The future belongs to the Intelligent Enterprise

Ready or not, the future is here.
For enterprise organizations, it must be a data-driven one.

Whoever can use technology to transform the customer experience, and be the first to discover and deliver on new business models, will be the disruptor. Those who can't, the disrupted in this period known as the “era of Digital Darwinism.”

The future belongs to the Intelligent Enterprise which anticipates constantly evolving regulatory, technological, market, and competitive challenges and turns them into opportunity and profit. It delivers a single version of the truth and agility. It connects to any data and distributes reports to thousands. The Intelligent Enterprise goes beyond business intelligence, delivering transformative insight to every user, constituent and partner.

Are most organizations there yet?
As brands hone and focus their 2020 (and even 2030) vision, MicroStrategy has surveyed 500 enterprise analytics professionals on the state of their organization’s analytics initiatives. We’ve asked them about investment, priorities, use, benefits, challenges, talent, advancement and the foreseeable future. In our 2018 global survey, we polled professionals across Brazil, Germany, Japan, the United Kingdom and the United States where we found many commonalities, as well as some distinct differences based on location.

One thing is certain in this global survey view: data and analytics are playing a crucial role in digital transformation efforts - driving greater effectiveness and efficiency, as well as the strategy to define new business models and bring about successful change.

From a look at today’s challenges and benefits to top trends, we hope you’ll find the data and insights delivered in this report beneficial as your organization strives to become an Intelligent Enterprise.
# Table of Contents

**Overview:** The State of Enterprise Analytics is Strong  
**Benefits:** Accentuating the Positive  
**Challenges:** Acknowledging Room for Improvement  
**People:** Taking Stock in Talent  
**Culture:** Democratizing Data and Analytics  
**Investment:** Investing and Advancing  
**Survey Methodology**  
**About MicroStrategy**
OVERVIEW: THE STATE OF ENTERPRISE ANALYTICS IS STRONG

In an era of accelerating digital disruption, 57% of enterprise organizations are using data and analytics to drive strategy and change.
OVERVIEW: MicroStrategy’s Global State of Enterprise Analytics survey found that analytics and business intelligence professionals are incredibly confident about their organization’s analytics proficiency in 2018: 78% said they believe their organization is currently using data and analytics as effectively as it could be. When asked if they felt their organization was a leader in data analytics use, the percentage of those who said yes did decrease, but is optimistically high at 64%.

In 2018, the top uses for data and analytics are to drive process and cost efficiency, as well as to drive strategy and change. Advanced and predictive analytics, as well as big data dominate the top applications, even though the maturity of most currently used solutions is somewhat lacking. When selecting an enterprise analytics solution, security stands out as a top concern around the globe - except for, very interestingly, one country in the five surveyed.
**How is your organization using data and analytics?**

<table>
<thead>
<tr>
<th>Country</th>
<th>To drive process and cost efficiency</th>
<th>To drive strategy and change</th>
<th>To monitor and improve financial performance</th>
<th>To analyze how current products and services are used</th>
<th>To manage risk</th>
<th>To attain and retain customers</th>
<th>To monitor the market</th>
<th>To develop new products and services</th>
<th>To analyze workplace and workforce productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GLOBAL</strong></td>
<td>60%</td>
<td>57%</td>
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<tr>
<td><strong>BRAZIL</strong></td>
<td>57%</td>
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<tr>
<td><strong>GERMANY</strong></td>
<td>57%</td>
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<tr>
<td><strong>JAPAN</strong></td>
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<td><strong>UNITED KINGDOM</strong></td>
<td>59%</td>
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<tr>
<td><strong>UNITED STATES</strong></td>
<td>61%</td>
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<td>54%</td>
<td>50%</td>
<td>47%</td>
<td>49%</td>
<td>53%</td>
</tr>
</tbody>
</table>
Which of the following does your organization currently leverage around analytics?

**GLOBAL**

- **Advanced and predictive analytics**: 52%
- Distribution of analytics via email, collaboration tools, etc.: 49%
- Analytics embedded in other apps (e.g. Salesforce): 44%
- Mobile productivity apps: 39%
- KPIs presented on screens in office: 37%
- Data lakes/Hadoop: 30%
- Zero-click analytics: 22%
- None of the above: 3%

**BRAZIL**

- **Advanced and predictive analytics**: 53%
- Distribution of analytics via email, collaboration tools, etc.: 52%
- Analytics embedded in other apps (e.g. Salesforce): 47%
- Mobile productivity apps: 42%
- KPIs presented on screens in office: 31%
- Data lakes/Hadoop: 23%
- Zero-click analytics: 24%
- None of the above: 1%

**GERMANY**

- Advanced and predictive analytics: 45%
  - **Distribution of analytics via email, collaboration tools, etc.**: 50%
  - Analytics embedded in other apps (e.g. Salesforce): 39%
  - Mobile productivity apps: 31%
  - KPIs presented on screens in office: 44%
  - Data lakes/Hadoop: 28%
  - Zero-click analytics: 15%
  - None of the above: 3%

**JAPAN**

- **Advanced and predictive analytics**: 60%
- Distribution of analytics via email, collaboration tools, etc.: 42%
- Analytics embedded in other apps (e.g. Salesforce): 40%
- Mobile productivity apps: 40%
- KPIs presented on screens in office: 33%
- Data lakes/Hadoop: 31%
- Zero-click analytics: 30%
- None of the above: 2%

**UNITED KINGDOM**

- **Advanced and predictive analytics**: 54%
- Distribution of analytics via email, collaboration tools, etc.: 53%
- Analytics embedded in other apps (e.g. Salesforce): 50%
- Mobile productivity apps: 41%
- KPIs presented on screens in office: 38%
- Data lakes/Hadoop: 34%
- Zero-click analytics: 20%
- None of the above: 5%

**UNITED STATES**

- **Advanced and predictive analytics**: 49%
- Distribution of analytics via email, collaboration tools, etc.: 47%
- Analytics embedded in other apps (e.g. Salesforce): 45%
- Mobile productivity apps: 40%
- KPIs presented on screens in office: 37%
- Data lakes/Hadoop: 33%
- Zero-click analytics: 20%
- None of the above: 5%
Which intelligence applications does your organization currently utilize?

GLOBAL
- Big data analytics: 59%
- Enterprise reporting: 47%
- Data discovery: 47%
- Mobile productivity apps (for sales, field service, etc.): 44%
- Embedded analytics: 42%
- Consumer-facing applications: 40%
- Digital identity: 40%
- Workforce telemetry apps: 34%
- Mobile BI: 27%

BRAZIL
- Big data analytics: 51%
- Enterprise reporting: 64%
- Data discovery: 40%
- Mobile productivity apps (for sales, field service, etc.): 41%
- Embedded analytics: 42%
- Consumer-facing applications: 42%
- Digital identity: 45%
- Workforce telemetry apps: 25%
- Mobile BI: 25%

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- Digital identity: 38%
- Workforce telemetry apps: 43%
- Mobile BI: 28%
What is most important to you in the selection of an analytics solution for your organization?

<table>
<thead>
<tr>
<th>Location</th>
<th>Security</th>
<th>Comprehensive platform</th>
<th>Ease of use</th>
<th>Product reputation, trust, longevity</th>
<th>Enterprise scalability</th>
<th>Single source of the truth</th>
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</thead>
<tbody>
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<td><strong>GLOBAL</strong></td>
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<td>15%</td>
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<td>4%</td>
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<tr>
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<tr>
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<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td><strong>UNITED KINGDOM</strong></td>
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<td>18%</td>
<td>16%</td>
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</tr>
<tr>
<td><strong>UNITED STATES</strong></td>
<td>14%</td>
<td>18%</td>
<td>17%</td>
<td>20%</td>
<td>26%</td>
<td>5%</td>
</tr>
</tbody>
</table>
How mature is the analytics technology used by your organization?

GLOBAL

Collaborative deployment between IT and business with governance and security frameworks without access to big data, mobile and predictive technologies: 27%

Basic IT-led reporting tools without self-service for business users: 23%

Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies without center of excellence for training and support: 21%

Predominantly business led self-service without governance and security frameworks: 14%

Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies supported by a center of excellence for training and support: 11%

Rudimentary, with only spreadsheets and basic reporting tools: 4%

GERMANY

Collaborative deployment between IT and business with governance and security frameworks without access to big data, mobile and predictive technologies: 25%

Basic IT-led reporting tools without self-service for business users: 33%

Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies without center of excellence for training and support: 21%

Predominantly business led self-service without governance and security frameworks: 12%

Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies supported by a center of excellence for training and support: 6%

Rudimentary, with only spreadsheets and basic reporting tools: 3%

JAPAN

Collaborative deployment between IT and business with governance and security frameworks without access to big data, mobile and predictive technologies: 21%

Basic IT-led reporting tools without self-service for business users: 28%

Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies without center of excellence for training and support: 18%

Predominantly business led self-service without governance and security frameworks: 21%

Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies supported by a center of excellence for training and support: 10%

Rudimentary, with only spreadsheets and basic reporting tools: 2%

BRAZIL

Collaborative deployment between IT and business with governance and security frameworks without access to big data, mobile and predictive technologies: 36%

Basic IT-led reporting tools without self-service for business users: 15%

Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies without center of excellence for training and support: 17%

Predominantly business led self-service without governance and security frameworks: 10%

Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies supported by a center of excellence for training and support: 16%

Rudimentary, with only spreadsheets and basic reporting tools: 6%
How mature is the analytics technology used by your organization? (cont.)

UNITED KINGDOM
Collaborative deployment between IT and business with governance and security frameworks without access to big data, mobile and predictive technologies: 23%
Basic IT-led reporting tools without self-service for business users: 17%

Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies without center of excellence for training and support: 26%
Predominantly business led self-service without governance and security frameworks: 15%
Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies supported by a center of excellence for training and support: 15%
Rudimentary, with only spreadsheets and basic reporting tools: 4%

UNITED STATES
Collaborative deployment between IT and business with governance and security frameworks without access to big data, mobile and predictive technologies: 31%
Basic IT-led reporting tools without self-service for business users: 22%

Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies without center of excellence for training and support: 21%
Predominantly business led self-service without governance and security frameworks: 13%
Sophisticated architecture for self-service analytics, with governance, security frameworks, access to big data, mobile and predictive technologies supported by a center of excellence for training and support: 8%
Rudimentary, with only spreadsheets and basic reporting tools: 5%
Do you feel your organization is using data and analytics as effectively as it could be?

**GLOBAL**
- Yes: 78%
- No: 22%

**BRAZIL**
- Yes: 84%
- No: 16%

**GERMANY**
- Yes: 77%
- No: 23%

**JAPAN**
- Yes: 71%
- No: 29%

**UNITED KINGDOM**
- Yes: 79%
- No: 21%

**UNITED STATES**
- Yes: 80%
- No: 20%
Do you feel your organization is a leader in data and analytics usage?

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>Brazil</td>
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</tr>
<tr>
<td>Germany</td>
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<tr>
<td>Japan</td>
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<tr>
<td>United Kingdom</td>
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<td>34%</td>
</tr>
<tr>
<td>United States</td>
<td>64%</td>
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</tr>
</tbody>
</table>
BENEFITS: ACCENTUATING THE POSITIVE

Data-driven organizations are realizing a growing competitive advantage: 57% are experiencing faster, more effective decision making through their data and analytics use.
**BENEFITS:** Organizations using more and better data to gain business insights are creating a competitive advantage for future success. They’re not just using data to improve core operations, but they’re transforming customer experiences and creating new business models. Data-driven organizations around the globe report the top two benefits of their analytics initiatives are improved efficiency and productivity (63%), as well as faster, more effective decision making (57%). The advantages don’t stop there, however. Improved customer acquisition and retention and better financial performance are all being realized.

These organizations say what’s helped them achieve the most from their data are creating a strategy around data (40%), and revolving their culture around it (37%). After that, other organization-wide initiatives have accentuated the positive momentum. Read on to find out what they are.
What benefits has your organization realized through your analytics use?

GLOBAL
- Improved efficiency and productivity: 63%
- Faster, more effective decision making: 57%
- Better financial performance: 51%
- Competitive advantage: 48%
- Improved customer experiences: 48%
- Improved customer acquisition and retention: 46%
- Identification and creation of new revenue streams: 43%

JAPAN
- Improved efficiency and productivity: 65%
- Faster, more effective decision making: 48%
- Better financial performance: 39%
- Competitive advantage: 45%
- Improved customer experiences: 38%
- Improved customer acquisition and retention: 48%
- Identification and creation of new revenue streams: 45%

UNITED KINGDOM
- Improved efficiency and productivity: 59%
- Faster, more effective decision making: 59%
- Better financial performance: 56%
- Competitive advantage: 46%
- Improved customer experiences: 58%
- Improved customer acquisition and retention: 55%
- Identification and creation of new revenue streams: 44%

UNITED STATES
- Improved efficiency and productivity: 65%
- Faster, more effective decision making: 60%
- Better financial performance: 51%
- Competitive advantage: 54%
- Improved customer experiences: 47%
- Improved customer acquisition and retention: 50%
- Identification and creation of new revenue streams: 43%

BRAZIL
- Improved efficiency and productivity: 61%
- Faster, more effective decision making: 57%
- Better financial performance: 58%
- Competitive advantage: 49%
- Improved customer experiences: 54%
- Improved customer acquisition and retention: 39%
- Identification and creation of new revenue streams: 44%

GERMANY
- Improved efficiency and productivity: 64%
- Faster, more effective decision making: 60%
- Better financial performance: 52%
- Competitive advantage: 47%
- Improved customer experiences: 41%
- Improved customer acquisition and retention: 38%
- Identification and creation of new revenue streams: 41%
What has had the most positive impact on the success of your analytics initiatives?

### GLOBAL
- **Creating an analytics strategy**: 40%
- Developing a data-driven culture: 37%
- Establishing an effective data architecture & tech infrastructure: 36%
- Data preparation best practices: 36%
- Education and training: 36%
- Executive interest and buy-in: 34%
- Self-service analytics capabilities for business users: 30%
- Attracting and retaining top talent: 30%
- Automation: 26%
- Branded mobile analytics application: 22%
- Natural language generation and voice capabilities: 20%

### BRAZIL
- **Creating an analytics strategy**: 47%
- Developing a data-driven culture: 45%
- Establishing an effective data architecture & tech infrastructure: 32%
- Data preparation best practices: 32%
- Education and training: 36%
- Executive interest and buy-in: 28%
- Self-service analytics capabilities for business users: 28%
- Attracting and retaining top talent: 31%
- Automation: 27%
- Branded mobile analytics application: 22%
- Natural language generation and voice capabilities: 13%

### GERMANY
- **Creating an analytics strategy**: 39%
- Developing a data-driven culture: 30%
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- Self-service analytics capabilities for business users: 25%
- Attracting and retaining top talent: 31%
- Automation: 31%
- Branded mobile analytics application: 19%
- Natural language generation and voice capabilities: 21%

### JAPAN
- **Creating an analytics strategy**: 42%
- Developing a data-driven culture: 37%
- Establishing an effective data architecture & tech infrastructure: 38%
- Data preparation best practices: 34%
- Education and training: 37%
- Executive interest and buy-in: 36%
- Self-service analytics capabilities for business users: 35%
- Attracting and retaining top talent: 33%
- Automation: 26%
- Branded mobile analytics application: 17%
- Natural language generation and voice capabilities: 19%

### UNITED KINGDOM
- **Creating an analytics strategy**: 39%
- Developing a data-driven culture: 37%
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- Data preparation best practices: 42%
- Education and training: 33%
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- Self-service analytics capabilities for business users: 27%
- Attracting and retaining top talent: 29%
- Automation: 25%
- Branded mobile analytics application: 23%
- Natural language generation and voice capabilities: 21%

### UNITED STATES
- **Creating an analytics strategy**: 33%
- Developing a data-driven culture: 37%
- Establishing an effective data architecture & tech infrastructure: 34%
- Data preparation best practices: 44%
- Education and training: 43%
- Executive interest and buy-in: 44%
- Self-service analytics capabilities for business users: 35%
- Attracting and retaining top talent: 27%
- Automation: 22%
- Branded mobile analytics application: 29%
- Natural language generation and voice capabilities: 28%
Data privacy and security concerns are a key challenge for organizations around the globe; 49% say these concerns are holding their organization back from using data more effectively.
CHALLENGES: As organizations leverage data to accelerate their digital transformation initiatives and strengthen their competitive edge, what’s holding them back from moving farther even faster? Globally, the three challenges enterprise organizations most commonly face include data privacy and security concerns (49%), limited democratization of data within their organization (33%), and a lack of training on how to make the most of an increasing influx of data (29%).

Around the world, many enterprise organizations are also struggling with data governance which requires technological as well as cultural support to succeed. Forty-five percent (45%) of organizations report that less than half of their organizational data is governed (certified by organizational authority or adheres to corporate policies/a single version of the truth).
What are the barriers, if any, to more effective use of data and analytics within your organization?

**GLOBAL**

- Data privacy and security concerns: 49%
- Access to data is limited across the organization: 33%
- Lack of training: 29%
- The current solution is not user-friendly for many: 28%
- Our organization lacks the proper technology: 26%
- Our organization lacks an analytics strategy: 24%
- There is no centralized tool for capturing and analyzing data: 21%
- Analytics use is not a key focus for executives: 20%

**BRAZIL**

- Data privacy and security concerns: 48%
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**UNITED STATES**

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- Our organization lacks the proper technology: 26%
- Our organization lacks an analytics strategy: 27%
- There is no centralized tool for capturing and analyzing data: 29%
- Analytics use is not a key focus for executives: 16%
How much of your organizational data is governed (certified by organizational authority or adheres to corporate policies/single version of the truth)?

<table>
<thead>
<tr>
<th>Region</th>
<th>Less than 10%</th>
<th>10 - 49%</th>
<th>50 – 75%</th>
<th>More than 75%</th>
<th>Don’t know</th>
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</thead>
<tbody>
<tr>
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<td>31%</td>
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<td>33%</td>
<td>38%</td>
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<td>25%</td>
<td>4%</td>
</tr>
<tr>
<td>UNITED STATES</td>
<td>7%</td>
<td>24%</td>
<td>36%</td>
<td>28%</td>
<td>5%</td>
</tr>
</tbody>
</table>
64% of enterprise organizations say that over the next year, they are planning to invest more in hiring data and analytics talent.
PEOPLE: Organizations often struggle with not only the selection of tools that can help them become an Intelligent Enterprise, but also with how to build and structure teams and marshal resources that can more efficiently and effectively transform data into insight. For brands to have the talent they want and need tomorrow, many are upping the ante on their acquisition efforts – as well as starting to grow their talent in house.

The role of Chief Data Officer is also on the rise around the world. More than half of organizations in this survey (57%) say they now have one. This role could be pivotal in helping to democratize data and analytics across all parts of the organization. According to this year’s survey, 48% of organizations’ front-line employees aren’t given access to their brand’s data and analytics.
Do you have a CDO role within your organization or are you thinking of creating one?

GLOBAL
- We have a Chief Data Officer: 57%
  - We’re considering creating a Chief Data Officer position: 24%
  - We don’t have a Chief Data Officer: 16%
  - We haven’t thought about that role for our organization: 4%

BRAZIL
- We have a Chief Data Officer: 62%
  - We’re considering creating a Chief Data Officer position: 17%
  - We don’t have a Chief Data Officer: 17%
  - We haven’t thought about that role for our organization: 4%

GERMANY
- We have a Chief Data Officer: 54%
  - We’re considering creating a Chief Data Officer position: 27%
  - We don’t have a Chief Data Officer: 15%
  - We haven’t thought about that role for our organization: 4%

UNITED KINGDOM
- We have a Chief Data Officer: 60%
  - We’re considering creating a Chief Data Officer position: 27%
  - We don’t have a Chief Data Officer: 16%
  - We haven’t thought about that role for our organization: 4%

UNITED STATES
- We have a Chief Data Officer: 49%
  - We’re considering creating a Chief Data Officer position: 20%
  - We don’t have a Chief Data Officer: 22%
  - We haven’t thought about that role for our organization: 9%

JAPAN
- We have a Chief Data Officer: 59%
  - We’re considering creating a Chief Data Officer position: 32%
  - We don’t have a Chief Data Officer: 9%
  - We haven’t thought about that role for our organization: 0%

Over the next year, does your organization plan to invest more, less or about the same in hiring additional data and analytics talent?

GLOBAL
- We plan to invest more: 64%
  - We plan to invest about the same: 32%
  - We plan to invest less: 4%

BRAZIL
- We plan to invest more: 77%
  - We plan to invest about the same: 23%
  - We plan to invest less: 0%

GERMANY
- We plan to invest more: 59%
  - We plan to invest about the same: 32%
  - We plan to invest less: 9%

UNITED KINGDOM
- We plan to invest more: 59%
  - We plan to invest about the same: 38%
  - We plan to invest less: 3%

UNITED STATES
- We plan to invest more: 63%
  - We plan to invest about the same: 30%
  - We plan to invest less: 7%
Which of the following roles do you currently have within your organization?

<table>
<thead>
<tr>
<th>Global</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System administrator: 59%</strong></td>
<td><strong>System administrator: 73%</strong></td>
</tr>
<tr>
<td>Intelligence director (i.e. director of analytics, head of BI): 46%</td>
<td>Intelligence director (i.e. director of analytics, CDO): 44%</td>
</tr>
<tr>
<td>Database architect: 44%</td>
<td>Database architect: 39%</td>
</tr>
<tr>
<td>Analytics architect: 42%</td>
<td>Analytics architect: 43%</td>
</tr>
<tr>
<td>Platform administrator: 39%</td>
<td>Platform administrator: 42%</td>
</tr>
<tr>
<td>Application architect: 35%</td>
<td>Application architect: 37%</td>
</tr>
<tr>
<td>Digital identity architect: 26%</td>
<td>Digital identity architect: 23%</td>
</tr>
<tr>
<td>Embedded analytics architect: 25%</td>
<td>Embedded analytics architect: 18%</td>
</tr>
<tr>
<td>Mobile architect: 23%</td>
<td>Mobile architect: 24%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brazil</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System administrator: 64%</strong></td>
<td><strong>System administrator: 55%</strong></td>
</tr>
<tr>
<td>Intelligence director (i.e. director of analytics, CDO): 50%</td>
<td>Intelligence director (i.e. director of analytics, CDO): 52%</td>
</tr>
<tr>
<td>Database architect: 45%</td>
<td>Database architect: 53%</td>
</tr>
<tr>
<td>Analytics architect: 44%</td>
<td>Analytics architect: 49%</td>
</tr>
<tr>
<td>Platform administrator: 39%</td>
<td>Platform administrator: 43%</td>
</tr>
<tr>
<td>Application architect: 31%</td>
<td>Application architect: 37%</td>
</tr>
<tr>
<td>Digital identity architect: 21%</td>
<td>Digital identity architect: 36%</td>
</tr>
<tr>
<td>Embedded analytics architect: 26%</td>
<td>Embedded analytics architect: 30%</td>
</tr>
<tr>
<td>Mobile architect: 17%</td>
<td>Mobile architect: 26%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Germany</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System administrator: 52%</strong></td>
<td><strong>System administrator: 53%</strong></td>
</tr>
<tr>
<td>Intelligence director (i.e. director of analytics, CDO): 42%</td>
<td>Intelligence director (i.e. director of analytics, CDO): 43%</td>
</tr>
<tr>
<td>Database architect: 40%</td>
<td>Database architect: 44%</td>
</tr>
<tr>
<td>Analytics architect: 36%</td>
<td>Analytics architect: 39%</td>
</tr>
<tr>
<td>Platform administrator: 36%</td>
<td>Platform administrator: 36%</td>
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<tr>
<td>Application architect: 35%</td>
<td>Application architect: 34%</td>
</tr>
<tr>
<td>Digital identity architect: 25%</td>
<td>Digital identity architect: 26%</td>
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<tr>
<td>Embedded analytics architect: 20%</td>
<td>Embedded analytics architect: 29%</td>
</tr>
<tr>
<td>Mobile architect: 25%</td>
<td>Mobile architect: 24%</td>
</tr>
</tbody>
</table>
In striving for a data-driven culture, only 16% of enterprise organizations can currently say that more than 75% of their employees have access to company data and analytics.
CULTURE: While most executive and management teams in enterprise organizations have a data-driven view of the business, the key to digital transformation lies in a truly data-driven culture where all teams are equally responsible, transparent and collaborative. When all employees have a view of where the business is at and where it needs to be, change, improvement and ideas around new business models are more likely to occur.

According to this year’s survey, while 84% of management teams have access to their organizations’ data and analytics, 48% of the organizations’ front line employees do not. For departments like sales and customer service, this lack of awareness for real-time decision making could significantly impact the bottom line. Respondents say embedding organizational analytics into business applications and displaying relevant data on screens throughout the organization would be of benefit in democratizing data and driving overall business improvement.
What percentage of your entire organization currently has access to data and analytics?

<table>
<thead>
<tr>
<th>Country</th>
<th>Less than 10%</th>
<th>10-49%</th>
<th>50-75%</th>
<th>More than 75%</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GLOBAL</strong></td>
<td></td>
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<tr>
<td>Less than 10%: 6%</td>
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<tr>
<td>10-49%: 37%</td>
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<tr>
<td>50-75%: 40%</td>
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<tr>
<td>More than 75%: 16%</td>
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<tr>
<td>Don't know: 1%</td>
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<tr>
<td><strong>BRAZIL</strong></td>
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<tr>
<td>Less than 10%: 1%</td>
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<tr>
<td>10-49%: 30%</td>
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<tr>
<td>50-75%: 52%</td>
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<td>More than 75%: 17%</td>
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<tr>
<td>Don't know: 0%</td>
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<tr>
<td><strong>GERMANY</strong></td>
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<td>Less than 10%: 8%</td>
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<td>10-49%: 41%</td>
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<td>50-75%: 37%</td>
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<td>More than 75%: 12%</td>
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<td>Don't know: 2%</td>
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<td><strong>JAPAN</strong></td>
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<tr>
<td>Less than 10%: 12%</td>
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<td>10-49%: 46%</td>
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<tr>
<td>50-75%: 33%</td>
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<tr>
<td>More than 75%: 9%</td>
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<tr>
<td>Don't know: 0%</td>
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<tr>
<td><strong>UNITED KINGDOM</strong></td>
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<tr>
<td>Less than 10%: 3%</td>
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<tr>
<td>10-49%: 43%</td>
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<tr>
<td>50-75%: 33%</td>
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<tr>
<td>More than 75%: 18%</td>
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<tr>
<td>Don't know: 2%</td>
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<tr>
<td><strong>UNITED STATES</strong></td>
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<tr>
<td>Less than 10%: 6%</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>10-49%: 27%</td>
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</tr>
<tr>
<td>50-75%: 44%</td>
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<tr>
<td>More than 75%: 22%</td>
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<tr>
<td>Don't know: 1%</td>
<td></td>
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</tr>
</tbody>
</table>

Rank in order which departments currently take most advantage of your organization’s analytics capabilities.

**GLOBAL**
1. IT
2. Finance
3. Marketing
4. Customer Service
5. Manufacturing
6. Sales
7. Field Service
8. Facilities
9. Human Resources
10. Other

**BRAZIL**
1. IT
2. Finance
3. Marketing
4. Customer Service
5. Manufacturing
6. Sales
7. Field Service
8. Facilities
9. Human Resources
10. Other

**GERMANY**
1. IT
2. Finance
3. Marketing
4. Customer Service
5. Manufacturing
6. Sales
7. Facilities
8. Field Service
9. Human Resources
10. Other

**JAPAN**
1. IT
2. Marketing
3. Manufacturing
4. Customer Service
5. Sales
6. Finance
7. Facilities
8. Field Service
9. Human Resources
10. Other

**UNITED KINGDOM**
1. IT
2. Marketing
3. Finance
4. Customer Service
5. Manufacturing
6. Sales
7. Field Service
8. Facilities
9. Human Resources
10. Other

**UNITED STATES**
1. IT
2. Marketing
3. Finance
4. Customer Service
5. Manufacturing
6. Sales
7. Field Service
8. Facilities
9. Human Resources
10. Other
Which of the following roles currently have access to your organization’s data and analytics?

<table>
<thead>
<tr>
<th>Region</th>
<th>Management teams</th>
<th>Executive teams</th>
<th>Front-line employees</th>
<th>Vendors</th>
<th>Customers</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GLOBAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>84%</td>
<td>78%</td>
<td>52%</td>
<td>20%</td>
<td>19%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>BRAZIL</strong></td>
<td>79%</td>
<td></td>
<td></td>
<td>24%</td>
<td>27%</td>
<td>18%</td>
</tr>
<tr>
<td><strong>GERMANY</strong></td>
<td>81%</td>
<td></td>
<td></td>
<td>11%</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td><strong>JAPAN</strong></td>
<td>93%</td>
<td>69%</td>
<td>58%</td>
<td>18%</td>
<td>12%</td>
<td>9%</td>
</tr>
<tr>
<td><strong>UNITED KINGDOM</strong></td>
<td>91%</td>
<td>74%</td>
<td>48%</td>
<td>17%</td>
<td>16%</td>
<td>19%</td>
</tr>
<tr>
<td><strong>UNITED STATES</strong></td>
<td>78%</td>
<td>74%</td>
<td>52%</td>
<td>28%</td>
<td>24%</td>
<td>16%</td>
</tr>
</tbody>
</table>
In driving greater analytics adoption across the organization, which of the following technologies would best help?

### GLOBAL

<table>
<thead>
<tr>
<th>Technology</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytics embedded into popular business apps (i.e. Salesforce):</td>
<td>44%</td>
</tr>
<tr>
<td>Visual displays of analytics on screens in office:</td>
<td>39%</td>
</tr>
<tr>
<td>Personalized distribution of analytics to any device:</td>
<td>38%</td>
</tr>
<tr>
<td>Proactive alerts and notifications:</td>
<td>37%</td>
</tr>
<tr>
<td>Analytics apps for personal devices:</td>
<td>36%</td>
</tr>
<tr>
<td>Surfacing organization-related analytics via company website or intranet:</td>
<td>35%</td>
</tr>
<tr>
<td>Custom name or branding for organization’s analytics offering:</td>
<td>31%</td>
</tr>
<tr>
<td>Voice assistant or natural language generation capabilities:</td>
<td>23%</td>
</tr>
</tbody>
</table>

### BRAZIL

- Analytics embedded into popular business apps (i.e. Salesforce): 35%
- Visual displays of analytics on screens in office: 35%
- Personalized distribution of analytics to any device: 38%
- Proactive alerts and notifications: 29%
- Analytics apps for personal devices: 46%
- Surfacing organization-related analytics via company website or intranet: 52%
- Custom name or branding for organization’s analytics offering: 23%
- Voice assistant or natural language generation capabilities: 27%

### GERMANY

- Analytics embedded into popular business apps (i.e. Salesforce): 44%
- Visual displays of analytics on screens in office: 41%
- Personalized distribution of analytics to any device: 31%
- Proactive alerts and notifications: 36%
- Analytics apps for personal devices: 33%
- Surfacing organization-related analytics via company website or intranet: 28%
- Custom name or branding for organization’s analytics offering: 28%
- Voice assistant or natural language generation capabilities: 18%

### JAPAN

- Analytics embedded into popular business apps (i.e. Salesforce): 45%
- Visual displays of analytics on screens in office: 41%
- Personalized distribution of analytics to any device: 40%
- Proactive alerts and notifications: 36%
- Analytics apps for personal devices: 33%
- Surfacing organization-related analytics via company website or intranet: 30%
- Custom name or branding for organization’s analytics offering: 21%
- Voice assistant or natural language generation capabilities: 21%
In driving greater analytics adoption across the organization, which of the following technologies would best help? (cont.)

**UNITED KINGDOM**

- Analytics embedded into popular business apps (i.e. Salesforce): 49%
- Visual displays of analytics on screens in office: 39%
- Personalized distribution of analytics to any device: 43%
- Proactive alerts and notifications: 40%
- Analytics apps for personal devices: 30%
- Surfacing organization-related analytics via company website or intranet: 37%
- Custom name or branding for organization’s analytics offering: 32%
- Voice assistant or natural language generation capabilities: 22%

**UNITED STATES**

- Analytics embedded into popular business apps (i.e. Salesforce): 49%
- Visual displays of analytics on screens in office: 37%
- Personalized distribution of analytics to any device: 39%
- Proactive alerts and notifications: 44%
- Analytics apps for personal devices: 37%
- Surfacing organization-related analytics via company website or intranet: 30%
- Custom name or branding for organization’s analytics offering: 28%
- Voice assistant or natural language generation capabilities: 28%
24% of enterprise organizations say that cloud computing is the technology trend that will have the most significant impact on their analytics initiatives in the next five years.
INVESTMENT: Around the globe as the pace of digital disruption accelerates, 90% of organizations report that data and analytics are either very or somewhat important to their digital transformation efforts. Investment this year and in the next five years in data and analytics is accelerating, with 71% of organizations surveyed saying that they plan to spend more on related initiatives heading into the 2020s.

Moves to the cloud and investments in mobile analytics are near-future focuses, as organizations in this year’s survey don’t seem all in (yet) on prioritizing new technologies such as AI, machine learning and IoT that will certainly have an exceptional impact on the Intelligent Enterprise.
Over the next year, do you plan to invest more, less or about the same in analytics initiatives?

<table>
<thead>
<tr>
<th>Country</th>
<th>Plan to invest more</th>
<th>Plan to invest about the same</th>
<th>Plan to invest less</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL</td>
<td>64%</td>
<td>30%</td>
<td>5%</td>
</tr>
<tr>
<td>BRAZIL</td>
<td>80%</td>
<td>16%</td>
<td>4%</td>
</tr>
<tr>
<td>GERMANY</td>
<td>60%</td>
<td>32%</td>
<td>8%</td>
</tr>
<tr>
<td>JAPAN</td>
<td>64%</td>
<td>34%</td>
<td>2%</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>58%</td>
<td>38%</td>
<td>4%</td>
</tr>
<tr>
<td>UNITED STATES</td>
<td>59%</td>
<td>32%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Over the next five years, do you plan to invest more, less or about the same in analytics initiatives?

<table>
<thead>
<tr>
<th>Country</th>
<th>Plan to invest more</th>
<th>Plan to invest about the same</th>
<th>Plan to invest less</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL</td>
<td>71%</td>
<td>24%</td>
<td>5%</td>
</tr>
<tr>
<td>BRAZIL</td>
<td>83%</td>
<td>12%</td>
<td>5%</td>
</tr>
<tr>
<td>GERMANY</td>
<td>61%</td>
<td>29%</td>
<td>10%</td>
</tr>
<tr>
<td>JAPAN</td>
<td>72%</td>
<td>26%</td>
<td>2%</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>65%</td>
<td>32%</td>
<td>3%</td>
</tr>
<tr>
<td>UNITED STATES</td>
<td>73%</td>
<td>23%</td>
<td>4%</td>
</tr>
</tbody>
</table>
How important is data and analytics to your digital transformation efforts?

GLOBAL
- Very important: 60%
- Somewhat important: 30%
- Neither important nor unimportant: 7%
- Not very important: 2%
- Not at all important: 1%

BRAZIL
- Very important: 75%
- Somewhat important: 19%
- Neither important nor unimportant: 3%
- Not very important: 2%
- Not at all important: 1%

GERMANY
- Very important: 48%
- Somewhat important: 45%
- Neither important nor unimportant: 6%
- Not very important: 0%
- Not at all important: 1%

JAPAN
- Very important: 56%
- Somewhat important: 32%
- Neither important nor unimportant: 6%
- Not very important: 5%
- Not at all important: 1%

UNITED KINGDOM
- Very important: 61%
- Somewhat important: 24%
- Neither important nor unimportant: 11%
- Not very important: 4%
- Not at all important: 0%

UNITED STATES
- Very important: 62%
- Somewhat important: 20%
- Neither important nor unimportant: 8%
- Not very important: 0%
- Not at all important: 1%
How important is a mobile analytics strategy to your organization’s success?

<table>
<thead>
<tr>
<th>Region</th>
<th>Very important</th>
<th>Somewhat important</th>
<th>Neither important nor unimportant</th>
<th>Not very important</th>
<th>Not at all important</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GLOBAL</strong></td>
<td>39%</td>
<td>43%</td>
<td>11%</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>BRAZIL</strong></td>
<td>64%</td>
<td>27%</td>
<td>5%</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>JAPAN</strong></td>
<td>31%</td>
<td>47%</td>
<td>24%</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>GERMANY</strong></td>
<td>25%</td>
<td>57%</td>
<td>11%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>UNITED KINGDOM</strong></td>
<td>42%</td>
<td>36%</td>
<td>17%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>UNITED STATES</strong></td>
<td>35%</td>
<td>50%</td>
<td>9%</td>
<td>2%</td>
<td>4%</td>
</tr>
</tbody>
</table>
Is your organization’s analytics platform/solution in the cloud?

<table>
<thead>
<tr>
<th>Region</th>
<th>Yes, all of it (%)</th>
<th>No (%)</th>
<th>We have both cloud and on-prem deployments (%)</th>
<th>Don’t know (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL</td>
<td>39</td>
<td>14</td>
<td>46</td>
<td>1</td>
</tr>
<tr>
<td>BRAZIL</td>
<td>48</td>
<td>13</td>
<td>38</td>
<td>1</td>
</tr>
<tr>
<td>GERMANY</td>
<td>37</td>
<td>17</td>
<td>46</td>
<td>0</td>
</tr>
<tr>
<td>JAPAN</td>
<td>39</td>
<td>16</td>
<td>44</td>
<td>1</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>38</td>
<td>11</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>UNITED STATES</td>
<td>31</td>
<td>14</td>
<td>54</td>
<td>1</td>
</tr>
</tbody>
</table>
Is your organization considering moving its analytics platform/solution to the cloud?

<table>
<thead>
<tr>
<th>Region</th>
<th>Considering within next year</th>
<th>Not considering at this time</th>
<th>Considering within next 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL</td>
<td>41%</td>
<td>34%</td>
<td>25%</td>
</tr>
<tr>
<td>JAPAN</td>
<td>19%</td>
<td>50%</td>
<td>31%</td>
</tr>
<tr>
<td>BRAZIL</td>
<td>46%</td>
<td>31%</td>
<td>23%</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>45%</td>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td>UNITED STATES</td>
<td>64%</td>
<td>14%</td>
<td>21%</td>
</tr>
<tr>
<td>GERMANY</td>
<td>35%</td>
<td>41%</td>
<td>24%</td>
</tr>
</tbody>
</table>
In the next five years, which technology trend do you think will have the most significant impact on your analytics initiatives?

<table>
<thead>
<tr>
<th>Region</th>
<th>Technology Trend</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>Cloud computing</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>Big data</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>AI/machine learning</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>Internet of Things</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>Digital identity management</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Blockchain</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>Voice/NLG</td>
<td>3%</td>
</tr>
<tr>
<td>Japan</td>
<td>Cloud computing</td>
<td>28%</td>
</tr>
<tr>
<td></td>
<td>Big data</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>AI/machine learning</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Internet of Things</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>Digital identity management</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Blockchain</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Voice/NLG</td>
<td>1%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Cloud computing</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Big data</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>AI/machine learning</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Internet of Things</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Digital identity management</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>Blockchain</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Voice/NLG</td>
<td>3%</td>
</tr>
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<td>United States</td>
<td>Cloud computing</td>
<td>24%</td>
</tr>
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<td></td>
<td>Big data</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>AI/machine learning</td>
<td>16%</td>
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<td>16%</td>
</tr>
<tr>
<td></td>
<td>Digital identity management</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>Blockchain</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>Voice/NLG</td>
<td>4%</td>
</tr>
</tbody>
</table>
The respondents to the online survey represented more than 20 industries and were all the analytics solution final decision makers or purchase influencers for their organization.
SURVEY METHODOLOGY: MicroStrategy conducted an online survey in April 2018 in which we received responses from 500 analytics and business intelligence professionals equally distributed across Brazil, Germany, Japan, the United Kingdom and the United States.

All respondents oversee or perform data analysis that informs the business decisions for their organization. The survey did not knowingly poll customers of MicroStrategy or any other specified analytics solution vendor. Survey participants represented organizations with 250 to 20,000 employees worldwide. Almost three-fourths of the respondents were male and more than half of the respondents were age 35 or older.

Note: Not all figures in the report add up to 100% as a result of rounding percentages and exclusion of ‘neither/nor’, ‘don’t know’ and ‘prefer not to say’ responses. This online survey was conducted for MicroStrategy by global research consultancy Hall & Partners.
**Respondent Industry**

- Manufacturing: 15%
- Software tech: 14%
- Banking: 13%
- Retail: 11%
- Financial services/Business services: 6%
- Construction: 5%
- Education: 5%
- Other: 5%
- Engineering / Architecture: 4%
- Government: 4%
- Healthcare: 4%
- Communications: 3%
- Transportation: 3%
- Wholesale: 3%
- Utilities: 2%
- Agriculture: 1%
- Hospitality: 1%
- Real estate: 1%

**Respondent Age**

- 18 – 24: 3%
- 25 – 34: 31%
- 35 – 54: 53%
- 55+: 12%

**Respondent Gender**

- Male: 69%
- Female: 31%

**Organization Size (Number of Employees)**

- 250 – 999: 32%
- 1,000 – 2,499: 24%
- 2,500 – 4,999: 14%
- 5,000 – 9,999: 13%
- 10,000 or more: 17%

**Geography (Number of Respondents)**

- Brazil: 100
- Germany: 100
- Japan: 100
- United Kingdom: 100
- United States: 100
ABOUT MICROSTRATEGY

MicroStrategy (Nasdaq: MSTR) is a worldwide leader in enterprise analytics and mobility software. A pioneer in the business intelligence and analytics space, MicroStrategy delivers innovative software that empowers people to make better decisions and transform the way they do business.

We provide our enterprise customers with world-class software and expert services so they can deploy unique intelligence applications and become an Intelligent Enterprise.

To learn more, email info@microstrategy.com, visit MicroStrategy online, and follow us on LinkedIn, Twitter and Facebook.

For an overview of MicroStrategy’s capabilities, a live demo and a link to a free trial of the full platform, visit microstrategy.com/us/get-started.