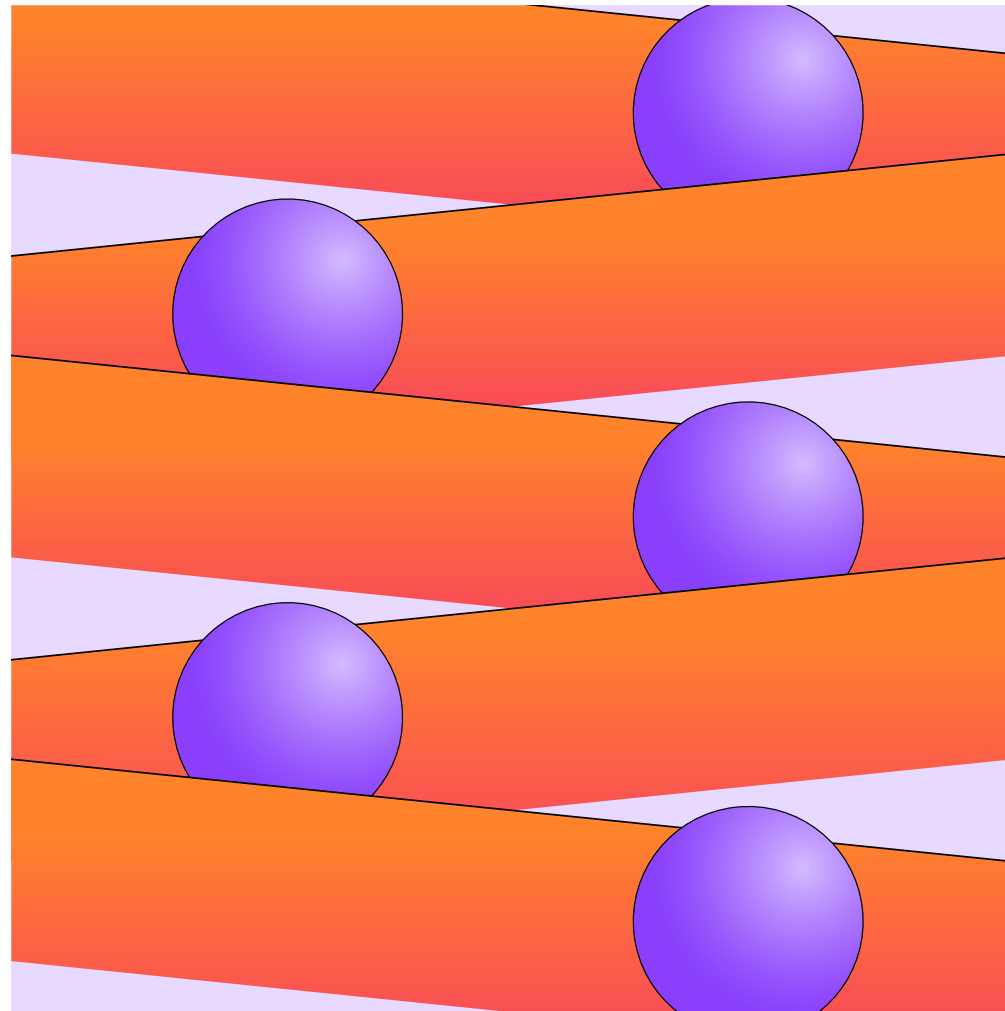


5 trends for 2024

*Deep tech requires
deep trust*



Putting the 2024 five trends in context

This is the fifth installment of IBM Institute for Business Value's five trends report. Each edition has identified key opportunities and concepts expected to drive outsized business impact over the next 12 months.

Within this tapestry of annual trends, business leaders must also think longer term and decide their investment priorities. Our companion report, *Seven Bets*, focuses on seven longer-term trends and the bets executives can make to take advantage of those opportunities. Covering topics from generative AI to quantum, sustainability to design leadership, and new ways of working to supply chain resiliency, it addresses what leaders need to know and what they need to do as these trends play out over the next several years. For more detail, visit our *Seven Bets* homepage <https://ibm.co/seven-bets>.

Intelligent machines become more autonomous every day. The crucial counterbalance to that?

Trust.

Specifically, building trust into everything from data to people, and from machines to operating models.

Trust is a precious commodity

As humans and technology become more entwined, it's wise to be cautious about where we place our trust. Indeed, trust has become a key business differentiator. How do we know? Because across the C-suite, 81% of executives view security, assurance, and trust as a brand attribute that actually sets their organization apart.¹

While leaders recognize the importance of trust, though, they struggle to gain and sustain it. Only 55% of CEOs are confident in their organization's ability to accurately and completely report the information stakeholders demand for data security and privacy.²

The struggle is evident among consumers as well. For example, only 20% of consumers trust corporations regarding sustainability, down from roughly 50% in 2021.³

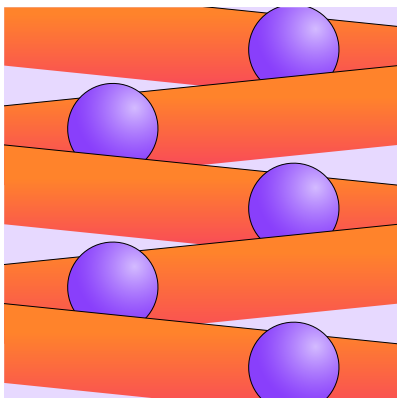
Yet when choosing a brand, 90% of consumers say trust is the biggest deciding factor.⁴

2024: Machine intelligence brings trust front and center

A year can spur a trend, cement one, or end it unexpectedly. In 2008, mortgages and housing led to the global financial crisis. In 2020, a global pandemic took an unimaginable number of human lives and cost the global economy more than \$12 trillion.⁵ And in 2023, generative AI changed the nature—and face—of work, causing many people to question the security of their jobs. While trust is always important, it becomes more so during massive disruptions such as these.

Our research shows 2024 will be the year when business leaders need to balance technology and trust. Of course, building trust into every aspect of an organization is not a new concept. But it's become more challenging with generative AI, global uncertainty, intensifying competition, and the continued rise of ecosystems.

5 Trends for 2024



Trend 1

Organizations move from “plus AI” to AI plus.

Trust in AI

Can we trust generative AI?
If so, how much and in which areas?

Trend 2

People who use AI will replace people who don't.

Trust in team

Can we help our workforce trust their new teammate, AI, as it helps them with day-to-day business processes?

Trend 3

The data conversation moves out of IT, into the C-suite.

Trust in data

Can we trust the veracity and security of our own data?

Trend 4

Operating models bend so they don't break.

Trust in operating model

Can we trust our own systems, processes, and strategy?

Trend 5

Ecosystems are not part of the strategy, they are the strategy.

Trust in partners

Can we build and maintain trusted ecosystems as they become increasingly central to customer engagement and value creation?

Trend 1

Organizations move from “plus AI” to AI plus.

AI plus means designing for AI first, not as an afterthought.

Three out of four CEOs say competitive advantage depends on who has the most advanced generative AI.⁶ In fact, 43% of CEOs told us their enterprises are already using generative AI to inform strategic decisions. And 36% say the technology is being used for operational decisions.⁷ In 2024, we expect to see continued increases.

Yet, across organizations, more than 60% are still not yet developing a consistent, enterprise-wide approach to generative AI—an essential step in responsible, trustworthy AI plus.⁸



“Generative AI models surprise, impress, and scare us, all at the same time.”

Gonzalo Gortázar
CEO, CaixaBank

Balancing speed and wisdom

Moving to AI plus means rethinking workforce strategy. Our research shows, though, that two out of three CEOs are acting without a clear view of how to help their workforce with the disruption and inevitable change that AI brings.⁹ And fewer than one in three CEOs have conducted an assessment on the potential impact of generative AI on their workforce.¹⁰

Still, organizations that embrace AI consistently outperform their peers.¹¹

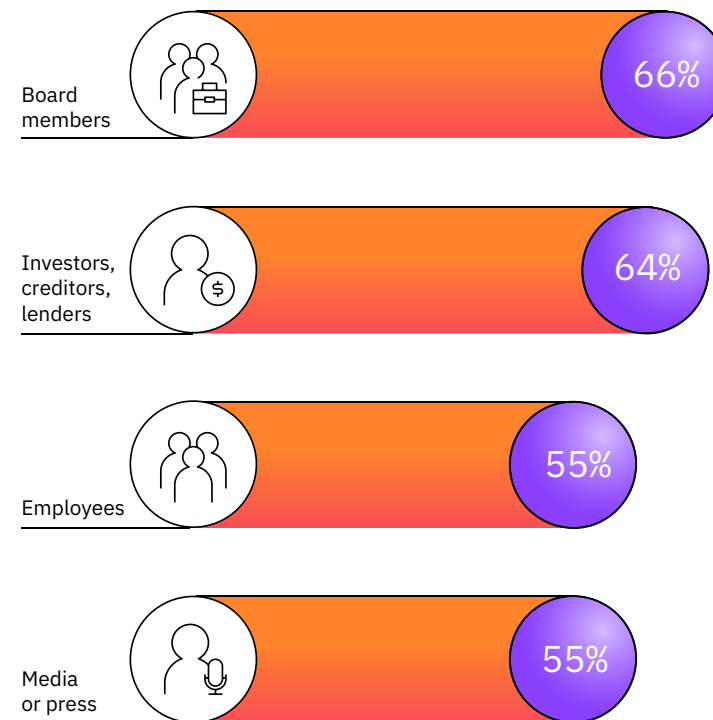
Generative AI is already in the zeitgeist and pressure to accelerate is mounting (see Figure 1). There is no going back. But that doesn't mean there won't be some pumping of the brakes in 2024. 72% of business leaders say they're willing to forgo generative AI benefits due to ethical concerns, and 69% expect a regulatory fine due to generative AI adoption.¹²

To lead with responsible AI, executives and their organizations need to lead with the best of what makes us human: wisdom, ethics, and care for their stakeholders.

FIGURE 1

CEOs feel pressure from stakeholders to accelerate AI adoption

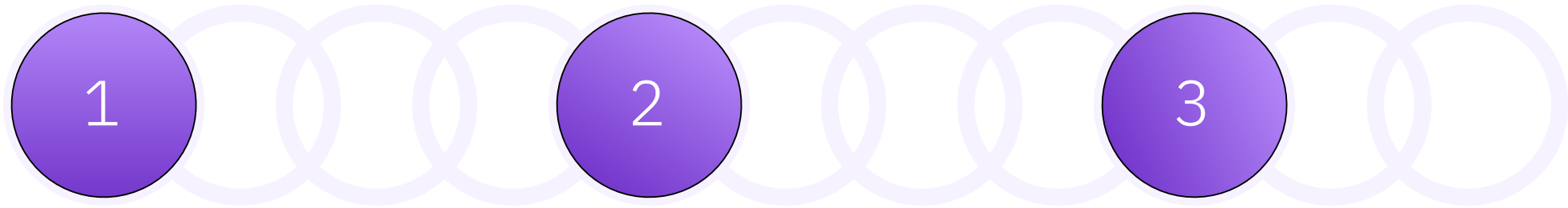
To what extent are the following stakeholder groups applying pressure to slow or accelerate adoption of generative AI?



Source: CEO decision-making in the age of AI: Act with intention. IBM Institute for Business Value. 2023. <https://ibm.co/c-suite-study-ceo>.

Action guide

Redesign your operating model through an AI-plus lens.



Establish AI management and oversight roles

Create a Chief AI Ethics Officer role dedicated to championing responsible AI; give them the authority to provide guidance and exercise veto power. Promote responsible use of AI. Ensure the technology is accessible, reliable, and trustworthy. And integrate ethical considerations throughout development lifecycles. More broadly, some organizations are considering adding Chief Trust Officers to address everything from AI, to data, to customer sentiment.

Expand AI skills beyond the IT department

Encourage employee buy-in for generative AI from the start. Focus on reskilling and upskilling, with an emphasis on creativity and people skills. Invest in a strong data infrastructure. Optimize AI's potential by fostering greater transparency and AI-relevant knowledge across the enterprise.

Introduce clear AI governance and education

Integrate AI governance into your core business model, explicitly addressing explainability, bias, and reliability. Establish comprehensive AI education programs for employees. Empower them to fully utilize generative AI capabilities. Make sure it's clear to customers and stakeholders when they are engaging with AI and when they are interacting with a real person who is augmented with AI.

Trend 2

People who use AI will replace people who don't.

Say hello to the coworker who never sleeps. In 2024, generative AI will impact virtually all organizational roles and levels. 77% of entry-level workers will see their job roles shift by 2025—but so will more than one in four senior executives.¹³

Successful AI adoption depends on teams welcoming new AI tools and applications. And to do that, they must believe generative AI is trustworthy.

AI bots aren't new. But in 2024 we anticipate a rapid increase in AI as a coworker. Operating around the clock to tackle rote, repetitive tasks, AI bots free humans to do higher value, strategic work.

Uniquely human traits such as creativity (the skill business leaders see as most valuable by 2025), nuanced decision-making, and empathy will become even more important.¹⁴

Right now, with limited foresight, 87% of CEOs expect job roles to be *augmented* rather than *replaced* by generative AI.¹⁵



What's important is skills that make people employable, whether at their current employer or next.

AI workforce impacts will deepen

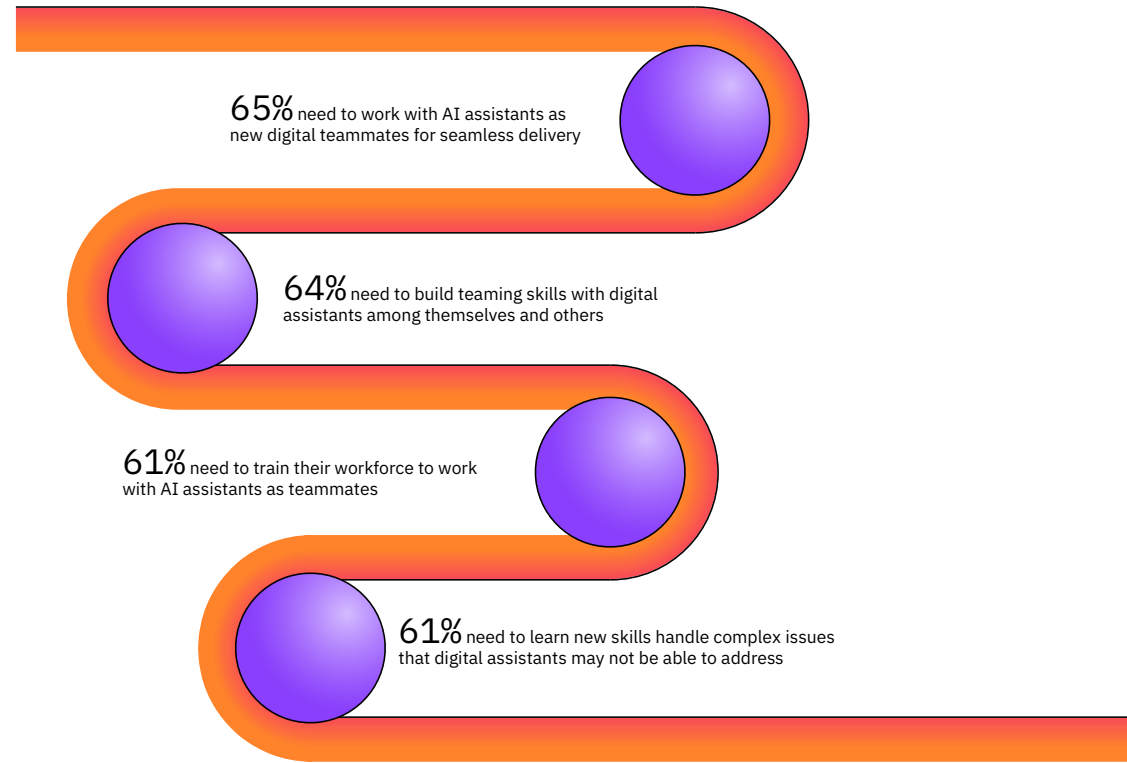
The worker augmentation versus replacement ratio will likely change. As generative AI matures rapidly, an increasing number of roles and people at all levels will be more severely impacted by AI. For example, in five years, a majority of government leaders expect to spend more on AI and automation than on human talent.¹⁶

CEOs estimate that 40% of their workforce needs to reskill as they implement AI and automation over the next three years.¹⁷ Trust will play a key role in whether employees willingly embrace reskilling and adapt to new roles. In the bigger picture, what's important is skills that make people employable in the new reality—irrespective of whether those roles are at their current employer or in a completely different environment.

At least 80% of C-suite executives expect that generative AI will fundamentally transform their organization's workflows and how people do their jobs.¹⁸ But workers must trust their new counterparts for success. And fostering that trust requires diligence on not only the efficacy of AI foundational models, but also worker reskilling and training.

FIGURE 2

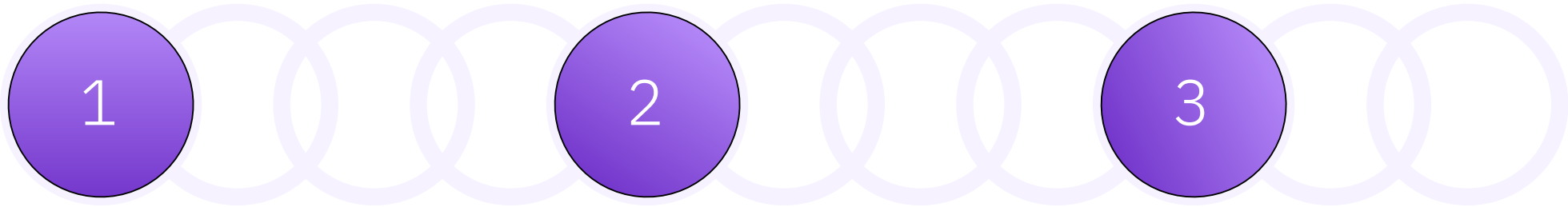
The workforce is acquiring new skills and new ways of working as they team with their AI assistants



Source: Q. To what extent do you agree with the following statements about how digital labor/AI assistants impacts the workforce skills in your organization 2023 and 2025? (By end 2023, agree + strongly agree). IBM Institute for Business Value, 2023 AI-First BPO C-Suite Survey.

Action guide

Keep people at the forefront of this massive workforce shift.



1 Make generative AI reskilling an advancement opportunity

Define a flexible skilling strategy with collective input from HR, IT, and other key stakeholders. Define learning requirements for higher-level functions performed by your people and routine tasks executed by your bots. Identify key skills aligned to specific job roles, then use generative AI to create learning paths from your internal training catalogues and external resources.

2 Redefine business processes with a people-first lens, augmented by AI

Use technology to analyze how work is done and identify any inefficiencies or bottlenecks. Use these insights to rethink operations and define where it's best for digital workers to take the lead, keeping humans in the decision-making loop.

3 Give teams a forum to recommend tasks that could be automated

Leverage digital HR channels to create open feedback loops, not just giving employees a voice but having a system for making them part of designing the change in work. Develop next-generation leaders who operate comfortably in a blended workforce of humans and AI.

Trend 3

The data conversation moves out of IT, into the C-suite.

Data is the lifeblood of every organization. It flows everywhere to inform strategy, operational decisions, and innovation.

Trusting your data is more important than ever, but not just the integrity of the data itself. You also need to be able to trust that all data crossing your virtual transom is secure and protected.

Organizations always needed to protect data from being stolen. But now they must also protect data from being poisoned as it moves in, out, and through their organization.

Financial stakes are high. Organizations that are able to monetize their large stores of trusted, high-quality data realize almost double the ROI from their AI capabilities than their peers (9% ROI versus 4.8%).¹⁹

With these returns at risk, it's no surprise that in 2024, data is no longer just a technology concern; it's a business imperative with massive strategic significance. 61% of CEOs say worries about data lineage and provenance will be a barrier to adopting generative AI.²⁰ 57% say that data security is also a barrier, while 45% cite data privacy.²¹



“The orthodox response is that decisions should be data-driven. In many situations, this works . . . in other situations, it is not as clear-cut.”

Fernando González
CEO, Cemex

Source: CEO decision-making in the age of AI: Act with intention. IBM Institute for Business Value. 2023. <https://ibm.co/c-suite-study-ceo>.

Data: Is it trustworthy? And is it safe?

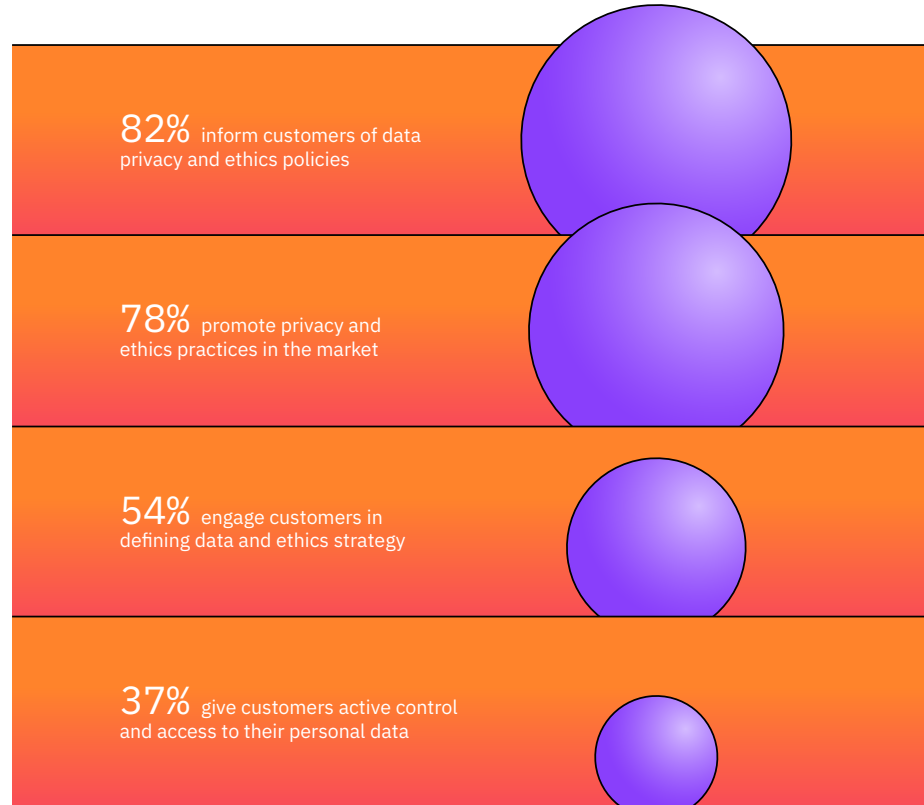
Meanwhile, manipulated data has also emerged as a huge threat. Executives expect hackers posing as trusted users to have the greatest nefarious impact on the business, followed by malicious code.²² As threat actors gain more familiarity with generative AI tools and use them to create smarter malware, we'll see new intrusion attacks with greater reach that are faster, more sophisticated, and more precise than ever.

No wonder cybersecurity budgets were 51% greater in 2023 than in 2021.²³ And they're expected to climb an additional 43% by 2025.²⁴ To capture the value trusted data can yield, organizations should view security as a key strategic differentiator.

2024 sees networks continuing to be defined by dynamic services and diffuse boundaries—with data flowing across all of them. In this environment, zero trust requires authentication and verification for every exchange of value. This makes it ideally suited to the current environment. By making trust an operational, transactional variable, ecosystem partners can support even the most sensitive workloads and mission-critical capabilities.²⁵

FIGURE 3

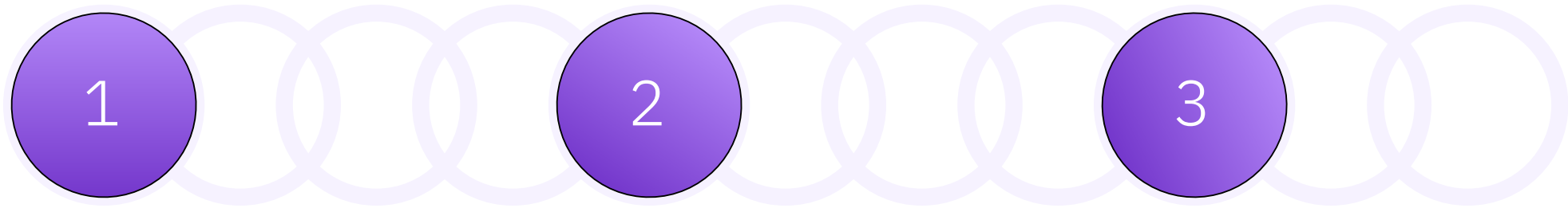
Leading Chief Data Officers increasingly handle customers and their data proactively



Source: *Turning data into value: How top Chief Data Officers deliver outsize results while spending less.* IBM Institute for Business Value. March 2023. <https://ibm.co/c-suite-study-cdo>.

Action guide

The fastest path to value: Secure your data, establish trust, and speed decision-making.



1 Recognize that just spending more on security is not enough

Transform your approach to security, looking to zero trust and even beyond. Integrate it into every aspect of the enterprise. Make secure and trusted data a key aspect of your brand. Focus on transparency and accountability to reduce risks and avoid bias. Reposition routine tasks, such as maintaining data cleanliness and regulatory compliance, into powerful assets, setting your business apart with tangible evidence and experience.

2 Make trust the start of every interaction

Strengthen your cyber-risk capabilities and prioritize cyber resilience to further foster trust and protect your business and relationships. Focus on monitoring and managing the key touchpoints where trust is built or broken. Communicate best practices to showcase unique approaches and stand out in the marketplace.

3 Look over the horizon to thwart cyber threats

Pinpoint obstacles between you and your partners, concentrating on procedural and governance elements that hinder decision-making and value, and slow trust-building. Make security a key concern when vetting partners and review partners' security strategies and procedures regularly.

Trend 4

Operating models bend so they don't break.

Building flex into operating models is essential for organizations to withstand—and emerge stronger from—the variety of shocks the corporate system now must endure.

Leaders structure an operating model they can trust to weather a changing world.

Too many executives are hampered by their operating models though. For instance, only 55% of leaders say their organization's ERP solution is configured in a way that will allow them to act quickly in the face of change.²⁶ What's more, 31% indicate their ERP solution makes it significantly or slightly harder to respond effectively to disruption.²⁷

These statistics do not bode well in a world where 60% of government leaders say that the frequency of shock events (e.g., natural

disasters, pandemics) is likely to increase in the future. And 70% expect that intensity and impact of shocks will increase.²⁸

For decades, senior executives have talked about sense-and-respond capabilities to help mitigate disruption. But the technology to manage and mitigate shocks lagged behind. The good news is that technology can finally provide these capabilities with true speed and sophistication. When experiencing a shock to business systems, executives are now able to respond in almost real time.



“Sometimes you have to make the decision to head in one direction and rely on your ability to try to change direction midstream if you need to.”

Roberto Tomasi
CEO, Autostrade per l'Italia

Source: CEO decision-making in the age of AI: Act with intention. IBM Institute for Business Value. 2023. <https://ibm.co/c-suite-study-ceo>.

Building an operating model that flexes with the times

Advanced technology capabilities such as AI and analytics help move organizations to more elastic operating models that can adjust and evolve as world events do.

Training AI models to cull patterns from unstructured external data, incorporating internal patterns and organizational management principles, allows businesses to weather shocks. Crucially, though, it also allows them to use these events as additional means of propulsion—driving innovation and business growth.

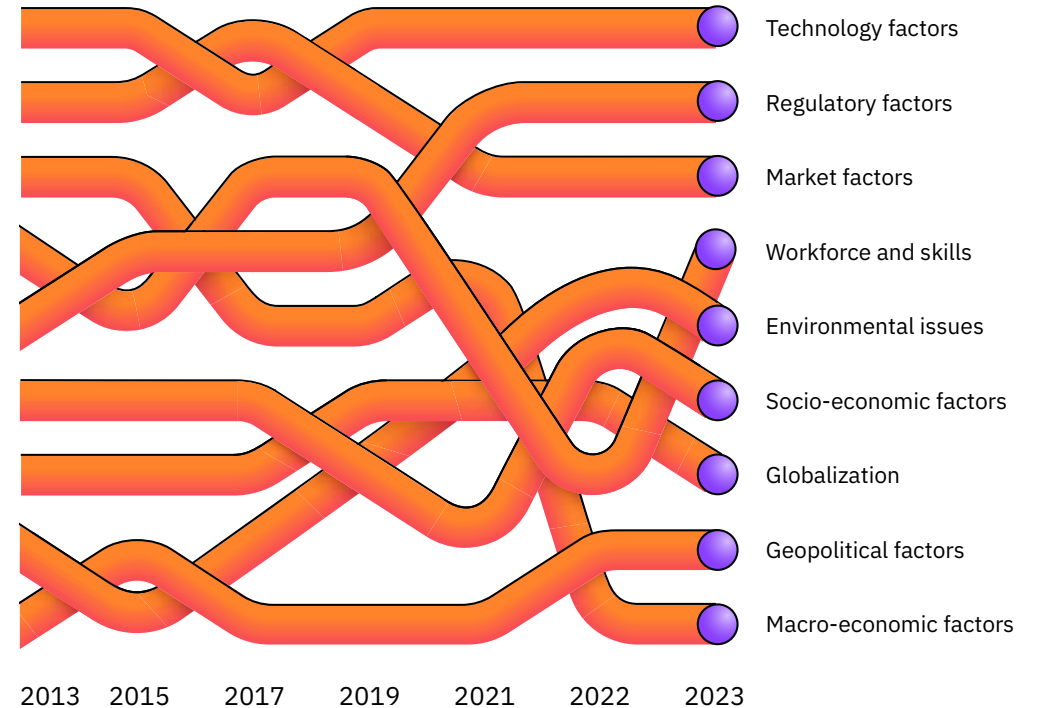
The success enterprises are already having when applying generative AI to supply chains illustrates the possibilities for broader enterprise sense-and-respond use.

81% of executives say that generative AI’s predictive capabilities detect problems earlier.²⁹ And 77% report generative AI models can successfully identify geopolitical and climate risks, enabling proactive—and rapid—mitigation.³⁰

2024 sees generative AI-enabled dashboards become even more sophisticated, enabling visibility and responsiveness to the ever-growing array of shocks. Top CEOs have already been moving in this direction—they are more than 13 times as likely as their counterparts to rate their enterprise dashboard as excellent at providing insight.³¹ But many organizations aren’t there yet. When asked to describe their enterprise dashboard, only 6% of CEOs said their measures are fully integrated across the enterprise, linked to outcomes, central to strategy, and aligned with ecosystems.³² Yet, they need to be. Integrated, enterprise-level dashboards provide the transparency essential to building trust in enterprise operating models.

FIGURE 4

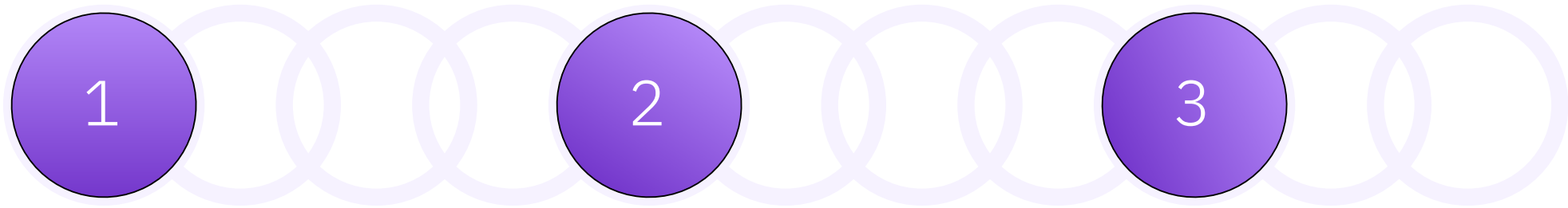
External forces impacting CEOs over time continue to shift dramatically



Source: CEO decision-making in the age of AI: Act with intention. IBM Institute for Business Value. 2023. <https://ibm.co/c-suite-study-ceo>.

Action guide

Build elasticity into your operating model.



1 Integrate scenario planning into all levels of your organization

Test operating processes and procedures against potential scenarios. Work with partners to clarify roles and responsibilities, decision-making processes, and accountability before shocks occur. Employ data-driven modeling, AI, and other tools for scenario planning and risk management.

2 Address shock events in ways that create opportunities for better futures

Turn to agile, cross-functional teams for rapid ideation, testing, and iteration to drive innovation. Scale success by integrating that innovation, using data strategies and AI, into business processes.

3 Identify new ways to mitigate future shocks

Review approaches to business continuity and address those that have become outdated. Look specifically for structural, organizational, and cultural barriers now, before the next major shock event.

Trend 5

Ecosystems are not part of the strategy, they *are* the strategy.

As enterprises build trust with their customers, ecosystems can help or hurt.

Trust takes years to build and a moment to lose. As customer experience becomes an ever-greater driving force behind organizational decisions, businesses are only as trusted as their least trusted partner. One bungled customer interaction or data breach is all it takes to destroy trust. And so, trusted ecosystems become an essential competitive advantage.

In 2024, ecosystems finally evolve from a collection of separate entities banding together to achieve separate but aligned goals. They move instead to integrated virtual collectives with a shared purpose. Already, 69% of executives say their organization has seen stronger financial results because of participation in ecosystems.³³ And in a world where top talent matters more than ever, 65% say they can access more relevant, high-demand skills through ecosystems.³⁴



Fewer than 3 in 10 organizations leverage shared and integrated technology capabilities for innovation with their ecosystem partners.

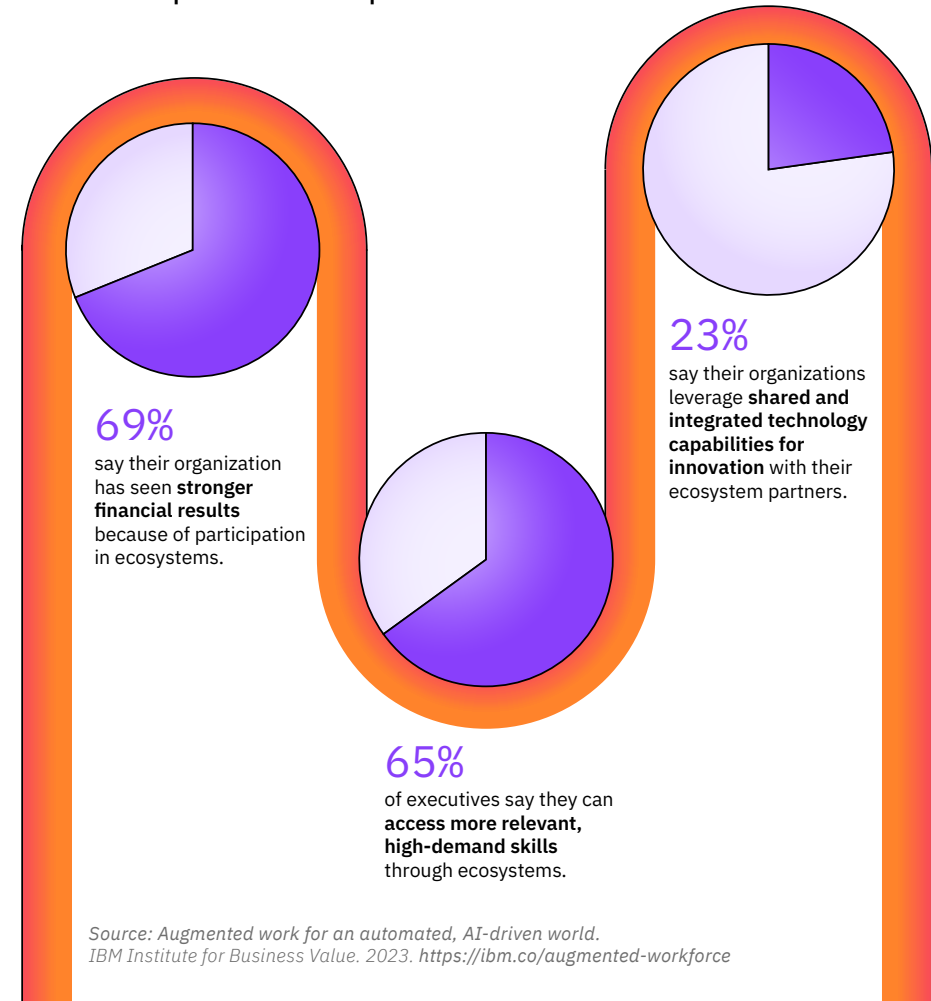
Open innovation is tied to revenue growth

The name of the ecosystem game is open innovation. Partners share talent, ideas, resources, technology, and more to leapfrog in myriad areas from product design to after-sales support. Revenue growth among open innovation leaders is already 59% higher than peers.³⁵ And in a typical large organization, where as much as 10% of revenue comes from open innovation, 59% can translate into a very large number.³⁶

Yet for open innovation to prosper, data must flow freely and securely across the ecosystem. Many organizations still struggle to get their own data house in order, so the challenge of integrating with ecosystem partners that are also struggling is real. Indeed, one in three Chief Data Officers admit they are challenged by an overly complex partner ecosystem.³⁷

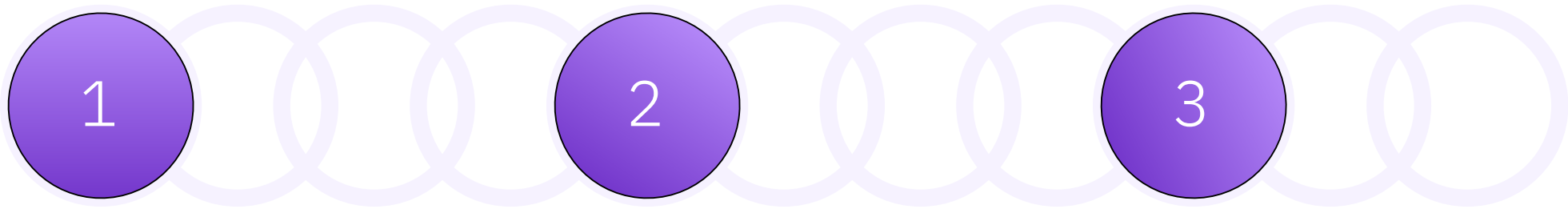
FIGURE 5

How trusted partners can help at a macro level



Action guide

Treat your ecosystem like a virtual collective with a common purpose.
Assess whether you have the right partners to foster greater innovation.



1 Unify data and secure partnerships to unlock and expand collaboration

Implement an enterprise data fabric with seamless data access—this will strengthen sharing within your ecosystem. Dismantle data silos and create a unified, accessible data infrastructure. Require transparent communication and data-sharing among partners for collective growth and innovation.

2 Prioritize quality over quantity

Review partnerships to ensure they still align with your organization’s evolving goals, culture, and strategy. Evaluate potential partners on their ability to maintain a strong, trust-based relationship that benefits the collective. Focus on partnerships that offer access to diverse capabilities and technologies.

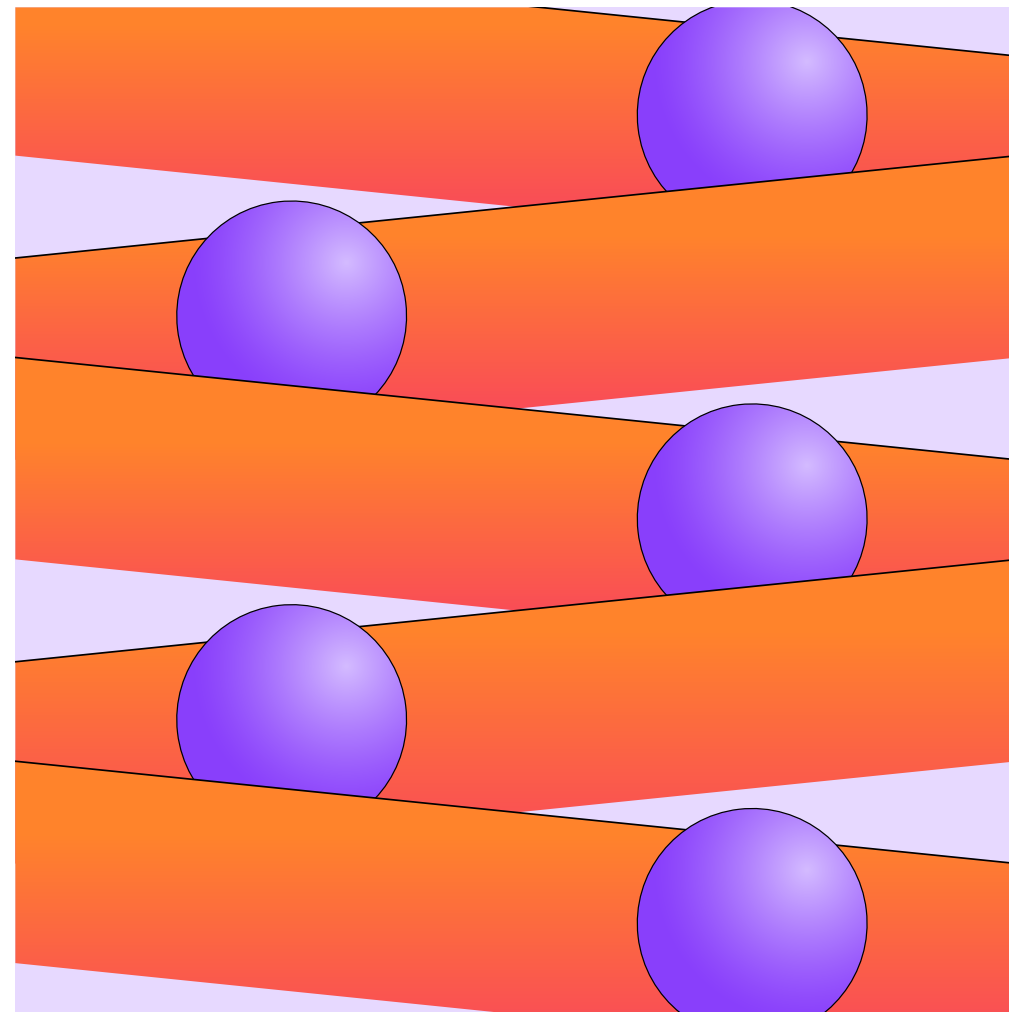
3 Use your ecosystem as a springboard for transformation

Determine the necessary skills for innovation and decide how to engage the right talent within your ecosystem. Adopt open standards and secure data sharing to promote collaboration and trust within your ecosystem.

2024 is the year to weave trust throughout your organization

The trends we've covered are playing out regardless of any single organization's actions. An emphasis on building and maintaining trust—with employees, stakeholders, customers, and ecosystem partners—is a strategy to pursue today rather than tomorrow.

In a world where nuances of human judgment counterbalance and complement deep technology, trust has become the new business currency.



Contributors

Many thanks to the many people whose invaluable insights, expertise, and support helped make this report possible: Sara Aboulhosn, Cindy Anderson, Steve Ballou, Christian Bieck, Karen Butner, Annette Celio, Bill Chamberlin, Jane Cheung, Liam Cleaver, Marisa Conway, Haynes Cooney, Jacob Dencik, Wei Ding, Mandy Drouin, Catherine Fillare, Brian Goehring, Bruce Jarvis, Rachel Larkin, Kris Lawas, Salima Lin, Anthony Marshall, Kathy Martin, Michelle Mattelson, Rakesh Mistry, Yu Muraoka, Hebatallah Nashaat, Toshiyuki Ohoka, Talita Cristina Paro Fabene, Gerry Parham, Kristine Rodriguez, Wendy Roth, Sherihan Sherif, Ai Jun Sun, Li Wang, Joanna E. Wilkins, Andrew Womack, Mayuko Yasuda, Katsumi Yokoyama, and Dave Zaharchuk.

IBM Institute for Business Value

The IBM Institute for Business Value (IBV) delivers trusted, technology-based business insights by combining expertise from industry thinkers, leading academics, and subject matter experts with global research and performance data. The IBV thought leadership portfolio includes research deep dives, benchmarking and performance comparisons, and data visualizations that support business decision making across regions, industries and technologies.

For more information

To stay connected and informed, sign up to receive IBV's email newsletter at ibm.com/ibv. You can also find us on LinkedIn at <https://ibm.co/ibv-linkedin>.

Notes and sources

- 1 Thompson, Dr. Shue-Jane, Shawn DSouza, Shamla Naidoo, and Gerald Parham. *The new era of cloud security: Use trust networks to strengthen cyber resilience*. IBM Institute for Business Value, March 2021. <https://ibm.co/cloud-security-cyber-resilience>
- 2 *CEO decision-making in the age of AI: Act with intention*. The Global C-suite Study Series. 28th Edition. IBM Institute for Business Value. June 2023. <https://ibm.co/c-suite-study-ceo>
- 3 Biswas, Arun, Elizabeth Goos, and Jacob Dencik, PhD. *The ESG data conundrum*. IBM Institute for Business Value. April 2023. <https://ibm.co/esg-data-conundrum>
- 4 IBM Institute for Business Value 2024 global consumer research survey of 20,083 consumers from 26 countries. Unpublished data.
- 5 "IMF sees cost of Covid pandemic rising beyond \$12.5 trillion estimate." Reuters. January 20, 2022. <https://www.reuters.com/business/imf-sees-cost-covid-pandemic-rising-beyond-125-trillion-estimate-2022-01-20/>
- 6 *CEO decision-making in the age of AI: Act with intention*. The Global C-suite Study Series. 28th Edition. IBM Institute for Business Value. June 2023. <https://ibm.co/c-suite-study-ceo>
- 7 Ibid.
- 8 *The CEO's guide to generative AI*. IBM Institute for Business Value. 2023. <https://ibm.co/ceo-generative-ai>
- 9 *CEO decision-making in the age of AI: Act with intention*. The Global C-suite Study Series. 28th Edition. IBM Institute for Business Value. June 2023. <https://ibm.co/c-suite-study-ceo>
- 10 Ibid.

- 11 Goldstein, Jill, Bill Lobig, Cathy Fillare, and Christopher Nowak. *Augmented work for an automated, AI-driven world: Boost performance with human-machine partnerships*. IBM Institute for Business Value. August 2023. <https://ibm.co/augmented-workforce>
- 12 *The CEO's guide to generative AI: Responsible AI and ethics*. IBM Institute for Business Value. October 2023. <https://ibm.co/ceo-generative-ai-responsible-ai-ethics>
- 13 *The CEO's guide to generative AI: Talent and skills*. IBM Institute for Business Value. July 2023. <https://ibm.co/ceo-generative-ai-talent-skills>
- 14 Ibid.
- 15 Ibid.
- 16 Mihm, J. Christopher, Rob Handfield, and Tony Scott. *Preparing governments for future shocks: A roadmap to resilience*. IBM Institute for Business Value. October 2023. <https://ibm.co/government-future-shocks-resilience>
- 17 Goldstein, Jill, Bill Lobig, Cathy Fillare, and Christopher Nowak. *Augmented work for an automated, AI-driven world: Boost performance with human-machine partnerships*. IBM Institute for Business Value. August 2023. <https://ibm.co/augmented-workforce>
- 18 *The power of AI and automation: Accelerating performance with intelligent workflows*. Data story. IBM Institute for Business Value. April 2023. <https://ibm.co/automation-intelligent-workflows>
- 19 *The CEO's guide to generative AI: Platforms, data, and governance*. IBM Institute for Business Value. September 2023. <https://ibm.co/ceo-generative-ai-platforms>
- 20 Ibid.
- 21 Ibid.
- 22 *The CEO's guide to generative AI: Cybersecurity*. IBM Institute for Business Value. October 2023. <https://ibm.co/ceo-generative-ai-cybersecurity>
- 23 Ibid.
- 24 Ibid.
- 25 McCurdy, Chris, Lisa Fisher, Gerald Parham, and Dr. Shue-Jane Thompson. *Getting started with zero trust security: A guide for building cyber resilience*. IBM Institute for Business Value. July 2021. <https://ibm.co/zero-trust-security>
- 26 *Crisis and continuity: New ERP strategies to help mitigate political risk*. IBM Institute for Business Value. November 2022. <https://ibm.co/business-continuity-erp>
- 27 Ibid.
- 28 Mihm, J. Christopher, Rob Handfield, and Tony Scott. *Preparing governments for future shocks: A roadmap to resilience*. IBM Institute for Business Value. October 2023. <https://ibm.co/government-future-shocks-resilience>
- 29 *The CEO's guide to generative AI: Supply chain*. IBM Institute for Business Value. November 2023. <https://ibm.co/ceo-generative-ai-supply-chain>
- 30 Ibid.
- 31 *CEO decision-making in the age of AI: Act with intention*. The Global C-suite Study Series. 28th Edition. IBM Institute for Business Value. June 2023. <https://ibm.co/c-suite-study-ceo>
- 32 Ibid.

- 33 Goldstein, Jill, Bill Lobig, Cathy Fillare, and Christopher Nowak. *Augmented work for an automated, AI-driven world: Boost performance with human-machine partnerships*. IBM Institute for Business Value. August 2023. <https://ibm.co/augmented-workforce>
- 34 Ibid.
- 35 Palmer, Kirsten, Jacob Dencik, PhD, and Lisa Fisher. *Ecosystems and open innovation: Co-create or stagnate*. IBM Institute for Business Value and APQC. October 2023. <https://ibm.co/ecosystems-open-innovation>
- 36 Ibid.
- 37 *Turning data into value: How top Chief Data Officers deliver outsize results while spending less*. The Global C-suite Study Series. 27th Edition. IBM Institute for Business Value. March 2023. <https://ibm.co/c-suite-study-cdo>



© Copyright IBM Corporation 2023

IBM Corporation
New Orchard Road
Armonk, NY 10504

Produced in the United States of America | December 2023

IBM, the IBM logo, ibm.com and Watson are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at “Copyright and trademark information” at: ibm.com/legal/copytrade.shtml.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED “AS IS” WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

This report is intended for general guidance only. It is not intended to be a substitute for detailed research or the exercise of professional judgment. IBM shall not be responsible for any loss whatsoever sustained by any organization or person who relies on this publication.

The data used in this report may be derived from third-party sources and IBM does not independently verify, validate or audit such data. The results from the use of such data are provided on an “as is” basis and IBM makes no representations or warranties, express or implied.