 32.8%
- Comply with government regulations* 10.0%
- Reduce capital expenditures 23.2%
- Reduce operating expenditures 15.1%
- Other 0.7%
- Don't know / Not sure 0.0%

**Ranked #3**
- Increase productivity* 14.8%
- Improve information security* 18.3%
- Increase revenue 18.5%
- Increase customer base 18.8%
- Comply with government regulations* 8.5%
- Reduce capital expenditures 28.1%
- Reduce operating expenditures 33.8%
- Other 0.0%
- Don't know / Not sure 0.0%

*Response not offered in prior years

2016
- Increase productivity
- Improve information security
- Increase revenue
- Increase customer base
- Comply with government regulations
- Reduce capital expenditures
- Reduce operating expenditures
- Other
- Don't know / Not sure

2015
- Increase productivity
- Improve information security
- Increase revenue
- Increase customer base
- Comply with government regulations
- Reduce capital expenditures
- Reduce operating expenditures
- Other
- Don't know / Not sure
Technology trends (cont.)

**What is the preferred technology approach model for your business?**

- **On-premises:** systems, hardware and support staff at your physical location
  - 33.8%
  - 36.8%
  - 35.0%

- **Hosted solutions:** pre-built system run, located and operated at a fixed monthly fee
  - 32.8%
  - 26.2%
  - 23.6%

- **Hybrid:** A mix of on-premises, off-premises solutions based on your application and business needs
  - 21.6%
  - 20.6%
  - 20.6%

- **Off-premises:** systems applications run and managed in the cloud using Software as a Service (SaaS) approach
  - 11.4%
  - 13.4%
  - 14.4%

- **Other**
  - 0.0%
  - 0.0%
  - 0.2%

- **Don't know**
  - 0.4%
  - 3.0%
  - 6.2%

**For hosted solutions, what is your preference?**

- **On-premises as a fixed price traditional variable licensing model**
  - 45.7%
  - 49.6%
  - 48.3%

- **A fixed monthly cost for your hosted preconfigured solution**
  - 33.6%
  - 32.2%

- **Off-premises leading practice design solution with little ability to customize and pay-as-you-go pricing**
  - 9.1%
  - 14.5%
  - 18.6%

- **Don't know**
  - 1.0%
  - 2.3%
  - 0.8%
Technology in the mid-market—Taking ownership

## Technology trends (cont.)

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

- **Increase flexibility to scale, acquire, divest**: 56.1% (2016), 44.8% (2015), 51.4% (2014)
- **Reduce IT CapEx/OpEx costs**: 24.6% (2016), 38.8% (2015), 23.6% (2014)
- **Quickly obtain SOX compliance**: 10.5% (2016), 11.9% (2015), 12.5% (2014)
- **Readiness for IFRS**: 3.5% (2016), 4.5% (2015), 6.9% (2014)
- **Don’t know**: 5.3% (2016), 0.0% (2015), 5.6% (2014)

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

- **Ability to quickly adjust to a business need/change**: 38.0% (2016), 40.8% (2015), 46.6% (2014)
- **Ability to customize**: 26.9% (2016), 28.2% (2015), 17.5% (2014)
- **Ability to have IT own your system**: 23.1% (2016), 19.4% (2015), 21.4% (2014)
- **Greater control over disaster recovery**: 11.1% (2016), 8.7% (2015), 10.7% (2014)
- **Other**: 0.0% (2016), 1.0% (2015), 1.0% (2014)
- **Don’t know**: 0.9% (2016), 1.9% (2015), 2.9% (2014)
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>Impact (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information security (cyber intelligence)</td>
<td>17.2%</td>
</tr>
<tr>
<td>Cloud infrastructure</td>
<td>13.0%</td>
</tr>
<tr>
<td>Analytics</td>
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</tr>
<tr>
<td>Cloud ERP or hybrid cloud applications</td>
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<tr>
<td>Big Data</td>
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<tr>
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<tr>
<td>Legacy (core) system modernization</td>
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<tr>
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<td>6.0%</td>
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<tr>
<td>Artificial intelligence</td>
<td>4.6%</td>
</tr>
<tr>
<td>Virtual/augmented reality</td>
<td>4.0%</td>
</tr>
<tr>
<td>Wearable technologies</td>
<td>3.0%</td>
</tr>
<tr>
<td>3D printing (additive manufacturing)</td>
<td>2.2%</td>
</tr>
<tr>
<td>None of the above</td>
<td>2.8%</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.)

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

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Technology in the mid-market—Taking ownership

Technology trends (cont.)

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<table>
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<tr>
<th>Which of the following technology-related trends have the potential to produce the greatest productivity gains for your organization? Select all that apply.</th>
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<tr>
<td>Social business/social media</td>
</tr>
<tr>
<td>Legacy (core) system modernization</td>
</tr>
<tr>
<td>Artificial intelligence</td>
</tr>
<tr>
<td>Wearable technologies</td>
</tr>
<tr>
<td>Virtual/augmented reality</td>
</tr>
<tr>
<td>3D printing (additive manufacturing)</td>
</tr>
<tr>
<td>None of the above</td>
</tr>
</tbody>
</table>
Cyber and information security

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

- Our spend is negligible (< 1% of overall technology spend)
  - 15.5%
  - 20.6%

- We spend between 1-5% of overall technology spend on information security
  - 61.1%
  - 56.6%

- Our spend on information security is above 5% of overall technology spend
  - 22.1%
  - 19.4%

- Don’t know/Not sure
  - 1.3%
  - 3.4%

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

- Phishing and targeted attacks*
  - 48.6%
  - 60.1%
  - 0.0%

- Employee-introduced risk compromising data or infrastructure**
  - 0.0%
  - 46.8%
  - 0.0%

- Migration to cloud
  - 41.6%
  - 47.5%
  - 45.9%

- Integration with external systems (business partners, customers)
  - 40.0%
  - 52.5%
  - 49.4%

- Mobility
  - 36.8%
  - 38.6%
  - 30.2%

- Internal access controls
  - 35.4%
  - 46.2%
  - 44.8%

- 2016
- 2015
- 2014
Cyber and information security (cont.)

How does your company mitigate information security risks? Select all that apply.

- We encrypt sensitive information: 57.8% (44.0%)
- We have a plan in place to manage external information security threats: 52.0% (66.6%)
- We have a plan in place to manage internal information security threats: 51.0% (60.8%)
- We offer education and training on information security matters: 46.8% (29.6%)
- We have governance structures and procedures in place concerning information security threats: 43.6% (47.4%)
- We do not currently have plans in place to mitigate information security risks: 1.0% (0.0%)
- Other: 0.2% (0.0%)
- Don't know/Not sure: 0.0% (4.0%)

*Response not offered in prior years
Cloud

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

Financials and Accounting
- Mature: 57.0%
- Building: 20.8%
- Experimenting: 9.8%
- Investigating: 4.4%
- No action: 2.2%

Enterprise Resource Planning (ERP)
- Mature: 33.6%
- Building: 39.2%
- Experimenting: 13.8%
- Investigating: 0.6%
- No action: 4.2%

Customer Relationship Management (CRM)
- Mature: 33.0%
- Building: 31.4%
- Experimenting: 21.4%
- Investigating: 7.8%
- No action: 4.2%

Human Resources
- Mature: 32.6%
- Building: 31.2%
- Experimenting: 13.6%
- Investigating: 13.0%
- No action: 4.0%

Enterprise Performance Management (ERM)
- Mature: 31.0%
- Building: 27.4%
- Experimenting: 19.6%
- Investigating: 8.8%
- No action: 4.4%

Manufacturing Resource Planning (MRP)
- Mature: 32.8%
- Building: 24.2%
- Experimenting: 17.2%
- Investigating: 9.6%
- No action: 6.4%

Supply Chain Management (SCM)
- Mature: 29.6%
- Building: 26.8%
- Experimenting: 19.4%
- Investigating: 9.6%
- No action: 9.8%

Knowledge Management System (KMS)
- Mature: 27.0%
- Building: 29.6%
- Experimenting: 19.2%
- Investigating: 12.6%
- No action: 5.2%

Sales Force Automation (SFA)
- Mature: 21.4%
- Building: 24.6%
- Experimenting: 22.6%
- Investigating: 9.2%
- No action: 6.2%

Data Warehouse/Analytics
- Mature: 31.0%
- Building: 33.8%
- Experimenting: 17.8%
- Investigating: 9.2%
- No action: 4.0%

Legend:
- Mature: successful deployments
- Building: in the deployment phase of production
- Experimenting: pilot projects started or being planned
- Investigating: interested in the potential opportunities
- No action/Waiting
- No action/No need
Cloud (cont.)

What is the most significant factor influencing the pace of your organization’s current adoption of cloud-based services? Select only one.

Integrating with existing applications and infrastructure
- 2016: 25.6%
- 2015: 28.3%
- 2014: 23.4%

Issues concerning data privacy and security risks
- 2016: 23.8%
- 2015: 35.5%
- 2014: 34.4%

Understanding business drivers and value proposition of cloud-based services
- 2016: 17.2%
- 2015: 14.7%
- 2014: 15.8%

Need for greater “speed to value” in terms of traditional on-premises IT implementation *
- 2016: 16.4%
- 2015: 0.2%
- 2014: 0.0%

Funding, staffing and talent
- 2016: 14.8%
- 2015: 15.0%
- 2014: 13.0%

No need at this time
- 2016: 1.6%
- 2015: 2.0%
- 2014: 7.4%

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

- Cost: 18.6%
- Confidence in information security: 18.2%
- Ensuring data integrity and reliability: 14.6%
- Complexity of integration with core systems: 14.0%
- Cloud-to-cloud application integration: 9.8%
- Business processes and workflow management: 9.2%
- Lack of maturity of cloud vendor solutions: 7.4%
- Business partner integration: 6.8%
- Don't know/Not sure: 1.4%
Cloud (cont.)

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

- Improve speed of implementation (time to value) 20.8%
- Reduce concerns about data security 17.0%
- Reduce capital expenditure 16.2%
- Enable global expansion 15.6%
- Reduce operational expenditure 15.2%
- Address growth needs-scaling, M&A activity, etc. 13.6%

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 40.0%
- Management of differing cloud solution upgrade cycles 22.2%
- The ability to manage multiple cloud vendors 20.8%
- Resource knowledge (internal or external) 15.6%
- Other 0.2%
- Don't know/Not sure 1.2%
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
- 19.4%
- 18.6%

Building — in the deployment phase of production for Internet of Things
- 37.2%
- 29.6%

Experimenting — pilot projects started or being planned
- 22.0%
- 23.2%

Investigating — interested in the potential opportunities Internet of Things offers
- 15.4%
- 14.4%

Waiting — no action taken yet
- 3.8%
- 8.0%

No action planned — not relevant to our business strategy
- 2.2%
- 6.2%

If your company develops products linked to the “Internet of Things,” how would you categorize these products?

- Smart hybrid cloud monitoring: 50.6%
- Smart industrial devices: 47.6%
- Smart consumer devices: 43.2%
- We do not develop products linked to IoT: 10.0%

What are some common applications for the Internet of Things that your company is pursuing? Select all that apply.

- Tracking business processes: 47.0%
- Tracking customer behavior: 45.2%
- Tracking employee productivity: 42.0%
- Predicting customer behavior: 37.8%
- Help in managing supplier behavior: 36.6%
- Monitoring hybrid cloud: 35.6%
- Other: 0.6%
- We do not utilize products linked to the IoT: 5.8%
Analytics

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

- Increase accuracy in forecasting and reporting business results: 61.2%
- Predictive client, customer, or business behavior analysis: 54.2%
- Understanding internal operational patterns and behaviors: 52.4%
- Exposing the value of data to make sound business decisions: 52.0%
- Don’t know/Not sure: 1.2%
- We do not use data analytics: 1.4%

What would your organization see as the greatest value of data analytics?

- Increased operational effectiveness: 32.9% (2016), 38.5% (2015), 28.0% (2014)
- Greater competitive edge in understanding customer trends: 26.7% (2016), 26.0% (2015), 25.2% (2014)
- Increased customer intimacy: 21.0% (2016), 7.0% (2015), 6.2% (2014)
- Ability to predictively manage aspects of the business: 19.3% (2016), 26.0% (2015), 32.8% (2014)
- Other: 0.0% (2016), 0.2% (2015), 0.4% (2014)
- Don’t know/Not sure: 0.2% (2016), 1.4% (2015), 7.4% (2014)
## Analytics (cont.)

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

<table>
<thead>
<tr>
<th>Area</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales/customer management</td>
<td>57.9%</td>
<td>60.1%</td>
<td>42.2%</td>
</tr>
<tr>
<td>Marketing</td>
<td>43.9%</td>
<td>49.1%</td>
<td>34.2%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>40.8%</td>
<td>32.7%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Finance/tax</td>
<td>38.8%</td>
<td>42.4%</td>
<td>33.0%</td>
</tr>
<tr>
<td>Human resources</td>
<td>35.7%</td>
<td>32.9%</td>
<td>18.6%</td>
</tr>
<tr>
<td>Other</td>
<td>1.6%</td>
<td>2.1%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Don’t know/not applicable</td>
<td>0.8%</td>
<td>2.1%</td>
<td>11.2%</td>
</tr>
</tbody>
</table>

Which term most closely describes your organization’s current use of predictive (cognitive) analytics?

- Mature — successful deployments (e.g. ERP, DRM, HR)
  - 2016: 25.1%  
  - 2015: 21.4%  
- Building — in the deployment phase of production for predictive (cognitive) analytics
  - 2016: 30.6%  
  - 2015: 41.5%  
- Experimenting — pilot projects started or being planned
  - 2016: 19.6%  
  - 2015: 18.2%  
- Investigating — interested in the potential opportunities predictive (cognitive) analytics offer
  - 2016: 19.0%  
  - 2015: 12.0%  
- Waiting — no action taken yet
  - 2016: 5.5%  
  - 2015: 5.3%  
- No action planned — not relevant to our business strategy
  - 2016: 0.0%  
  - 2015: 1.6%  

2016  
2015  
2014
## Analytics (cont.)

### How would you describe the quality of data within your organization?

<table>
<thead>
<tr>
<th>Category</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fragmented and no clear structure or format across business areas</td>
<td>21.2%</td>
<td>20.4%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Need moderate data cleansing</td>
<td>19.7%</td>
<td>28.2%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Data cleansed but need to structure for efficient use and validation</td>
<td>28.8%</td>
<td>31.0%</td>
<td>28.2%</td>
</tr>
<tr>
<td>Data ready for broad analytics use</td>
<td>28.8%</td>
<td>18.4%</td>
<td>12.0%</td>
</tr>
<tr>
<td>Other</td>
<td>0.0%</td>
<td>0.2%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Don’t know/not sure</td>
<td>1.5%</td>
<td>3.2%</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Area</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workforce planning</td>
<td>62.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation and benefits</td>
<td>59.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talent sourcing and acquisition</td>
<td>59.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talent retention and attrition prediction</td>
<td>54.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### What is your biggest hurdle in adopting predictive analytics?

<table>
<thead>
<tr>
<th>Hurdle</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data quality issues</td>
<td>24.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of skilled resources internally</td>
<td>22.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understanding what you want to measure and how</td>
<td>22.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maturity of the organization</td>
<td>15.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty obtaining skilled external resources</td>
<td>14.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0.4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### What is your company’s preferred approach to implementing data analytics?

<table>
<thead>
<tr>
<th>Approach</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managed analytics services</td>
<td>36.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Custom development</td>
<td>23.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Package technology</td>
<td>21.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscription-based analytics</td>
<td>18.7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Analytics (cont.)

In which areas do predictive (cognitive) analytics hold the most promise for your business? Select all that apply.

<table>
<thead>
<tr>
<th>Area</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing large amounts of data (customers, patients, members)</td>
<td>58.1%</td>
<td>52.6%</td>
</tr>
<tr>
<td>Identifying business investment/expansion opportunities</td>
<td>54.0%</td>
<td>51.6%</td>
</tr>
<tr>
<td>Predicting disruptive business events</td>
<td>47.0%</td>
<td>39.2%</td>
</tr>
<tr>
<td>Talent recruitment and retention</td>
<td>38.4%</td>
<td>30.0%</td>
</tr>
<tr>
<td>No action planned — not relevant to our business strategy</td>
<td>1.2%</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Area</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real-time communication</td>
<td>29.2%</td>
<td>35.8%</td>
</tr>
<tr>
<td>Monitoring and understanding consumer sentiment</td>
<td>14.4%</td>
<td>18.4%</td>
</tr>
<tr>
<td>Greater integration/intimacy</td>
<td>17.0%</td>
<td>25.8%</td>
</tr>
<tr>
<td>Automation in customer response/relationship processes</td>
<td>18.6%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Other</td>
<td>1.0%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Don't know</td>
<td>1.6%</td>
<td>9.8%</td>
</tr>
</tbody>
</table>
Social and virtual/augmented reality

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

- Enhance collaboration, productivity and engagement: 43.6%
- Improve transparency within the organization: 32.4%
- Create an internal social network for employees to share new activity: 23.2%
- Other: 0.8%

If your company utilizes virtual/augmented reality for its business operations, what are some common applications? (Select all that apply.)

- Enhance employee-employee interaction (e.g., working remotely): 41.6%
- Enhance employee-customer interaction (e.g., sales and advertising): 40.4%
- Enhance ability for customers to train in simulated environments: 39.8%
- Enhance ability for employees to work or train in simulated environments: 38.6%
- Enhance ability for customers to engage with the product/service in a new way: 38.0%
- We do not utilize virtual/augmented reality in our business: 11.8%
## Survey respondent demographics

### What was your company’s 2015 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>19.6%</td>
</tr>
<tr>
<td>Between $250 million and $499.99 million</td>
<td>23.2%</td>
</tr>
<tr>
<td>Between $500 million and $749.99 million</td>
<td>23.4%</td>
</tr>
<tr>
<td>Between $750 million and $1 billion</td>
<td>23.8%</td>
</tr>
<tr>
<td>More than $1 billion</td>
<td>10.0%</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>10.2%</td>
</tr>
<tr>
<td>Board member</td>
<td>1.4%</td>
</tr>
<tr>
<td>CEO</td>
<td>16.2%</td>
</tr>
<tr>
<td>President</td>
<td>2.0%</td>
</tr>
<tr>
<td>CFO</td>
<td>3.6%</td>
</tr>
<tr>
<td>CIO</td>
<td>12.0%</td>
</tr>
<tr>
<td>COO</td>
<td>0.8%</td>
</tr>
<tr>
<td>CTO</td>
<td>9.0%</td>
</tr>
<tr>
<td>Other C-level</td>
<td>1.2%</td>
</tr>
<tr>
<td>Senior vice president/vice president</td>
<td>6.6%</td>
</tr>
<tr>
<td>Head of business unit</td>
<td>3.2%</td>
</tr>
<tr>
<td>Head of department</td>
<td>8.8%</td>
</tr>
<tr>
<td>Controller</td>
<td>1.2%</td>
</tr>
<tr>
<td>Senior director/director</td>
<td>8.8%</td>
</tr>
<tr>
<td>Senior manager/manager</td>
<td>3.4%</td>
</tr>
<tr>
<td>CHRO (Chief HR Officer)</td>
<td>0.8%</td>
</tr>
<tr>
<td>CMO</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 100</td>
<td>1.6%</td>
</tr>
<tr>
<td>100-499</td>
<td>16.0%</td>
</tr>
<tr>
<td>500-999</td>
<td>22.2%</td>
</tr>
<tr>
<td>1,000-2,999</td>
<td>32.8%</td>
</tr>
<tr>
<td>3,000 or more</td>
<td>27.4%</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>25.8%</td>
</tr>
<tr>
<td>Energy &amp; Resources</td>
<td>8.2%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>16.4%</td>
</tr>
<tr>
<td>Life Sciences &amp; Health Care</td>
<td>7.8%</td>
</tr>
<tr>
<td>Technology, Media &amp; Telecommunications</td>
<td>36.8%</td>
</tr>
<tr>
<td>Other</td>
<td>5.0%</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: 90.4%
- I am somewhat knowledgeable: 9.6%

Is your company private or public?

- Private: 80.0%
- Public: 20.0%

If private, which category best describes your company?

- Family-owned: 21.3%
- Closely held (excl. family-owned): 36.5%
- Private equity owned: 38.8%
- Venture capital backed: 3.5%

In which state is your company’s headquarters located?
(Number of respondents shown.)

[Map showing state distribution with numbers indicating responses for each state.]

Perspectives
This report is just one example of Deloitte research on topics of interest to privately held and mid-market companies. 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
We would like to thank all survey respondents and interviewees for their time and the insights they shared for this report, Technology in the mid-market—Taking ownership.