



RESILIENCY RULES REPORT

*New research reveals how to survive
and thrive amidst disruption*

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Introduction & Overview

The Resiliency Rules: Building stronger organizations



It's a truth as old as time: If you're not changing, you're not growing. Of course, change is tough, and many organizations struggle to adapt to the changing times and consumer habits. But that's the thing about change – it doesn't wait for us to feel ready. It thrusts itself on us at a moment's notice and forces us to change or suffer the consequences. Those that thrive have one thing in common: resiliency.

The current economic, political, environmental and social climate is prompting change at an unprecedented pace, and prioritizing resiliency is more important than ever. According to a Deloitte report, 84% of business leaders say they're factoring resiliency into their organization's future.

But are they really? SAS wanted to find out.

We conducted a survey in late December of 2022 to understand what companies are doing to build resiliency into their organizations and what others should do to follow their lead. Our report identifies five principles organizations need to adapt and keep pace with — or outpace — market changes. The five principles are speed and agility, innovation, equity and responsibility, data culture and literacy, and curiosity. Collectively, we refer to these as **"The Resiliency Rules."**

The Resiliency Rules



SPEED & AGILITY

Adapt to changing market conditions quickly.



INNOVATION

Accelerate advances through data-led insights.



EQUITY & RESPONSIBILITY

Innovate while ensuring ethical standards are applied during the design, development and use of transformative technologies.



DATA CULTURE & LITERACY

Build a data-driven focus that instills data literacy across the entire organization.

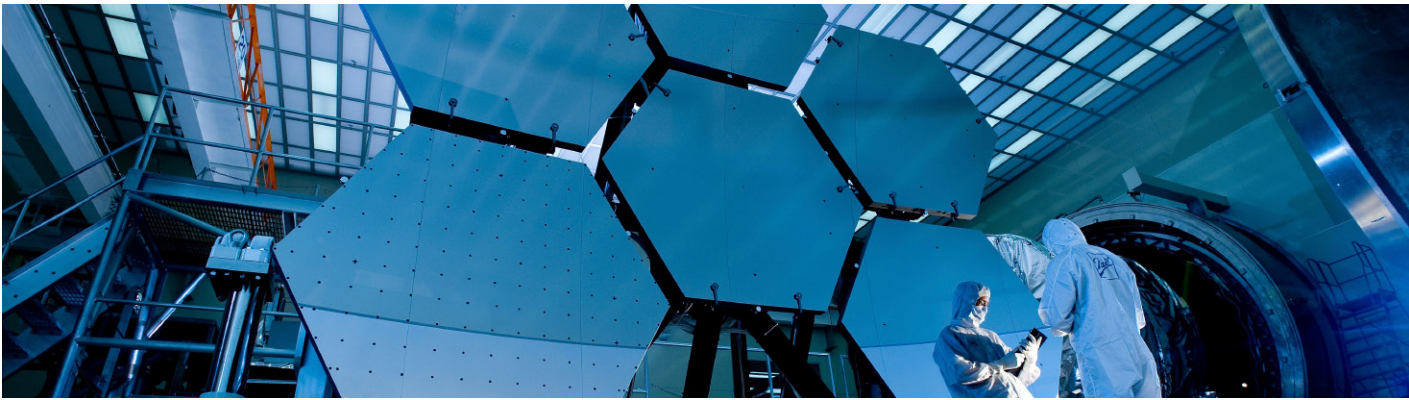


CURIOSITY

Harness the power of exploration to drive insights that fuel innovation and impact.

Methodology

Research Methodology



Findings in this report come from original research. Executives were surveyed in:

BELGIUM

BRAZIL

FRANCE

GERMANY

INDIA

JAPAN

LUXEMBOURG

NETHERLANDS

PORTUGAL

SPAIN

UNITED KINGDOM

UNITED STATES

In-depth interviews were conducted in November to understand senior executives' perspectives on business resiliency and their approaches to leadership during volatile times.

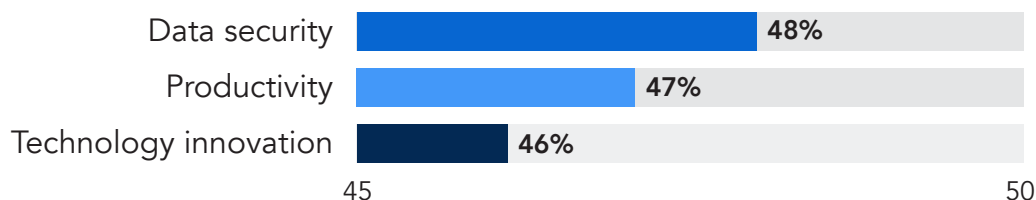
A proprietary survey was conducted with 2,414 senior executives working full-time within financial services, retail/consumer goods, manufacturing, health care/life sciences or government. The survey was completed from Dec. 16, 2022 to Jan. 4, 2023 in the above countries.

Key Findings

Key Findings: Resiliency is multidimensional

Most executives view resiliency as a critical business imperative. 97% of executives believe resiliency is **very** or **somewhat** important, and 87% said it helps them prepare for unforeseen events.

A resiliency gap exists. Despite recognizing the critical role of resiliency, less than half of executives (47%) see their organization as resilient. 46% of executives say they are not fully equipped to face disruption and are falling short of addressing their top challenges related to:



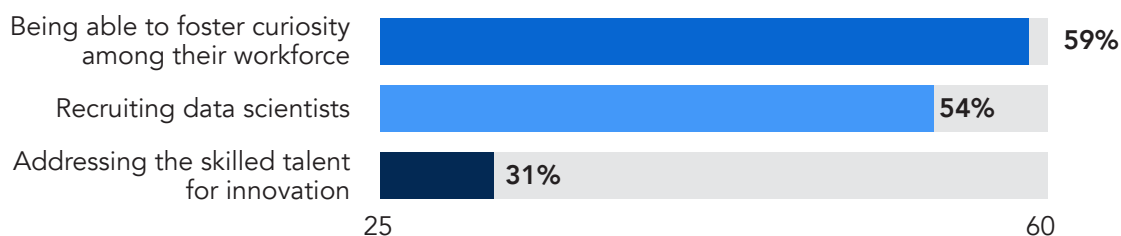
With the right guidance, executives are confident about closing the resiliency gap. Most business leaders (88%) are confident about increasing resiliency in their companies in the future and presumably closing the gap. But to do so, their organization needs guidance in implementing an effective resiliency strategy (81%).

Stratifying executives based on an assessment of their company's state of resiliency creates a picture of highly resilient organizations to clear a path toward greater resiliency. Only 25% of the executives surveyed rank as leading a highly resilient organization. The majority of executives fell in the "moderate" category. The research showed that high-resiliency executives were more likely to work at large, global companies often collaborating with their technology and data analytics colleagues.

The Resiliency Rules are widely recognized as an important cornerstone for organizations to thrive. Of the five rules, speed and agility are considered “most important” to adapt quickly to changes and remain competitive, even though collectively, they all are vital to organizational resiliency.

Executives cite data and analytics as critical for implementing The Resiliency Rules. More than 90% of executives believe data and analytics are important to achieve each rule. They also turn to data in the face of disruption and view it as important to a resiliency strategy. Underscoring the importance of data and analytics, very resilient businesses are more likely to implement a data strategy than their less resilient counterparts (93% vs. 22%).

Costs and data quality issues are barriers to implementing The Resiliency Rules. A third of executives (35%) say their organization struggles to gain the insights necessary to improve resiliency because they are overwhelmed by data. Other challenges include:



We need to make sure that we don't assume the market will continue to be the same three years from now. We have to assume there will be market disruptions coming in, and we need to make sure that when we are planning a roadmap, we take into consideration disruptions not visible right now

CTO, Financial Services

Report

According to our survey, only a third (36%) of executives believe their country's economy is strong today. Challenges executives are facing include:

DRIVING DIGITAL TRANSFORMATION	53%
INFLATION AND ECONOMIC DOWNTURN	53%
ATTRACTING AND RETAINING TALENT	51%
IMPROVING SUSTAINABILITY PRACTICES	51%
REACHING CUSTOMERS ACROSS CHANNELS	50%
CHANGES IN CUSTOMER DEMAND	50%
SUPPLY CHAIN ISSUES	49%

These challenges complicate but do not impede optimism about the future. Approximately 70% of executives feel the economy in their country is headed in the right direction, and it is organizational resiliency that helps them get there because 88% agree it helps reduce the immediate effects of crises by enabling companies to be better prepared for disruption.

Gaps in resiliency show potential points of failure

To me, a resilient business has a much stronger ability to sustain a positive course and speed on both revenue and margin despite the buffeting or these numerous attacks that are coming at you. Yes, they're attacking, but it didn't get in the way of anything I had to do to run my business.

CEO, Technology

Leaders across industries consider resiliency a vital business priority. 87% of executives believe resiliency helps prepare for unforeseen challenges. Even more, 97% say it is an essential factor in being prepared for any type of change an organization may encounter, and its importance has grown over time. Eight-in-ten executives (81%) say they value resiliency more today than in 2020.

The importance executives place on resiliency, however, differs dramatically from how they feel about their own organization, creating a remarkable gap between aspiration and reality.

At the present time, fewer than half of executives (47%) consider their company very resilient. About half (51%) perpetually think about how to build resiliency for their organization, and the remainder of respondents sporadically consider it, or not at all.

The importance of achieving resiliency versus the perceived level and prioritization forms a “Resiliency Gap” that stretches through more than half of executives (53%), meaning that more than one in two say their organization is not where it should be when it comes to resiliency. This reflects a realistic assessment by executives, who are willing to admit their organizations fall short of their desired state. And 78% of those who fall into this gap also say they need help building resiliency. This gap is not insurmountable. On the contrary, most executives believe greater resiliency is attainable for their organization if they have wise guidance and smart strategies for building it.

Of the executives seeking help,

47%

had less than 10 years of experience in their role and view their company as very resilient. This says that less tenured executives may not have the necessary experience in deploying a resiliency plan, but they take the matter seriously because their organization is prioritizing resiliency.

Executives tell us that the top reasons for attaining resiliency and closing the resiliency gap included:

- Ensuring organization performance (89%) and technology functionality (88%) can be restored more rapidly.
- Reducing the impact of crises by enabling organizations to anticipate and cushion against shocks (88%).
- Increasing market share by ensuring systems and organizational culture can adapt to changing market conditions (87%).
- Creating a positive impact on customer acquisition and retention (74%) and sales and marketing (74%).

Good guidance starts with great data about your current state. In our research, we set out to assess and benchmark executives to understand where their organizations stack up when it comes to resiliency. We call it The Resiliency Index.

RATE YOUR ORGANIZATIONS RESILIENCY WITH OUR ASSESSMENT TOOL



The Resiliency Index: Compare your organization to high performers

The Resiliency Index establishes a baseline for where companies are in their journey and identifies ways executives in high-resiliency organizations are modeling approaches for others who are caught in a gap between perception and action.

There is no strict definition of resilience. It is more sustainability of the business and subject to the market condition or market dynamic. This adds a lot of difference in the way you pursue it. I think adapting to the market conditions and being aware of the disruptors in the market is the key to resilience.

CTO, Fintech

We developed an index to understand where resiliency fits into an organization's priorities and investments. The assessment was based on grouping metrics associated with executives' perceptions of their organization's resiliency state. Three categories make up The Resiliency Index: high-, moderate- and low-resiliency.¹

Of the 2,414 executives surveyed:

- **26% of organizations** were highly resilient.
- **54% of organizations** were moderately resilient.
- **20% of organizations** had low resilience.

1. The 2023 Resiliency Index: The resiliency index score is based on the ratings of metrics associated with executives' perceptions of their company's state of resiliency. The index transforms the raw ratings on these metrics into a 0-100 score where all the scores are averaged. Executives with a score of 67 or lower ranked "low" in the index, executives with a score ranging from 68 to 92 were categorized as "moderate", and those with a score of 93 or higher were assigned to the "high" category. The thresholds in each category were derived based on the index score distribution and best practices.

Comparison of high- and low- resiliency executives

The 26% of high-resiliency executives are more likely to:

- Work in global organizations with more than 500 employees.
- Have 11 - 20 years of experience in their current role.
- Work more closely with the technology and data security departments or work closely with the IT and data analytics departments.

Conversely, the executives who rated lower in The Resiliency Index (20%) were more likely to:

- Work in national or regional organizations with less than 500 employees.
- Have more than 20 years of experience in their current role.
- Work closely with the finance department.
- Less likely to place importance on organization resiliency as a priority.

What can you learn from high-resiliency executives that can help you achieve more of an ideal state?

When we examined how high-resiliency executives perceived their success in addressing critical issues in the last few years, their responses were significantly higher compared to the moderate and low resiliency executives.

How successful has your company been at addressing the following business challenges over the past two years? This question will allow readers to understand why 65% is better than 28%, etc.) When comparing high-resiliency organizations to low-resiliency organizations, we found these strategies and programs important:

Improving productivity	_____	65% high resiliency vs. 28% low resiliency
Data security	_____	65% high resiliency vs. 28% low resiliency
Driving new technology innovations	_____	64% high resiliency vs. 26% low resiliency
Improving sustainability practices	_____	64% high resiliency vs. 25% low resiliency
Workforce challenges	_____	58% high resiliency vs. 23% low resiliency
Supply chain complexity	_____	58% high resiliency vs. 25% low resiliency

Also, high-resiliency executives attributed their business success to three factors:

- Had existing internal resiliency measures in place (96% high resiliency vs. 68% low resiliency).
- Prioritized analytics and AI when it’s time to navigate disruption more than low-resiliency executives (93% high resiliency vs. 22% low resiliency).
- Felt equipped to face economic instability and disruption (63% high resiliency vs. 32% low resiliency).

High-resiliency executives use internal and external data and analytics for decision making, which is key in navigating changes. Nearly all highly resilient executives say they rely on data and analytics compared to only 73% in the low-resiliency category.

Internal data sources high-resiliency executives rely on include:

Sales data: 70%	Operational data: 57%	Inventory data: 49%
Supply chain data: 66%	Website analytics: 55%	Workforce data: 38%
Customer analytics: 64%	Social media data: 54%	

External data sources high-resiliency executives rely on include:

Consumer transaction data: 78%	Market research data: 62%	Shipping data: 47%
	Employment trends: 58%	Government data: 30%
Industry-specific data: 62%	Public data: 55%	

For high-resiliency executives, resiliency impacts more than just business connectivity. It directly influences job performance (96%) and consumer confidence (98%) as well. High-scoring leaders say that internal resiliency measures help:

Prepare for unpredictable events	96%
Strengthen business performance	96%
Restore technology functionality much more rapidly	96%
Strengthen customer confidence and trust that the business is dependable	98%

Diving deeper to understand how to maintain and strengthen an organization's resiliency, we wanted to know how these five Resiliency Rules make up a winning strategy.

01

Speed and agility: The ability to adapt quickly to market changes and remain competitive.

02

Equity and responsibility: Ensuring strategies and solutions are ethical, equitable and sustainable to help build a reputation as a trusted, responsible corporate citizen.

03

Curiosity: A drive to seek new information, explore new possibilities and ask the right questions as a foundational imperative to find new ways to of working, develop new innovations and better adapt to changing market conditions.

04

Innovation: The ability for organizations to unlock new business models, workflows, solutions, products or services through technology.

05

Data culture and literacy: An organizational culture that values data and evidence-based decision making and a workforce skilled at understanding and using data and analytics to power the way they work.

We asked the executives to assess the importance of The Resiliency Rules. To start, we asked how they would rank based on the importance of being resilient. Speed and agility were considered the most important regardless of industry or country. However, the margin of importance across the five rules is very narrow, leaving us to conclude that executives view all five as important for planning, and companies should avoid prioritizing a single rule at the expense of others.

How do industries compare?

Health care places higher importance on all five rules compared to other industries

	Financial services	Retail/ consumer goods	Manufacturing	Health care/ life sciences	Government
Speed and agility	61%	62%	65%	68%	68%
Equity and responsibility	60%	51%	56%	64%	52%
Curiosity	56%	52%	53%	62%	41%
Innovation	60%	55%	59%	63%	58%
Data culture and literacy	56%	55%	56%	64%	55%

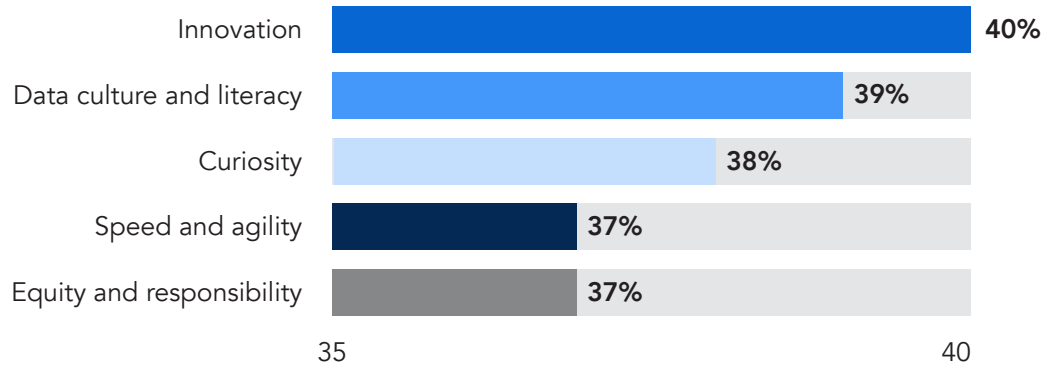
Light blue boxes indicate the highest level of importance and dark blue is the lowest.

Challenges to implementing resiliency are tied to lack of investment

Executives agree all five rules are important drivers for resiliency, scoring each rule above 80%. However, investing in the five rules seems to be a shortfall, with only half of the executives prioritizing resourcing. Under-funding or a lack of funding is an important factor for moderate- and low-resiliency executives. Falling short of success in implementing prompts is a recognized need for more help and guidance.

	Speed and agility	Equity and responsibility	Curiosity	Innovation	Data culture and literacy
Driver of resiliency	87%	83%	84%	85%	84%
Cited as high prioritization for investment	54%	50%	48%	52%	49%
Very successful at implementing rule	46%	44%	44%	46%	46%

We asked the executives we surveyed where they need the investment and the most help. Innovation narrowly ranked highest:



Analytics uncovers the secrets of resiliency

We've looked at the importance of each of these rules and their effect on a resiliency strategy, but taking a closer look into each of these, we found a common critical element across all – data and analytics.

The last piece of the solution is always data analytics and having the human intelligence be augmented by the data analytics and machine learning-driven systems that quickly analyze huge amounts of data and make recommendations. ... For traditional industries, significant growth of data analytics is in the area of predictive maintenance – predicting what happens where. It's very important to be right on time with your intervention service or replacement rather than doing it periodically. Because if you do it periodically, it's sometimes a waste of energy time, and money.

CRO/CFO Consultant, Finance

Speed and agility: Moving at a data-driven pace

Speed and agility is the ability to adapt quickly to market changes and remain competitive.

Speed and agility are the key with respect to time to market, I would say. Basically, when we are launching features, we have to make sure that we are launching quickly, rapidly and continuously. When we're saying speed and agility, it is critical because we don't have too much time.

CTO, Fintech

Businesses are prioritizing speed and agility and relying on data and analytics to navigate, predict, and prescribe actions to outpace competitors and meet market demand.

A majority, 68% of executives, are currently using data and AI to improve speed and agility. This is followed closely by security and digital transformation initiatives:

- | | |
|----------------------------------|-------------------------------------|
| 1. Data analytics and AI: 68% | 5. Data visualization: 41% |
| 2. Cybersecurity: 52% | 6. Data ops: 36% |
| 3. Cloud computing: 49% | 7. Augmented reality: 31% |
| 4. Internet of Things (IoT): 44% | 8. Natural language processing: 29% |

Here too, technology tools used more by executives who score high on The Resiliency Index:

DATA ANALYTICS AND AI

HIGH RESILIENCY

80%

MODERATE RESILIENCY

69%

LOW RESILIENCY

48%

CYBERSECURITY

HIGH RESILIENCY

65%

MODERATE RESILIENCY

47%

LOW RESILIENCY

46%

CLOUD COMPUTING

HIGH RESILIENCY

60%

MODERATE RESILIENCY

47%

LOW RESILIENCY

39%

INTERNET OF THINGS

HIGH RESILIENCY

54%

MODERATE RESILIENCY

43%

LOW RESILIENCY

35%

DATA VISUALIZATION

HIGH RESILIENCY

51%

MODERATE RESILIENCY

42%

LOW RESILIENCY

24%

AUGMENTED REALITY

HIGH RESILIENCY

40%

MODERATE RESILIENCY

28%

LOW RESILIENCY

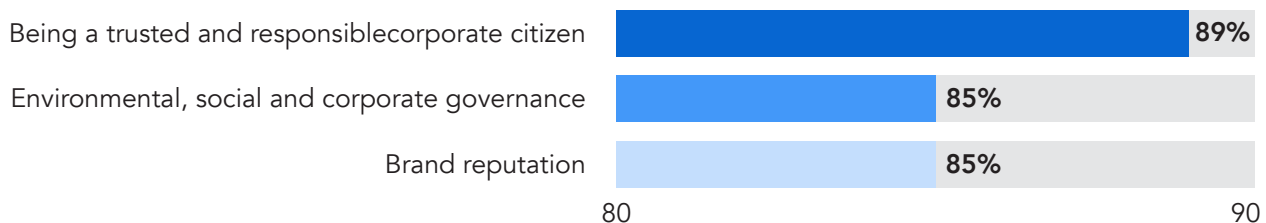
24%

Equity and responsibility: Identifying your blind spots

Equity and responsibility ensures that your strategies are ethical, equitable and sustainable to help build a reputation as a trusted and responsible corporate citizen.

With digital transformation, organizations acknowledge their responsibility to ensure technology innovations are inclusive and beneficial. They work to avoid negatively impacting vulnerable populations.

Attributes of equity and responsibility that executives associated with business resiliency:



If you want to be resilient, you need to have a clear view. ... It needs to be very clear in your mind how equity and resilience are related. You need to open your eyes and to think very deeply about where you want to go and how to get there.

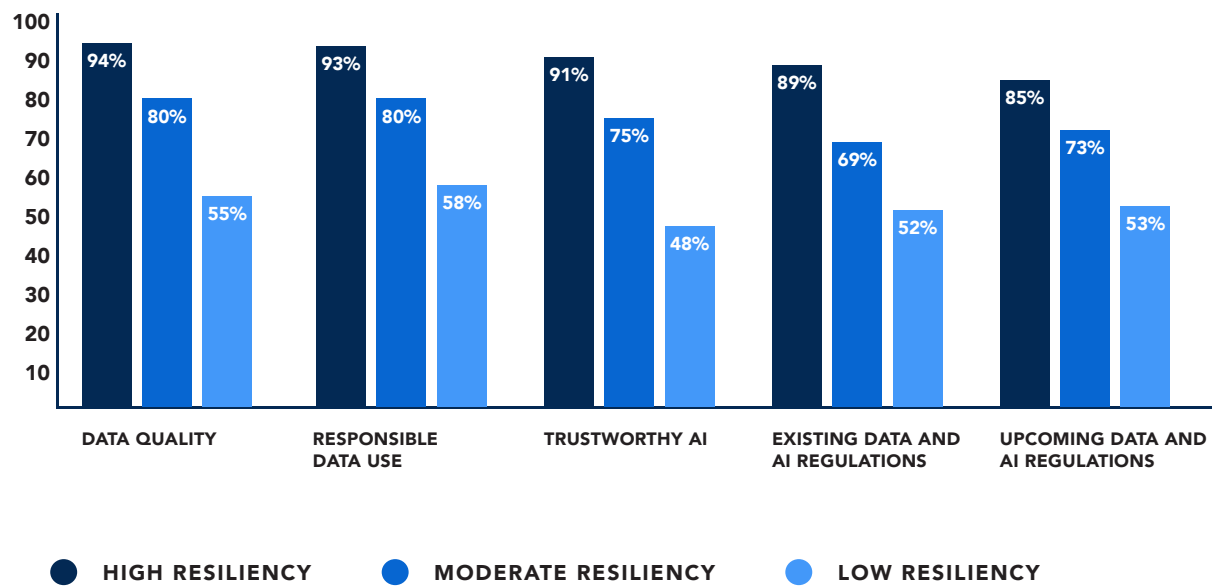
CEO, Health care

Globally, 79% of executives are addressing responsible data use and data quality on a weekly basis, followed by trustworthy AI (73%) and data and AI regulations (72%).

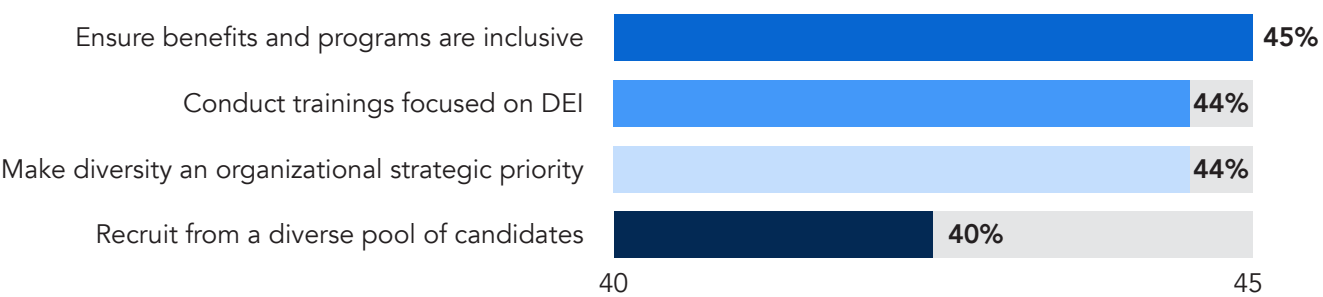
We also found that the executives in the high-resiliency category are more likely to prioritize equity and responsibility, taking time regularly to address this rule. In fact, high-resiliency executives take steps weekly to address equity and responsibility in their organization.

Below is how high-resiliency executives scored in common areas of equity and responsibility compared to the moderate- and low-resiliency organizations:

Most important areas of equity and responsibility:

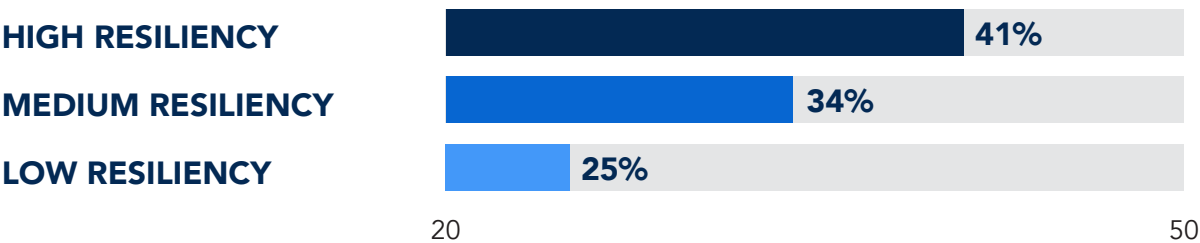


Executives are also implementing technology solutions to ensure ethical innovation, including improving sustainability (58%) and addressing workforce diversity (54%). The actions all global executives are taking to improve workforce diversity include:

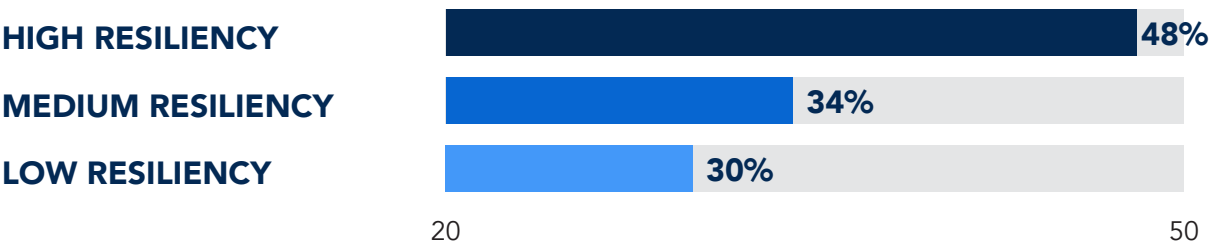


And, here, too, high-resiliency executives indicated they are making more efforts to improve workforce diversity (67% high resiliency, 52% moderate resiliency and 44% low resiliency).

Supporting employee resource groups:



Supporting employee mentorship programs:



Curiosity: The ROI of exploration

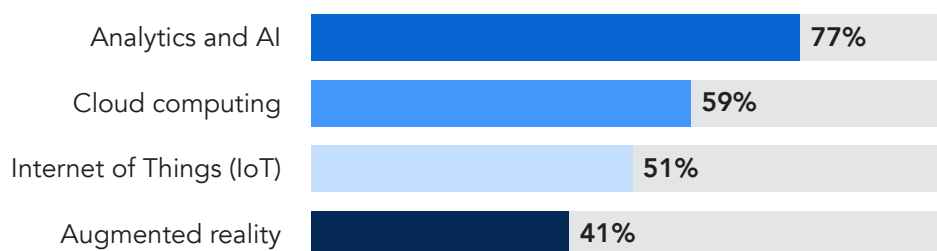
Curiosity is a drive to seek new information, explore new possibilities and ask the right questions. It is a foundational imperative to finding new ways of working, developing new innovations and better adapting to changing market conditions.

As our [2022 Curiosity@Work study](#) revealed, curiosity can have transformative power. This sentiment was echoed in our resiliency research. We found that nearly half (48%) of executives say it is very valuable to foster curiosity as a part of their company's culture. It is worth mentioning that high-resiliency executives value curiosity eight times more than low-resiliency executives.

In a world of fast-changing technologies and challenges, curiosity is part of informing yourself ahead of happening and preventing negative disruptions in your business.

CTO, Fintech

Executives believe data and analytics are crucial for encouraging curiosity in the workplace; it is particularly important to high-resiliency executives (68%). And fostering curiosity requires analytics and AI, along with other technology tools. Technology tools that support curiosity:



Larger companies

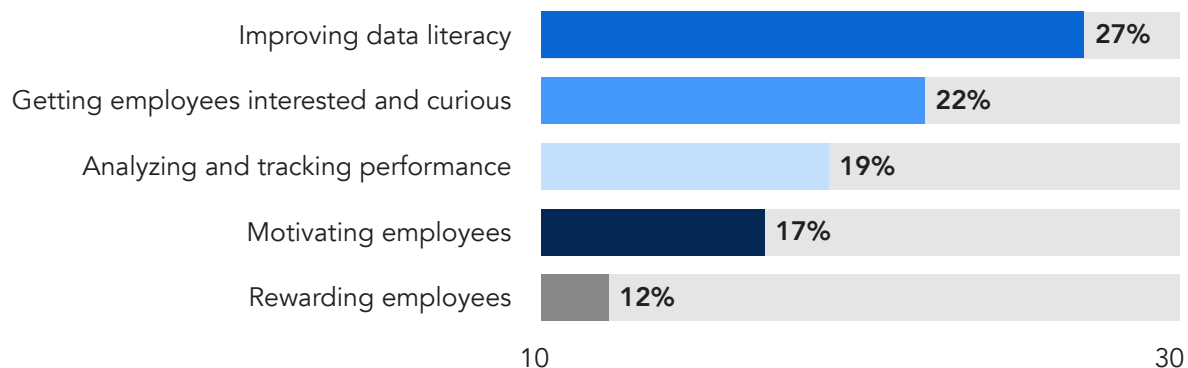
At larger corporations with more than 500 employees, executives place a greater emphasis on curiosity as a driver of business resiliency than smaller and mid-sized companies. The survey found 51% of executives in large companies find curiosity very valuable, compared to only 38% of executives in companies with 101-500 employees.

Breaking down the role of data and analytics further, 88% of high-resiliency executives said they rely on analytics and AI to support their organization's curiosity.

A business can be resilient by not getting caught by surprise and by having that curiosity beyond just what the current headlines are saying or what the current challenges on everybody's radar. It's looking for those unexpected challenges.

RVP, Software

When asked about the top ways executives are using data and analytics to encourage curiosity among employees, they responded:



Innovation: New ways of thinking and fresh approaches to stubborn problems

Innovation is the ability for organizations to unlock new business models, workflows, solutions, products or services through technology.

By enabling organizations to uncover new approaches to their key challenges, innovation acts as an engine that powers business resiliency.

I would say curiosity leads to innovation. And innovation allows you to be resilient. Data and analytics allow you to see whether what you're proposing to put in place is going to work. ... I don't know of any innovation that occurs without data.

CEO, Health care

Data and analytics are necessary for innovations to be grounded in the practical needs of the organization and the audiences it serves. Organizations said data helps with learning and development programs (62%), identifying skills gaps (57%) and decision making (57%).

High-resiliency execs

High-resiliency organizations are more likely to recognize the influence data and analytics can have and the extent to which data insights drive new innovations.

Data and analytics have a great deal of influence on innovation.

73%
HIGH RESILIENCY

20%
LOW RESILIENCY

Data insights drive new innovations.

78%
HIGH RESILIENCY

17%
LOW RESILIENCY

Smaller companies

61% of executives in companies with 101-500 employees are using data for decision making versus 45% of executives in companies with 500+ employees.

51% of executives in companies with 101-500 employees indicate their organizations are using analytics to adjust business models versus 43% of executives in companies with 500+ employees.

When it comes to innovation, the majority of executives (across countries and industries) are looking for new ways to monetize their data. This is particularly high in the financial services (80%) and manufacturing (75%) industries.



Workforce instrumental for innovation

Executives indicated that the workforce is key for innovation. It's imperative for organizations that want to build a stronger foundation of resiliency to use data to understand their employees better.

For high-resiliency organizations, understanding employees was the most important use of data to innovate in their industry (58%), followed by measuring productivity (53%).



Part of their employees' job or all of their job is actually working on innovation. And not having people so focused on just getting their day-to-day job done that they don't have any time to innovate or think about new things or how to solve problems. So, part of it is giving people time to do that or allocating the personnel to enable that.

CRO/CFO Consultant, Finance

Data culture and literacy: Weaving a data-first approach throughout the organization

Data culture and literacy focuses on building an organizational culture that values data and evidence-based decision making, and a workforce skilled at understanding and using data and analytics to power the way they work.

What we do today — how our data architecture and culture is built today — defines how well we can be resilient in the future. Many financial institutions struggle with disruptions like COVID because of a poor data culture and shabby data management practices. But many organizations are taking the right steps to rectify the problems, particularly with respect to data culture and data architecture. It's definitely an area where many clients are focusing, both from finance and operations perspectives.

CRO/CFO Consultant, Finance

Developing a data-driven culture and encouraging data literacy can help build agility and skills that are key in this digital era. According to the executives we surveyed, data literacy is important across all business functions leading with strategy:



One challenge that surfaced was executives who indicated prioritizing data as part of their company's culture is very important (59%) listed a shortage of data scientists as a barrier, which makes it difficult for them to bring a data culture to life. This discrepancy is particularly apparent in:

- Organizations with more than 500 employees who ranked data culture higher than executives in organizations with less than 500 employees.
- Executives in healthcare identified the shortage of data scientists as an issue, with 72% ranking it as important versus other industries like financial services (55%).

Barriers to resiliency

With consensus about the importance of The Resiliency Rules, we wanted to know what barriers the executives face and what ultimately contributes to The Resiliency Gap.

Speed and agility	Equity and responsibility	Curiosity	Innovation	Data Culture and literacy
Data quality issues (36%)	Cybersecurity risks (37%)	Encouraging employees (59%)	Costs (36%)	Costs (37%)
Data integration issues (35%)	Costs (37%)	Skillset shortage (51%)	Cybersecurity risks (35%)	Data quality issues (37%)
Costs (34%)	Data quality issues (36%)	Communicating benefits (50%)	Lack of workforce skills (31%)	Data integration issues (32%)

Understanding the barriers is as important as knowing if your organization is high-, moderate- or low-resiliency to chart a path for planning and investment. This is where data and analytics are instrumental in finding solutions to successfully implement a resiliency strategy.



Next step? Find your gaps to start closing them

Resiliency rules. And yet, while executives we surveyed believe it is important in a post-pandemic world, the reality of implementation or “being a resilient company” falls short, creating the Resiliency Gap.

SAS created The Resiliency Index to understand how executives perceive resiliency in their organizations and understand the factors causing the gap. Executives who score high on the Resiliency Index understand how to navigate change, including the type of data and analytics they rely on for decision making.

Executives are confident about closing The Resiliency Gap with the right guidance. They are even humble in saying they are seeking out help. To that end, SAS tested five business principles to understand the value executives perceive they offer in achieving resiliency. Across industry and geography, executives view these principles as important. We call these principles The Resiliency Rules, and they include speed and agility, innovation, equity and responsibility, data culture and literacy, and curiosity. For each of these five rules, executives indicate there are barriers to implementation, starting with cost and data quality. Executives can manage these barriers with the help of data and analytics. To learn more about the resiliency research, visit **blogs.sas.com/resiliency**

If it's time for your organization to stop talking about resiliency and take action, visit **blogs.sas.com/resiliency** to complete a five-minute assessment. We'll reward you with recommendations to help make the changes your business needs to become the most resilient it can be.

