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Unlocking the Value of Data with Data Innovation Acceleration

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Introduction and Research Overview

OBJECTIVE:

This study sought to understand whether, and to what degree, an organization's adoption of technologies and processes that optimize data innovation are correlated to business benefits like leveraging data to increase revenue and lowering costs.

METHODOLOGY:

ESG conducted an online survey of 2,000 IT decision makers knowledgeable about a broad range of IT environment characteristics at their organizations, including their data management technologies, practices, and processes.

DEMOGRAPHICS:

Thirty-five percent of respondents (N=700) were based in North America (US and Canada), 28% (N=550) were based in Europe (UK, France, Germany, and Russia), 23% (N=450) were based in the Asia-Pacific region (Australia, New Zealand, China, Japan, and India), and 15% (N=300) were based in Latin America (Brazil and Mexico). Organizations represented a mix of midmarket organizations (i.e., those with 100-999 employees, 21%) and enterprises (i.e., those with 1,000 employees, 79%).

What Does a Mature Data Innovation Practice Look Like?

Organizations continue to generate more data in new and different ways—from the proliferation of edge and IoT devices, through new application monitoring and observability streams, to exploding customer data generated from new digital services and experiences. Organizations face a mandate to leverage their wealth of data to the benefit of the business as opposed to leaving it an untapped resource.

The “how” of building a mature data innovation practice that can unlock the value of data is multifaceted. It requires a comprehensive view of high-quality data and technologies that can scale and keep pace with vast and accelerating data generation. It also requires cross-functional collaboration with technology teams in sync with and effectively supporting the organization’s “data disruptors” like analytics teams, developers, and data scientists.

Segmenting the Market in Terms of Data Innovation Maturity

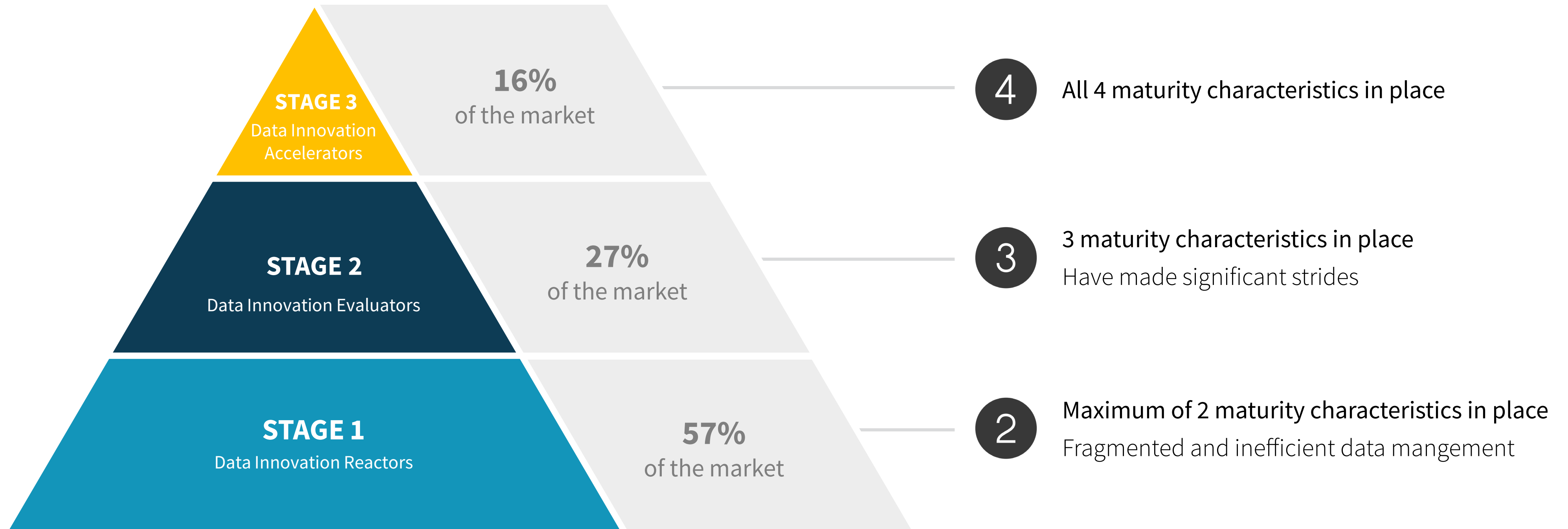
In order to analyze organizations by their ability to ingest, organize, and analyze their data, ESG grouped respondents’ organizations into three cohorts based on their responses to four survey questions specific to data management:

- The comprehensiveness of their data integration.
- The quality of their data (i.e., its accuracy and veracity).
- The quality of collaboration between IT and data users throughout project lifecycles.
- The adoption of technologies like artificial intelligence and machine learning to support, automate, and scale data management operations.

Each of these questions is representative of a maturity characteristic: a behavior or technology in use that identifies the organization as a leader. ESG’s hypothesis was that organizations with more Data Innovation Maturity would significantly outperform their peers in terms of their ability to drive business transformation with data.

Three Stages of Data Innovation Maturity:

Today, the majority of organizations (57%) fall into Stage 1, showing that most organizations are struggling with a fragmented view of their imperfect data, don't have the technologies in place to keep pace with their data, and are grappling with infighting among teams. At the same time, just 16% of organizations meet the threshold of operating an Accelerated Data Innovation practice. There is a clear imperative for most organizations to radically evolve how they approach data management today in order to maximize the return on their data capital.



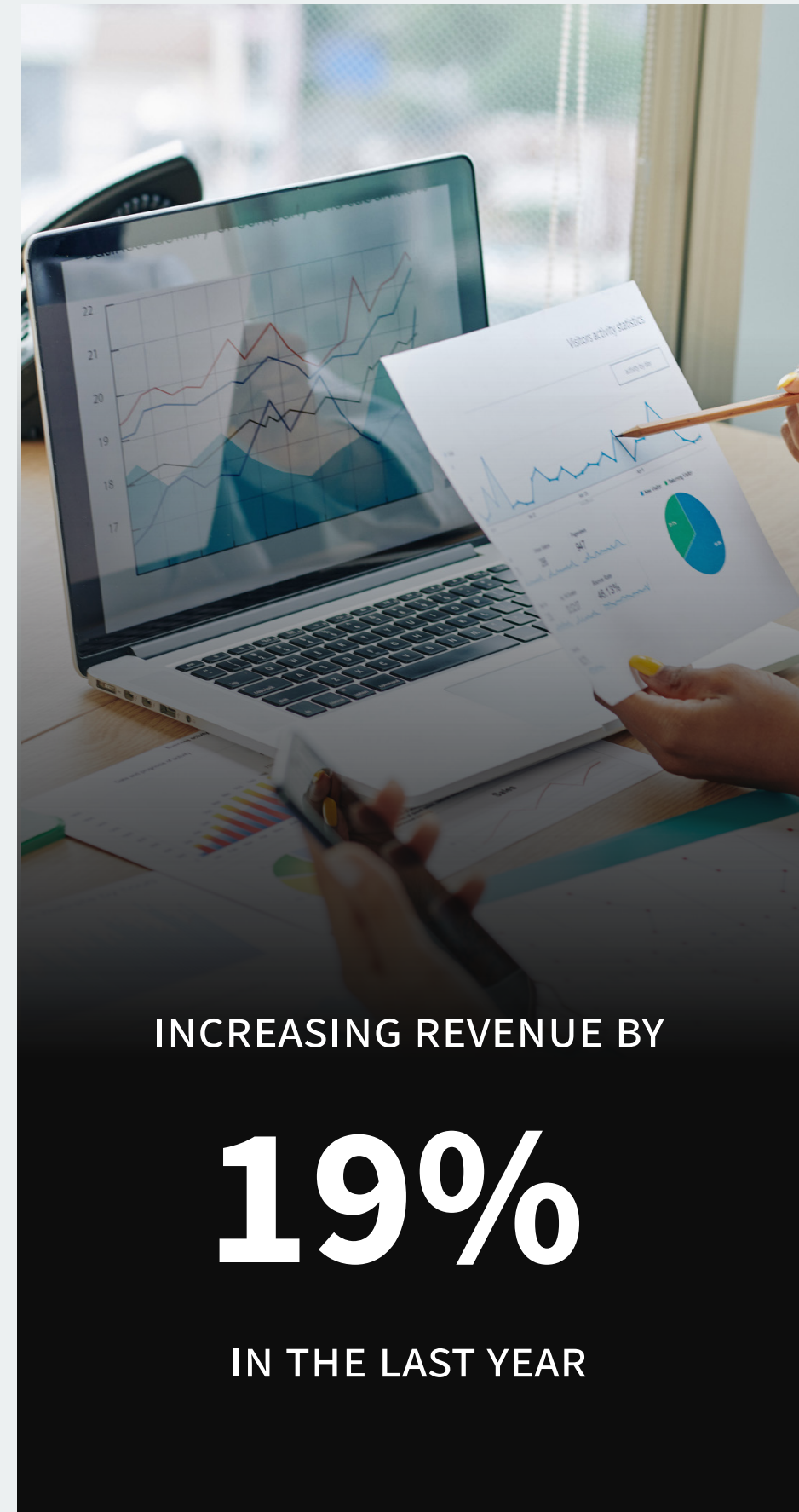
Key Takeaways: What Did We Learn About Data Innovation Accelerators?

Accelerators enjoy big rewards:

Driving up the top line: Over the last 12 months Accelerators report increasing revenue with their data management and analytics practice by 19% (a 46% larger increase than Reactors).

Driving down costs: Over the last 12 months Accelerators report reducing business operations costs with their data management and analytics practice by 14% (a 75% greater reduction than reported by Reactors).

Innovating with data: Accelerators have developed and launched ~5 new products that would not have been possible without their data management and analytics practices in the last 12 months.



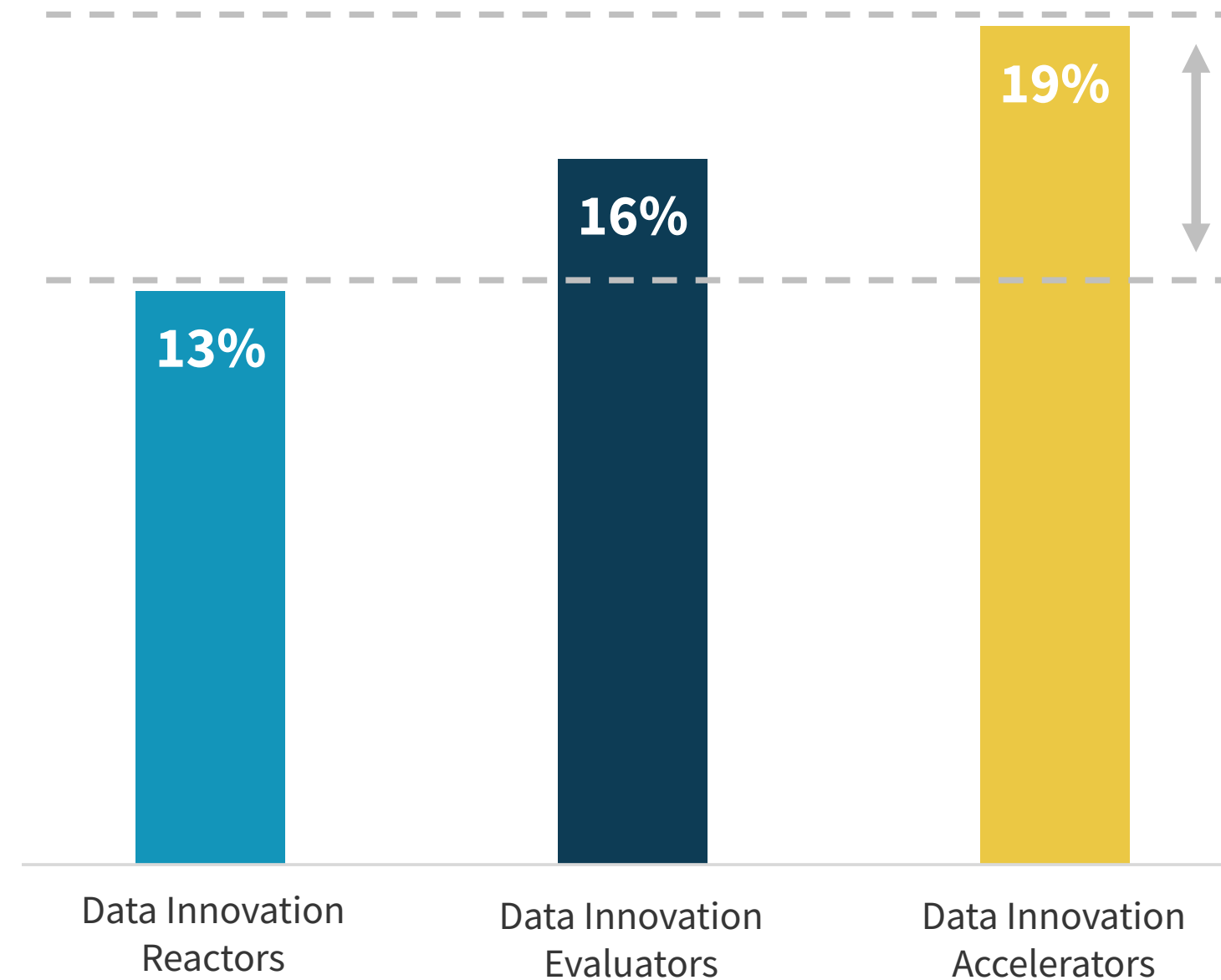
The Very Real Revenue Impact of Data Innovation Acceleration

Effective data management and analytics drive insight, but we wanted to understand if they go a step further and actually drive revenue. Skeptics may say that only a few organizations have made this leap, but our research shows the opposite.

We asked respondents: of all their data management and analytics projects, what percentage have had a direct positive impact on revenue? In the aggregate, respondents reported that 54% of projects have been revenue contributors. However, Data Innovation Accelerators have a significant edge over their peers. On average, 64% of their projects have increased revenue versus 50% of projects at Data Innovation Reactors. Said another way: **Accelerators' projects have a 28% higher likelihood of generating revenue for the organization.**

The next logical question is how much revenue is being generated by data management and analytics practices. We asked respondents how much they believe annual revenue has increased in the last 12 months as a result of their organization's data management and analytics practices and the results were striking. **Data Innovation Accelerators credit their data management practice with increasing organizational revenue by 19% on average, which is a 46% larger increase than Data Innovation Reactors have seen.**

| Average increase in annual revenue over the last year attributed to the data management practice



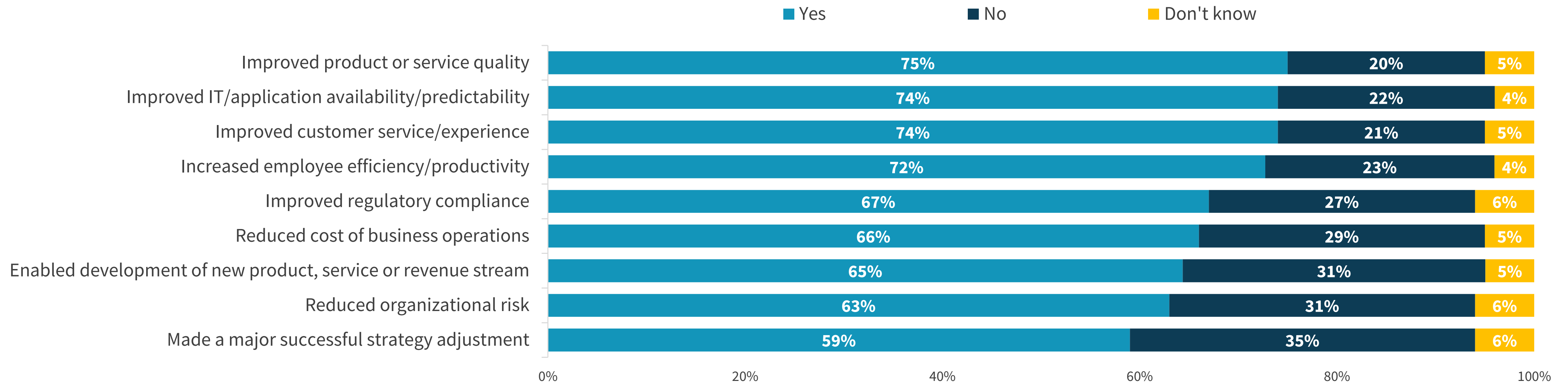
Analytics has driven
46% MORE
 growth at Accelerator organizations
 in the past 12 months

Question text: By approximately what percentage do you think your organization's annual revenue has increased in the last 12 months as a result of your organization's data management and analytics practices? (Estimated mean)

More than Just Revenue – The Multifaceted Benefits of Data Innovation Acceleration

While this research makes it clear that Data Innovation Maturity drives large returns, all organizations are operating in an environment with more data at their disposal. Our research makes it clear that even independent of maturity, most organizations are affecting change with their data management practices. ESG asked respondents if their organizations had achieved 9 benefits as a direct result of their data management and analytics practices. Even the least frequently reported benefit was cited as achieved by the majority (59%) of all respondents.

Over the last year our data management practice has...

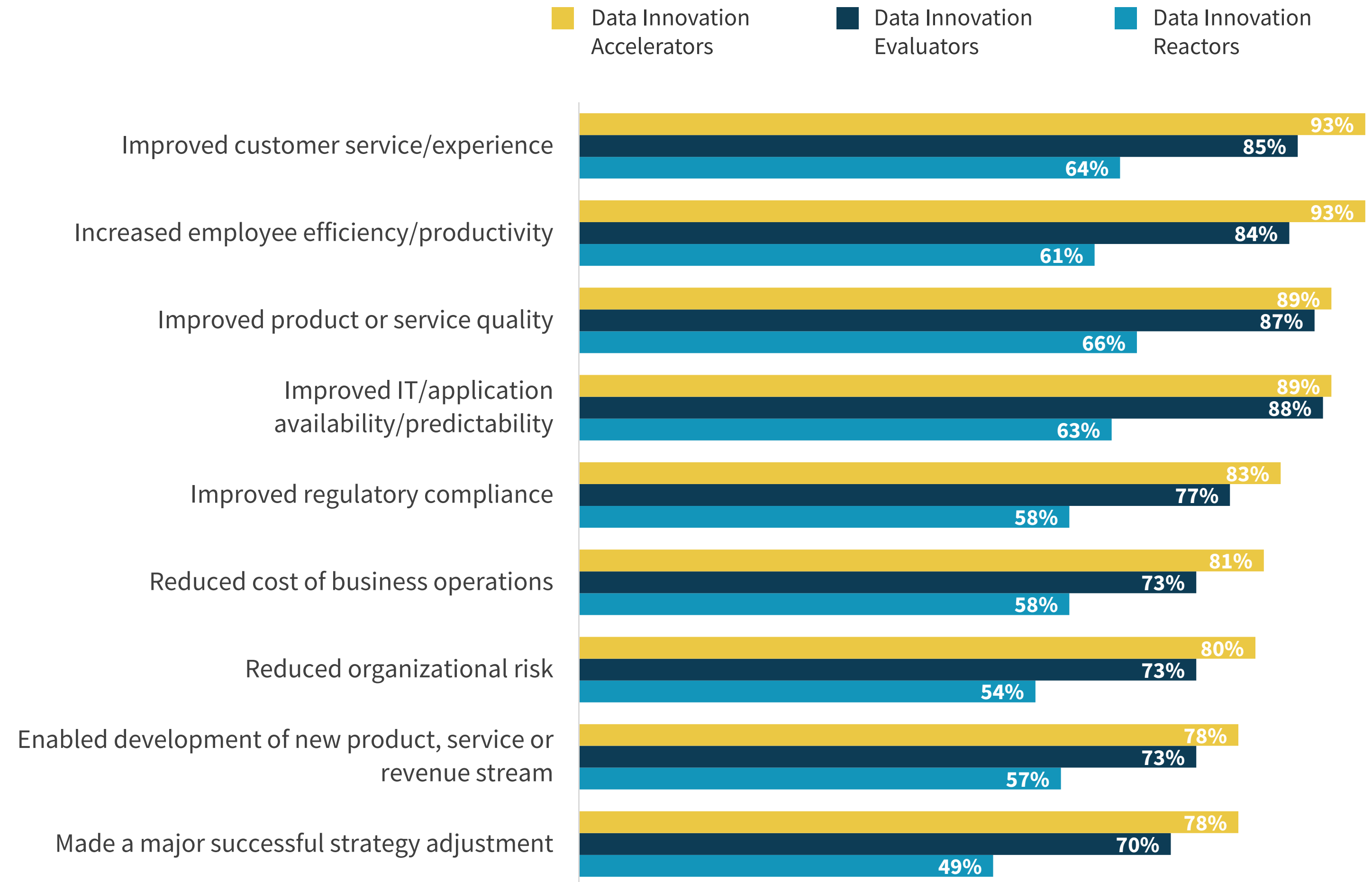


Question text: Has your organization achieved any of the following benefits in the last 12 months as a direct result of its data management and analytics practice? (Percent of respondents, N=2,000)

Data Management Returns Increase with Data Innovation Maturity

It is not surprising to note that more mature organizations have seen the greatest return over the past year from their data management efforts: 80% or more of Data Innovation Accelerators credit their data management practice with improving customer experience (93%), increasing employee productivity (93%), improving product quality (89%), improving application availability (89%), improving compliance (83%), reducing cost of operations (81%), and reducing risk (80%).

Over the last year our data management practice has...



Question text: Has your organization achieved any of the following benefits in the last 12 months as a direct result of its data management and analytics practice? (Percent of respondents selecting "Yes")

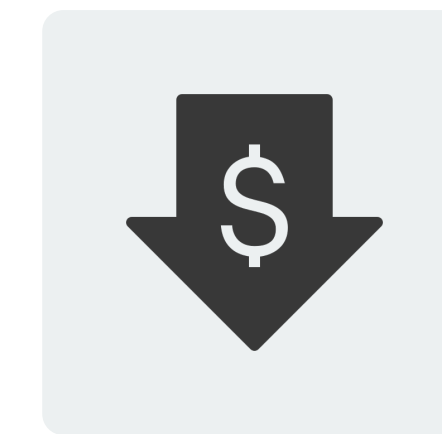
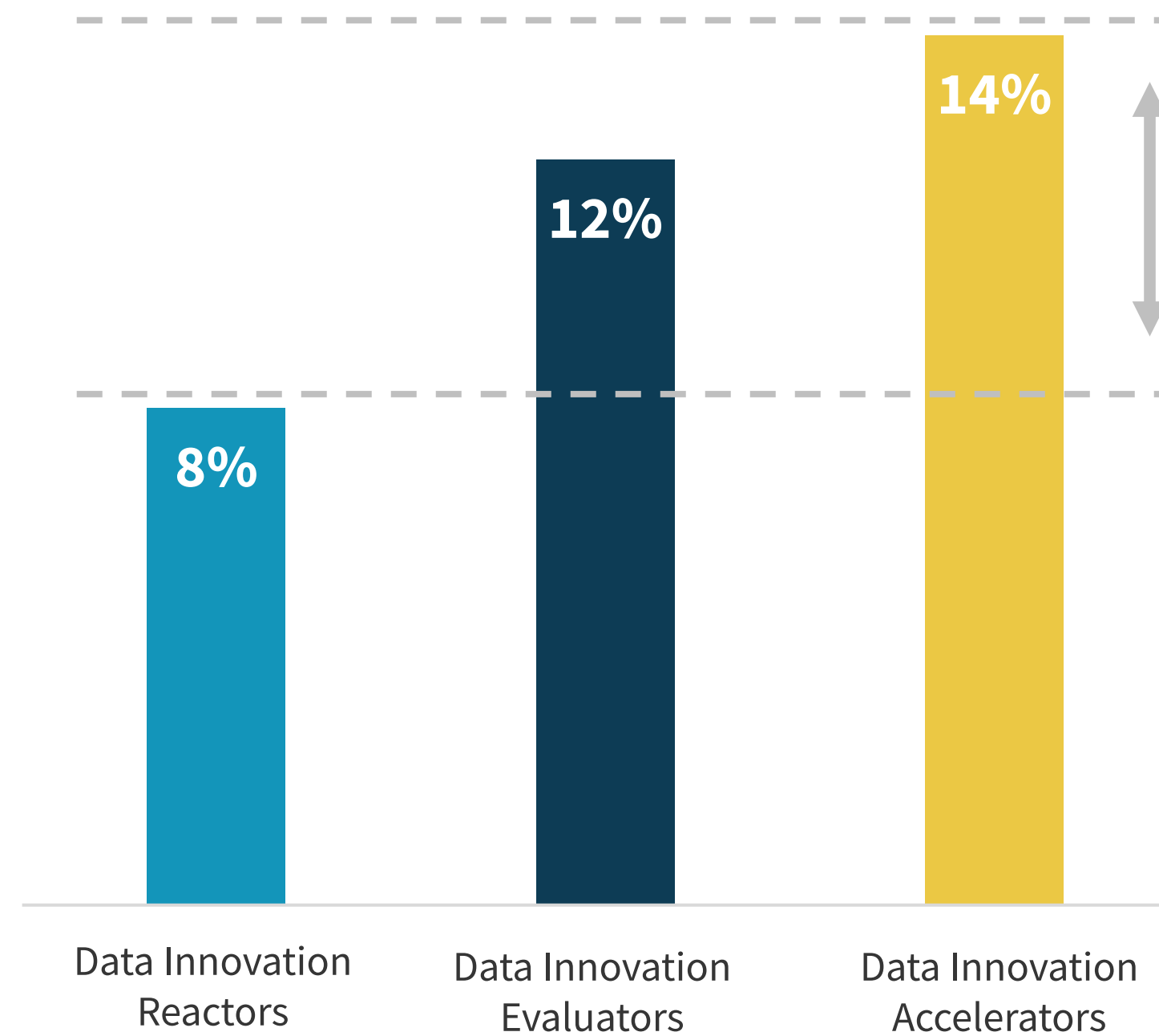
Quantifying the Cost Impact of Accelerated Data Innovation

One of the key areas to which organizations are applying their data management acumen is cost optimization. Through better data management, organizations are better equipped to identify waste and redundancy in business processes, more efficiently allocate skills and resources where they will have the greatest return, and avoid costly mistakes caused by imperfect data and analysis.

Our research shows that Data Innovation Maturity directly reduces costs by driving efficiencies throughout the business. On average, **Data Innovation Accelerators credit their data management and analytics practice with reducing business operations costs by 14% over the last 12 months** (a 75% larger reduction than Reactors have seen).

The financial implications are clear, but Accelerators are also positioned to be better corporate citizens through improved corporate sustainability. Accelerators' ability to reduce waste has a social, environmental, and cultural impact that goes well beyond optimizing financial outcomes for the business.

Average reduction of business operations costs enabled by organizations' data management practice



Data management has driven
75% LARGER
 cost reductions at Accelerator organizations in the past 12 months

Question text: By approximately what percentage have business operations costs decreased in the last 12 months as a result of your organization's data management and analytics practice? (Mean)

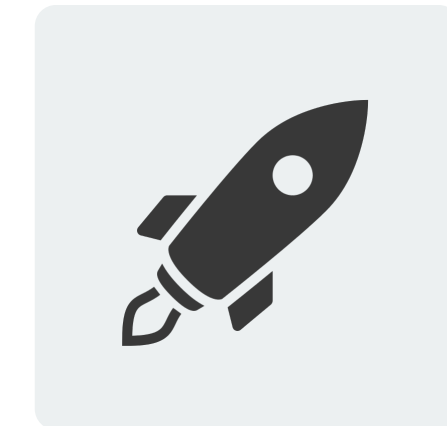
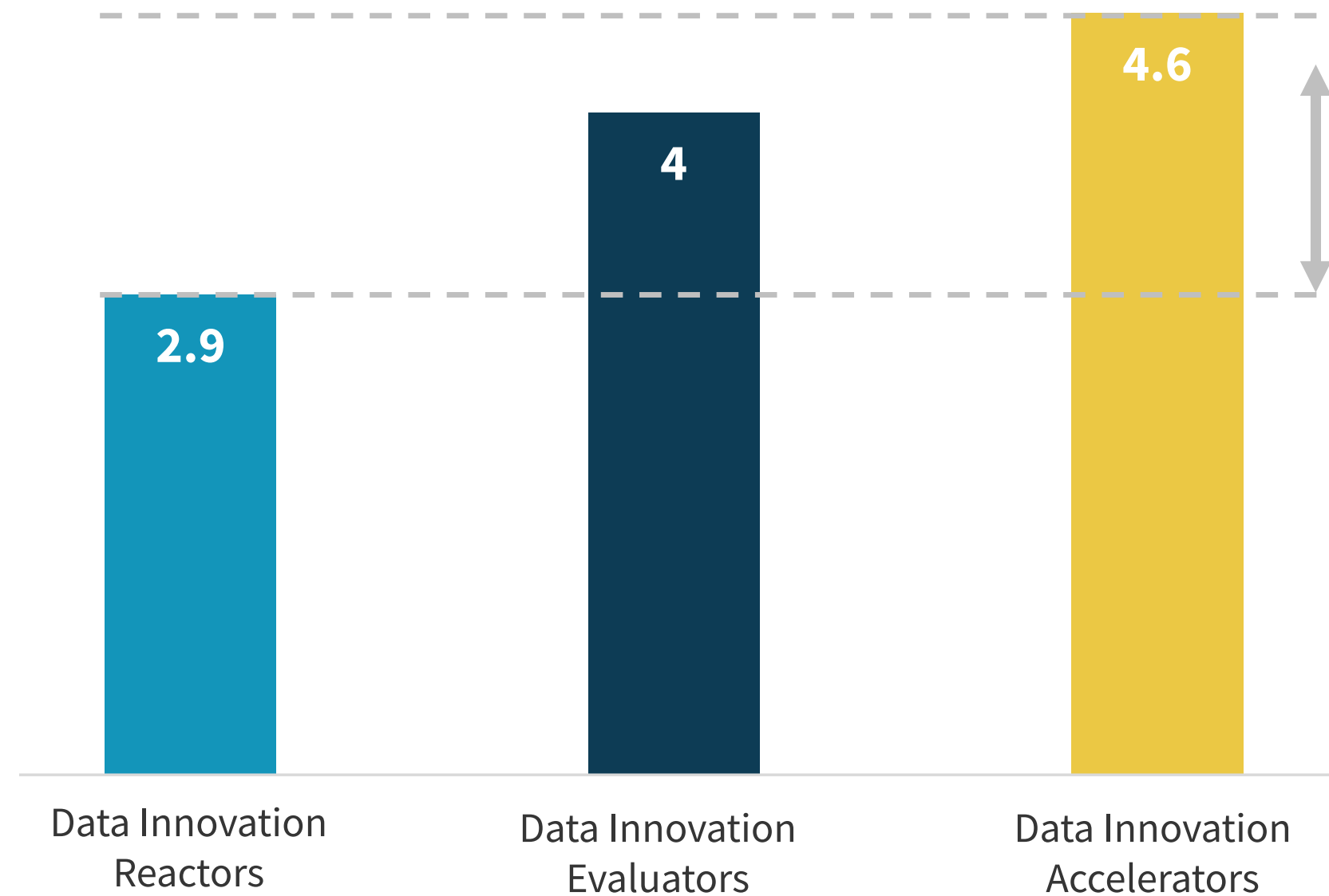
Using Data to Deliver Innovative Offerings

An organization's data can give it the insight to innovate. Better analysis of data can help organizations identify market opportunities and anticipate and react to changing customer preferences more quickly to create what customers crave in real time.

Our research validates this, with **Data Innovation Accelerators reporting an average of nearly 5 products or services launched in the last year that wouldn't have been possible without their data management and analytics practices.** This means they launched 2 more products on average than Data Innovation Reactors.

Not only are more mature organizations launching more products per year than less mature organizations, but they get these products to market ahead of competitors more often. We asked respondents to think of the last few product launches at their organizations and tell us if, and by how much, they tend to beat competitors to market. Nearly three-quarters (72%) of Accelerators typically beat competitors to market. In fact, **Accelerators were 2.6x more likely than Reactors to report generally getting to market ahead of competitors. Moreover, Accelerators averaged double the time-to-market advantage of Reactors (getting products to market 1.6 months ahead of competitors on average versus .8 months).**

Number of product or service launches enabled by data management annually



Accelerator organizations credit their data management practice with launching nearly

2 MORE

products or services per year

Question text: How many new products/revenue streams has your organization launched in the last year that it wouldn't have without its data management and analytics practice? (Mean)

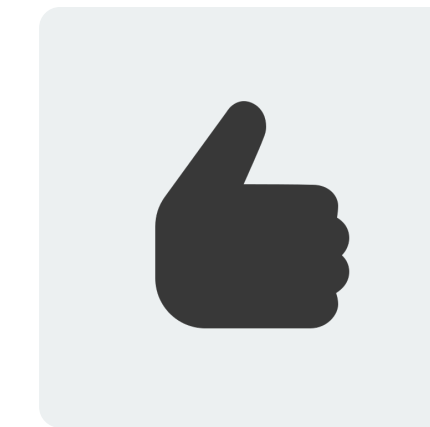
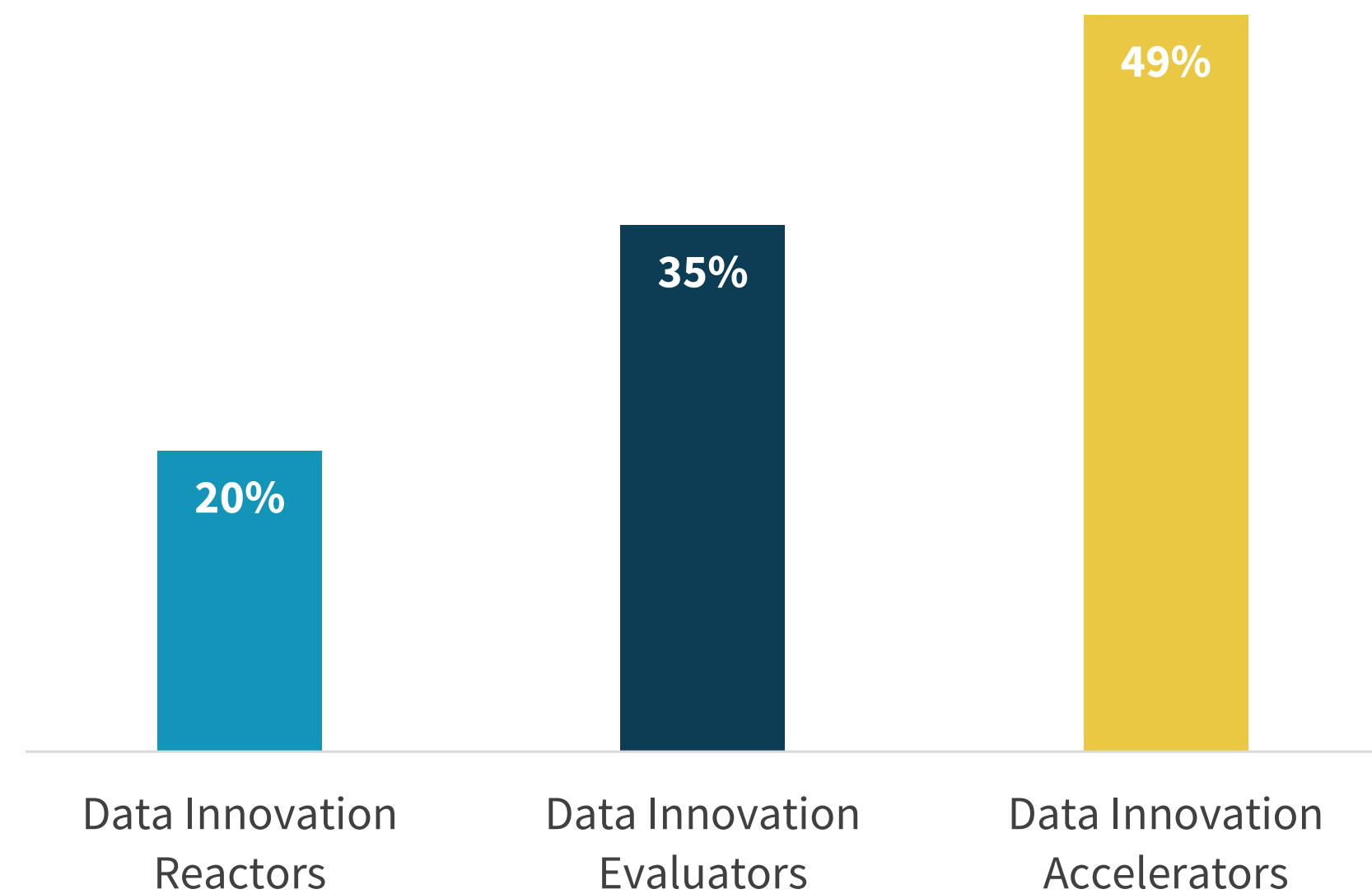
Innovation Results in Higher Customer Satisfaction

Data Innovation Accelerators' superior ability to interpret, understand, and react to market demands fuels innovation. In turn, these organizations optimize customer experience. As noted earlier, improved customer experience is the benefit most frequently cited by organizations as being driven by their data management practices (reported at 93% of Accelerators).

Our research provides additional support to the idea that Data Innovation Maturity drives customer benefit. 49% of respondents at Accelerators say their organization typically exceeds their customer satisfaction goals, while just 20% of Reactors report the same level of success. **Accelerators are 2.5x more likely to exceed their customer satisfaction goals.**

Modern IT organizations should operate with a focus on customer outcomes. One clear way they can contribute in this regard is by fostering a data management practice that supports innovation, differentiation, and higher customer satisfaction.

| Percent of respondents reporting their organization typically exceeds its customer satisfaction goals



Data Innovation Accelerators are **2.5x MORE** likely exceed customer satisfaction goals

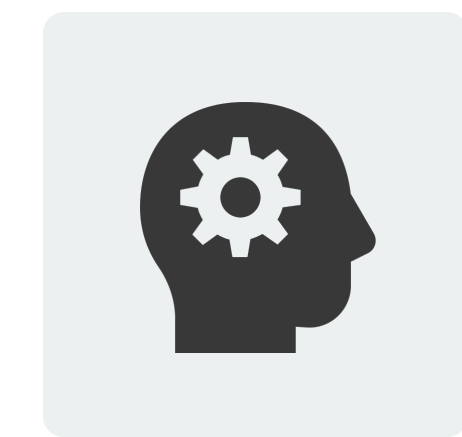
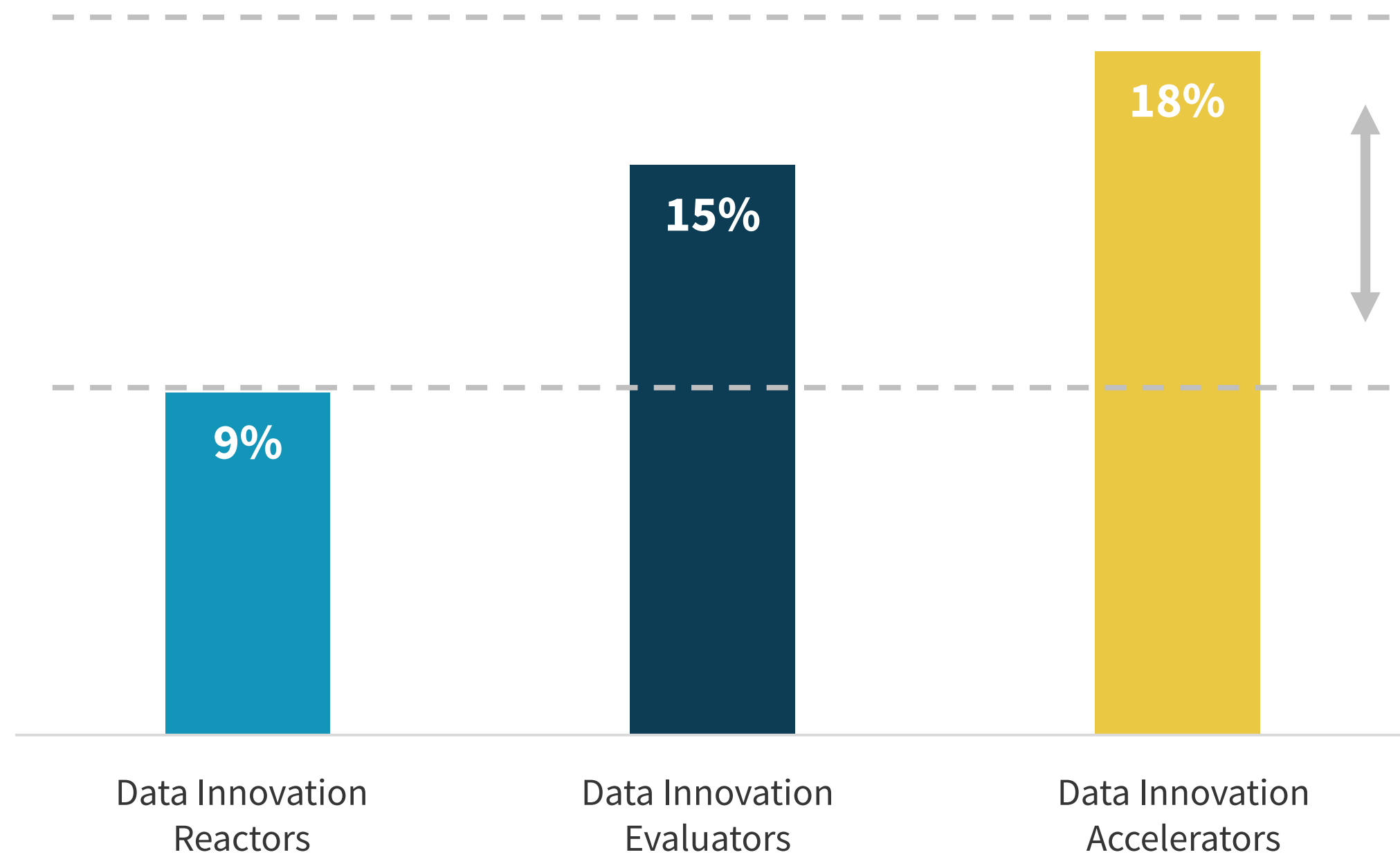
Question text: Relative to its goals, how does your organization typically perform on formal customer/user satisfaction metrics (e.g., Net Promoter Score (NPS), Customer Satisfaction (CSAT) or similar metrics)? (Percent of respondents)

Data Innovation Acceleration Drives Productivity Increases

Another way an organization's data management practice can bring value to the organization is via improved insight into employee productivity. Organizations have the opportunity to use data from employees' everyday work to identify patterns that impact productivity and engagement, providing employers with actionable insights into key areas of improvement.

Our research shows that organizations with high Data Innovation Maturity are putting these types of analytics into practice. **Relative to Data Innovation Reactors, Accelerators have enabled 2x larger gains in employee productivity with their data management and analytics in the past 12 months.** While Reactors have improved productivity by 9% on average, Accelerators have improved employee productivity by 18%.

Average increase in employee productivity enabled by data management and analytics



Analytics has driven
2X LARGER
 gains in productivity in
 the past 12 months for
 Data Innovation Accelerators

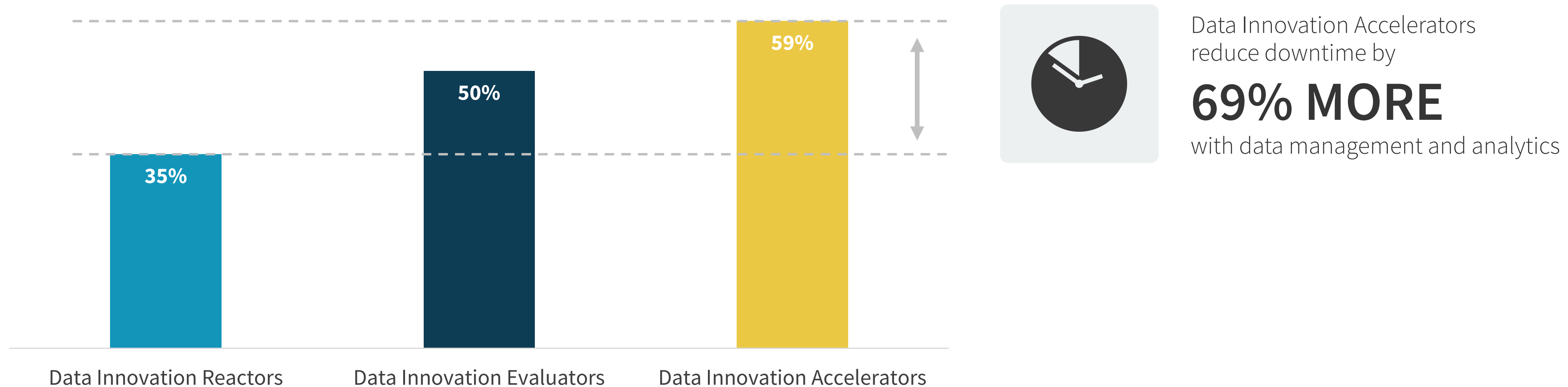
Question text: You indicated your organization has increased employee productivity as a result of data management and analytics efforts. By approximately what percentage do you think productivity has been increased in the last 12 months? (Estimated mean)

Data Innovation Acceleration Maximizes App Availability

As organizations modernize applications and increase the use of microservices, containers, and Kubernetes, the amount and types of data produced by applications changes. This can create challenges with application monitoring and observability. Organizations must increasingly apply advanced data management and analytics capabilities in order to effectively measure performance, availability, and user experience.

Our research shows that organizations with high Data Innovation Maturity are better operationalizing application data to maximize uptime. On average, **Data Innovation Accelerators report data management and analytics has helped them reduce application downtime by 59%**. This represents a 69% larger reduction in downtime achieved by Data Innovation Reactors.

Average reduction in application downtime enabled by data management and analytics

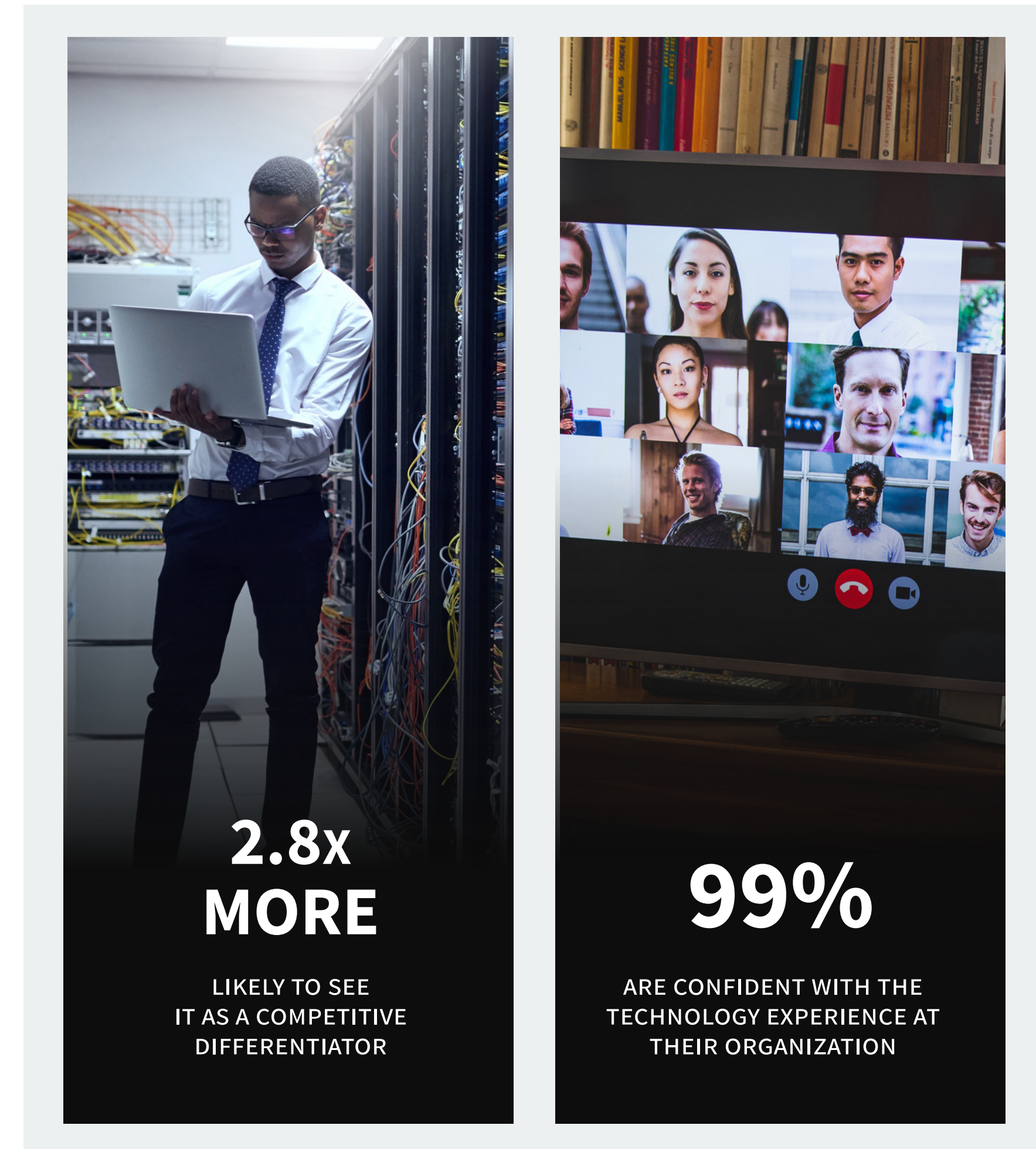


Question text: When your organization uses data management and analytics insights to improve application availability/predictability, what reduction in downtime have you generally observed? (Estimated mean)

Two Critical Ways Data Innovation Maturity Bolsters Business Sentiment

Businesses recognize IT as a competitive differentiator. Data Innovation Accelerators are 2.8x more likely to see IT as a competitive differentiator while Reactors are 2.9x more likely to say their IT organization is just adequate, a cost center, or even a business inhibitor.

They are positioned to adapt and thrive through uncertainty: 99% of respondents at Data Innovation Accelerators are confident that they have the technology experience at their organization to adapt and thrive through major societal and macroeconomic disruptions and they are 3.1x more likely to be very confident.



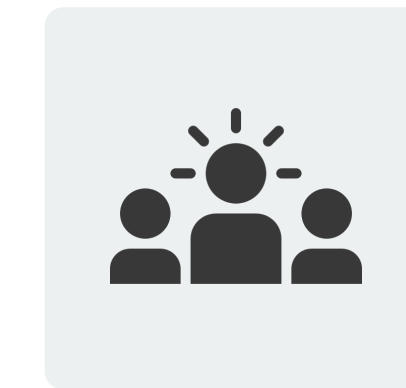
As Data Innovation Maturity Improves, Businesses Recognize IT as a Competitive Differentiator

Maturing an organization’s data management practice is a big job. At many organizations, it means dramatically changing how data assets are identified and harvested, curated and consolidated, and analyzed. Clearly the business payoff of this work is significant, but not all IT organizations and leaders are goaled based on business outcomes. However, our research did uncover a clear and meaningful benefit for the IT team at Data Innovation Accelerators: an improved standing in the eyes of business leadership.

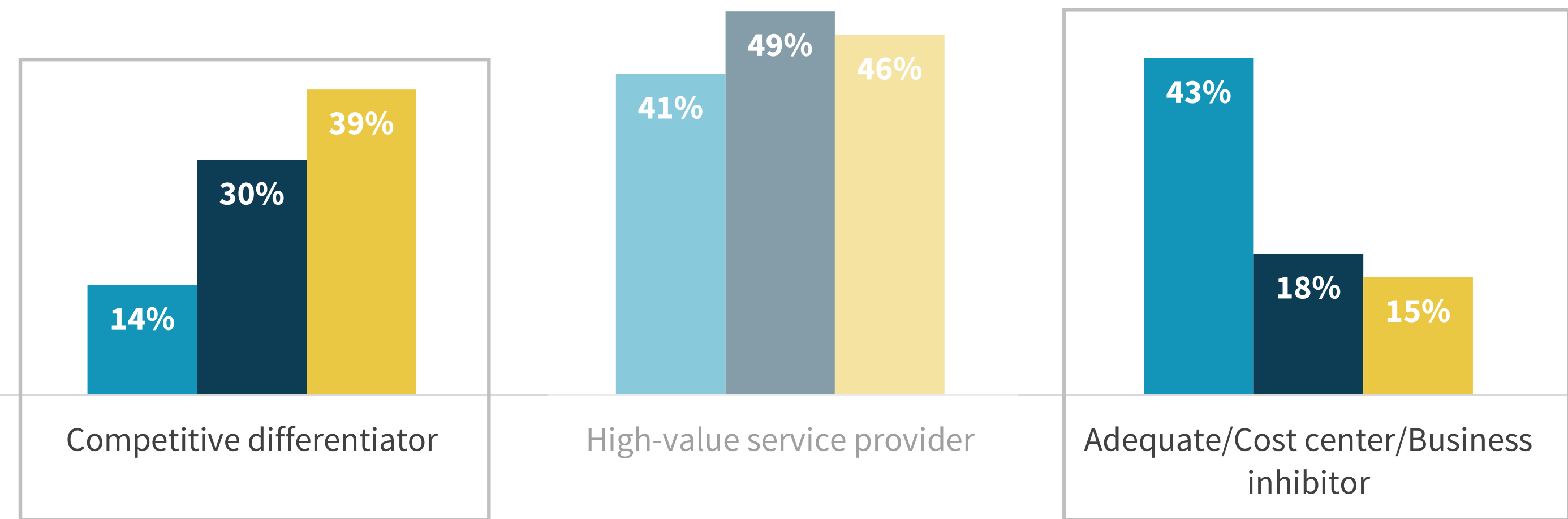
We asked respondents how the C-suite views the IT function. We observed dramatic differences based on Data Innovation Maturity. IT teams at organizations with accelerated data innovation are viewed as a competitive differentiator **2.8x more often than Reactors**.

How is IT viewed by the C-suite?

■ Data Innovation Reactors
 ■ Data Innovation Evaluators
 ■ Data Innovation Accelerators



Data Innovation Accelerators are **2.8x MORE** likely to be seen as a competitive differentiator by line-of-business executives



Question text: How do your organization’s C-suite business executives view the IT organization? (Percent of respondents)

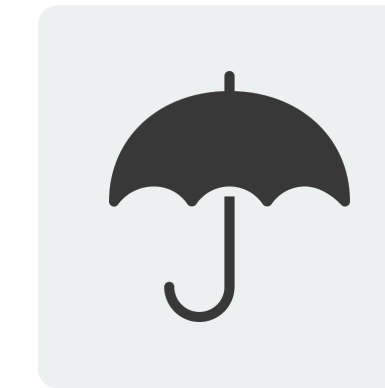
As Data Innovation Increases, Organizational Resiliency Improves

When organizations face macroeconomic headwinds, every advantage counts. And our research makes it clear that high Data Innovation Maturity is a huge edge. Our research shows that organizations that have high Data Innovation Maturity are 3.1x more likely to be very confident they possess the technology experience needed to adapt and thrive through disruptions.

Forward-thinking IT leaders must bear in mind that when the business climate is challenging, IT is uniquely positioned to deliver value through data that can be the difference between success or failure.

Confidence in organizational resiliency

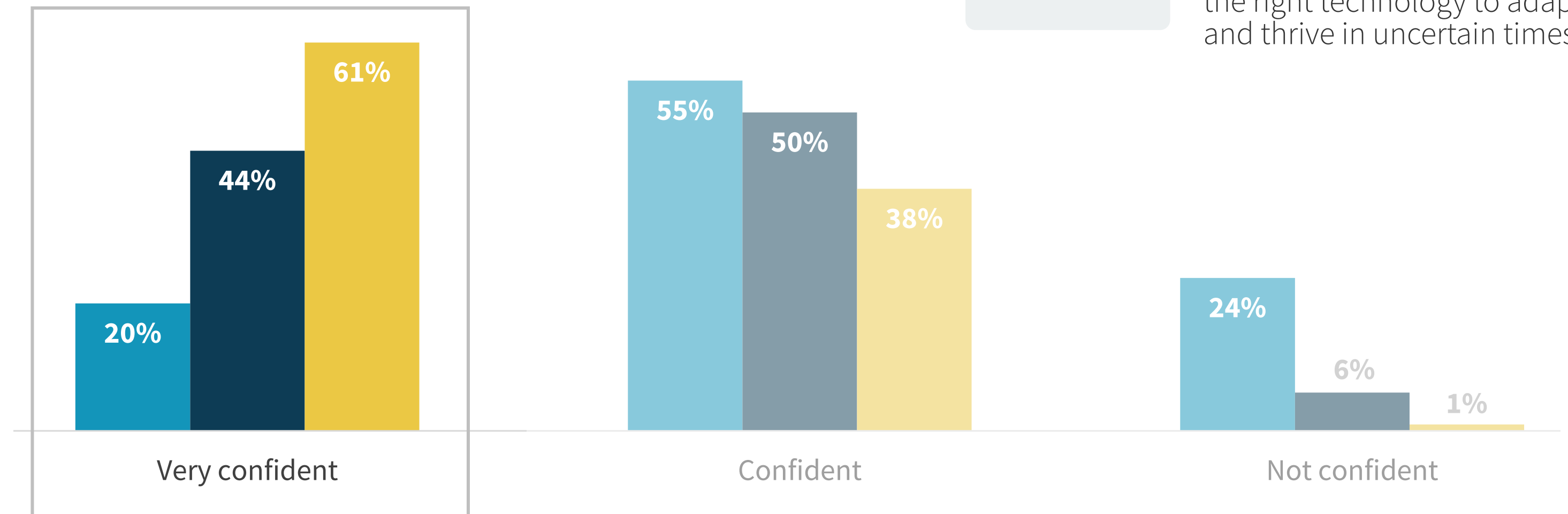
■ Data Innovation Reactors
 ■ Data Innovation Evaluators
 ■ Data Innovation Accelerators



Respondents at Data Innovation Accelerator organizations are

3.1x MORE

likely to believe their org has the right technology to adapt and thrive in uncertain times



Question text: How confident are you in your organization's ability to deliver the technology experience needed to adapt and thrive through major societal and macroeconomic disruptions? (Percent of respondents)



Dell Technologies is among the world's leading technology companies, instrumental in developing solutions to help transform people's lives with extraordinary capabilities. We deliver the infrastructure, tools, and processes that help organizations create modern data pipelines across and between on-premises, edge and public clouds, rapidly reducing the time between data creation and innovation to help you overcome unplanned obstacles and seize unexpected opportunities - all tailored to the way you need to acquire and consume IT. Dell Technologies will stop at nothing to help you harness the transformative power of technology so you can be ready for whatever comes next.

Together Intel and Dell Technologies are driving innovation and next generation capabilities with the broadest portfolio of trusted client and enterprise solutions for cloud and data management, enabling businesses to move faster, innovate more, and operate efficiently

VMware's cloud, app modernization, networking, security and digital workspace platforms form a flexible, consistent digital foundation on which to build, run, manage, connect, and protect data and applications, anywhere. Dell Technologies aligns the unique advantages of VMware software with Dell synergies to deliver even more value to customers by providing the essential infrastructure to innovate with data, build their customers' digital future, and transform IT.

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Enterprise Strategy Group (ESG) is an integrated technology analysis, research, and strategy firm providing market intelligence, actionable insight, and go-to-market content services to the global technology community. It is increasingly recognized as one of the world's leading analyst firms in helping technology vendors make strategic decisions across their go-to-market programs through factual, peer-based research. ESG is a division of TechTarget, Inc. (Nasdaq: TTGT), the global leader in purchase intent-driven marketing and sales services focused on delivering business impact for enterprise technology companies.

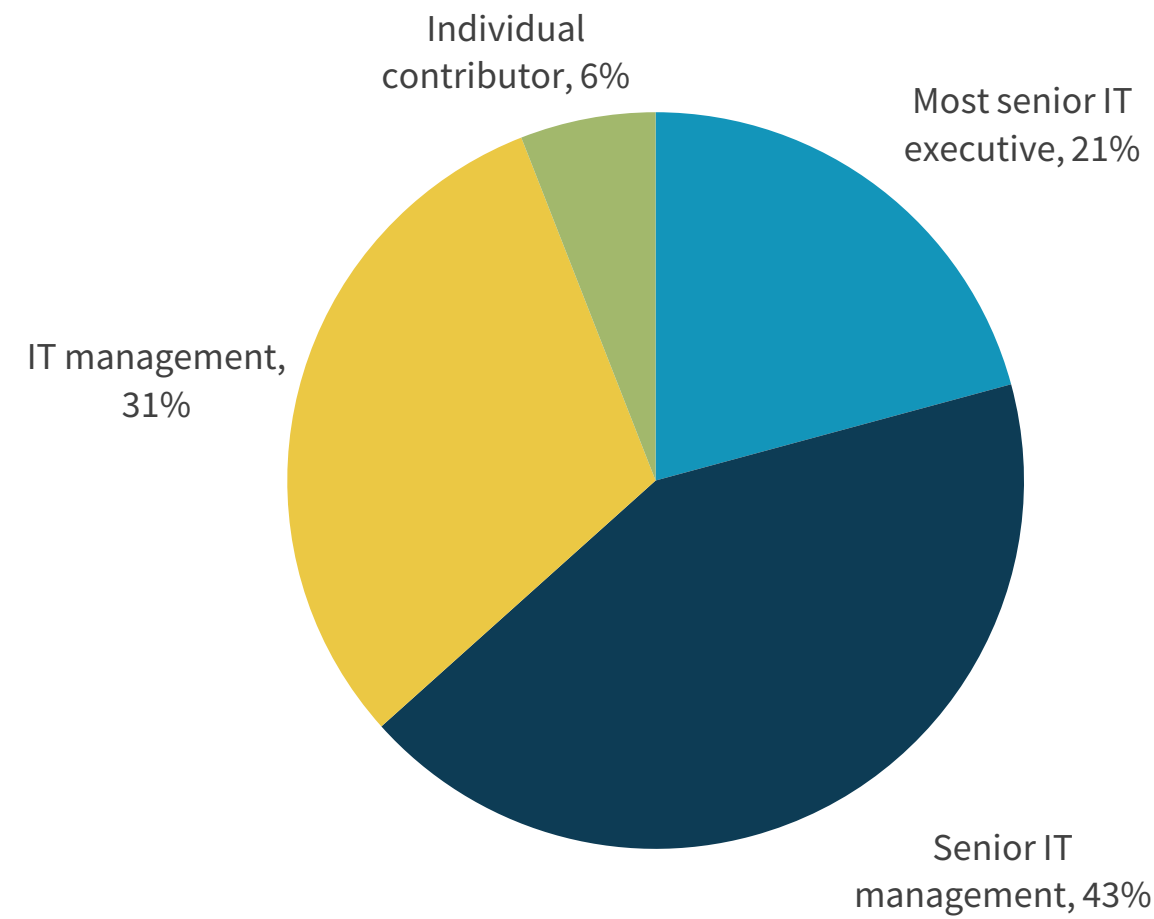


Research Methodology

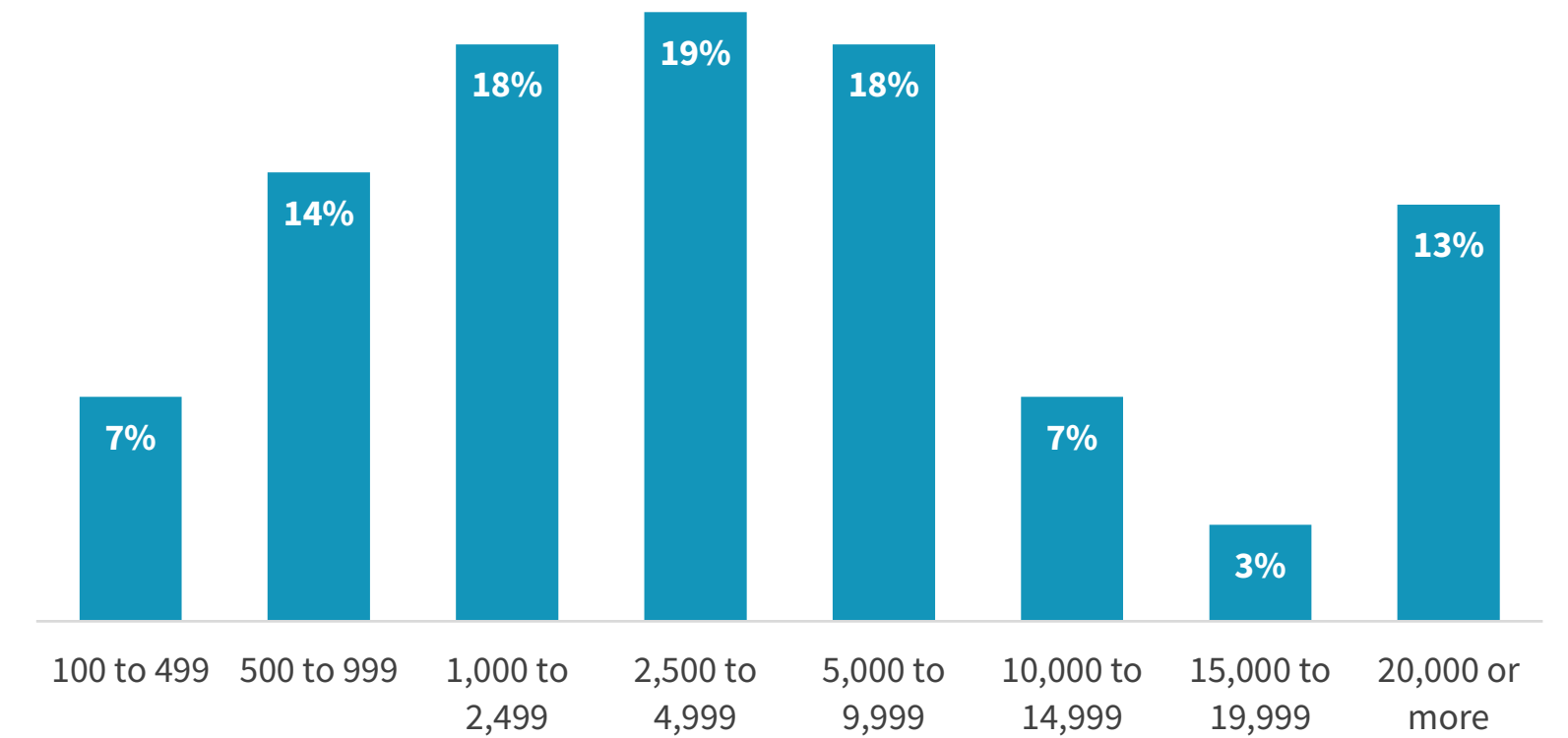
To gather data for this report, ESG conducted a comprehensive online survey of IT decision makers knowledgeable about the devices, data management tools, and data center infrastructure in use at their organizations. The survey was conducted between December 8, 2020 and December 31, 2020. All respondents were distributed among North America (35%), Europe (28%), the Asia Pacific region (23%), and Latin America (15%) and employed at midmarket organizations (i.e., those with 100-999 employees, 21%) and enterprises (i.e., those with 1,000+ employees, 79%). Both public and private sector organizations were represented. All respondents were provided an incentive to complete the survey in the form of cash awards and/or cash equivalents.

After filtering out unqualified respondents, removing duplicate responses, and screening the remaining completed responses (on a number of criteria) for data integrity, we were left with a final total sample of 2,000 professionals.

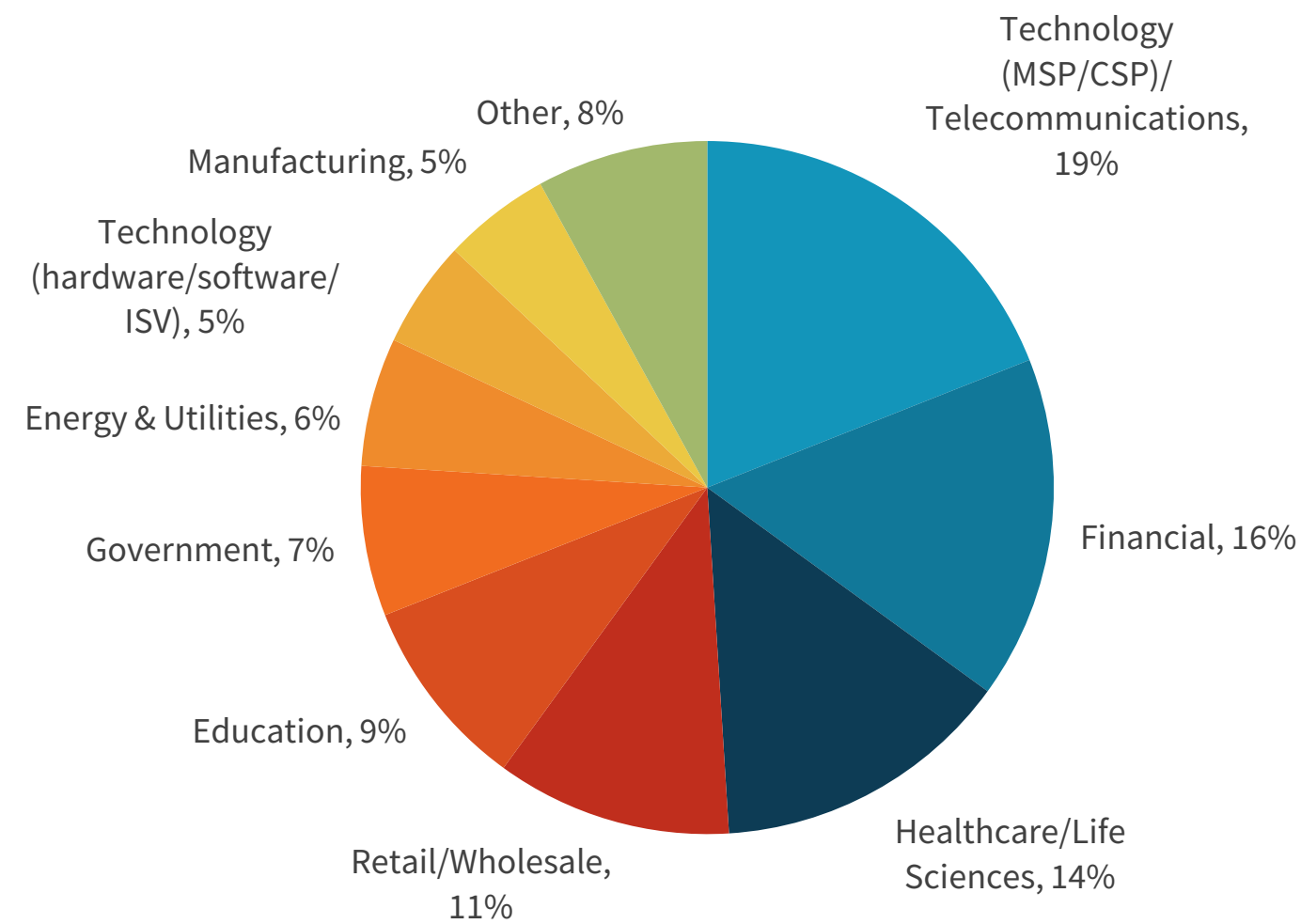
RESPONDENTS BY CURRENT JOB TITLE



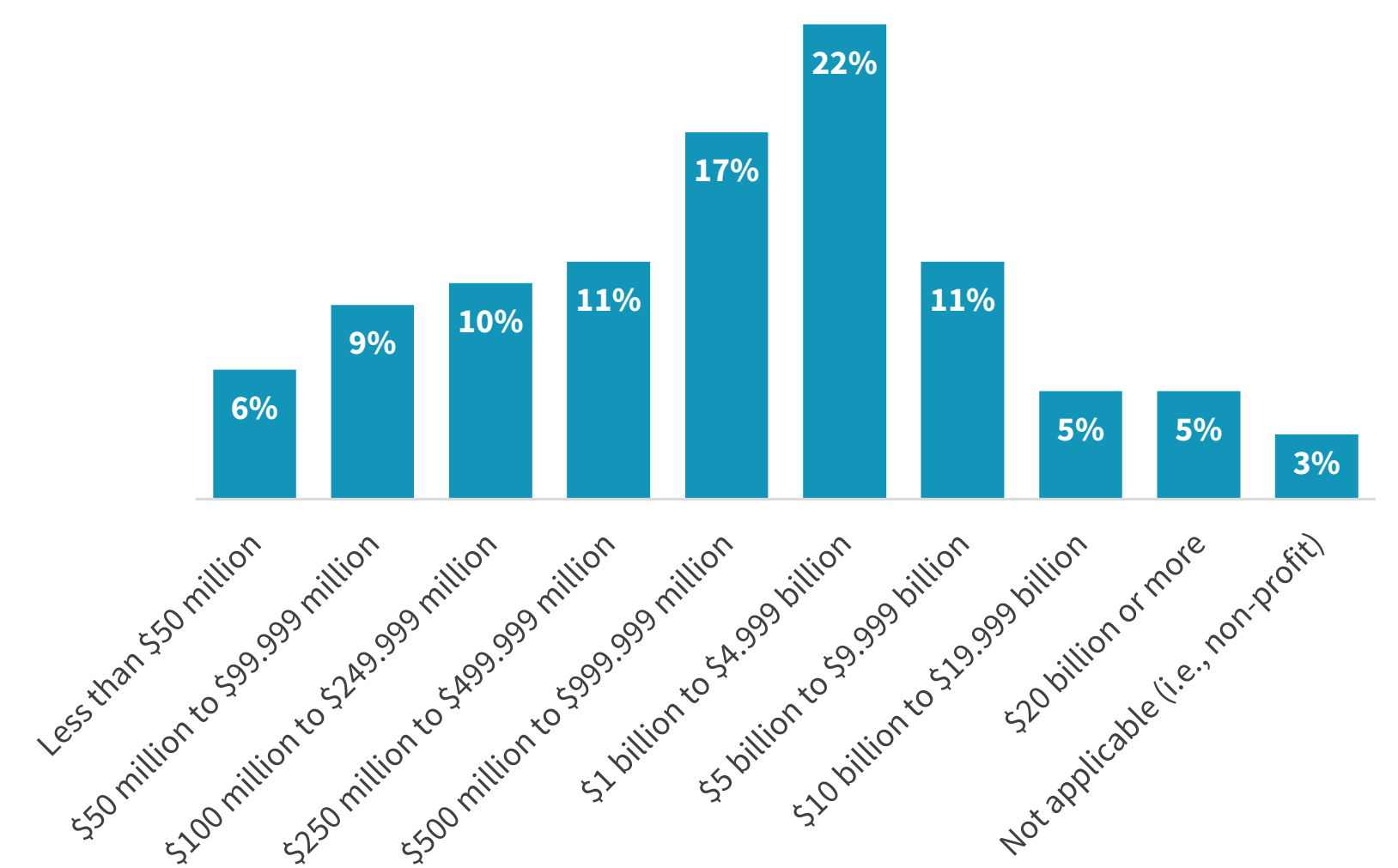
RESPONDENTS BY NUMBER OF EMPLOYEES



RESPONDENTS BY INDUSTRY



RESPONDENTS BY TOTAL ANNUAL REVENUE



Segmentation Questions

Below are the specific questions ESG used to identify which organizations are accelerating data innovation:

1. How siloed or integrated is your organization's entire data and analytics footprint (i.e., all the data your organization could potentially use to create value)?
 - i. **Threshold of an Accelerator:** Data is either completely or mostly integrated.
2. How much trust do you have in the veracity of your organization's data as well as the outputs of its analytics practices?
 - i. **Threshold of an Accelerator:** The organization has a great deal of trust in the veracity of its data with just a few areas cited as opportunities to improve.
3. What is the quality of collaboration between the IT team and the analytics team in areas such as performance requirements, project timelines, budgets, and project objectives?
 - i. **Behavior of an Accelerator:** The organization must have reported good or extremely good collaboration across all areas where teams must collaborate.
4. Is the organization currently using AI/ML to analyze data and enhance insights?
 - i. **Behavior of an Accelerator:** The organization must be using AI/ML in data analysis today.

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