Technology in the mid-market—Seizing opportunity
Appendix: Full survey results
September 2019
From July 8 to July 17, 2019, a Deloitte survey of private and 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 more than $1 billion, with firms under $500 million comprising 61 percent of the sample this year. Half of the respondents were C-suite executives, while the remaining executives held other management roles.

Eighty-five percent of the respondents represented companies that are privately held, while the remainder were publicly traded firms. Thirty-four percent of the respondents represented technology, media, and telecommunications companies, while 26 percent were from consumer and industrial products companies. The remaining respondents were divided among financial services; energy and resources; life sciences and health care; and, other industries. Some percentages in the charts throughout this appendix 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—Seizing opportunity, can be found on our website at www.deloitte.com/us/mid-market-technology.
Business environment

What portion of your company’s current revenue comes from outside the US?

- 0%: 15%
- 1% to 25%: 25%
- 26% to 40%: 27%
- 41% to 55%: 17%
- 56% to 70%: 9%
- 71% to 85%: 4%
- 86% to 100%: 3%

What would you estimate your company’s revenue growth will be over the next 12 months?

- 0% or below: 3%
- 1% to 10%: 46%
- 11% to 20%: 37%
- 21% and above: 14%

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

- Highly optimistic: 30% (2019), 42% (2018), 47% (2017)
- Cautiously optimistic: 50% (2019), 50% (2018), 57% (2017)
- Neutral: 10% (2019), 6% (2018), 9% (2017)
- Pessimistic: 6% (2019), 1% (2018), 2% (2017)
- Highly pessimistic: 5% (2019), 0% (2018), 0% (2017)
Technology spend

What is your company's current "spend" on technology?

- We do not currently have a separate, identifiable spend
  - 3% (2019)
  - 10% (2018)
  - 12% (2017)

- Our spend is negligible (< 1% of revenue)
  - 6% (2019)
  - 11% (2018)
  - 9% (2017)

- We spend between 1-5% of revenue on technology
  - 48% (2019)
  - 43% (2018)
  - 48% (2017)

- Our spend is above 5% of revenue
  - 43% (2019)
  - 34% (2018)
  - 32% (2017)

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

- Significantly higher
  - 12% (2019)
  - 17% (2018)
  - 12% (2017)

- Higher
  - 48% (2019)
  - 57% (2018)
  - 58% (2017)

- About the same
  - 35% (2019)
  - 25% (2018)
  - 29% (2017)

- Lower
  - 5% (2019)
  - 1% (2018)
  - 2% (2017)

- Significantly lower
  - 1% (2019)
  - 1% (2018)
  - 0% (2017)
Technology in the mid-market—Seizing opportunity

Technology spend (continued)

What will be your company’s top technology investment priorities for the next 12 months? Select all that apply.

- Managing cybersecurity and information security risk: 39%
- Adoption of 5G technology: 39%
- Business innovation – developing new products and services: 37%
- Using analytics and cognitive technologies to anticipate business trends and predict outcomes: 36%
- Reducing IT costs and simplifying IT architecture: 35%
- Acquisition of talent required to support emerging technologies: 35%
- Modernizing and transforming legacy systems: 34%
- Adjusting/redesigning current IT organization operating model: 34%
- Aligning business processes to capitalize on technology-enabled opportunities: 30%
- Moving to a cloud-first architecture: 29%
- Implementing augmented, mixed or virtual reality: 29%
- Evaluating blockchain applicability: 26%
- Implementing robotic process automation: 25%

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

- Managing cybersecurity and information security risk: 9%
- Adoption of 5G technology: 9%
- Business innovation – developing new products and services: 13%
- Using analytics and cognitive technologies to anticipate business trends and predict outcomes: 10%
- Reducing IT costs and simplifying IT architecture: 8%
- Acquisition of talent required to support emerging technologies: 8%
- Modernizing and transforming legacy systems: 9%
- Adjusting/redesigning current IT organization operating model: 6%
- Aligning business processes to capitalize on technology-enabled opportunities: 7%
- Moving to a cloud-first architecture: 6%
- Implementing augmented, mixed or virtual reality: 6%
- Evaluating blockchain applicability: 4%
- Implementing robotic process automation: 6%
Talent

How does your company intend to harness the best of future workers to sustain performance over time? Select all that apply.

Enhancing internal learning and development - reskilling employees through experiential learning, gamification technologies and cognitive skills 72%

Developing new talent strategies to attract, recruit and retain workers with experience in cognitive, analytics, AI, and other next-generation technologies 68%

Internal crowdsourcing, focus on job rotations, global mobility and diverse experiences 45%

External crowdsourcing, freelancers, and other flexible talent including "gig" workers 35%

None of the above; we do not intend to develop our workforce 1%

Which of the following staffing changes have had the most impact on your company's ability to leverage technology? Select all that apply.

Recruiting new talent (e.g., data scientists) 56%

Reskilling employees to realize the greatest benefit from new technology tools 54%

Including skills related to robotics, artificial intelligence (AI), and cognitive analytics in competency requirements and performance assessments 53%

Redesigning jobs and tasks to make it easier for people and machines to work together 52%

Redeploying employees replaced by robotics, AI and cognitive technologies 37%

Leveraging the "gig" economy (e.g., freelance or contract talent) 28%

Use of crowdsourcing to address select business problems 27%

None of the above 2%
Talent (continued)

How has your company’s deployment of emerging technologies impacted your hiring efforts and talent needs?

- Our company plan is to hire more people than we did before implementing new technologies: 46%
- Our company plan is to decrease our workforce based on the implementation of new technologies: 22%
- Our company plan is to hire for specific technical skill sets associated with the implementation of new technologies: 63%
- Our company plan is to reskill existing employees to maximize productivity and automation gains: 58%
- We do not expect new technologies to impact our talent model and hiring plans: 2%

How is your organization using the “gig” or freelance economy to meet strategic technology goals? Select all that apply.

- It has allowed us to engage with a more diverse pool of workers: 67%
- It has allowed us to become more agile in product/service development: 64%
- We have been able to enter new geographic markets: 60%
- It has allowed us to develop entire new lines of business: 56%

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

- Performance and productivity: 63% (2019), 66% (2018)
- Talent sourcing and acquisition: 57% (2019), 56% (2018)
- Talent retention and attrition prediction: 56% (2019), 45% (2018)
- Compensation and benefits: 52% (2019), 49% (2018)
- Workforce planning: 49% (2019), 53% (2018)

We do not engage “gig” workers (freelance or contract talent): 2%

Other: 0%
Technology trends

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

- Information security: 17%
- Internet of Things (IoT): 13%
- A.I. / Machine learning: 12%
- Cloud applications: 11%
- Legacy system modernization: 9%
- Predictive analytics: 8%
- Managed services: 7%
- Blockchain: 7%
- Robotic process automation: 6%
- Augmented reality: 5%
- None of these: 4%

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

- Information security: 20%
- Internet of Things (IoT): 12%
- A.I. / Machine learning: 8%
- Cloud applications: 11%
- Legacy system modernization: 8%
- Predictive analytics: 8%
- Managed services: 10%
- Blockchain: 7%
- Robotic process automation: 5%
- Augmented reality: 4%
- None of these: 7%

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.)

- Information security: 16%
- Internet of Things (IoT): 12%
- A.I. / Machine learning: 11%
- Cloud applications: 10%
- Managed services: 9%
- Blockchain: 8%
- Robotic process automation: 6%
- Augmented reality: 5%
- None of these: 5%
Role and value of technology

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

- I am very knowledgeable about our information technology: 82%
- I am somewhat knowledgeable: 18%

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

- Business leaders (CEO, CFO, COO, business unit leaders, supporting functions) 25%
- IT leaders (CTO, CIO, IT department leaders) 38%
- Both business and IT leaders 37%

What are the top three IT challenges currently faced by your company? Select up to three.

1. Information security 48%
2. Keeping up with the pace of technology change 46%
3. Technical complexity (e.g., integrating with legacy systems) 41%
4. Overall cost to implement new technologies 37%
5. Not having the right talent or skill sets 29%
6. Too many competing priorities 26%
7. Lack of an overall IT strategy 24%
8. None of the above 5%

What is your IT department’s most important contribution to your company?

1. Implementing new technologies 28%
2. Managing cybersecurity risk 20%
3. Understanding technology trends and opportunities 15%
4. Increased awareness of ethical obligations toward customer data 11%
5. Recognizing strategic value 10%
6. Data management privacy protocols 10%
7. Incident response protocols 5%
8. None of the above 5%

Role and value of technology (continued)

Which one of the following results do you think is most important for finance to achieve, via digital technologies, in order to become this go-to source for strategic advice?

- Improved efficiency: 26%
- Information transparency and accessibility: 20%
- Cost savings: 17%
- Automated real-time cognitive insights: 15%
- Massive data management capacity: 13%
- Enhanced digital trust: 9%

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

- Industrial devices (e.g., HVAC, environment sensors, chemical sensors, smart metering, logistics or supply chain tracking): 50%
- Machine intelligence sensors (products that provide cognitive contextual monitoring and self-aware data capture): 46%
- Business automation devices: 42%
- Wearable devices provided to employees for work or health tracking (e.g., health/activity sensors, trackers, or security devices like body cams, etc.): 41%
- Connected medical devices (e.g., remote sharing of medical data for diagnostics, operational data for preventive automation): 32%
- Smart traffic management through connected vehicles or self-driving (autonomous) cars: 29%
- No devices or sensor-aware products are being deployed: 8%
Role and value of technology (continued)

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

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information security</td>
<td>18%</td>
</tr>
<tr>
<td>Managing data privacy</td>
<td>14%</td>
</tr>
<tr>
<td>Cloud-to-cloud application integration</td>
<td>12%</td>
</tr>
<tr>
<td>Ensuring data integrity across systems</td>
<td>11%</td>
</tr>
<tr>
<td>Lack of IT talent with appropriate cloud-related skill sets</td>
<td>10%</td>
</tr>
<tr>
<td>Complexity of integration with on-premise systems</td>
<td>9%</td>
</tr>
<tr>
<td>Lack of maturity of cloud vendor solutions</td>
<td>7%</td>
</tr>
<tr>
<td>Business partner/ecosystem integration</td>
<td>6%</td>
</tr>
<tr>
<td>Concerns with vendor consolidation</td>
<td>5%</td>
</tr>
<tr>
<td>None of the above</td>
<td>6%</td>
</tr>
</tbody>
</table>

Which of the following are the focus areas for your organization as it relates to robotic process automation (RPA)? Select all that apply.

<table>
<thead>
<tr>
<th>Focus Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High volume, labor intensive, redundant document processing tasks</td>
<td>63% / 67%</td>
</tr>
<tr>
<td>Diagnostics and error collection</td>
<td>44% / 56%</td>
</tr>
<tr>
<td>Aggregation/entry of disparate data</td>
<td>41% / 56%</td>
</tr>
<tr>
<td>Streamlining/automation of contracts</td>
<td>47%</td>
</tr>
</tbody>
</table>

Which business areas in your company are using predictive analytics? Select all that apply.

<table>
<thead>
<tr>
<th>Business Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales/customer management</td>
<td>52%</td>
</tr>
<tr>
<td>Marketing</td>
<td>45%</td>
</tr>
<tr>
<td>Supply chain</td>
<td>43%</td>
</tr>
<tr>
<td>Human resources</td>
<td>37%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>36%</td>
</tr>
<tr>
<td>Finance/tax</td>
<td>35%</td>
</tr>
<tr>
<td>Internal audit</td>
<td>29%</td>
</tr>
<tr>
<td>Legal</td>
<td>18%</td>
</tr>
<tr>
<td>None of the above</td>
<td>5%</td>
</tr>
</tbody>
</table>

How is your company currently using artificial (machine) intelligence? Select all that apply.

<table>
<thead>
<tr>
<th>Artificial Intelligence Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automating the analysis of data to anticipate business outcomes</td>
<td>69%</td>
</tr>
<tr>
<td>Robotic process automation to mimic human behaviors or tasks</td>
<td>48%</td>
</tr>
<tr>
<td>Using speech-to-text conversion</td>
<td>45%</td>
</tr>
<tr>
<td>We are not currently using artificial intelligence</td>
<td>7%</td>
</tr>
<tr>
<td>None of the above</td>
<td>5%</td>
</tr>
</tbody>
</table>
Role and value of technology (continued)

### Which one of the following machine intelligence approaches could be most beneficial in your organization in the next 12-24 months?

<table>
<thead>
<tr>
<th>Approach</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive insights</td>
<td>34%</td>
<td>40%</td>
<td>43%</td>
</tr>
<tr>
<td>Cognitive automation</td>
<td>20%</td>
<td>32%</td>
<td>18%</td>
</tr>
<tr>
<td>Cognitive engagement</td>
<td>31%</td>
<td>31%</td>
<td>33%</td>
</tr>
<tr>
<td>None of the above</td>
<td>4%</td>
<td>9%</td>
<td>6%</td>
</tr>
</tbody>
</table>

### Which of the following technologies is your company leveraging? Select all that apply.

<table>
<thead>
<tr>
<th>Technology</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology to track digital habits to gauge purchasing patterns</td>
<td>56%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understanding personal behaviors to micro-personalize products and services</td>
<td></td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>Technology to track off-line habits and physical behaviors to predict need</td>
<td></td>
<td></td>
<td>47%</td>
</tr>
<tr>
<td>Voice-enabled AI (voice to text, call center AI) to enhance customer experience</td>
<td></td>
<td></td>
<td>46%</td>
</tr>
<tr>
<td>We are not leveraging these technologies</td>
<td></td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>

### Which of these enabling technologies has your company implemented? Select all that apply.

<table>
<thead>
<tr>
<th>Technology</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artificial intelligence (AI)</td>
<td>57%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor technologies (IoT)</td>
<td>51%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virtual reality</td>
<td>35%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed reality (virtual reality combined with live images)</td>
<td>33%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Augmented reality</td>
<td>30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td>13%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Digital disruption

To what extent do you expect your company’s operations could be impacted by digital disruption in the next 12 months?

- Enable new ways to interact with customers: 48% significant, 30% moderate, 18% slight, 4% none
- Speed the pace of transactions and business interactions: 46% significant, 32% moderate, 18% slight, 4% none
- Increase worker productivity with technology augmentation: 43% significant, 35% moderate, 18% slight, 4% none
- Improve business process alignment: 41% significant, 36% moderate, 17% slight, 6% none
- Help create new lines of services/business: 38% significant, 35% moderate, 20% slight, 7% none
- Generate new and unexpected competition: 37% significant, 36% moderate, 21% slight, 7% none
- Increase need to hire specialists (e.g., data scientists): 36% significant, 34% moderate, 22% slight, 7% none
- Reduce operational costs: 34% significant, 38% moderate, 23% slight, 4% none

Which areas of your business do you think could experience job-related changes in the next 3-5 years due to digital disruption? Select all that apply.

- Sales/customer management: 55% significant
- Marketing: 50% significant
- Supply chain: 49% significant
- Human resources: 42% significant
- Manufacturing: 38% significant
- Finance/tax: 37% significant
- Internal audit: 31% significant
- Legal: 22% significant
- None expected: 6% significant
Data privacy and security

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

- Targeted attacks
- Employee-introduced risk compromising data or infrastructure
- Integration with external systems
- IoT integration
- Internal access controls
- Migration to cloud
- Leveraging external cloud hosting providers
- Mobility
- Cloud-to-cloud vendor package integration
- None of the above

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

- We encrypt sensitive information
- We perform periodic testing and certification
- We provide education and training on information security risk and data protection matters
- We have a plan in place to manage internal information security threats
- We have governance structures and procedures in place concerning information security threats
- We have a plan in place to manage external information security threats
- We share threat information with law enforcement and industry peers to avoid risk isolation
- We do not currently have plans in place to mitigate information security risks

Response not offered in prior years’ surveys.
### Survey respondent demographics

#### 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>13%</td>
</tr>
<tr>
<td>CEO</td>
<td>10%</td>
</tr>
<tr>
<td>President</td>
<td>2%</td>
</tr>
<tr>
<td>CFO</td>
<td>1%</td>
</tr>
<tr>
<td>Chief Information Officer</td>
<td>6%</td>
</tr>
<tr>
<td>Chief Innovation Officer</td>
<td>1%</td>
</tr>
<tr>
<td>COO</td>
<td>1%</td>
</tr>
<tr>
<td>Chief Technology Officer</td>
<td>10%</td>
</tr>
<tr>
<td>Chief Marketing Officer</td>
<td>1%</td>
</tr>
<tr>
<td>Chief Human Resources Officer</td>
<td>1%</td>
</tr>
<tr>
<td>Other C-level</td>
<td>5%</td>
</tr>
<tr>
<td>Senior vice president/vice president</td>
<td>5%</td>
</tr>
<tr>
<td>Head of business unit</td>
<td>5%</td>
</tr>
<tr>
<td>Head of department</td>
<td>9%</td>
</tr>
<tr>
<td>Controller</td>
<td>1%</td>
</tr>
<tr>
<td>Senior director/director</td>
<td>10%</td>
</tr>
<tr>
<td>Senior manager/manager</td>
<td>20%</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>26%</td>
</tr>
<tr>
<td>Energy &amp; Resources</td>
<td>10%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>13%</td>
</tr>
<tr>
<td>Life Sciences &amp; Health Care</td>
<td>10%</td>
</tr>
<tr>
<td>Technology, Media &amp; Telecom</td>
<td>34%</td>
</tr>
<tr>
<td>Other</td>
<td>7%</td>
</tr>
</tbody>
</table>

#### If private, which category best describes your company?

- Family-owned: 20%
- Closely held (including partnership/employee owned, excluding family-owned): 18%
- Private equity owned: 36%
- Listed and traded on a public stock exchange: 15%
- US-based subsidiary of privately held foreign company: 11%

#### What was your company’s 2018 annual revenue in U.S. dollars?

<table>
<thead>
<tr>
<th>Revenue Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100 million — $249.99 million</td>
<td>31%</td>
</tr>
<tr>
<td>$250 million — $499.99 million</td>
<td>30%</td>
</tr>
<tr>
<td>$500 million — $749.99 million</td>
<td>14%</td>
</tr>
<tr>
<td>$750 million — $1 billion</td>
<td>15%</td>
</tr>
<tr>
<td>More than $1 billion</td>
<td>10%</td>
</tr>
</tbody>
</table>

#### What portion of your company’s current revenue comes from outside the US?

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>15%</td>
</tr>
<tr>
<td>1% to 25%</td>
<td>25%</td>
</tr>
<tr>
<td>26% to 40%</td>
<td>27%</td>
</tr>
<tr>
<td>41% to 55%</td>
<td>17%</td>
</tr>
<tr>
<td>56% to 70%</td>
<td>9%</td>
</tr>
<tr>
<td>71% to 85%</td>
<td>4%</td>
</tr>
<tr>
<td>86% to 100%</td>
<td>3%</td>
</tr>
</tbody>
</table>
In which state is your company's headquarters located?
(Number of respondents shown.)
Deloitte Private Perspectives
This report is just one example of Deloitte research on topics of interest to mid-market companies, including private enterprises. Deloitte Private 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.

Please visit our Deloitte Private website (https://www.deloitte.com/us/private) to view additional material on issues facing mid-market companies, including private enterprises.

Acknowledgment
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Contacts

**Jason Downing**
Vice Chairman and US Deloitte Private Leader
Deloitte LLP
jdowning@deloitte.com

**Brian Umbenhauer**
Deloitte Private Consulting Leader
Deloitte Consulting LLP
bumbenhauer@deloitte.com

**Chris Jackson**
Deloitte Private Technology Leader
Deloitte Consulting LLP
cajackson@deloitte.com

**Bob Rosone**
Managing Director
Deloitte Private
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