Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro:</td>
<td>Research Methodology</td>
</tr>
<tr>
<td>Section 1:</td>
<td>Innovation</td>
</tr>
<tr>
<td>Section 2:</td>
<td>Hybrid work</td>
</tr>
<tr>
<td>Section 3:</td>
<td>Data</td>
</tr>
<tr>
<td>Section 4:</td>
<td>Edge</td>
</tr>
<tr>
<td>Section 5:</td>
<td>Cloud</td>
</tr>
<tr>
<td>Section 6:</td>
<td>Security</td>
</tr>
<tr>
<td>Section 7:</td>
<td>Sustainability</td>
</tr>
<tr>
<td>Section 8:</td>
<td>Emerging tech</td>
</tr>
</tbody>
</table>
In these tumultuous times, it’s never been more important to innovate—to keep up with non-stop change and battle headwinds coming from a global recession, supply chain challenges and more. Innovation isn’t a fun side-project. Resilient, focused, scalable, cultural innovation drives growth and protects companies from challenges that might otherwise defeat them.

The Dell Technologies Innovation Index is a global benchmark assessing organizations’ innovation maturity across the globe. This inaugural study is a powerful, point-in-time snapshot of how businesses are innovating despite unprecedented uncertainty after a global pandemic and amidst rampant inflation.

The study was conducted by independent researcher, Vanson Bourne, on behalf of Dell Technologies, in September and October 2022.
Research Methodology
Dell Technologies commissioned independent market research specialist Vanson Bourne to conduct this research. The study surveyed 6,600 IT decision makers and business decision makers across the following regions: North America, LATAM, EMEA, APJ and Greater China.

Respondents are drawn from public and private sector organizations with 100 or more employees. We screened for people who are either driving or influencing innovation in their org.

The interviews were conducted online and via telephone in September and October 2022. Unless otherwise indicated, the results discussed are based on the total sample.

Like the Digital Transformation Index before it, which focused on what businesses were doing to progress their digital transformation journeys and categorized them from the most mature “Leaders” to the least mature “Laggards”, the Innovation Index categorizes organizations based on how accomplished they are as innovators. We’re exploring the Innovation state of the nation, so to speak, because we believe that in uncertain times, just as many organizations pare back their innovation, innovation becomes more necessary and sustaining. Both bold moves and incremental changes can start a ripple effect resulting in greater productivity, efficiency and profitability.

To capture and communicate how organizations are faring, we’ve scored organizations’ people, process and technology approach to edge, multicloud, cybersecurity, hybrid work and modern data infrastructure—resulting in an innovation leader-laggard spectrum for each.

**Scoring informed by respondents’ organizations:**
1. Ability and readiness to innovate
2. Attitude to innovation
3. Consideration of people, process and technology when innovating
4. Success in using edge, multicloud, cybersecurity, hybrid work and modern data infrastructure
Research Scope

**QUANTITATIVE**

6,600 Respondents from mid- to enterprise-sized companies

IT decision makers & business decision makers (non-IT) (50/50 split, min. 20% C-level) driving or influencing innovation in their org/dept

Owner/ Executive, Finance, Sales, IT/Tech, Customer services, Marketing, Production & Manufacturing, HR, R&D, Digital, Customer Experience, Logistics & Supply Chain

**INDUSTRIES**

- Financial services
- Insurance
- Retail & consumer products
- Telecommunications
- Media & entertainment
- Oil & Gas (Energy)
- Manufacturing
- Automotive
- IT/Technology
- Public Healthcare
- Private Healthcare
- Life Sciences
- Government
- Education

**GLOBAL REACH**

45+ Locations

**NA**
- Canada
- United States

**LATAM**
- Argentina
- Brazil
- Chile
- Colombia
- Mexico
- NOLA (Panama, Costa Rica, Guatemala, Honduras, Puerto Rico, El Salvador)

**APJ**
- Australia/New Zealand
- Japan
- India
- Malaysia
- Singapore
- S. Korea
- Thailand

**GC**
- China Mainland
- Hong Kong
- Taiwan

**EUROPE**
- Austria
- Belgium
- Czech Republic
- Denmark
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Israel
- Italy
- Luxembourg
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Saudi Arabia
- Spain
- South Africa
- Sweden
- Switzerland
- Turkey
- United Arab Emirates
- United Kingdom

Respondents from mid- to enterprise-sized companies

Research Scope
Respondent type and region

Showing respondent type. Base: all respondents (6,600)

- IT decision maker (ITDM): 3350
- Business decision maker (BDM): 3250

Showing respondent region. Base: all respondents (6,600)

- EMEA: 3000
- APJ: 1700
- LATAM: 900
- North America: 500
- Greater China: 500
**Respondent department**

<table>
<thead>
<tr>
<th>Breakdown of ITDM respondents (3,350):</th>
<th>Breakdown of BDM respondents (3,250):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information technology</td>
<td>Business direction and strategy</td>
</tr>
<tr>
<td></td>
<td>Business direction and strategy</td>
</tr>
<tr>
<td></td>
<td>Finance</td>
</tr>
<tr>
<td></td>
<td>Administration</td>
</tr>
<tr>
<td></td>
<td>Production/manufacturing</td>
</tr>
<tr>
<td></td>
<td>HR/training/recruitment/talent</td>
</tr>
<tr>
<td></td>
<td>Operations</td>
</tr>
<tr>
<td></td>
<td>Business development/sales/channel</td>
</tr>
<tr>
<td></td>
<td>Purchasing/procurement</td>
</tr>
<tr>
<td></td>
<td>Design/research and development</td>
</tr>
<tr>
<td></td>
<td>Client services/relationship management</td>
</tr>
<tr>
<td></td>
<td>Logistics/supply chain/transport/fleet</td>
</tr>
<tr>
<td></td>
<td>Customer services</td>
</tr>
<tr>
<td></td>
<td>Engineering, excluding DevOps</td>
</tr>
<tr>
<td></td>
<td>Health and safety</td>
</tr>
<tr>
<td></td>
<td>Innovation</td>
</tr>
<tr>
<td></td>
<td>Quality control</td>
</tr>
<tr>
<td></td>
<td>Trading/merchandising/retail shop floor</td>
</tr>
<tr>
<td></td>
<td>Risk/fraud/compliance/governance</td>
</tr>
<tr>
<td></td>
<td>Marketing communications</td>
</tr>
<tr>
<td></td>
<td>Legal</td>
</tr>
<tr>
<td></td>
<td>Facilities/property</td>
</tr>
</tbody>
</table>

*3,350 respondents*  

**Breakdown of ITDM respondents (3,350):**

- Information technology: 3,180
- DevOps: 170

**Breakdown of BDM respondents (3,250):**

- Business direction and strategy: 406
- Finance: 379
- Administration: 361
- Production/manufacturing: 238
- HR/training/recruitment/talent: 236
- Operations: 230
- Business development/sales/channel: 180
- Purchasing/procurement: 148
- Design/research and development: 132
- Client services/relationship management: 130
- Logistics/supply chain/transport/fleet: 117
- Customer services: 110
- Engineering, excluding DevOps: 109
- Health and safety: 97
- Innovation: 74
- Quality control: 74
- Trading/merchandising/retail shop floor: 66
- Risk/fraud/compliance/governance: 53
- Marketing communications: 49
- Legal: 44
- Facilities/property: 17

*Which of the following best describes your primary job function?* Base: all respondents (6,600)
Organization industry

Financial services: 964
Manufacturing: 829
Education: 758
IT & Technology: 679
Oil & Gas (Energy): 560
Healthcare – private: 465
Retail & consumer products: 434
Healthcare – public: 369
Government: 275
Media & entertainment: 237
Telecommunications (Telco): 195
Automotive: 188
Insurance: 158
Life Sciences: 145
Other public sector: 116
Other private sector: 228

*In which sector is your organization?* Base: all respondents (6,600)
Size of organization and respondent seniority

- 100-249 employees: 1530 respondents
- 250-499 employees: 963 respondents
- 500-999 employees: 1297 respondents
- 1,000-2,999 employees: 1149 respondents
- 3,000-4,999 employees: 1006 respondents
- 5,000 or more employees: 655 respondents

- Board member; C-level: 1338 respondents
- Senior management; senior manager of unit, function or department: 1859 respondents
- Mid-level management; manager of team or silo: 1858 respondents
- Junior management; supervisory and frontline managers: 1545 respondents

“How many employees does your organization have globally?” Base: all respondents (6,600)

“How of these best describes your position in the organization?” Base: all respondents (6,600)
Respondent age and organization age

"What is your age?" Base: all respondents (6,600)

- 18-24: 146
- 25-34: 1617
- 35-44: 3180
- 45-54: 1252
- 55-64: 341
- 65 and over: 64

"How many years has your organization been operating for?" Base: all respondents (6,600)

- Less than 5 years: 159
- 5-6 years: 425
- 7-10 years: 1034
- 11-15 years: 1595
- 16-20 years: 1143
- 21-30 years: 844
- 31-40 years: 459
- 41-50 years: 221
- More than 50 years: 694
- Don't know: 26
Organization revenue growth in 2021 and 2022

Underperforming (negative) 128
Not growing (0%) 218
Low growth (1-5%) 1925
Medium growth (5-15%) 2566
High growth (15-25%) 1067
Extreme growth (25+) 478
Don't know 218

Underperforming (negative) 102
Not growing (0%) 157
Low growth (1-5%) 1236
Medium growth (5-15%) 2443
High growth (15-25%) 1561
Extreme growth (25+) 885
Don't know 216

“What was your organization’s annual revenue growth in 2021?” Base: all respondents (6,600)

“What do you expect will be your organization’s annual level of growth in terms of revenue for 2022?” Base: all respondents (6,600)
Maturity Model
Innovation Maturity Curve group descriptions

**Innovation Laggards** perform poorly across a range of innovation markers, with considerable improvements needed across the board. They almost never have processes in place to facilitate innovation and do not work with partners to improve innovation success. Leaders do not model or encourage innovation from across the organization.

**Innovation Followers** underperform across a range of innovation markers, with improvements needed. They are unlikely to have processes in place to facilitate innovation, but they may work with partners, in a limited capacity, to improve innovation efforts. Leadership is unlikely to encourage innovation across the organization.

**Innovation Evaluators** innovate in some areas but are mostly stuck in evaluation stage. They lack a clear and holistic strategy and means to move forward. They have processes in place to facilitate innovation and will partner with organizations to advance these efforts. Leadership need to be coached to encourage innovation from across the organization.

**Innovation Adopters** are largely successful in their innovation efforts, but small improvements are needed. They’re likely to have processes in place to facilitate innovation and often work with multiple partners to improve innovation efforts. Leaders encourage innovation from across the organization.

**Innovation Leaders** are successfully advancing innovation across the business. They have end-to-end processes in place to facilitate innovation and typically work with multiple partners to progress innovation efforts. Leaders actively encourage innovation from across the organization—their workforce is empowered to innovate.
Innovation maturity model

Only 2% of respondents’ organizations fall into the most mature “Innovation Leader” group, with 16% in the second most mature group. For the rest, there is still a relatively large amount of room for improvement.

When looking at 2022 revenue growth: Innovation Leaders and Adopters are almost twice as likely to experience high levels of growth, compared to Innovation Laggards and Followers.

Innovation maturity model. Base: all respondents (6,600)
12% of respondents’ organizations fall into the most mature “Work Leader” group, although 27% are in the second most mature “Work Adopter” group. For the rest, there is still a relatively large amount of room for improvement.

Hybrid work maturity model. Base: ITDM respondents (3,350)
Data maturity model

Only 4% of respondents’ organizations fall into the most mature “Data Leader” group, with 22% in the second most mature group. For the rest, there is still a relatively large amount of room for improvement.

Data maturity model. Base: ITDM respondents (3,350)
Only 5% of respondents’ organizations fall into the most mature “Edge Leader” group and only 8% fall into the second most mature group. Organizations are much more likely to fall into the lower maturity groups in relation to edge technology.
Only 2% of respondents’ organizations fall into the most mature “Cloud Leader” group, with only 6% in the second most mature “Cloud Adopter” group. Over half fall into the two least mature groups.
Security maturity model

Only 2% of respondents’ organizations fall into the most mature “Security Leader” group, with 8% in the second most mature group. For the rest, there is still a relatively large amount of room for improvement.
Innovation
“Based on your perception, which of the following most aligns with your organization’s innovation approach?” Base: all respondents (6,600)

- Our innovation is game changing/creates new customer value (53%)
- Our innovation is mainly incremental change/efficiency improvements (47%)
- Our innovation is based on new ideas (73%)
- Our innovation comes from old ideas in a new context (27%)
- Our innovation comes from a formalized business practice (35%)
- Our innovation is not formalized and comes from anywhere in a business (65%)

73% of Innovation Leaders & Adopters are doing this. They have a more organized approach to innovation.
Our innovation comes from a select few people with a natural aptitude for innovation
- Our innovation comes from anyone in the organization

- Our innovation is driven by special projects
- Our innovation is a byproduct of day-to-day activities
- Our innovation drives measurable change and tangible improvement
- Our innovation relates to exploration and often doesn’t yield tangible results

"Based on your perception, which of the following most aligns with your organization’s innovation approach?" Base: all respondents (6,600)

81% of Leaders & Adopters are strategically implementing innovation that drives measurable change.
<table>
<thead>
<tr>
<th>Most important innovation goals</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve the customer experience</td>
<td>54%</td>
</tr>
<tr>
<td>Future-proof the organization (by staying ahead of changing customer demands)</td>
<td>52%</td>
</tr>
<tr>
<td>Increase revenue</td>
<td>52%</td>
</tr>
<tr>
<td>Cost savings and efficiencies</td>
<td>52%</td>
</tr>
<tr>
<td>Become a more sustainable business</td>
<td>50%</td>
</tr>
<tr>
<td>Improve the organization’s brand/reputation</td>
<td>47%</td>
</tr>
<tr>
<td>New market/monetization opportunities/new business models</td>
<td>46%</td>
</tr>
<tr>
<td>Gain the competitive advantage</td>
<td>44%</td>
</tr>
<tr>
<td>Improve the employee experience</td>
<td>42%</td>
</tr>
<tr>
<td>Become a more ethical business</td>
<td>35%</td>
</tr>
</tbody>
</table>

“What are your organization’s **most** important innovation goals?” Combination of responses ranked first, second, third, fourth and fifth. Base: all respondents (6,600)
### Innovation approach

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My team and I encourage each other to innovate</td>
<td>45%</td>
<td>43%</td>
<td>10%</td>
<td>2%</td>
</tr>
<tr>
<td>Our culture reinforces the belief that everyone has the potential to innovate</td>
<td>42%</td>
<td>44%</td>
<td>11%</td>
<td>3%</td>
</tr>
<tr>
<td>We have a robust supply chain that can withstand unforeseeable events</td>
<td>32%</td>
<td>47%</td>
<td>16%</td>
<td>3%</td>
</tr>
<tr>
<td>We are not fazed by barriers to innovation</td>
<td>31%</td>
<td>45%</td>
<td>19%</td>
<td>4%</td>
</tr>
<tr>
<td>In our organization, technology is an innovation enabler</td>
<td>43%</td>
<td>44%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>We actively seek out technologies that realize our innovation goals</td>
<td>42%</td>
<td>44%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>We innovate the most during periods of volatility</td>
<td>32%</td>
<td>45%</td>
<td>18%</td>
<td>4%</td>
</tr>
</tbody>
</table>

*To what extent do you agree or disagree with the following statements?* Base: all respondents (6,600)

52% of Innovation Leaders & Adopters strongly agree that their organization innovates most during periods of volatility.
### Innovation processes

<table>
<thead>
<tr>
<th>Innovation Process</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage/enable cross-department innovation (teams from different lines of business coming together)</td>
<td>57%</td>
</tr>
<tr>
<td>Align all innovation projects to company goals (including societal goals) – and cut those that don’t align</td>
<td>52%</td>
</tr>
<tr>
<td>Integrate innovation goals in all departmental and staff objectives</td>
<td>51%</td>
</tr>
<tr>
<td>Partner with external partners to identify trends, forecast future need and bridge skills gaps</td>
<td>50%</td>
</tr>
<tr>
<td>Retrospectively analyze what didn’t work and carry lessons forward</td>
<td>46%</td>
</tr>
<tr>
<td>Allocate a sizeable budget for innovation</td>
<td>41%</td>
</tr>
<tr>
<td>Iterate and course correct</td>
<td>30%</td>
</tr>
<tr>
<td>None of the above ways</td>
<td>1%</td>
</tr>
</tbody>
</table>

"How does your organization **intentionally and successfully** approach innovation?" Base: all respondents (6,600)
## Innovation processes

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure stakeholders’ buy-in/employee involvement with consistent stakeholder communication</td>
<td>62%</td>
</tr>
<tr>
<td>Run pilots to demonstrate proof of concept and secure buy-in</td>
<td>57%</td>
</tr>
<tr>
<td>Host hackathons or scrums to encourage innovation and collaboratively fix problems</td>
<td>43%</td>
</tr>
<tr>
<td>Rapid prototyping</td>
<td>32%</td>
</tr>
<tr>
<td>Merge development and operations teams to deliver applications and services at high velocity</td>
<td>29%</td>
</tr>
<tr>
<td>Encourage citizen development/democratization of code</td>
<td>22%</td>
</tr>
<tr>
<td>We do not do anything to specifically assist with innovation efforts</td>
<td>2%</td>
</tr>
</tbody>
</table>

75% of Leaders & Adopters secure stakeholders’ buy-in with consistent communications.

*Tactically, which of the following does your organization do/practice **extensively** in relation to its innovation efforts?* Base: all respondents (6,600)
### Innovation culture

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspects of my company’s culture hold me back from being as innovative as</td>
<td>26%</td>
<td>38%</td>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>I want to be can be</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have a vibrant culture of innovation</td>
<td>38%</td>
<td>44%</td>
<td>14%</td>
<td>3%</td>
</tr>
<tr>
<td>We capture innovation ideas from people across the company</td>
<td>38%</td>
<td>47%</td>
<td>12%</td>
<td>3%</td>
</tr>
<tr>
<td>Based on our innovation culture/innovation pipeline, I am not confident</td>
<td>24%</td>
<td>34%</td>
<td>20%</td>
<td>21%</td>
</tr>
<tr>
<td>our organization will be relevant in the next 3-5 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We are well insulated from economic volatility: we have taken steps to</td>
<td>32%</td>
<td>47%</td>
<td>16%</td>
<td>4%</td>
</tr>
<tr>
<td>ensure our organization’s resiliency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In part, people leave our company because they can't innovate as much as</td>
<td>24%</td>
<td>35%</td>
<td>23%</td>
<td>17%</td>
</tr>
<tr>
<td>they hoped they would</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In part, people join our company because they see that we empower our</td>
<td>34%</td>
<td>44%</td>
<td>15%</td>
<td>5%</td>
</tr>
<tr>
<td>people to innovate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*“To what extent do you agree or disagree with the following statements?” Base: all respondents (6,600)*
**Business leaders' innovation approach**

*Thinking about how your organization’s leaders encourage a culture of innovation, to what extent do you agree with the following statements?* Base: all respondents (6,600)

- **Our leaders encourage innovation from unlikely places**
  - Strongly agree: 43%
  - Somewhat agree: 32%
  - Somewhat disagree: 18%
  - Strongly disagree: 6%
  - Don’t know: 2%

- **Our leaders are more inclined to favor their own ideas**
  - Strongly agree: 41%
  - Somewhat agree: 30%
  - Somewhat disagree: 20%
  - Strongly disagree: 8%
  - Don’t know: 1%

- **Our leaders create a safe space to try something, fail and learn from mistakes**
  - Strongly agree: 44%
  - Somewhat agree: 38%
  - Somewhat disagree: 14%
  - Strongly disagree: 4%
  - Don’t know: 1%

- **Our leaders have a high tolerance of risk**
  - Strongly agree: 42%
  - Somewhat agree: 31%
  - Somewhat disagree: 19%
  - Strongly disagree: 19%
  - Don’t know: 7%

- **Our leaders are more focused on the day to day running of the business than innovation**
  - Strongly agree: 39%
  - Somewhat agree: 29%
  - Somewhat disagree: 22%
  - Strongly disagree: 22%
  - Don’t know: 9%
How people rate their innovation

"Which of the following best describes how you would categorize yourself and your organization in terms of innovation?" Base: all respondents (6,600)

- Me personally, outside work: 39% Extremely innovative, 28% Innovative
- Me personally, while at work: 41% Extremely innovative, 32% Innovative
- My organization (compared to best of breed in my industry): 39% Extremely innovative, 32% Innovative

53% of Innovation Leaders & Adopters judge their organization to be extremely innovative.
Where organizations can make improvements

An innovation goes through various phases. To the best of your knowledge, in which phase is your organization **strongest**, and where could improvements be made? Base: all respondents (6,600)

- **Innovation ideation**: 69% strongest, 24% we could make improvements
- **Innovation research**: 70% strongest, 22% we could make improvements
- **Innovation development and testing**: 70% strongest, 24% we could make improvements
- **Innovation adoption (with employees)**: 69% strongest, 26% we could make improvements
- **Innovation adoption (with customers)**: 69% strongest, 24% we could make improvements
- **Scaling innovation**: 69% strongest, 26% we could make improvements

*An innovation goes through various phases. To the best of your knowledge, in which phase is your organization **strongest**, and where could improvements be made?* Base: all respondents (6,600)
What would incentivize employees to innovate more

Opportunities for expanded or other roles/promotion: 53%
To play a part in shaping the organization’s future direction/outcomes: 52%
Monetary reward: 44%
Learning opportunity: 44%
Recognition by senior leaders: 43%
Industry recognition (i.e., from the number of patents to your name): 42%
If it was set as a business priority from leadership: 39%
Nothing would incentivize me to innovate more at work: 0%

“What would incentivize you to innovate more at work?” Base: all respondents (6,600)
We partner with organizations to share knowledge and new ideas: 46%

We partner with research companies to identify future trends/foreseeable risk: 45%

Partner with external organizations to bridge technical skills gaps: 42%

Partner with external organizations to bridge the technology gap: 41%

We partner with organizations to develop patents and go-to-market opportunities: 39%

We gain access to new ideas and IP through acquisition and mergers: 36%

Partner with external organizations to share data: 34%

We partner with start-ups and white label their solution: 32%

My organization does not partner with other organizations to enable innovation: 3%

“What partnerships does your organization take part in to enable innovation?” Base: all respondents (6,600)
Innovation during uncertain times

<table>
<thead>
<tr>
<th>External Forces</th>
<th>Accelerate innovation slightly</th>
<th>Accelerate innovation dramatically</th>
<th>Prevent our ability to innovate</th>
<th>Slow our innovation</th>
<th>No impact on innovation</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geopolitical events</td>
<td>36%</td>
<td>29%</td>
<td>33%</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recession/inflation/economic uncertainty</td>
<td>48%</td>
<td>19%</td>
<td>33%</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply chain issues</td>
<td>41%</td>
<td>24%</td>
<td>34%</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security concerns, data and privacy regulations</td>
<td>40%</td>
<td>22%</td>
<td>37%</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unequal access to technology in society</td>
<td>39%</td>
<td>26%</td>
<td>33%</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate change</td>
<td>29%</td>
<td>36%</td>
<td>34%</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disruption from new digital players</td>
<td>32%</td>
<td>26%</td>
<td>40%</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Organization need to develop innovation resilience: the practice and determination to innovate during uncertain times.

Innovation Leaders and Adopters are 2.2x more likely to accelerate during recession/ inflation/economic uncertainty, compared to Innovation Followers and Laggards.

“What impact would the following external forces have on your organization’s ability to innovate?” Base: all respondents (6,600)
## Organizations’ barriers to innovation

### Top 5 barriers hindering innovation for respondents’ organizations

<table>
<thead>
<tr>
<th>Rank</th>
<th>Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Skills gap / struggling to attract and hire talent</td>
</tr>
<tr>
<td>#2</td>
<td>Overwhelming workload leaving no time to innovate</td>
</tr>
<tr>
<td>#3</td>
<td>Lack of budget for innovation / reduced budget</td>
</tr>
<tr>
<td>#4</td>
<td>Red tape or complex approval processes</td>
</tr>
<tr>
<td>#5</td>
<td>Lack of established innovation vision and strategy</td>
</tr>
<tr>
<td></td>
<td>Lack of well-defined, practical execution process</td>
</tr>
<tr>
<td></td>
<td>Struggling to prioritize innovation projects</td>
</tr>
</tbody>
</table>

95% of respondents highlight at least one barrier that is hindering innovation in their organization.

“What do you perceive to be the main barriers, hindering your organization’s ability to innovate?” Base: all respondents (6,600)
### Individual and team barriers to innovation

#### Top 5 barriers hindering respondents’ own ability to innovate

<table>
<thead>
<tr>
<th>#1</th>
<th>Lack of time outside of core day-to-day tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2</td>
<td>Personal fear of failure / fear of repercussions if ideas fail</td>
</tr>
<tr>
<td>#3</td>
<td>Lack of technology / digital fluency</td>
</tr>
<tr>
<td>#4</td>
<td>Not always confident to share ideas with leaders / sponsors</td>
</tr>
<tr>
<td>#5</td>
<td>No natural aptitude to innovate</td>
</tr>
</tbody>
</table>

87% of respondents highlight at least one barrier that is hindering their own ability to innovate

#### Top 5 barriers hindering respondents’ teams or peers from innovating

<table>
<thead>
<tr>
<th>#1</th>
<th>Lack of time to innovate due to workload</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2</td>
<td>Lack technology/digital fluency</td>
</tr>
<tr>
<td>#3</td>
<td>Lack an aptitude to innovate</td>
</tr>
<tr>
<td>#4</td>
<td>Fear failure / fear repercussions if ideas fail</td>
</tr>
<tr>
<td>#5</td>
<td>Lack of self-belief in their innovation potential / defer to other people to innovate</td>
</tr>
</tbody>
</table>

94% of respondents highlight at least one barrier that is hindering their teams’ or peers’ ability to innovate

“What do you believe is hindering your own ability to innovate?” Base: all respondents (6,600)

“What do you perceive to be the main barriers, hindering your peers’/team’s ability to innovate?” Base: all respondents (6,600)
"When your organization looks to innovate beyond current geographical markets, where do you commonly struggle?" Base: all respondents (6,600)
We spend a lot of time managing end-of-life technology (no longer supported) in our environment

We’ve modernized and are running current/fully supported technology

Don’t know

We have poor visibility into our environment and it’s a security concern

We’re well prepared for most threats and prioritize security

Don’t know

Security teams are engaged early in an asset’s full lifecycle/included in the design process

Security teams only get involved in an asset’s full lifecycle if a security flaw is identified

Don’t know

“Which of the following opposing statements most accurately describes the current status of your organization’s IT” Base: all respondents (6,600)
Our IT processes are manual and time consuming

We’ve fully embraced automation

Don’t know

We face a skilled IT labor shortage

We’re well-resourced to accomplish our mission

Don’t know

"Which of the following opposing statements most accurately describes the current status of your organization’s IT" Base: all respondents (6,600)
current status of IT supporting innovation

I'm confident we have the IT infrastructure to enable me/my team to innovate without constraints and delays

- Strongly agree: 45%
- Somewhat agree: 14%
- Somewhat disagree: 3%
- Strongly disagree: 1%
- Don't know: 37%

63% of Innovation Leaders & Adopters strongly agree. Only 24% of Innovation Laggards and Followers strongly agree.

"To what extent do you agree or disagree that your IT department/IT provider is supporting innovation in your organization by enabling the following?" Base: all respondents (6,600)
To what extent do you agree or disagree that your IT department/IT provider is supporting innovation in your organization by enabling the following?

- **Our developers are supported well (can deliver innovation at speed)**
  - Strongly agree: 44%
  - Somewhat agree: 33%
  - Somewhat disagree: 14%
  - Strongly disagree: 3%
  - Don't know: 1%

- **Our predictive capabilities allow us to foresee barriers and avoid pitfalls**
  - Strongly agree: 48%
  - Somewhat agree: 45%
  - Somewhat disagree: 15%
  - Strongly disagree: 3%
  - Don't know: 1%

- **Our workforce has the tools they need to innovate anywhere, anytime**
  - Strongly agree: 45%
  - Somewhat agree: 45%
  - Somewhat disagree: 15%
  - Strongly disagree: 3%
  - Don't know: 1%

- **With sustainable IT or greener data centers, we're modernizing our business in ways that's better for the planet**
  - Strongly agree: 45%
  - Somewhat agree: 37%
  - Somewhat disagree: 15%
  - Strongly disagree: 3%
  - Don't know: 2%

*To what extent do you agree or disagree that your IT department/IT provider is supporting innovation in your organization by enabling the following?* Base: all respondents (6,600)
Current status of IT: continuous effort needed

51% of Innovation Leaders & Adopters strongly agree. Only 26% of Innovation Laggards and Followers strongly agree.

30% of Innovation Leaders & Adopters strongly agree. Only 17% of Innovation Laggards and Followers strongly agree.

We could be automating more, to free-up bandwidth and enable our teams to innovate more

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>48%</td>
<td>13%</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Our technology is not cutting-edge. We could fall behind our competitors

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>34%</td>
<td>24%</td>
<td>18%</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

“Innovators see IT transformation that fuels innovation as a continuous effort”

“To what extent do you agree or disagree that your IT department/IT provider is supporting innovation in your organization by enabling the following?” Base: all respondents (6,600)
How people partner with IT

- I see my IT team as an important business partner: 55%
- I proactively educate myself on our current technology capabilities and future technology trends: 54%
- I choose to work closely with the IT team (I bring them into my decision-making early on): 51%
- Volunteer to help IT articulate business use cases for new IT implementations: 36%
- I volunteer to be an early adopter for IT pilots: 35%
- I do not work with the IT department to push forward innovation: 5%

“How do you work with your organization’s IT department/IT provider to push innovation forward?” Base: BDM respondents (3,250)
Work
**Anywhere-work aids innovation**

**Do remote/hybrid workers have as much opportunity to innovate/bring innovation forward?**

- **Yes, more so – collaborative technology combined with the freedom to work anywhere aids innovation**
  - 49%
- **Yes, the same – collaborative technology creates a level playing field**
  - 39%
- **No, less so – they miss out on valuable face to face communication**
  - 9%
- **Don’t know**
  - 1%
- **I do not have any experience of this**
  - 2%

88% of respondents believe remote workers in their organization have as much, if not more opportunity to innovate compared to onsite staff, thanks to collaborative technology combined with the freedom to work anywhere.

*In your organization, do remote/hybrid workers have as much opportunity to innovate/bring innovative ideas forward as onsite staff do?* Base: all respondents (6,600)
Enabling anywhere work (1/2)

In terms of everyone’s technology set-up, to what extent is your organization enabling the workforce to maintain productivity and innovate from anywhere in the below areas?

- Providing the right intelligent/responsive technology to improve the work experience, regardless of location
- Providing technology that enables seamless transitions between locations and devices
- Making security intrinsic so we can work anywhere without worrying about the security implications
- Enabling non-disruptive patching and maintenance IT updates that do not interfere with our productivity but optimize the technology’s performance

*Base: ITDM respondents (3,350)*
“In terms of everyone’s technology set-up, to what extent is your organization enabling the workforce to maintain productivity and innovate from anywhere in the below areas?” Base: ITDM respondents (3,350)
Onsite teams’ technology and tools

- Yes, we provide everything needed for this
- Yes, but we could provide slightly more/somewhat better technology/tools
- We do not have onsite teams

“Do your onsite teams have the technology and tools they need to be productive in relation to the following?” Base: ITDM respondents (3,350)
Remote/hybrid teams’ technology and tools

- Yes, we provide everything needed for this
- Yes, but we could provide slightly more/somewhat better technology/tools
- No, we don’t provide the right technology and tools for this
- We do not have remote/hybrid teams

<table>
<thead>
<tr>
<th>Feature</th>
<th>Yes, we provide everything needed for this</th>
<th>Yes, but we could provide a lot more/much better technology/tools</th>
<th>No, we don’t provide the right technology and tools for this</th>
<th>We do not have remote/hybrid teams</th>
</tr>
</thead>
<tbody>
<tr>
<td>The technology that suits individual needs and preferences</td>
<td>38%</td>
<td>39%</td>
<td>18%</td>
<td>3%</td>
</tr>
<tr>
<td>Regular, practical training and support (so they learn about the technology’s most helpful features)</td>
<td>38%</td>
<td>41%</td>
<td>17%</td>
<td>3%</td>
</tr>
<tr>
<td>Cutting-edge collaboration software and applications (i.e., whiteboarding applications)</td>
<td>38%</td>
<td>40%</td>
<td>17%</td>
<td>3%</td>
</tr>
<tr>
<td>Access to early adopter immersive technologies/experiences</td>
<td>36%</td>
<td>39%</td>
<td>18%</td>
<td>4%</td>
</tr>
<tr>
<td>Enhancements that drive greater collaboration, privacy and connectivity (i.e., background noise cancelling features, longer batteries)</td>
<td>38%</td>
<td>40%</td>
<td>17%</td>
<td>3%</td>
</tr>
</tbody>
</table>

“Do your remote/hybrid teams have the technology and tools they need to be productive in relation to the following?” Base: ITDM respondents (3,350)
Data
Data-driven innovation

“To the best of your ability, estimate what proportion of innovation efforts in your organization derive/are driven from data insights?” Base: ITDM respondents (3,350)

- Vast majority: 38%
- Slightly more than half: 21%
- Around half: 9%
- Slightly less than half: 4%
- Small minority: 2%
- None: 0%
- Don’t know: 1%

All innovation efforts: 26%
“What capabilities and practices do you have in place to enable your organization to innovate with data?” Base: ITDM respondents from organizations that use data insights for at least a small minority of their innovation efforts (3,324)
## Data capabilities

There are marked disparities depending on innovation maturity groups: Innovation Leaders and Adopters tend to be much more likely to do these things extremely well (45%-57%) compared to Innovation Laggards and Followers (18%-23%).

<table>
<thead>
<tr>
<th>Data Capabilities</th>
<th>Doing extremely well</th>
<th>Doing well</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal data skills training</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Attracting/hiring data experts</td>
<td>30%</td>
<td>41%</td>
</tr>
<tr>
<td>The collection, preparation and curation of data</td>
<td>34%</td>
<td>40%</td>
</tr>
<tr>
<td>Securing data in transit, in use, and at rest to support privacy and security objectives</td>
<td>33%</td>
<td>43%</td>
</tr>
<tr>
<td>Advanced data management (automation, policy, cloud tiering)</td>
<td>34%</td>
<td>39%</td>
</tr>
<tr>
<td>Turning data into real-time insights</td>
<td>31%</td>
<td>40%</td>
</tr>
<tr>
<td>Applying insights to business use cases/delivering value</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Democratization of data/data for all</td>
<td>30%</td>
<td>41%</td>
</tr>
</tbody>
</table>

“How well is your organization doing the following?” Base: ITDM respondents (3,350)
"To what extent do you agree or disagree that your IT department/IT provider is supporting innovation in your organization by enabling the following?" Base: all respondents (6,600)

- 65% of Innovation Leaders & Adopters strongly agree. Only 27% of Innovation Laggards and Followers strongly agree.
- 67% of Innovation Leaders & Adopters strongly agree. Only 28% of Innovation Laggards and Followers strongly agree.

**I can access the data that I need when I need it**
- Strongly agree: 41%
- Somewhat agree: 11%
- Somewhat disagree: 3%
- Strongly disagree: 0%
- Don’t know: 0%

**I trust the data that I have access to**
- Strongly agree: 42%
- Somewhat agree: 44%
- Somewhat disagree: 11%
- Strongly disagree: 2%
- Don’t know: 1%
Challenges when innovating with data

<table>
<thead>
<tr>
<th>#</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Cybersecurity threats (on their data)</td>
</tr>
<tr>
<td>#2</td>
<td>Lack of IT infrastructure to meet and process data at the edge</td>
</tr>
<tr>
<td>#3</td>
<td>People continuing to follow their instinct rather than study data first</td>
</tr>
<tr>
<td>#4</td>
<td>Explosive growth in complexity and diversity of data</td>
</tr>
<tr>
<td>#5</td>
<td>Regulatory and compliance data requirements</td>
</tr>
<tr>
<td>-</td>
<td>Limited processes and tools to derive insights from data</td>
</tr>
<tr>
<td>-</td>
<td>Data silos: lack of visibility/can’t bring data together</td>
</tr>
</tbody>
</table>

94% of respondents highlight at least one challenge that is stopping their organization from innovating with data.

"Which, if any, of the following challenges are compromising your organization’s ability to innovate with data?" Base: ITDM respondents (3,350)
Edge
Unlocking innovation with the edge

Edge is central to our IT strategy and is unlocking innovation across our organization already - 41%

Edge is central to our IT strategy and will unlock innovation across our organization in the future - 42%

We recognize edge is integral but we don't have the capacity to implement edge technologies - 10%

We haven't explored the role edge will play and how to get value from it - 4%

We have fully explored edge and it isn't relevant to our organization - 1%

I am unfamiliar with my organization’s edge strategy - 2%

"Which statement most aligns to your organization’s edge strategy?" Base: ITDM respondents (3,350)
Succeeding with the edge

Overcoming limited network bandwidth with edge
- 45% Doing well
- 33% Doing extremely well

Consolidating and simplifying operations and infrastructure at the edge
- 45% Doing well
- 34% Doing extremely well

Securing edge hardware, applications and data
- 43% Doing well
- 38% Doing extremely well

Managing ever-changing infrastructure capacity requirements at the edge
- 45% Doing well
- 34% Doing extremely well

Enabling sustainability benefits such as reduced emissions or energy use
- 41% Doing well
- 37% Doing extremely well

Collecting data created at the edge
- 42% Doing well
- 36% Doing extremely well

Gaining real-time insights from the data collected/created
- 44% Doing well
- 36% Doing extremely well

Automating business decisions/operations from those insights
- 42% Doing well
- 36% Doing extremely well

*Seeing marked disparities across innovation groups: majority of Innovation Leaders and Adopters (around 50%+) doing these things extremely well compared to approx. 1 in 4 Innovation Laggards and Followers.*

“How would you rate your organization’s performance in the following areas?” Base: ITDM respondents from organizations that have edge as a central part of their IT strategy (2,806)
Barriers to acting on data at the edge

Top 5 barriers limiting organizations’ potential to act on data at the edge

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Integration difficulties: integrating the overall business architecture with the IT/OT infrastructure architecture</td>
</tr>
<tr>
<td>#2</td>
<td>Lack of people skilled in deploying AI and/or automation at the edge</td>
</tr>
<tr>
<td>#3</td>
<td>Security concerns regarding edge devices not designed with security in mind</td>
</tr>
<tr>
<td>#4</td>
<td>Governance, security and/or privacy concerns for data at the edge</td>
</tr>
<tr>
<td>#5</td>
<td>Limitations created by IT/OT relationship issues (i.e., competing goals)</td>
</tr>
</tbody>
</table>

“What barriers are limiting your organization’s potential to act on data at the edge?” Base: ITDM respondents from organizations that have edge as a central part of their IT strategy or that recognize edge as integral but don’t have the capacity to implement edge technologies (3,133)

94% of respondents highlight at least one barrier that is limiting how their organization can act on data at the edge
"Which of the following best describes the proportion of your time spent battling complexity at the edge (data silos and a sprawling IT footprint) versus generating innovation at the edge?" Base: ITDM respondents from organizations that have edge as a central part of their IT strategy (2,806)
Hope for the future (1-2 years)

*How confident are you that your organization will achieve the following with edge within the next 1-2 years?* Base: ITDM respondents from organizations that have edge as a central part of their IT strategy or that recognize edge as integral but don’t have the capacity to implement edge technologies (3,133)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Very confident</th>
<th>Fairly confident</th>
<th>Not very confident</th>
<th>Not at all confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>We’ll have a holistic strategy for all our edge data</td>
<td>41%</td>
<td>44%</td>
<td>13%</td>
<td>2%</td>
</tr>
<tr>
<td>We’ll have a holistic architecture for the edge</td>
<td>39%</td>
<td>45%</td>
<td>13%</td>
<td>2%</td>
</tr>
<tr>
<td>We’ll overcome latency/bandwidth issues with the edge</td>
<td>41%</td>
<td>45%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>We’ll generate value from data insights and automation at the edge</td>
<td>39%</td>
<td>48%</td>
<td>11%</td>
<td>1%</td>
</tr>
<tr>
<td>Our data will be secure and protected at the edge</td>
<td>42%</td>
<td>45%</td>
<td>12%</td>
<td>1%</td>
</tr>
<tr>
<td>We’ll future proof our organization with the edge</td>
<td>43%</td>
<td>44%</td>
<td>12%</td>
<td>1%</td>
</tr>
<tr>
<td>We’ll have the right skills and knowledge to successfully generate value at the edge</td>
<td>42%</td>
<td>44%</td>
<td>12%</td>
<td>1%</td>
</tr>
</tbody>
</table>

*Very confident* | *Fairly confident* | *Not very confident* | *Not at all confident*
Cloud
## Methods used to gain IT agility and flexibility

<table>
<thead>
<tr>
<th>Approach</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopting an as-a-Service IT consumption model</td>
<td>45%</td>
</tr>
<tr>
<td>Leveraging a mix of public and private cloud environments</td>
<td>43%</td>
</tr>
<tr>
<td>Moving apps and/or data to one or more public clouds</td>
<td>43%</td>
</tr>
<tr>
<td>Re-platforming existing apps to take advantage of the capabilities of cloud</td>
<td>43%</td>
</tr>
<tr>
<td>Moving apps and/or data to a private cloud</td>
<td>41%</td>
</tr>
<tr>
<td>Transitioned to DevOps/DevSecOps methodology</td>
<td>38%</td>
</tr>
<tr>
<td>Embracing containerization and microservices</td>
<td>34%</td>
</tr>
<tr>
<td>Leveraging colocation</td>
<td>27%</td>
</tr>
</tbody>
</table>

Nearly all (99%) ITDMs report that their organization is doing at least one thing to gain IT agility and flexibility to support innovation.

“What is your organization doing to gain IT agility and flexibility to support innovation?” Base: ITDM respondents (3,350)
Moving data and apps between clouds has been easy

Moving data and apps between clouds has been time consuming and difficult

Operating in multiple clouds has limited our data's value

Operating in multiple clouds has protected our data's value and enables us to innovate faster

Our cloud strategy has largely delivered consistently without mistakes

Implementing our cloud strategy has been difficult and frustrating

"Which most accurately describes your organization's cloud experience?" Base: ITDM respondents (3,350)
Benefits of modern cloud architecture

A modern cloud architecture is enabling the following benefits (top 5)

1. Opportunity to take advantage of Cloud Economics to accelerate innovation by eliminating large upfront CapEx expenditures - 42%

2. Using advanced cloud services such as AI, chatbots, quantum computing etc. - 40%

3. Opened up geolocations: better service in areas we don’t have a physical data center by leveraging a cloud’s global footprint - 40%

4. Taking advantage of OnDemand unlimited compute bursting capabilities to accelerate tasks i.e., AI, DevTest etc. - 40%

5. Reduced management overhead and improved visibility by embracing Autonomous Operations - 38%

“What benefits has a modern cloud architecture enabled for your organization?” Base: ITDM respondents (3,350)
**Current and future cloud strategy challenges**

### Top 5 challenges being experienced in relation to cloud strategies *today*

<table>
<thead>
<tr>
<th>#</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Growing cloud costs (storage, networking egress, access fees etc.)</td>
</tr>
<tr>
<td>2</td>
<td>Data Sovereignty and other compliance requirements hard to comply with</td>
</tr>
<tr>
<td>3</td>
<td>Time and money spent to migrate apps to new cloud environment</td>
</tr>
<tr>
<td>4</td>
<td>Limited visibility and control create additional security challenges</td>
</tr>
<tr>
<td>5</td>
<td>Siloed cloud experiences and disparate management across disparate vendors</td>
</tr>
</tbody>
</table>

92% of respondents highlight at least one challenge in relation to their cloud strategy today

“What challenges is your organization experiencing with its cloud strategy today?”
Base: ITDM respondents (3,350)

### Top 5 barriers likely to impact organizations’ *future* cloud strategy

<table>
<thead>
<tr>
<th>#</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inability to add additional capacity without a major infrastructure investment</td>
</tr>
<tr>
<td>2</td>
<td>Our IT team aren’t bought into the long-term benefits of cloud</td>
</tr>
<tr>
<td>3</td>
<td>Lack of cloud control; no singular experience</td>
</tr>
<tr>
<td>4</td>
<td>Our current strategy is too short term</td>
</tr>
<tr>
<td>5</td>
<td>It’s not a preference at board level</td>
</tr>
</tbody>
</table>

86% of respondents highlight at least one barrier that will likely impact future cloud strategy in their organization

“What are the likely barriers to your organization’s future cloud strategy?” Base: ITDM respondents (3,350)
Cybersecurity achievements

We’ve found a good balance between access and security controls: 57%
Peace of mind: so, people can work from anywhere/find inspiration from everywhere: 55%
A secure edge: security across a distributed network with many endpoints: 54%
Disaster recovery/minimal disruption: we can experience a cyberattack and continue to trade/transact: 52%

66% of Innovation Leaders & Adopters say this
65% of Innovation Leaders & Adopters say this

“What has your organization (and its strategic IT partner) achieved so far in relation to cybersecurity?” Base: ITDM respondents (3,350)
Cybersecurity achievements

67% of Innovation Leaders & Adopters strongly agree. Only 27% of Innovation Laggards and Followers strongly agree.

60% of Innovation Leaders & Adopters strongly agree. Only 26% of Innovation Laggards and Followers strongly agree.

“To what extent do you agree or disagree that your IT department/IT provider is supporting innovation in your organization by enabling the following?” Base: all respondents (6,600)
Actions to improve cybersecurity

- Company-wide cybersecurity training, including focus on complex passwords and multi-factor authentication: 37%
- Ensuring IT suppliers have implemented a secure supply chain: 36%
- Conducting an audit of users, devices, assets, cloud services, etc., to understand full scope of what needs to be protected: 36%
- Employing a holistic end-to-end security strategy integrating both hardware- and software-based protections: 33%
- Protecting high value data in the event of an attack i.e., through using a cyber recovery vault: 33%
- Consolidating our security applications and gaining greater control of our IT infrastructure: 33%
- Augmenting security capabilities with external cybersecurity experts (security service providers): 32%
- Practicing a secure development lifecycle that protects the processes by which new products, features and services are designed and developed: 32%
- Evaluating a larger, distributed attack surface for potential risks (meeting this necessity in a hybrid working world): 30%
- Using AI-based optimization software to automate privacy controls: 30%
- Hiring additional cybersecurity experts: 27%
- Using a managed threat detection and response service: 27%
- Exploring/building a Zero Trust architecture: 23%

“Which, if any, of the following is your organization doing to improve its cybersecurity?” Base: ITDM respondents (3,350)
Cybersecurity challenges

<table>
<thead>
<tr>
<th>#</th>
<th>Top 5 elements compromising cybersecurity in respondents’ organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Overall complexity of the modern computing environment (making it difficult to manage)</td>
</tr>
<tr>
<td>#2</td>
<td>Evolving threat landscape (struggling to stay ahead of threats)</td>
</tr>
<tr>
<td>#3</td>
<td>Employees don’t take cybersecurity threats seriously/naïve</td>
</tr>
<tr>
<td>#4</td>
<td>Too many discrete IT security solutions to manage</td>
</tr>
<tr>
<td>#5</td>
<td>Security teams not working hand in hand with business stakeholders to define priorities</td>
</tr>
</tbody>
</table>

94% of respondents highlight at least one element that is compromising cybersecurity in their organization

“Which of the following is very likely to be compromising your organization’s cybersecurity?” Base: ITDM respondents (3,350)
Time spent firefighting threats vs. securing innovation

Average portion of time spent firefighting security threats versus enabling secure innovation

52% 48%

Firefighting security threats Enabling secure innovation

"Which of the following best describes the proportion of your time spent firefighting security threats versus enabling secure innovation?" Base: ITDM respondents (3,350)
## How innovation is accelerating the need for Zero Trust

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The increased value of data makes the necessity to secure the data</td>
<td>38%</td>
</tr>
<tr>
<td>more paramount</td>
<td></td>
</tr>
<tr>
<td>The need to secure a growing volume of endpoints for an increasingly</td>
<td>38%</td>
</tr>
<tr>
<td>remote workforce</td>
<td></td>
</tr>
<tr>
<td>Increased attack surface area due to distributed IT footprint across</td>
<td>37%</td>
</tr>
<tr>
<td>multiple cloud and edge locations</td>
<td></td>
</tr>
<tr>
<td>Increasingly complex supply chains require a rigorous and efficient</td>
<td>35%</td>
</tr>
<tr>
<td>security approach</td>
<td></td>
</tr>
<tr>
<td>Difficulty addressing new Edge and IoT security challenges such as:</td>
<td>35%</td>
</tr>
<tr>
<td>physical access, device management, and limited connectivity</td>
<td></td>
</tr>
<tr>
<td>The growing sophistication of cyberattacks</td>
<td>34%</td>
</tr>
<tr>
<td>Cybersecurity skills shortage – necessitating a paradigm shift in IT</td>
<td>34%</td>
</tr>
<tr>
<td>security</td>
<td></td>
</tr>
<tr>
<td>The rapid pace of digitization is creating complexity, which is harder</td>
<td>33%</td>
</tr>
<tr>
<td>to secure</td>
<td></td>
</tr>
<tr>
<td>Proliferation of privileged identities that offer elevated permissions</td>
<td>32%</td>
</tr>
<tr>
<td>for critical systems</td>
<td></td>
</tr>
<tr>
<td>We are not pursuing/accelerating a Zero Trust model</td>
<td>3%</td>
</tr>
<tr>
<td>We are not overly familiar with what Zero Trust is and why we need it</td>
<td>2%</td>
</tr>
</tbody>
</table>

"How is innovation accelerating the need for Zero Trust adoption in your organization?" Base: ITDM respondents (3,350)
Sustainability
How technology is making them more sustainable

<table>
<thead>
<tr>
<th>Feature</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reducing our overall IT carbon footprint (decreasing the amount of emissions associated with the IT products our company uses)</td>
<td>52%</td>
</tr>
<tr>
<td>Increasing efficiency by leveraging Edge/AI/ML to action data insights (e.g. smart tech, where to heat/cool facilities etc.)</td>
<td>50%</td>
</tr>
<tr>
<td>Increasing energy efficiency/reducing energy use in the data center</td>
<td>47%</td>
</tr>
<tr>
<td>Providing services to help us retire/recycle the IT equipment that we use (end-of-life)</td>
<td>47%</td>
</tr>
<tr>
<td>Enabling us to experiment with how we consume the technology (aaS/on-demand)</td>
<td>42%</td>
</tr>
<tr>
<td>Greater visibility of our carbon impacts (via telemetry data)</td>
<td>39%</td>
</tr>
<tr>
<td>To the best of my knowledge technology is not helping us achieve our sustainability/climate goals</td>
<td>1%</td>
</tr>
<tr>
<td>My organization doesn’t have any sustainability/climate goals</td>
<td>1%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1%</td>
</tr>
</tbody>
</table>

"How is technology helping your organization achieve its sustainability/climate goals?" Base: ITDM respondents (3,350)
Technology investment areas to advance innovation

Which of the following technologies is your organization actively investing in or exploring the feasibility of investing in to advance innovation? Base: ITDM respondents (3,350)

- AI, Machine Learning and advanced analytics: 39%
- Quantum computing: 34%
- Web 3.0 to allow full ownership of data: 34%
- Next-gen 3D displays: 33%
- Industrial robotics: 30%
- Neuromorphic hardware: 30%
- Natural user interfaces: 28%
- Digital Twins: 27%
- Green data center solutions: 25%
- Mixed, Augmented or Virtual Reality: 25%
- Commercial robotics (UAVs/drones, medical robots, co-bots etc.): 25%
- Zero Trust architecture: 23%
- Renewable electricity: 22%
- Distributed ledgers such as Blockchain: 20%
- 3D Printing: 18%

“Which of the following technologies is your organization actively investing in or exploring the feasibility of investing in to advance innovation?” Base: ITDM respondents (3,350)
ABOUT DELL TECHNOLOGIES
Dell Technologies helps organizations and individuals build their digital future and transform how they work, live and play. The company provides customers with the industry’s broadest and most innovative technology and services portfolio for the data era. www.delltechnologies.com

ABOUT VANSON BOURNE
Vanson Bourne is an independent specialist in market research for the technology sector. Their reputation for robust and credible research-based analysis is founded upon rigorous research principles and their ability to seek the opinions of senior decision makers across technical and business functions, in all business sectors and all major markets. www.vansonbourne.com