Capacity for change

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Improving your organization's capacity for change

When we asked executives around the world about their concerns for the year ahead, two macro issues rose to the fore: volatility and uncertainty. Sound familiar? Change—and a dearth of reliable data to guide organizations through it—is a known variable in today's leadership equation.

If change is a constant, it follows that leaders need to ensure their organizations' capacity for change, and that might look quite different in today's terms—and tomorrow's. What will it take to continuously adapt and innovate inside and out? How can you balance your growth strategy with shorter-term challenges? For this issue, we've created and curated exclusive research and insights on how leaders can, as one author puts it, "flourish in ambiguity."

That perspective, on page 40, posits that decisive action may no longer be the sign of a successful leader. Rather, when the road ahead is unclear and definitively choosing a direction could lead you off course, it might be more worthwhile to experiment, taking small steps in different directions to feel your way through the fog and find the right way forward.

Research in this issue suggests that another hallmark of successful leadership today could be the ability to balance a packed agenda of competing strategic priorities. On page 32, we've pulled from recent global executive surveys and data analyses to paint a picture of the complexity of modern-day leadership. Six out of 10 leaders surveyed are balancing seven or more priorities, and weighty ones at that—from driving innovation to building a more resilient supply chain to future-proofing the workforce.

Consider the volatility and uncertainty of that last priority alone: How can leaders more effectively manage across in-house, outsourced, in-office, and remote teams? And what lessons can be learned from organizations that are moving away from static jobs and toward the flexible application of skills? This issue offers research and insights on all of that too (pp. 18-20 and 52).

Deloitte Insights' mission is to help future-focused leaders navigate what's next, so we'll keep these special editions coming, guided by your input on the challenges and opportunities in front of you.

Best,

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Artists

Stephanie Dalton Cowan

Stephanie Dalton Cowan synthesizes fine art and printmaking methods with photography and custom silhouettes to produce artwork for magazines, publishing houses, and advertising and design agencies, as well as for opera, theater, television, and major motion pictures.

Bruce Morser

Bruce Morser likes a sharp pencil. Working from an island near Seattle, his images cover subjects ranging from large technical machines such as the International Space Station, to architectural forms like the Acropolis, to medical illustration, to corporate portraiture, to fashion.

Molly Piersol

Molly Piersol is a senior data visualization designer at Deloitte. She believes the display of data itself creates beautiful art and works to further expand the stories that live between the lines of figures and infographics. Piersol is a Virginia transplant to the Seattle area and her roots have grown deep enough that she'll never go back.

Jim Slatton

Jim Slatton is a designer and illustrator from Asheville, N.C. His graphic style is rooted in decades of branding work and a love of mid-century minimalism. He works with custom iconography and typography, photo collage, and data to distill complex information to simple visual stories.

Adam Spannbauer

Adam Spannbauer is an analytics practitioner and lecturer at the University of Tennessee, Knoxville. His designs are created using the programming language JavaScript, and they often focus on the balance between chaos and order.

Luke Lucas

Luke Lucas creates bespoke lettering and applies a dimensional, illustrative style to his work, which is featured in magazines and on billboards around the globe. He works with a range of traditional and digital techniques in his studio on the northern beaches of Sydney.
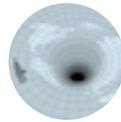
Dan Page

Dan Page is an editorial illustrator based near Toronto whose work has appeared in publications around the world, including *The Wall Street Journal, The New York Times*, and *Rolling Stone*. When he's not in his studio, he's usually enjoying time with his wife, three daughters, and two dogs.

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Dana Smith

Dana Smith is an editorial illustrator and photographer based in Boston. Given his obsession with pop culture, mid-century American graphic design, and one highly addictive in-store reel-to-reel tape circa 1973, his work features an ever-present nod to nostalgic Americana.

In this era of disruption, you need practical foresight, fresh insights, and trustworthy data to help make your organization more resilient and better prepared for new opportunities.

From investigating current trends to offering cutting-edge solutions for your most complex business challenges, our teams of researchers, data scientists, and multimedia storytellers bring clarity to an uncertain world.
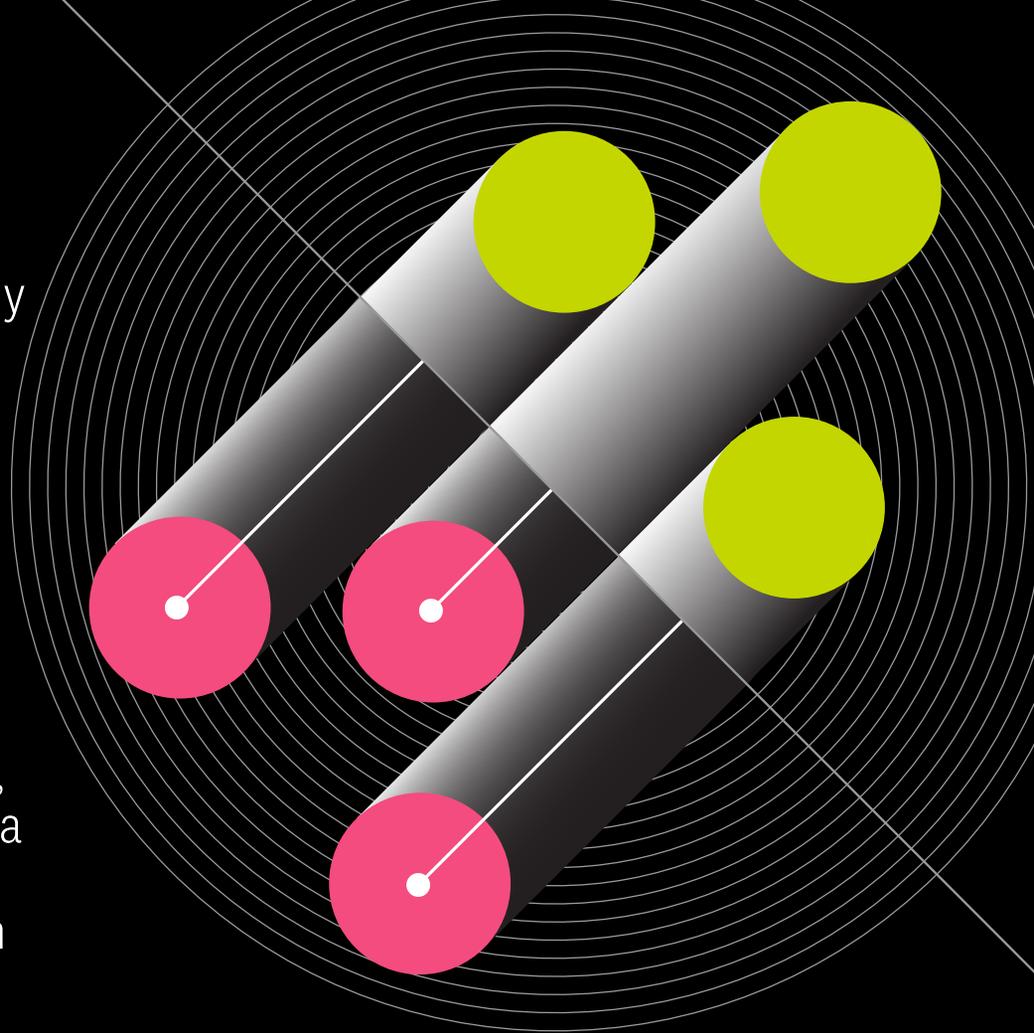
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What disrupts the disruptors?

Security, data, and regulation have the most disruptive potential, according to the tech industry leaders we surveyed.

In this age of discontinuity, the technology industry is being propelled and buffeted by a number of powerful winds of change: advances in science and technology, new models, and growing dangers. To gain more insight into these forces and the potential challenges they pose, we conducted a short survey of tech industry leaders, asking how disruptive 11 emerging issues are to their company today and will be in the next three to five years.

In general, we found that tech leaders seem to be feeling the most anxiety from issues associated with data. Companies are collecting and protecting ever-larger volumes of data, and dealing with the associated increases in cost and complexity. Issues around data governance and privacy are the focus of many C-suite and board discussions. Data also powers AI, so its ubiquity and vitality are creating both new opportunities and vulnerabilities.

Cybersecurity and data-related issues (data-driven competitiveness) are currently ranked as the most disruptive issues we asked about, and they're expected to remain so. Tech leaders believe that if their data is compromised and there's a loss of trust, every facet of their business would be impacted. Amid the escalating cyber arms race driven by state and nonstate actors and cybercriminals, companies are constantly questioning their security status.

Over the next three to five years, regulation is expected to become much more disruptive, with 14% more survey respondents saying it will be "very disruptive" then versus now. Today we're seeing regulatory and government action across a broad range of issues that could impact the technology industry, including data privacy, content moderation, antitrust, cybersecurity, AI, and cryptocurrency. Many tech leaders are uncertain about how technology industry regulation will play out, and are concerned about different standards increasing complexity and reducing flexibility and innovation.

Some areas that survey respondents deem less disruptive, such as Web3, quantum, and augmented reality/virtual reality, are seen as just too far out or not practical enough to achieve widespread disruption yet. However, with the fast pace of technological evolution, their attitudes and responses could quickly change.

Organizations shouldn't ignore what isn't disruptive yet. Sensing mechanisms can help companies monitor and evaluate current trends to identify future disruptors and prepare for them.

Research and analysis by the Deloitte Center for Technology, Media, and Telecommunications

Technology industry leaders see regulation becoming much more disruptive over the next three to five years
Change in level of disruption for emerging issues

Very disruptive today | Very disruptive in 3–5 years

- Cybersecurity **59%** → **64%** Cybersecurity (+5%)
- Data-related issues **55%** → Data-related issues (+9%)
- Artificial intelligence / Privacy and surveillance **52%** → **55%** Regulation (+14%)
- Regulation **41%** → **48%** Privacy and surveillance / **47%** Artificial intelligence
- Threats to truth and trust **36%** → **35%** Threats to truth and trust
- Web3 **24%** → **29%** Web3 (+5%)
- Next-generation manufacturing / Quantum computing **21%** → **18%** Next-generation manufacturing / Augmented/virtual/mixed reality (+1%)
- Augmented/virtual/mixed reality **17%** → **15%** Quantum computing / **14%** Cyber-biological convergence (+6%)
- Cyber-biological convergence **8%**

Note: N = 68
Source: Deloitte survey of US technology industry leaders, December 2021.

Quantifying the value of tech companies' 'trusted actions'

Customers who believe that US tech companies haven't taken certain trust-building actions could be up to 53% less likely to pay a premium for the brand, make another purchase, or recommend the brand to others, Deloitte research finds.

The negative effect of inaction or poor action is far more significant than the positive effect of well-performed trust actions

When performed well, positive impact on (B2B/B2C) customer behavior ranges from 4% to 10% above average

Average

When performed poorly, these actions generate an outsized negative impact of 20% to 53% below average

Source: Deloitte survey of the US tech sector, January–February 2022.

Given the strategic and operational challenges brought on by the pandemic, social justice movements, climate change, geopolitical shifts, and increasing competition, companies are under pressure to act quickly and make every move count. Such a fast-moving environment can make it difficult for companies to maintain stability and high levels of customer trust, which can significantly impact their bottom line.

Trust has been shown to affect customers' loyalty and likelihood to purchase—and even their willingness to pay a premium for that purchase. In fact, trusted brands have been found to outperform low-trusted competitors by up to four times more market value. To determine how each "trusted action" a brand takes can affect customers' perceptions of the brand, we recently conducted an analysis of the US technology industry, which reportedly has moved from first place among the most trusted sectors in the United States in 2020 to ninth in 2021.[1]

In January and February 2022, we surveyed more than 1,000 US tech end users and 600 business-to-business purchasers from large organizations (more than US$500 million in revenue) across sectors, and we found that certain trust-building actions are significantly more valuable than others—actions primarily related to the quality of customer service, the tech brand's focus on innovation and insights, and the foundational security of its offering (including cybersecurity, data protection, and conduct and crime).

Tech end users and B2B purchasers who very strongly agreed that the organization took a successful action in a trust-building area were 4 to 10% more likely than average to have paid a premium to purchase from the brand, recommended the brand to others, or purchased additional products from the brand, among other behaviors. Taken in aggregate across more than 80 enterprise actions, the impact on customer behavior can be substantial.

More notably, respondents who very strongly disagreed that the brand adopted an action in this area were 20 to 53% less likely than average to have engaged in such behaviors. Similar findings were observed in how customers perceived the brand's organizational performance and competitive position—for instance, whether they thought the brand was a strong partner or collaborator, more innovative than peers, or the market leader in its category.

The bottom line? Customers might reward brands for taking specific trusted actions, but they can also punish those that do not.

Research and analysis by the Deloitte Center for Integrated Research and the Deloitte Data Science and Survey Advisory team

Read the full report at www.deloitte.com/insights/quantifying-trust

Infographic by Molly Piersol

Assuming responsibility: Boards and C-suites weigh in on the current state of trust management

Respondents to a Deloitte global board survey unanimously rate trust as a strategic priority, but more than half of respondents say boards are only managing it reactively.

When it comes to an organization's ability to thrive, adapt, and innovate, trust is like oxygen: It's a fundamental element for survival.

In a recent Deloitte Global Boardroom Program survey of 177 board directors and C-level executives across industries and geographies on building trust among stakeholders, 100% of respondents think trust plays a role—often a significant role—in their organizations' success: 94% of respondents say trust is critical to their organizations' performance, while the remaining 6% say trust is somewhat important.

When asked who's responsible for managing organizational trust, respondents point directly at themselves. More than three-quarters (77%) say the board and management should work together on maintaining stakeholder trust, 18% say it's primarily the board's responsibility, and only 5% say the board is not responsible. And 88% of respondents say the CEO is the C-suite executive who's primarily responsible for building or rebuilding trust with stakeholders.

One might assume, then, that today's boards are engaging in frequent, strategic discussions to proactively manage stakeholder trust, but survey results indicate that this might not be the case. Only 20% of board respondents say they discuss trust issues regularly (quarterly or more frequently) at the boardroom table. More than half (54%) say

they only talk about trust when there's a specific issue to resolve, indicating that many boards are taking a reactive stance.

Respondents might not have trust as a regular item on their board agendas, but they're putting the onus on themselves regardless. When asked what actions organizations can take to cultivate trust, respondents rank "organizational structure and tone" and "governance-driven transparency

and accountability" as the top priorities—both of which are responsibilities that fall squarely on the shoulders of board and C-suite leadership.

Research and analysis by the Deloitte Global Boardroom Program

Read the full report at www.deloitte.com/insights/trust-management

Q: "Is the board responsible for trust with your organization's stakeholders?"

5% No, the board is not responsible for trust	**77%** Yes, together with management
18% Yes, the board has the primary responsibility in the organization	
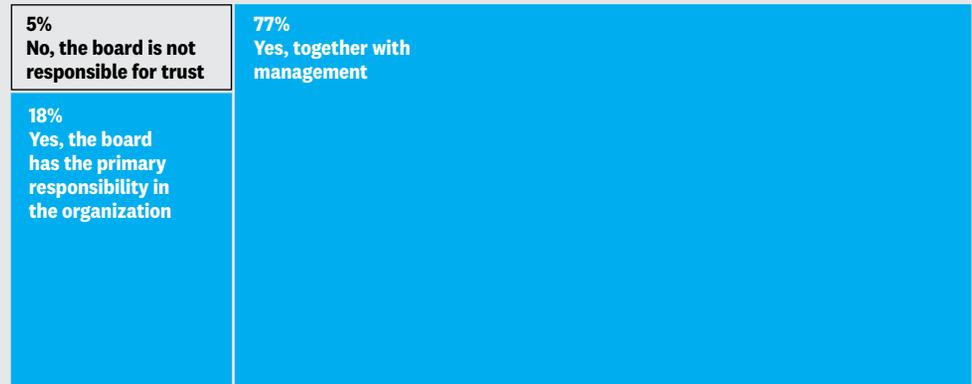
Q: "How frequently do you have trust as a specific item on the board agenda?"

53% No fixed cadence at present/only when there is a major reason to consider	**10%** We do not discuss it	**8%** Half yearly
	9% Annually	
	20% Quarterly or more frequent	

Q: "What are the top actions boards should take to drive a culture of trust in the organization?"

Least important 1 2 3 4 5 6 Most important

Organizational structure and tone to address trust

Governance-driven transparency and accountability

Internal and external stakeholder interactions

Measure trust to inform decisions

Crisis readiness

Better external communications
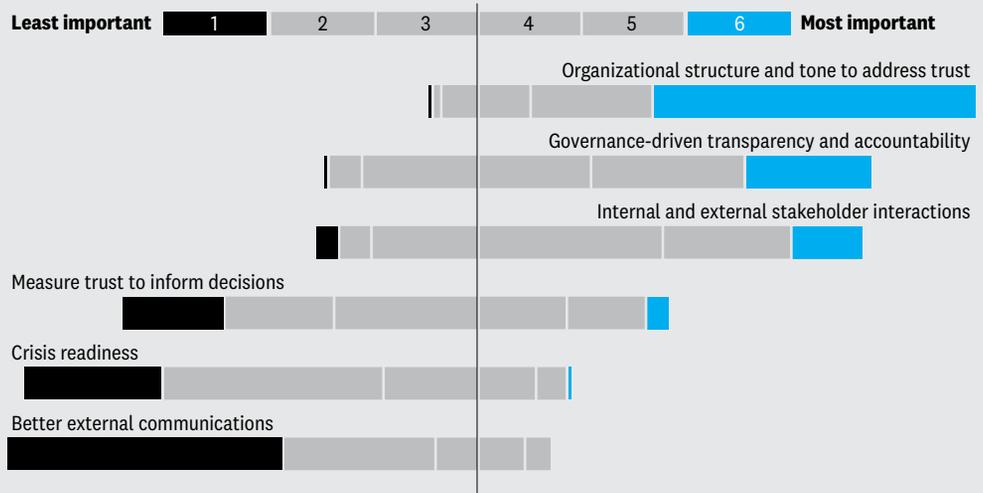
N = 177
Source: Deloitte Global Boardroom Program survey of board directors and C-suite executives.

Remote work could be becoming the rule rather than the exception

The majority of organizations surveyed by Deloitte Austria are finding that job applicants expect to be able to work from home, presenting challenges for hiring teams and managers alike.

The push to return to the office continues in many organizations across industries and around the world, but many jobseekers aren't interested in making the commute. Remote work has become an expectation—table stakes, for many candidates, rather than a differentiating perk, according to recent research from Deloitte Austria.

In collaboration with the University of Vienna and the University of Graz, Deloitte Austria conducts a biannual survey on flexible working models in the corporate sector. In early 2022, 590 corporate representatives in Austria were surveyed across fields, levels, and sectors, and 93% of respondents reported that over the past two years, there has been an increase in the number of job candidates expecting to be able to work from home.

Remote work can present managerial challenges. Almost three-quarters of survey respondents think that team spirit has suffered since remote work increased at the start of the pandemic. Onboarding and cross-departmental communication have also become more difficult. However, worker productivity hasn't suffered. To the contrary, 60% of the employers we surveyed report that increased remote working has led to increased productivity in the past two years.

If remote work is now an expectation among jobseekers and existing workers, companies may need to develop a strategy for their desired or required balance between working at home and at the office—and to clearly communicate it in their job descriptions so that candidates know whether their expectations will be met.

Q: "How has your recruitment situation changed in the last 24 months?"

● Increased   ○ Unchanged   ● Decreased

	Increased	Unchanged	Decreased
Candidates/applicants expecting to work remotely/from home	93%	6%	1%
Candidates asking for alternative forms of employment	77%	22%	1%
Candidates expecting to work from abroad	73%	27%	0%
Candidates expecting to be able to work part time	64%	35%	1%
Candidates from abroad	34%	55%	11%
Candidates living more than 100 kilometers away from the potential work location	30%	59%	11%
Applications overall	9%	33%	58%

Source: Survey data from the University of Vienna, the University of Graz, and Deloitte Austria, 2022.

Infographic by Molly Piersol

Managing an increasingly external workforce

A growing percentage of organizations' workforces is made up of external contributors, and less than one-third of the managers we surveyed feel ready to lead them.

How prepared are organizations to manage more external workers?
While a majority of survey respondents view external workers as part of their organization's workforce, fewer than one-third are actively preparing to manage more external contributors

93%
of managers view some external workers as part of their organization's workforce

30%
of managers agree their organization is suffciently preparing to manage a workforce that will rely more on external contributors

Readiness

74%
of managers agree that effective management of external contributors is critical to their organization's success

58%
of managers agree their organizations take an integrated approach to managing employees and external contributors

Effectiveness

N = 4,078
Source: Global, cross-industry survey of managers by *MIT Sloan Management Review* and Deloitte, 2021.

For more and more organizations, their workforce consists of a complex ecosystem of internal and external contributors. Contingent workers—vendors, contractors, freelancers, and other third parties—constitute 30% to 50% of some organizations' workforces, according to our research. Yet many leaders struggle with managing across these groups in an integrated, cross-functional way.

According to a survey of 4,078 managers across 29 industries and 129 countries conducted in late 2021 by *MIT Sloan Management Review* and Deloitte, 74% of respondents believe that effective management of external contributors is critical to their success.

However, fewer respondents (58%) say that they have an integrated approach to managing internal and external contributors, and only 30% think they're sufficiently prepared to manage a workforce that will rely more on external contributors.

As our third annual study on the future of work reveals, orchestrating a workforce ecosystem is a multifaceted effort that involves integration among many business functions. In mature legacy organizations, we see companies changing basic management practices around how they access, engage, and develop workers. We also see leaders adapting to a changing workforce where they have more contributors but less control.

Effective orchestration of a workforce ecosystem likely starts with redefining what a workforce is, says Susan Podlogar, chief human resources officer at insurance and employee benefits provider MetLife, which partners with a wide variety of contingent workers and external third-party firms, such as software and app developers. "There is a very clear definition of what an employee is, but what is a 'workforce'? It's a broader concept," she says. In addition to legal and regulatory issues, she notes other challenges as well: "How do you pull down some of the barriers that exist to manage it as one cohesive group? ... How do you make sure [your contingent workforce is] connected to your company's purpose?"

Research and analysis conducted in partnership with MIT Sloan Management Review

Read the full report at www.deloitte.com/workforceecosystems

CEOs debate the pull—and push— of hybrid workplace models

In a survey of US-based CEOs by Fortune *and Deloitte, respondents said they could potentially have less trouble hiring if they offer more flexibility through remote and hybrid work options—but more trouble keeping employees engaged.*

Offering the flexibility to work remotely is a key draw for job candidates in this competitive talent marketplace, but some US-based company leaders think that it also could lead to increased turnover.

In a cross-industry survey of more than 100 Fortune 500 and Global 500 US-based CEOs and select public and private CEOs in the global *Fortune* community conducted by *Fortune* and Deloitte in September and October 2022, the

majority (87%) of CEOs are empowering employees by providing more flexibility and predictability in hours and location, but just a little over half of survey respondents think doing so could negatively impact employee engagement and loyalty. And 49% of US CEOs would like employees to be back in the office but don't feel they can mandate it due to the risk of losing talent.

As the US-based leaders we surveyed weigh these trade-offs, our data offers evidence that

remote and hybrid workplace models are here to stay. For example, 79% of the CEOs in our survey plan to develop location-agnostic tools to drive engagement among remote or hybrid employees.

Research and analysis by the Deloitte Chief Executive Program and Fortune

Read the full report at www.deloitte.com/us/2022-ceo-survey

More than half of US-based CEO respondents believe that hybrid workplace models lead to lower employee engagement and loyalty

If talent shortages diminish, the overall focus on the employee experience will decrease
25%

I would like my employees to be back in the office, but I don't feel able to mandate it due to tight talent competition   **49%**

53%
As hybrid and remote work become more embedded in workplace models, employee engagement and loyalty will decrease

Q: "Please indicate your level of agreement with each of the following statements related to the evolving transformation of the talent landscape over the next six months."

98% **For highly in-demand talent, focus on the employee experience will continue**

95%
Talent shortages will continue for certain roles

71%
The overall talent shortage will continue

79%
We will develop new tools to drive engagement and loyalty for remote/hybrid employees that don't depend on co-location

United States (somewhat agree and strongly agree)
Source: *Fortune* and Deloitte CEO survey, September–October 2022.

Infographic by Molly Piersol

Counting the glass ceilings that remain

Here's a snapshot of one industry's opportunity to improve gender equity in leadership: Fewer than one-fifth of C-suite roles in financial services are held by women worldwide, according to Deloitte research.

In the quest for gender equity, it appears that glass ceilings still need to be shattered at many financial services institutions around the world. Among the most senior roles in financial services institutions across the globe as of 2021, women held 21% of board seats, 19% of C-suite roles, and 5% of CEO positions, according to the Deloitte Center for Financial Services' *Within Reach* report.[1]

Our research has shown that, when there are enough women in organizations' leadership ranks, we've seen strong evidence of the "multiplier effect:" For each woman added to the C-suite, there is a positive, quantifiable impact on the number of women in senior leadership levels just below the C-suite.[2]

In some locations, legislative actions have resulted in more women in leadership roles; in others, industries' and organizations' self-imposed targets have achieved similar results. For example, Australia is one of the few countries to have made measurable progress in advancing gender diversity in leadership roles. In 2012, it passed the Workplace Gender Equality Act and, since then, gender equity measures at the government and employer levels are producing results. Indeed, Australia is the country with the highest forecasted share of women in the C-suite (35.7%) by 2030, continuing the double-digit growth witnessed over the past decade.[3]

Overall, our analysis reflects global progress achieved over the previous two decades. But the numbers underscore the need for financial services institutions to make a concentrated effort and commitment across geographies to propel gender equity from an internal initiative to a business imperative.

Research and analysis by the Deloitte Center for Financial Services

Learn more at www.deloitte.com/insights/within-reach

Overall numbers reveal there's a lot more work to be done to achieve gender equity in financial services globally

21%
of board seats held by women within financial services institutions worldwide in 2021

19%
of C-suite roles held by women across financial services institutions worldwide in 2021

5%
of CEO positions held by women within *Fortune*'s 2021 Global 500 list of financial services institutions
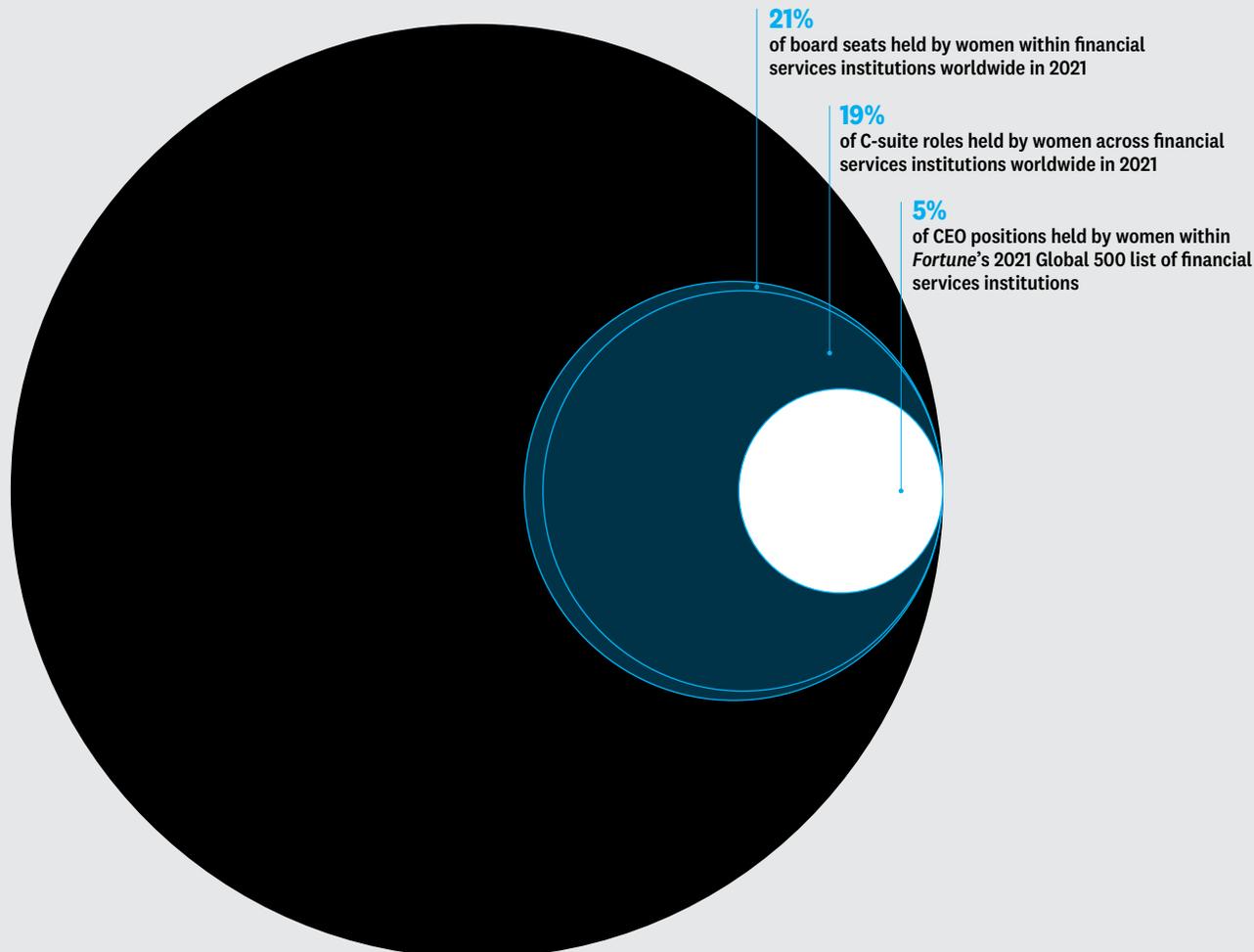
Sources: Deloitte, *Women in the boardroom: A global perspective*, Seventh edition; Deloitte Center for Financial Services analysis of BoardEx LLC data; Fortune Global 500 ranking.

Infographic by Molly Piersol

Training today's—and tomorrow's—talent

Work is changing. To keep up, business leaders in Australia are increasingly looking to universities for help with educating their current and future workforce.

With talent in short supply, the nature of work in many industries ever evolving, and the nature of leadership evolving along with it, business leaders across industries are looking to academia for help with better equipping today's and tomorrow's workforces.

According to a Deloitte Australia survey of 150 Australian business leaders conducted in 2021 across industries, sectors, and organization sizes, about 90% of respondents rank talent acquisition, people and skills development, and leadership development as important or critical issues over the next two to three years. And most respondents indicate a strong interest in education-focused partnerships that help organizations build the skills of their future workforces.

Fifty-five percent of respondents would like to expand or extend their existing university partnerships to focus on the development of people and skills, while 40% of respondents would enhance their partnerships to focus on the development of leadership skills.

Many respondents aren't just relying on universities' existing curricula: They're looking to combine university-generated training content with their own—or that of a third-party learning and development provider—and to codevelop personalized workforce learning material that solves a specific workforce issue (for example, the development of new skills in a particular technology being implemented by the organization). This indicates that, just as industry is looking to academia to help keep the workforce's skills up to date, academia can look to industry to reshape educational opportunities in line with the evolving nature of work.

Read the full report at www.deloitte.com/au/codesigning-futures

How Australian business leaders are partnering with universities on workforce training, or would consider doing so

- ○ Currently partner
- ● Would expand existing partnerships
- — Would consider a partnership in the future

Talent acquisition (graduate recruitment) — 56%, 65%, 52%

People and skills development — 24%, 26%, 55%

Product/service development and innovation — 20%, 16%, 30%

Codevelopment of education products/programs — 13%, 20%, 24%

Leadership development — 10%, 32%, 40%
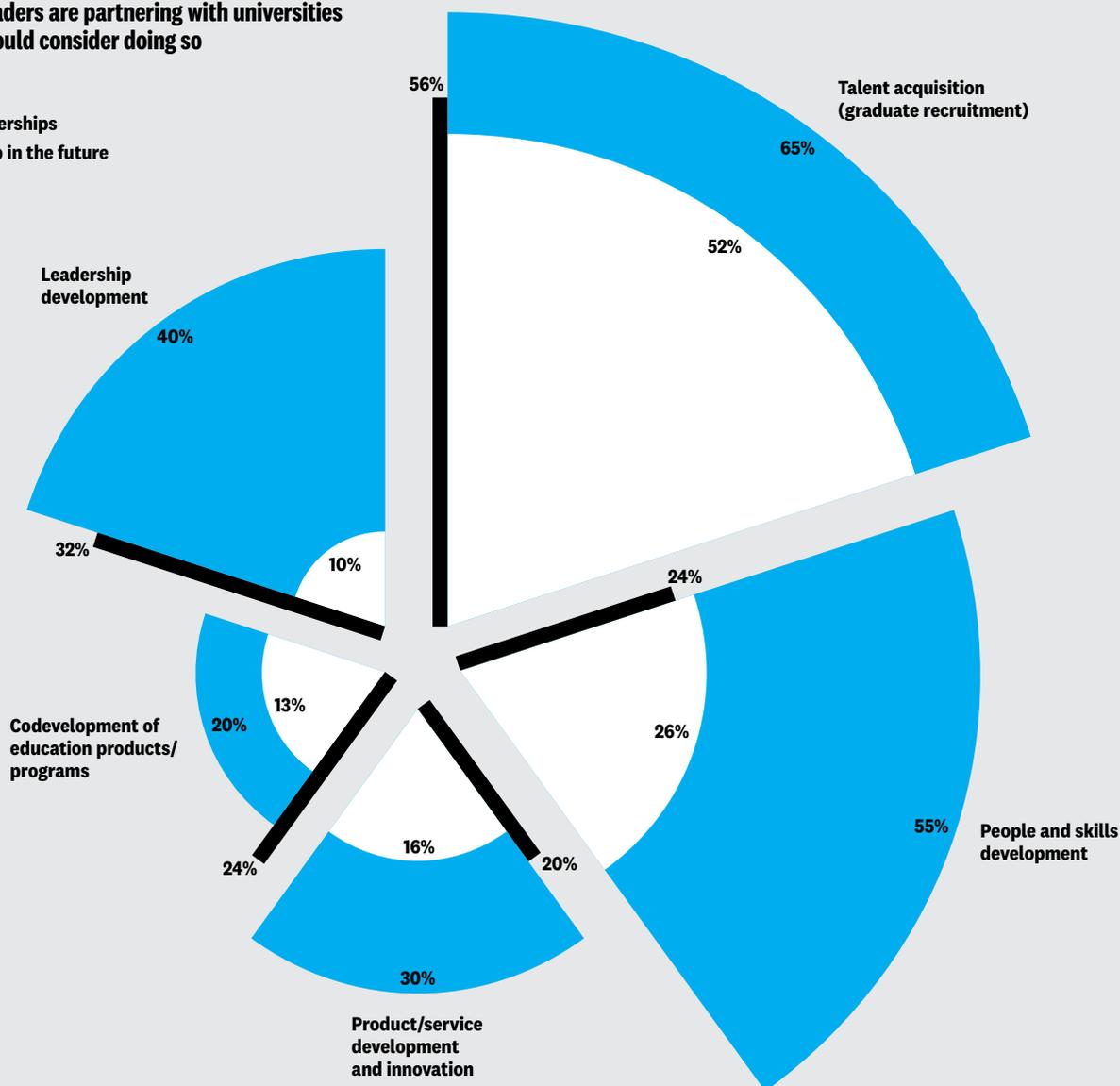
Source: Deloitte Australia survey of 150 Australian business leaders, 2021.

Infographic by Molly Piersol

Room for DEI improvement at the US consumer industry's front line

Nearly one-quarter of the frontline workers we surveyed across US consumer sectors are not convinced about the good intentions of their organizations' diversity, equity, and inclusion efforts.

Frontline workers in the food service, retail, travel, hospitality, consumer products, and automotive sectors play a vital role in driving organizational productivity and customer engagement, and these workforces have faced a plethora of pandemic-related challenges. Many also report facing challenges related to diversity, equity, and inclusion (DEI).

To gather data that could help consumer organizations build more equitable and inclusive workplaces for all frontline workers, Deloitte surveyed more than 3,000 US frontline workers in April 2022. Organizations across the US consumer industry are investing in DEI efforts, and while the majority of respondents (60%) believe that their companies are trying to create a better workplace for all, nearly one in four (24%) think their organizations' DEI efforts are more about making the organization look good.

This represents an area of opportunity for US consumer companies. Half of our survey's Black/African American and Hispanic/LatinX respondents have experienced some form of discrimination

at work. And nearly a quarter of women and a third of Black/African American frontline workers report having been discriminated against by either a customer or coworker on the basis of their gender and race/ethnicity, respectively. This contributes to a variety of outcomes, including the fact that only a third of overall survey respondents believe they can always be their authentic selves at work.

Making DEI "real" for the front line can unlock an individual's full potential to create compelling experiences for customers and can help improve both customer and employee satisfaction and loyalty. This becomes especially important at a time when businesses are trying to differentiate themselves in a hypercompetitive market to attract and retain frontline talent.

Research and analysis by the Deloitte Consumer Industry Center

Read the full report at www.deloitte.com/insights/dei-frontline

Infographic by Molly Piersol

Q: "Which best represents your company's commitment to diversity, equity, and inclusion?"

My company's initiatives are truly focused on creating a better workplace for all

5 — 38%

Five-point scale — 4 — 22%

3 — 15%

2 — 13%

1 — 11%

My company's initiatives are more about looking good
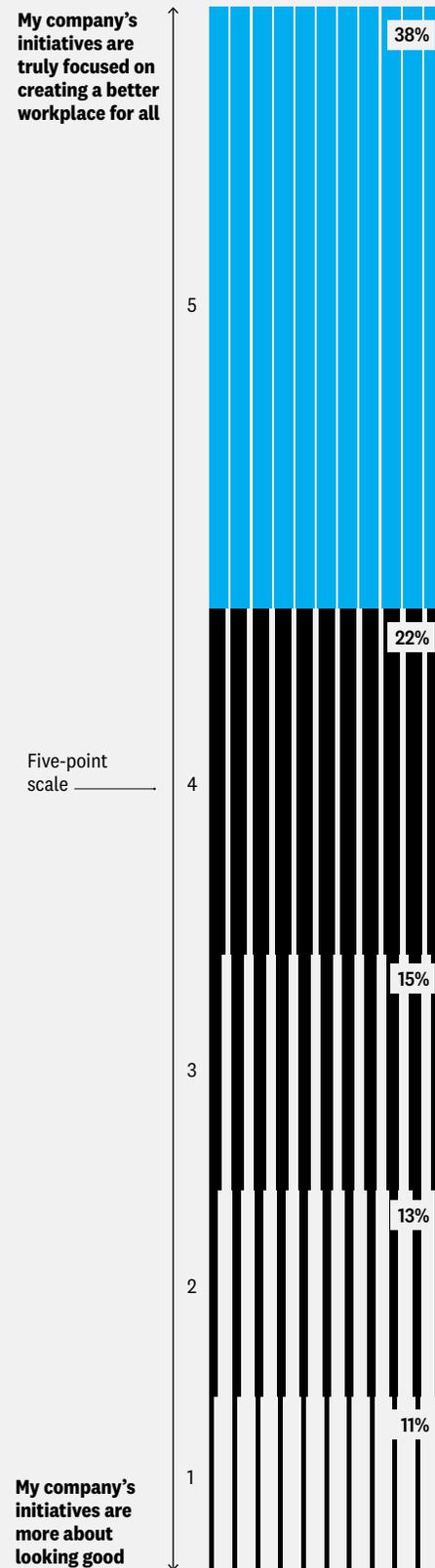
N = 3,005
Source: *Leading at the front(line)*, Deloitte Insights, August 2022.

Health inequities are expensive but preventable

Deloitte actuaries estimate that inequities cost US$320 billion in US health care spending today and could more than triple by 2040 if health care disparities aren't addressed.

● Advancing health equity isn't just a moral imperative.[1] It's a fiscal one, too.

According to a recent Deloitte analysis, failing to address health equity, or the fair and just opportunity for every individual to achieve their full potential in all aspects of health and well-being,[2] costs the US health care system US$320 billion today. Unaddressed health disparities could cost an additional US$1 trillion annually by 2040 and saddle US consumers with US$3,000 in average yearly health care costs, up from US$1,000 today.

Deloitte's actuarial team developed a model to quantify the link between health care spending and health care disparities related to race, socioeconomic status, and sex/gender. The team analyzed several high-cost diseases (for example, diabetes, asthma, and cardiovascular disease), determined the proportion of spending that could be attributed to health inequities today, and estimated increases in spending until 2040—while accounting for changes in population and per capita spending.

Inequities across the US health care system limit underserved people's access to affordable, high-quality care; impact every individual's potential to achieve health and well-being; and create avoidable costs and financial waste that span society.

But these outcomes are preventable. Solutions to achieving health equity center around rebuilding trust and intentionally designing care delivery for the needs of the community. This includes matching patients with providers who have similar cultural backgrounds to increase engagement and understanding, providing convenient hours and locations, and ensuring community voices are heard. It also requires addressing the reality that a lack of health insurance, transportation, caregiver support services, or time off from work could lead to missed medical appointments and, potentially, negative health outcomes or more costly treatment down the line.

Insights from the Deloitte Center for Health Solutions

🌐 Learn more at www.deloitte.com/insights/health-inequities

Modeling the cost of US health inequities in 2040

$1 trillion
Cost of inequities in 2040

$320 billion
Cost of inequities today

EXPECTED CHANGES IN POPULATION DEMOGRAPHICS, COST OF CARE, AND PER CAPITA SPENDING

2022

2040
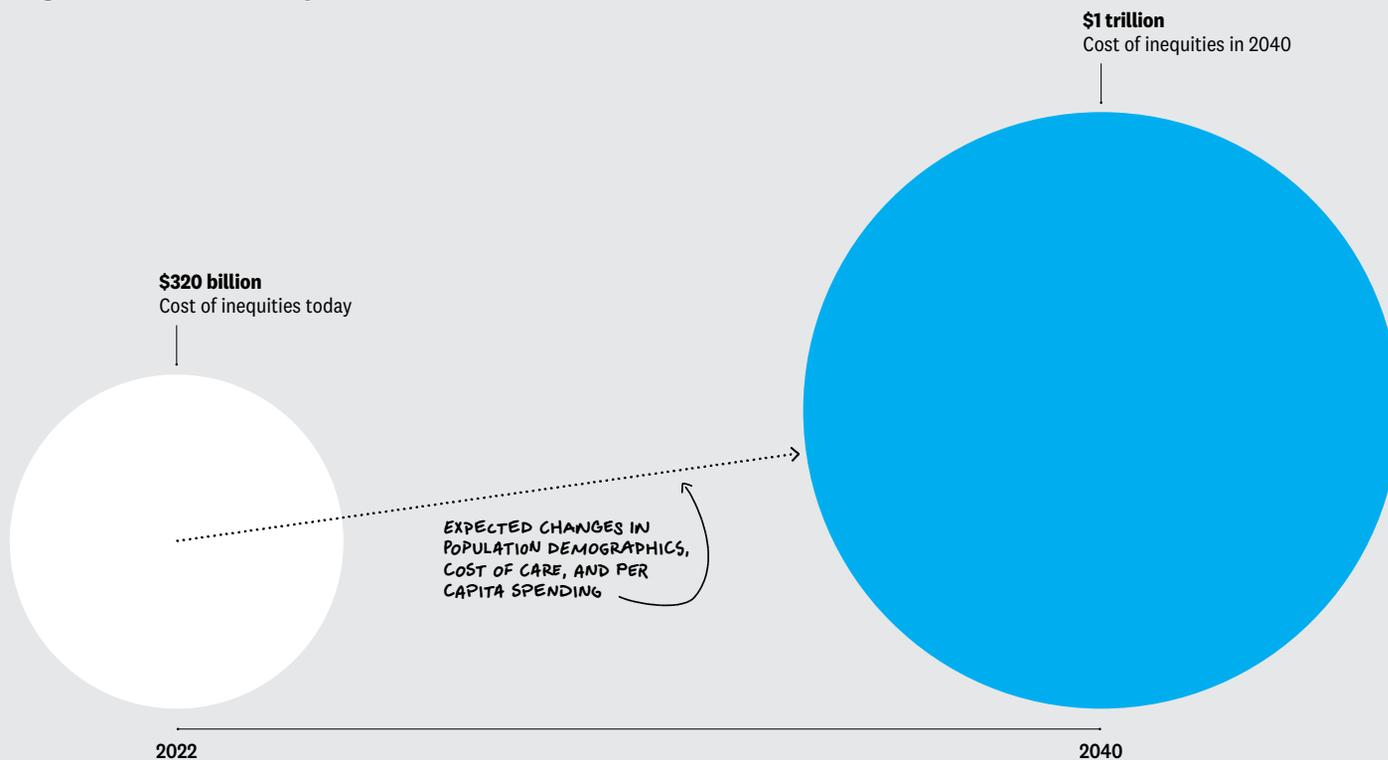
We initially focused on a set of disease states to establish a baseline for the costs potentially attributed to inequities and bias.

Using the assumptions from these disease states and disparities research, we extrapolated to all other disease states.

Note: All values are in US dollars.
Source: Deloitte analysis.

Infographic by Molly Piersol

New diagnostic technologies will revolutionize health care—once clinicians are fully equipped to use them

Nearly one-third of clinician respondents to a Deloitte UK survey cite their workforce's limited digital skills as a top barrier to adopting tech-enabled diagnostics—another human-centric hurdle to achieving the future of health.

Connected diagnostic devices, wearables, and personal health-tracking software are beginning to change the nature of health and wellness management for patients, but they're also changing how clinicians across the health care system work—and many clinicians aren't yet fully equipped for the transition.

The Deloitte UK Centre for Health Solutions recently surveyed 250 diagnostics companies and 751 frontline clinical staff across Europe and found that two-thirds of clinician respondents think that, as the health care sector transitions from a focus on acute intervention to one centered around prevention and wellness, the future of diagnostics will look "a great deal" or "totally" different in six to 10 years. Changes already underway include:

- Diagnostic services shifting from hospitals and centralized laboratories into community and home settings, which is providing patients with more equitable and convenient access to earlier diagnosis
- Improving levels of patient engagement with their health, coupled with the increased use of direct-to-consumer testing
- An acceleration in the capability and accuracy of smart, connected diagnostics, helping patients understand and manage their own ill-health conditions more effectively
- The increasing availability of real-time and historic data that can be mined using advanced analytics enabling predictive insights and a focus on prevention

While health care providers see the changes on the horizon, 32% of the clinician respondents to our survey reported that insufficient workforce training and skills related to new technologies are a top barrier to their adoption. And 40% of clinician respondents said that one of the most important changes needed to improve the future of diagnostics is to provide them with education and training to enhance their understanding of the insights that can be derived from new diagnostic technologies.

Respondents reported that improved collaborations between health care and diagnostic companies could help support the health care workforce's understanding of new technologies and allow health care systems to signal to innovators what kinds of technologies they need to improve care.

Research and analysis by the Deloitte UK Centre for Health Solutions

Read the full report at www.deloitte.com/uk/future-of-diagnostics

Facing today's challenges and opportunities to realize the future of diagnostics

● One of the top three answers   ● The top answer

Top challenges in adopting a new diagnostic technology

- Cost of the device/technology: 60%, 31%
- Digital infrastructure in health care: 39%, 14%
- Workforce skills: 32%, 7%

Top changes needed in improving the future of diagnostics

- Education and training of clinicians to enhance understanding of research, data science, and diagnosis derived from genomic, digital, and AI devices: 40%, 15%
- Collaboration between health care and medtech organizations to design diagnostic devices to address areas of unmet need: 31%, 10%
- Access to real-time device user/patient data: 31%, 10%

Source: Deloitte analysis of Sermo survey of 751 clinicians across six European countries, 2022.

Funding the journey to net-zero

A recent Deloitte analysis of the global oil and gas industry's financials indicates that energy companies are likely to have the financial security they need to transition to a low-carbon future.

● Despite volatility in global markets and recessionary fears, oil and gas companies are poised for growth—in no small part because of the financial discipline they've maintained over the last few years. In fact, the global oil and gas upstream industry is likely to generate its highest-ever free cash flow of US$1.4 trillion in 2022, according to an analysis by the Deloitte Center for Energy and Industrials, which positions the industry to play a major role in accelerating and securing the energy transition.

Moreover, from 2022 to 2030, the global oil and gas industry is likely to shore up a cash surplus of US$1.5 trillion after taking care of core hydrocarbon capital expense requirements and base corporate financial priorities, our analysis shows. About 70% of this surplus cash is likely to accrue in the next two years. However, we may see the industry deploying this accumulated cash only after 2024, when geopolitical uncertainty and recessionary concerns begin to wane, and the energy transition picks up momentum.

With the net-zero emissions targets looming on the horizon, low-carbon investments are likely to feature prominently among oil and gas companies' priorities. The cash surplus is likely to boost this momentum—even if companies first have to address evolving questions around energy security and diversification, the energy transition, and the uncertain trajectory of future oil and gas prices. The surplus could also alleviate concerns about the journey to net-zero emissions by providing some cushion to companies as they transition to a low-carbon future.

Research and analysis by the Deloitte Center for Energy and Industrials

🌐 Read the full report at www.deloitte.com/insights/low-carbon-future

2024 will likely be an investment inflection point for the O&G industry
Annual free cash flows, base priorities on cash, and balance (2022–2030)

● Surplus   ● Interest changes   ○ Net debt repaid   ● Buybacks   ● Shareholder payouts

About 70% of the surplus cash (close to a trillion dollars) is expected to accrue between 2022 and 2024.
But geopolitical uncertainty and an economic slowdown may limit their capital deployment in the short term.

O&G companies may start deploying the accumulated cash war chest from 2024 onward—by which point geopolitical uncertainty and recessionary pressures may have begun to subside, and the energy transition may have gained momentum.

Source: Deloitte analysis based on data from Rystad Energy Ucube database.

Deloitte Insights Magazine

Infographic by Molly Piersol

Coordinated climate policy could help protect jobs disrupted by climate change and decarbonization

The Deloitte Economics Institute finds that the global workforce already has about 80% of the skills needed for "green-collar" roles, and public policy could help direct investments to the necessary training to fill the gaps.

Climate change is putting jobs at risk around the world, and the issue could be exacerbated if the global economy takes a passive approach to decarbonization.

According to recent analysis by the Deloitte Economics Institute, more than 800 million jobs worldwide—around one-quarter of the global workforce today—are highly vulnerable to both climate extremes and the economic impacts of an uncoordinated transition to net-zero emissions. These impacts will be particularly severe in Asia Pacific and Africa, where much of the workforce tends to be employed in at-risk industries such as agriculture, conventional energy, and heavy industry. In India and China, for example, more than 40% of workers are employed in highly exposed industries.

But our research shows that if proactive government coordination directs investments to where they're needed the most, including retraining workers with vulnerable jobs to ensure that they find new work in the green economy, it could help enable the creation of a new "green-collar" workforce.

Around 80% of the skills that the world needs to decarbonize are present in the global workforce today, according to our analysis, so most workers have what they need to find work in a new economy —or they could, with minor upskilling. Moreover, many workers from industries that are most affected by the transition to net-zero emissions already have skills that will be prized in an economy shaped by the construction of new public infrastructure, the retrofitting of certain existing systems, and the creation of new industries altogether.

Effectively harnessing this talent and directing it toward new areas of growth could both reduce economic disruption during the transition and improve global standards of living, and it will require government's active participation via new workforce and decarbonization policies. If policymakers commit to curbing greenhouse gas emissions, rebuilding the economy as a series of interconnected systems, creating new employment pathways for disrupted workers, and upskilling and training the workforce with in-demand skills, the Deloitte Economics Institute's modeling shows that the global economy could create more than 300 million additional jobs by 2050 than it would otherwise have on a passive transition pathway.

Research and analysis by the Deloitte Economics Institute

Read the full report at www.deloitte.com/greencollarworkforce

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Regions' job vulnerability to climate change and decarbonization—plus their 'green-collar workforce' potential

Job vulnerability index

Europe
Potential to create 21 million additional jobs in an active transition

Asia Pacific
43% share of vulnerable workforce globally (with potential to create 180 million additional jobs in an active transition)

Americas
27% share of vulnerable workforce globally (with potential to create 26 million additional jobs in an active transition)

Africa
43% share of vulnerable workforce globally (with potential to create 75 million additional jobs in an active transition)

The Deloitte Economics Institute's job vulnerability index is a relative measure based on the share of each country's workers who are employed in vulnerable industries. By "vulnerability," we mean which jobs are most likely to be disrupted by extreme climate damage and the economic impacts of a global transition to net-zero emissions.

Source: Deloitte Economics Institute analysis using Deloitte's global workforce vulnerability index, with employment composition data informed by various statisticians offices from relevant countries.

Infographic by Molly Piersol

Looking for your next great read?

2

The changing face–and force– of globalization

Geopolitics has become a top business concern across industries and around the world. Two experts share their perspectives on how businesses are increasingly affected by globalization and its associated risks.

By **Dan Konigsburg, William Touche,** *and* **Bill Marquard**
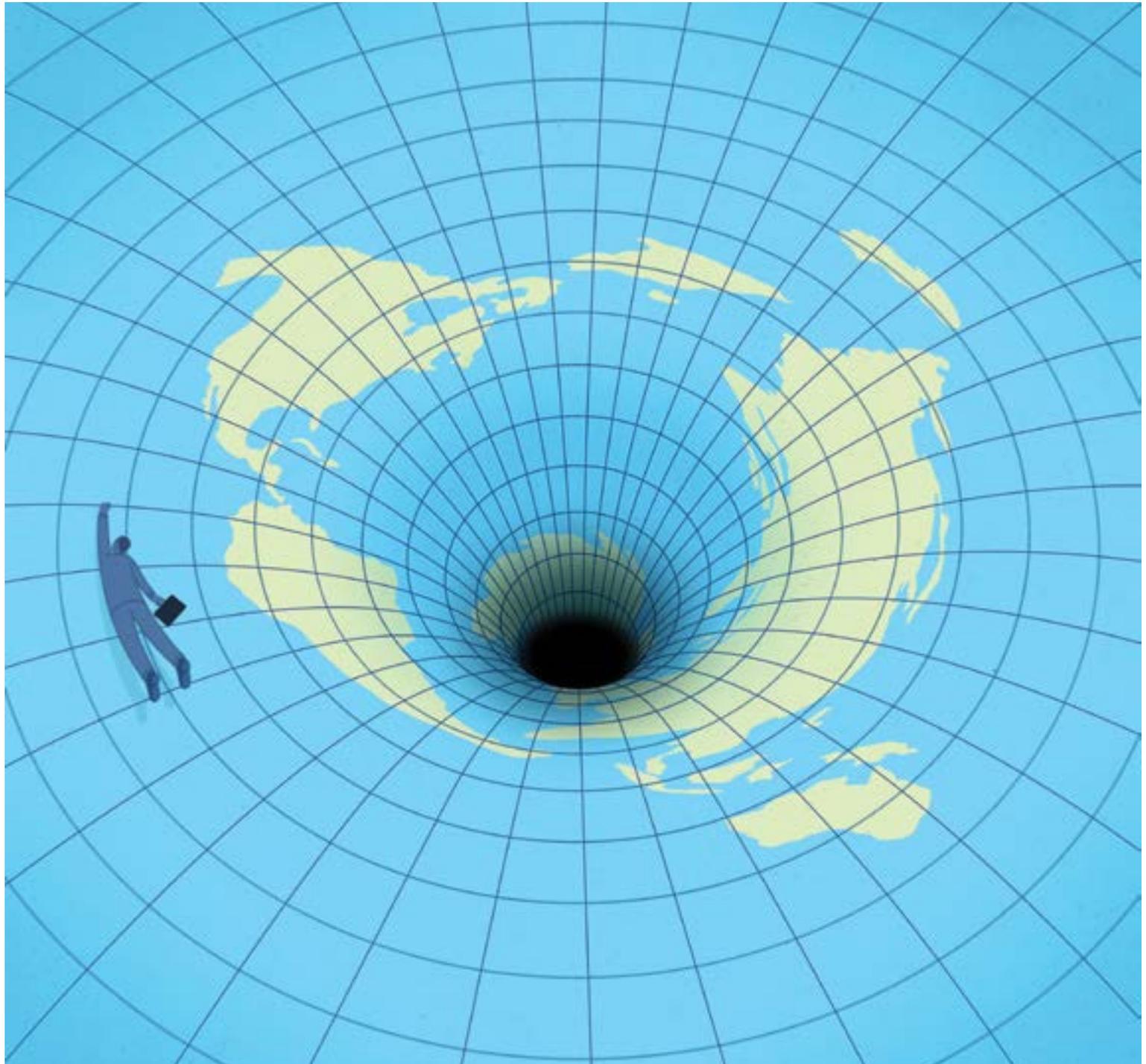
Illustration by Dan Page

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"All of a sudden, geopolitics is intruding [into the business world] in a very, very substantial way that it did not ... 10 years ago." That's how David H. Petraeus, retired US general and former CIA director, framed one of the many pressing challenges that boards and C-suites now face.

Petraeus, now a partner at US-based global investment firm KKR, kicked off a recent Deloitte Global Boardroom Program webinar on critical issues that boards are grappling with, including resilience, climate change, populism, leading in a post-truth world, and the changing face—and force—of globalization. He was joined in the discussion by David Miliband, president and CEO of the International Rescue Committee, and a former foreign secretary of the United Kingdom; and by moderator Rana Foroohar, a global business columnist at the *Financial Times* and global economic analyst for *CNN*.

"Global risks are crashing into the front room and the boardroom of every company around the world," Miliband said. "You've got a globalization of risk but a nationalization of resilience. ... You've got a geopolitical order and a globalization order that are, themselves, unstable."

In this new era of great power rivalries, geopolitics and its attendant risks have become the independent variables determining economic outcomes. Resilience is further complicated by the evaporation of three key drivers of smooth or "benign" globalization we have enjoyed for four decades: cheap capital, labor, and energy.

Petraeus summed up the impact of this shift: "What we've got to do is identify those [risks], mitigate them, and ensure that these can still be successful in this very transformed world. Globalized trade ... will continue to grow, but it's going to grow much more slowly. We're talking 1% a year, instead of the pretty substantial growth that we were seeing back in that era of benign globalization." ●

The views expressed herein are those of the panelists and not necessarily the views of Deloitte.

The Deloitte Global Boardroom Program's webinar series features discussions with eminent panelists to help global companies' boards and management teams stay current and challenge perceived wisdom. To become a member, contact us at globalboardroomprogram@deloitte.com.

Contending with the impossibility of deprioritization: The reality of modern-day leadership

Deloitte Insights surveyed C-suite execs around the world to see how they're allocating their corporate investments and found corporate agendas driven by urgent and often conflicting demands.

By **Bryan Furman**

To get a good picture of the complexity of modern-day leadership, consider the numerous and diverse priorities for the C-suite today—from global issues that are reshaping the role that business is taking in society (climate, trust, the future of work, well-being) to critical transformation projects (digital, business model innovation, customer centricity) to the challenges that come with an ever more volatile business environment (supply chain disruption, inflation, geopolitical unrest) to the centrality of earning and maintaining trust across all stakeholders (employees, customers/citizens, suppliers, and

governments). Executives told us that they find themselves having to prioritize these issues, and more, all at once.

In June 2022, we surveyed 1,364 C-suite executives in Asia Pacific, Europe, and North America across functions and industries to understand their priorities and vision for their corporate investments. We asked them which of 10 issues they're focusing on now and in their near-term strategies, and how they rank these priorities. Spoiler alert: None of these priorities can be truly deprioritized.

FIG 1: Driving innovation, maximizing customer data, and handling workforce-related issues are C-suite respondents' current top priorities in our survey

Q: "Please rate how focused your organization is in each of the following areas."

Focus area		Industry
Driving innovation		Consumer: 82%, 81%, 79%, 76%, 74%, 73%
Maximizing customer data		Energy, resources, and industrials: 86%, 81%, 80%, 78%, 77%, 73%
Reimagining supply chain		Financial services: 88%, 85%, 79%, 77%, 75%, 74%, 71%
Supporting climate/ sustainability initiatives		Government and public services: 80%, 78%, 77%, 74%
Responding to workforce-related issues		Life sciences and health care: 82%, 74%, 72%, 71%
Delivering personalization at scale		Technology, media, and telecom: 86%, 84%, 79%, 76%, 75%, 73%, 72%, 70%
Implementing more "purpose" into the business		
Planning for disruption		
Navigating impacts of deglobalization and regionalization		

Note: Top nine focus areas shown. Percentages indicate respondents who chose "focused" or "very focused."
Source: Deloitte Insights' cross-industry survey of 1,364 C-suite executives in Asia Pacific, Europe, and North America, June 2022.

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C-suites' long lists of to-dos are filled with must-dos

When asked to choose their focus areas among the 10 core business priorities broadly categorized across growth, purpose, people, process, and technology, over 60% of the executives we surveyed chose seven or more priorities, and 25% chose all 10 (figure 1).

And the leaders we surveyed expect the complexity to increase: When asked what they'll likely be prioritizing in three years, 30% of executives selected all 10 (figure 2).

For most industries in our analysis, the top priority is driving innovation, with maximizing and protecting customer data ranking second. Many respondents expect these top two priorities to remain consistent over the next three years.

This emphasis comes as business leaders are already contending with a packed agenda that includes increased competition, more vocal investors, more empowered consumers, and growing talent challenges, as well as transformative initiatives. In June 2021, 74% of CEOs said their organizations were pursuing large-scale digital transformation initiatives, 71% were investing

FIG 2: C-suite respondents' top priorities likely will remain consistent over the next three years, with more priorities entering the picture

Q: "Please rate your organization's expected level of focus for each of the following areas three years from now."

Categories (left): Driving innovation; Maximizing customer data; Reimagining supply chain; Supporting climate/sustainability initiatives; Responding to workforce-related issues; Delivering personalization at scale; Implementing more "purpose" into the business; Planning for disruption

Consumer: 85%, 79%, 78%, 77%, 74%, 73%, 72%
Energy, resources, and industrials: 81%, 80%, 79%, 78%, 77%, 72%, 70%
Financial services: 88%, 85%, 83%, 82%, 73%, 70%
Government and public services: 78%, 75%, 74%, 72%
Life sciences and health care: 82%, 75%, 73%, 71%, 70%
Technology, media, and telecom: 88%, 84%, 83%, 82%, 78%, 75%, 72%

Note: Top eight focus areas shown. Percentages indicate respondents who chose "focused" or "very focused."
Source: Deloitte Insights' cross-industry survey of 1,364 C-suite executives in Asia Pacific, Europe, and North America, June 2022.

in workforce transformations, and 46% were prioritizing sustainability-focused transformations, according to a *Fortune*/ Deloitte CEO survey of 110 chief executives across more than 15 industries.

Customer centricity is a top goal

Fast-forward one year later and the executives we surveyed are, across the board, focused on customer experience, new market or product expansion, and existing market or product growth as the expected outcomes from corporate investments—with

customer experience ranking first or second for leaders in five out of the six industries we analyzed (figure 3).

It's hard to prioritize when everything's a priority

Changing expectations and conflicting priorities are the top two barriers to achieving expected outcomes for every industry and geography in our survey. They outrank a lack of talent or budget, as well as macroeconomic trends that could hinder organizations' progress—although, those issues also were named as significant barriers by the majority of leaders we surveyed (figure 4).

FIG 3: Many respondents are focusing corporate investments on initiatives that will improve the customer experience

Expected outcomes

	Overall	Consumer	Energy, resources, and industrials	Financial services	Life sciences and health care	Technology, media, and telecom	Government and public services
Improve customer experience	67%	66%	67%	72%	68%	72%	69%
New market expansion	64%	65%	66%	65%	66%	67%	67%
Market growth	64%	61%	65%	64%	62%	66%	64%
Become more digital	62%	60%	64%	63%	61%	66%	63%
Improve margin	61%	60%	63%	62%	60%	65%	61%
Retain talent	60%	59%	63%	62%	59%	65%	60%
Brand reputation	59%	58%	62%	61%	59%	62%	57%
Resilience	59%	56%	57%	60%	55%	59%	56%
Be leading-edge	58%	56%	57%	58%	55%	58%	56%
Reduce operational costs	58%	56%	54%	57%	55%	56%	55%
Organizational trust	56%	56%	52%	57%	55%	54%	53%
ESG	52%	53%	50%	56%	48%	53%	52%
Internal culture	51%	49%	49%	53%	47%	49%	51%

Source: Deloitte Insights' cross-industry survey of 1,364 C-suite executives in Asia Pacific, Europe, and North America, June 2022.

In the face of these findings, organizations that can build trust and resilience may be better equipped to manage the relentless challenges that come with fast-moving and conflicting targets. The level of trust that an organization has built among board members, investors, employees, customers, suppliers, and other stakeholders is integral to topics ranging from cyber to ESG; compliance; diversity, equity, and inclusion; and product and service quality. Resilience, the ability to thrive amidst continual disruption, is a capability that can help organizations have successful digital and workforce transformations, mitigate and adapt to climate change, and shore up stakeholder trust.

And when everything is a priority, we believe there could be a need for a massive rethink in how organizations will be resilient going forward—not just to respond to a generational crisis, a geopolitical conflict, or a recession, but to thrive in the everyday complexities and challenges of running an organization.

In a world in which there seems to be no "back burner," how well leaders can manage competing priorities could become a critical differentiator, one that both shapes how organizations evolve and determines which ones thrive. ●

Data analysis provided by the Deloitte Data Science and Survey Advisory team

FIG 4: Changing expectations and conflicting priorities were named as the top barriers to achieving the expected outcomes from respondents' corporate investments

Barriers

	Overall	Consumer	Energy, resources, and industrials	Financial services	Life sciences and health care	Technology, media, and telecom	Government and public services
Changing expectations	75%	73%	76%	76%	73%	79%	72%
Conflicting priorities	72%	69%	72%	71%	73%	74%	71%
Legacy systems	65%	63%	64%	68%	68%	71%	61%
Lack of talent	62%	62%	64%	63%	65%	65%	58%
No guidance	60%	60%	63%	61%	59%	63%	57%
Change management	59%	59%	62%	60%	58%	62%	57%
Macroeconomic trends	59%	56%	59%	57%	57%	61%	56%
Lack of finances	56%	54%	52%	56%	57%	61%	55%
Blurring between collaboration and competition	55%	53%	50%	55%	53%	59%	54%
Lack of commitment	55%	53%	50%	54%	51%	57%	52%

Source: Deloitte Insights' cross-industry survey of 1,364 C-suite executives in Asia Pacific, Europe, and North America, June 2022.

Finding the right course of climate action

CEOs' intention to lead their organizations' climate action is clear, according to Deloitte research. Determining the best way forward, however, requires navigating five formidable tensions.

By **Shay Eliaz** *and* **Jonathan Goodman**

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Climate change is one of the most galvanizing and pressing issues of our time. We are already living in a new normal whose features and needs will only sharpen and increase in intensity. Indeed, 90% of CEOs surveyed by *Fortune* and Deloitte agree on the urgent need to address climate change concerns.[1]

Driven by scientific findings, shifts in the marketplace, and heightened stakeholder expectations, along with the anticipation of tighter and more exacting regulatory and reporting frameworks, leaders are focusing more on the necessity and value of both immediate and longer-term climate action. They're moving well past the point of mere exhortation as the costs of further delay become clearer and the trade-offs and potential benefits of mitigation choices become better understood and accepted.[2]

Whatever the motivation—to manage risk, capitalize on opportunity, or align with the strengthening sentiment for action—the CEOs and board members we've spoken to say that climate change is one of the most urgent and intractable priorities they face, and one that most keenly exercises their capacity to balance short- and long-term decisions. In most instances, the key impediment to CEOs' action on climate change isn't a lack of intention. Rather, it's the set of choices and tensions that CEOs and boards need to navigate to define their organizations' stance on climate action and, ultimately, influence their future position, prospects, and prosperity.

1. Profit today versus build for tomorrow

CEOs appreciate the reality of climate action's deferred-credit equation—that the measurable benefits of today's investments may not be realized for many years, likely beyond a CEO's tenure. Time and sustained commitment are required to build out infrastructure and for investments to turn into profits.

To many CEOs, this is a familiar conundrum, especially in industries that require significant capital outlays to create assets that will deliver value over decades. CEOs need to determine how to balance today's existing, profitable offerings with investments in the sustainable businesses of tomorrow. Scaling carbon capture, utilization, and storage technologies in hard-to-abate manufacturing operations, or transitioning to regenerative agricultural processes for food production are good examples of situations in which businesses need to invest far ahead of the curve while continuing to deliver profits in the present.

In contrast to these gradual, long-term adjustments, the purchase of carbon offsets represents a cheaper, more immediate way of reducing a company's measurable footprint. However, given increasing public scrutiny of such "on-paper" compensatory techniques and leaders' growing preference for intrinsic organizational improvements, the insetting versus offsetting choice will likely remain a key topic of C-suite debate for the foreseeable future.

This challenge—of whether and how to focus on today's profits while ensuring the organization's sustained success—is a key tension for the energy industry, where oil and gas companies are investing in renewables to ensure their business portfolios meet projected green energy needs and expectations. They do so while recognizing that many of today's investments will potentially undermine or directly challenge successful, highly profitable businesses that took decades and billions of dollars to build and optimize.

One company accelerating its journey toward carbon neutrality is Danish energy generator Ørsted. With its origins in managing Denmark's North Sea oil and gas reserves, the 50.1% state-owned organization has, over the past decade, transitioned from a highly carbon-intensive business toward one more focused on renewables such as wind and solar power, and bioenergy. Coal will be phased out entirely by 2023. This, along with other environmental programs, has resulted in Ørsted being named as the world's most sustainable energy company in the Corporate Knights Global 100 index for four years running (2019–2022).[3] As of January 2022, Ørsted was also the world's largest developer of offshore wind power[4]—an impressive achievement given the well-documented challenges that incumbents face in disrupting themselves.

2. Follow versus pave the way

Most CEOs are convinced that a reduction of their organizations' carbon footprint is inevitable. The quandary often faced is that of reconciling where an organization should lead and where it can—and should—follow.

Acting early and embracing the mantle of first mover creates powerful opportunities for differentiation. These can position the CEO to lead the climate conversation and help shape relevant industry regulation, while bolstering the organization's reputation as a sector leader. However, acting early may also bring risk: Leading in uncharted territory can mean placing the wrong bets; making unwise commitments; or investing in the wrong technologies, approaches, supply chains, or partners. And stakeholders' appetite for change varies: Some want faster or more fundamental climate action with less concern for corporate stability, while others see a company committing more heavily than they're willing to accept.[5]

Over the past decade, the automotive sector has evolved from a landscape of clearly delineated incumbents versus upstarts to one that is more complex and nuanced. Just a few years ago, the majority of large auto manufacturers were positioned as followers, gradually moving away from internal combustion engine technologies while maximizing their return on investment in legacy infrastructure. Meanwhile, electric vehicle pure plays such as Tesla, Nio, Rivian, and Lucid were early leaders in the nascent market for battery-powered vehicles by blending their knowledge of disruptive technologies with acquired learning on manufacturing and distribution.

Within just a few years, however, the landscape has been blurred by growing public emphasis on automotive decarbonization, a global energy crisis exacerbated by geopolitics and war, and factors such as the European Commission's 2020

commitment to a "European Clean Deal." No longer followers, traditional auto manufacturers, especially industry-leading original equipment manufacturers, today are rapidly closing the gap between themselves and the early market leaders.

3. Compete versus collaborate

Early climate action can bring competitive advantage for an organization. Yet it can be challenging to shape a course in a system that, by its very nature, requires collective action among entities that are more accustomed to competing than collaborating.

Whether going it alone or banding together, each approach brings its own set of advantages and benefits. Working independently can mean retaining all the rewards of any intellectual property created or capabilities deployed, rather than sharing them with co-investors or joint developers. In the case of scalable technology platforms or products, this can mean the difference between reaping the full rewards of a unicorn-sized success or owning a mere fraction of that. On the other hand, it can also mean bearing the full weight and costs of risks, particularly if unproven technologies and solutions are involved. Collaboration can help to share and mitigate risks, as well as provide access to a more diverse pool of resources, talent, and capabilities.

Consider food production, where players along the value chain rely upon each other for the exchange of goods and services, facilitating the manufacturing and distribution of produce. Increasingly, these exchanges also necessitate the sharing of essential data for transparency and accountability. In a world in which organizations depend on the specialized capabilities of others along the value chain, extending collaboration into areas such as climate is logical and, indeed, essential.

As an example, the Union of European Soft Drinks Associations (UNESDA) includes members such as PepsiCo, Coca-Cola, and Red Bull. Collectively, UNESDA's participating organizations have "developed a circular packaging vision for 2030, which pledges that all packaging will be recycled or renewable, and that 90% of packaging waste will be collected."[6]

In some cases, sector leaders have the scale, influence, and ambition to go it alone while insisting that suppliers and distributors follow suit. Examples include Walmart in retailing,[7] Illycaffeè's mobilization of the coffee ecosystem,[8] and Tesla in the automotive industry.[9] To some extent, every sector leader uses its weight to shape its ecosystem; if the leader is on a journey of climate action, then it follows that suppliers and distributors will be expected to operate in ways that complement that leader's objectives.

4. Pursue incremental versus transformational change

At the core of the challenge of how a company best sets and meets its climate commitments lies the tension over whether an organization should take modest, sequential steps toward its climate action goals or more aggressively disrupt itself to rapidly reduce its climate footprint. The CEO needs to determine the appropriate scope and the right speed of transformation for the

> At the core of the challenge of how a company best sets and meets its climate commitments lies the tension over whether an organization should take modest, sequential steps toward its climate action goals or more aggressively disrupt itself to rapidly reduce its climate footprint.

company to make meaningful progress toward its climate goals without jeopardizing its ability to generate acceptable returns during the transition. Moreover, the pace of climate transformation that organizations can achieve varies by sector, with some sectors better positioned to rapidly transform than others.

One global packaged goods company has, in recent years, sought to integrate climate action with its core business strategy. After stating ambitious climate commitments, it has assessed its entire product portfolio, committed to making all its packaging recyclable, redesigned many of its products, and reviewed its production processes to ensure the use of sustainable ingredients. Its pursuit of transformational change has also included a switch to more efficient manufacturing processes, powered by renewable energy generated either on-site or through power purchase agreements with renewable energy providers.

A broader case is that of the finance industry, which needs to address its own large real estate and technology footprint. Of critical importance, however, is the influential role that finance plays as an enabler of the transition across other industries. Whether the change is iterative or transformational, the finance industry provides both the capital to underwrite the significant investments needed by organizations and governments for climate action, and the backing and expertise to de-risk these transitions.

5. Focus on the interests of a narrow versus broader set of stakeholders

More than any preceding generation, today's CEOs answer to the largest-ever range of well-informed, active, and vocal stakeholders: their own boards, policymakers, shareholders and institutional investors, customers, suppliers, employees, an ever-more inquisitive media, and society at large. On the one hand, these forces may appear to be converging, as calls for climate action grow louder across more unified stakeholder groups. On the other, not all board members, investors, customers, or employees feel the same way about climate action, leaving leaders with a fragmented picture.

For example, according to the nonprofit Ceres Investor Network, a record number of climate-related shareholder proposals were filed in the United States in 2022, with a significant proportion of targeted companies agreeing to activist demands to take the actions sought.[10] Meanwhile, some investors are lobbying environmentally conscious companies for the opposite reason: to have them focus more on the generation of shareholder value. In early 2022, Unilever, widely recognized as a global pioneer in sustainable practices, came under pressure as activist hedge fund Trian Partners built a material stake in the consumer giant and sought to persuade Unilever's leadership to implement a significant restructure to improve profitability and shareholder returns.[11]

Complicating things further, within any one stakeholder group, there are potentially four generations with varying opinions and ethnic, economic, political, and philosophical leanings, each maintaining their respective positions on climate action. For global organizations, the situation gets even more complex when dealing with varied societal and cultural norms and expectations as well as distinct regulatory regimes.

In navigating such tensions, CEOs walk a tightrope of interests. Successful leaders acknowledge and take into account the interests of all relevant stakeholders, prioritizing thoughtfully while weighing various trade-offs in approach, focus, and outcome. Clear choices are required: There is nothing to be gained, and much to be lost, if a CEO tries to appease divergent and incompatible interests.

For Patagonia, a strong alignment of corporate purpose and culture along with clearly stated standards that bind suppliers, distributors, and other partners to the company's ethos mean that stakeholders willingly get behind the company and meet its prescribed standards. Conversely, those who do not share those values and standards tend to self-select themselves out of Patagonia's ecosystem.[12]

Meanwhile, Microsoft, HP, Nike, and Apple each have sophisticated and detailed climate action plans in motion that address diverse groups of stakeholders, commentators, influencers, and investors.[13] It's never easy satisfying such a divergent and, at times, contradictory base, but these companies are demonstrating a willingness to report on progress while acknowledging the distance they have yet to travel.

Navigating the tensions

When figuring out how to navigate the tensions, consider the following:

- Which of the tensions are most salient, based on your organization's current circumstances and climate action maturity? What are the relationships between the tensions?
- How do the more relevant tensions relate to, and reinforce, your organization's current or emerging corporate strategy?
- How adaptable is your organization's position, given uncertainties regarding regulatory and market developments and investor sentiment, and the pace at which these factors might shift?

Because some tensions may never be fully resolved, leaders will regularly need to make choices that are neither binary nor stark. Ultimately, the more a climate strategy complements and reinforces its corresponding corporate and business strategies, the more easily stakeholder dissonance can be reduced or eliminated —and the less distracted a CEO and leadership team will be.

The winners in 2030 and beyond likely will be those businesses that are formed and reshaped by sustainability—and CEOs are ultimately the ones who have to reconcile the tensions inherent in these choices. Encouragingly, we're finding that organizations that view and treat climate action as a growth driver, rather than an inhibitor, are those that are already pressing ahead. ●

Insights from Monitor Deloitte and the Deloitte Global CEO Program

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Flourishing in ambiguity

In times of uncertainty, when there's a dearth of reliable data, leaders might find that the best way forward is to act first and decide later.

By **Peter Evans-Greenwood** *and* **Katherine Wannan**

We live in uncertain times. Pandemics, wars, supply chain disruptions, and even just the networked and highly interconnected nature of the modern digital business environment mean that predictions can never be perfect. Some of this uncertainty can be resolved via weak signals that suggest what sort of future lies in front of us. Much of this future, however, is unknowable and unpredictable. It's hidden behind future decisions (by us and by others), latent possibilities out in an organization's extended ecosystem. Only some of these possibilities will crystalize into actualities, a process we can only influence rather than control.[1]

The unknowable and unpredictable nature of this environment runs counter to a dominant disposition in business: to decide to act. Business has a bias for action—a propensity to commit to the "best" opportunity.[2] Many organizations might be considered large ships, and so, setting them on a new course may require significant time and effort to overcome their inherent

inertia. It's thought to be best to set a clear direction, to pick a single course of action so that leadership can help coordinate the action required to bring the ship around. Insights from sensing tools, such as analytics and machine learning, can be used to detect and evaluate the options discernible by the organization, with the organization's leadership then committing it to what's believed to be the "best" option based on the data at hand.

However, the uncertainty and ambiguity we're experiencing means that the best perceived option might not be the one suggested by the available data, the option that our natural availability bias[3] suggests we should take. And the best option might not even be visible from our current vantage point. It might be a latent possibility that we're yet to discover, an unknown unknown. The option supported by the biased and incomplete data we have may even be the worst option, taking us away from (rather than toward) our goals.

Moreover, decades of unbundling operations and building partner and supplier ecosystems have often resulted in organizations that resemble flotillas rather than bulk carriers. Strategy and execution are thus intertwined and interrelated, extending from within the organization to the ecosystem's edge. The ambiguity often emerges from within the ecosystem, not just outside it.[4]

As we move further into the next big challenge for our global economy—rapid and large-scale decarbonization, and the shift to a sustainable economy—it becomes even more necessary for leaders to find ways to flourish in ambiguity. Many of the answers to the climate problems we face today are not yet known, nor are we even aware of the problems that we'll confront. Leaders may need to make decisions today in anticipation of what will likely be available in the future. This is a new and challenging position that could require a different model for decision-making.

Rather than deciding to act, we should consider acting to decide.[5] Instead of committing to one "best" option based on available data, we could invest in the many small actions that help improve our understanding of the current situation and foster the discovery and development of all options, the possibilities, available to us. As our understanding improves, some of these options may wither and fall away. Others could crystalize, transforming from possibility to actuality, transitioning from a potential or good idea to being the logical next step for the organization. At this point, when the obvious choice sits in front of us, we can decide and commit.

We can see this distinction between "decide to act" and "act to decide" in the responses to the onset of the global pandemic. Some organizations, even organizations widely considered among the most creative and innovative, struggled to decide what to do. They froze, battened down the hatches—suspending operations and furloughing employees—hoping that the trouble would soon pass.[6] Meanwhile, other organizations, unsure what to do, did many small things. They fostered new relationships (new partners, suppliers, and even customers) and explored new opportunities, developing the possibilities available to them, some of which crystalized into actualities.

StageKings is one firm that acted to decide.[7] Stay-at-home mandates and guidelines at the start of the pandemic killed the firm's business of building stage sets for some of Australia's biggest events. Rather than focusing on what they couldn't do, management looked for what the firm could do, tentatively exploring new products, markets, and clients. Soon they found themselves making flat-packed, assemble-yourself furniture aimed at the suddenly huge market of people who needed to work from home. The venture, branded IsoKing, grew so quickly that the firm had to hire workers rather than lay them off. The new business was soon larger than the old.[8]

The possible difficulty that many executives have in acting to decide is managing their tolerance for ambiguity. Ambiguous and uncertain situations can be considered a source of threats to be dealt with by creating a veneer of certainty because leaders believe they're expected to be decisive. In these murky circumstances, where there may be no clear "best" action to commit the organization to, the tendency could be to read available information in a way that hides (but doesn't deal with) the uncertainty. But deciding to act when there isn't enough data to make an informed decision can lead to suboptimal results.

The solution could be to change one's predilection for uncertainty:[9] to foster attitudes and behaviors that enable one to effectively engage with and manage the many uncertainties and unknowns (and unknown unknowns) that are inherent in our current environment, rather than to ignore or hide from them. Comfort with ambiguity can come from the confidence that one knows how to productively engage with it. And productively engaging with ambiguity often requires balancing our bias for committing to a single course of action with a bias for learning and exploration—taking smaller actions to determine the best way forward.

Sometimes the path forward will be clear: We may know that it is directionally correct (though details remain to be sorted out). At other times, the path could be uncertain: We'll need to consider exploring options, to feel out possibilities and develop them until we have an actuality (at which point, we can commit).

Acting to decide requires leaders to have the courage and awareness to know when to pivot—because acting to decide doesn't happen once but many times through the course of solving a problem or taking advantage of an opportunity. In this approach, success can come from the ability to sense and understand the landscape, sensing possibilities, and pivoting toward opportunities and around challenges as they arise. In this way, ambiguity is something leaders should embrace, a source of ideas and opportunities, a well of creativity and innovation,[10] rather than something to avoid.

Improving one's tolerance for ambiguity can be viewed as an emotional, as well as intellectual, change—of attitudes and behaviors—rather than a skill to be developed. It's about building leaders' confidence in their (and their organizations') ability to explore and learn when faced with uncertainty rather than feeling compelled to prematurely commit to decisive (and often wasteful) action. ●

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How resilient could Western economies be to the crises ahead?

Through interviews with company, university, and nonprofit leaders, Deloitte Switzerland assessed the Swiss economy's potential weak points to future pandemics, geopolitical tensions, and climatic events, and developed a template to help evaluate a Western economy's resilience.

By **Céline Neuenschwander** *and* **Ralph Wyss**
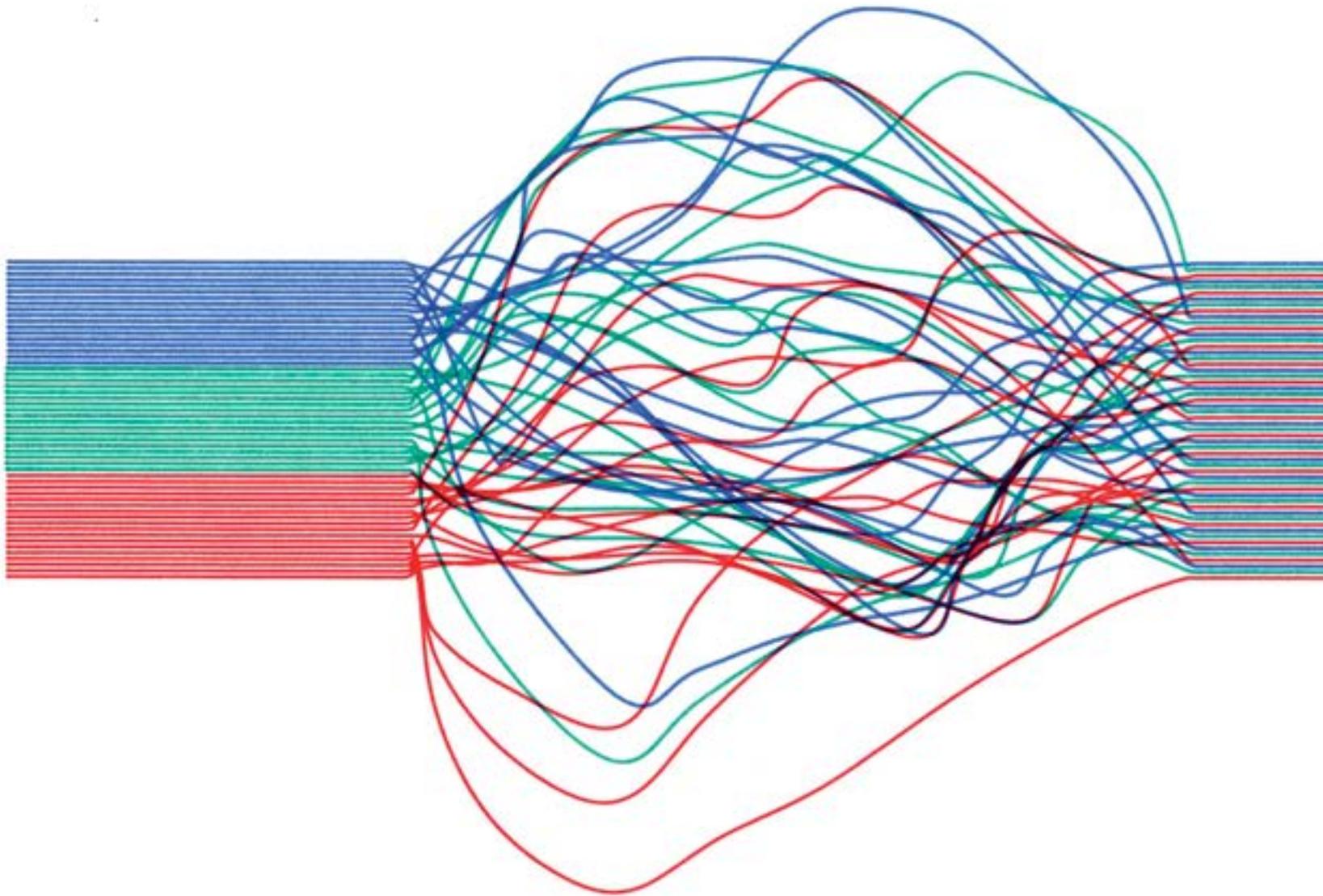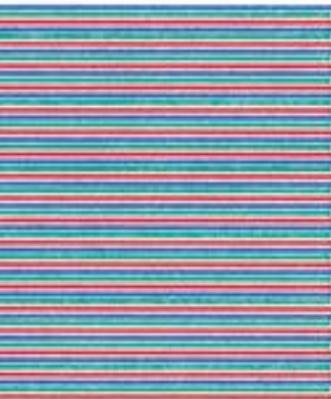
A global pandemic may have been considered unlikely before 2020 and a conventional war of aggression in Europe could have been just as unlikely before 2022. Such events test our countries' economic resilience and expose the weak points in what may sometimes be painful ways. We live in a highly developed yet fragile system that depends on very particular factors, many of which are intertwined. The question at hand is how to consider systematically assessing and improving the resilience of these economic factors and of our economies as a whole. Countries can start by assessing which types of crises may be most disruptive and which economic factors they impact most.

Deloitte Switzerland developed a methodology to help assess what effects a global pandemic, geopolitical tensions, or an increase in extreme climatic events would have on eight major factors that are necessary for the functioning of a typical developed economy: nutrition, health care, public safety, energy supply, telecommunications, financial market infrastructure, critical resources, and logistics. The intention was to develop a template to help evaluate a Western economy's resilience—the ability of an economy to deal with, recover from, or fully avoid an external (nonself-inflicted) shock.[1]

We focused on Switzerland's economy for this exercise, and we conducted 18 interviews with external experts from associations, public service organizations, universities, and companies—many with direct responsibility for ensuring Swiss resilience. The interviewees estimated the impact of the three crisis scenarios on each of the eight economic factors, ranking the crises' impact on a scale from 0 (complete elimination of the given economic factor) to 100 (remains essentially stable). For all of the scenarios, we looked three to five years into the future. Each scenario could be possible, but we didn't analyze or ask about its respective probability.

While not definitive, the results of this small study reveal some major differences in the resilience of the eight economic factors regardless of the type of crisis. The financial market infrastructure, for example, appears to be encouragingly resilient. And although the energy supply—a much-discussed topic at present—exhibits certain vulnerabilities, the basic supply could be largely maintained. Meanwhile, health care was found to be somewhat less resilient and could be severely limited in the global pandemic and geopolitical tension scenarios. And due to its dependency on an on-site workforce, logistics also could be very vulnerable, especially in the pandemic scenario.

When much of the world's workforce stands still—or stays home sick

What we found is that, compared to the other two scenarios, a global pandemic poses the greatest challenge to the Swiss economy's overall resilience. Many economic factors still depend heavily on the availability and employability of people, and if the workforce is sidelined en masse by illness (not to mention social distancing guidelines and restrictions), the economic factors could be greatly affected.

We examined a scenario in which a pandemic is prompted by a respiratory virus that isn't life-threatening but leads to a serious illness lasting several weeks and to potential long-term effects, infected people lose their immunity after three to six months, and a sustainable vaccination isn't yet available.

Our scenario posited that Switzerland's international connections and business activities have made the country a hotspot for the virus. Around 50% of the working population is working primarily from home. Under appropriate precautions and in exceptional cases, on-site work is also permitted. Companies and events with a high potential for infection are prohibited by the authorities from operating during the winter months ("lockdown"). On average, around 25% of the working population is sick and unable to work—with the proportion distributed evenly between those working from home and those working on-site. Large parts of the population question the official measures, while others consider them inadequate. There are great tensions between the respective camps.

All eight economic factors are dependent on people, and people would be getting sick in such a pandemic scenario, limiting the economy's crisis defense potential—even though Switzerland and the world as a whole have learned a lot from the COVID-19 crisis. Unsurprisingly, this is especially pronounced with health care services, and this pandemic scenario also would have a high impact on logistics.

The palpable economic dangers of geopolitical tensions

Current events are demonstrating once again just how damaging geopolitical tensions can be to countries' resilience. And according to our analysis, this scenario ranks second for its deleterious effects on the eight economic factors we studied.

The hypothetical geopolitical tension scenario we examined was focused on the formation of geopolitical blocs and tensions between them, which have intensified in recent years, resulting in a risk of a nuclear military conflict. In this scenario, more powerful states are taking advantage of concerns about greater escalation to enforce local territorial claims. Sanctions are extended, severely restricting the exchange of know-how, important components, and raw materials between the blocs.

In Switzerland, our scenario posited that cyber and sabotage attacks occur on companies and critical infrastructure, and are intended to destabilize the country politically and economically. Sanctions and the growing fear of armed conflict lead Swiss companies to rearrange their international procurement and sales structures, potentially causing delays in delivery and supply bottlenecks in the short term. The population makes more "panic purchases" of shelf-stable foods. The migration pressure on Switzerland as a safe haven has continued to grow, which leads to tensions as residents' willingness to help decreases as they focus on own welfare concerns.

It's not surprising that this scenario could have significant impacts on economic factors. Information, telecommunications, and health care could be vulnerable, due to the global nature of supply chains. And energy supply resilience could decrease rapidly in the face of major geopolitical tension and greater bloc formation.

Public security was found to be largely crisis-proof, as in all scenarios. However, the army, as the last resort for maintaining public security, could have difficulties stemming from the rise of geopolitical tensions, as it could become difficult to procure weapons. Furthermore, throughout much of Switzerland, many institutions (for example, the army, civil defense, crisis teams, and the fire brigade) are based on the country's militia system, which means that public duties or responsibilities rely on voluntary or part-time commitments from the citizens. While generally functioning well, services might become stretched in a prolonged crisis, as the voluntary or part-time militia members would need to return to their main occupations at some point.

The changing climate exposes short-term vulnerabilities

Extreme climatic events could affect Switzerland's overall resilience only to a limited extent during the period we studied, since our analysis was focused on the short term (three to five years from now). That said, the economic effects of the climate scenario that our analysis revealed for Switzerland are still relatively low compared to the expected consequences over this period.

In our hypothetical scenario (based heavily on current events and projections, as with our other scenarios), extreme environmental conditions increase worldwide and will continue to occur more frequently. Political tensions intensify between states that are fighting over access to water, the sinking of land, and food shortages in certain regions of the world. Formerly fertile agricultural land in the Southern hemisphere is deserted, which increases the migratory pressure toward the North. The discussions about fair water distribution from the Alpine region exacerbate the political climate between states.

In Switzerland, our scenario posits that climate change is reflected in an accumulation of droughts and heavy precipitation. The permafrost continues to melt. As an Alpine foothills region, Switzerland still has sufficient water supply, but problems can arise with its nationwide distribution. Switzerland is sometimes under pressure from neighboring countries to regulate the retention of water in reservoirs, and to take their respective interests into account. Rivers sometimes carry so little water that river water cooling is endangered. The water level in the Rhine partly drops below the driving level. Conversely, the water levels rise so much that the height of the bridges becomes a restriction for ship navigation. The strong warming in the Alpine region and the retreat of glaciers and permafrost leads to increased rockfall. Transalpine transport and energy suppliers may be severely affected by this. In addition, the analysis revealed a pronounced weakness in securing food imports in this climate change scenario. This highlights the importance of domestic food production and emergency stocks—but they aren't resilient to an unlimited degree either.

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Shoring up countries' resilience

By assessing the potential impact of crises and disruptions on each of the major factors or dimensions of a country's economy, the country can work to shore up its overall resilience through targeted effort and investments. And some kinds of crises or disruptions are easier to prepare for. For example, our analysis shows that it could be difficult for Switzerland or another Western economy to become highly resilient to a global pandemic across all major economic dimensions, but geopolitical tensions are somewhat easier to prepare for.

Encouragingly, our study found that the Swiss economy (with a few exceptions) could be well-equipped to ensure at least basic public services and infrastructure during a crisis. However, the study also highlights that countries should take a broader approach to the issue of resilience, looking beyond economic factors like energy supply to better prepare for the diversity of the challenges that lie ahead. ●

FIG 1: Resilience in Switzerland per scenario

○ **Geopolitical tensions**   ● **Climate events**   ● **Pandemic**

Estimated impact of each crisis scenario on each of the eight economic factors, on a scale from 0 (complete elimination of the given economic factor) to 100 (remains essentially stable)

Source: Deloitte Switzerland interviews of 18 external experts from associations, public service organizations, universities, and companies. Many interviewees have direct responsibility for ensuring Swiss resilience.

Challenging the orthodoxies of brand trust

Organizations increasingly understand the importance of building trust with their customers, partners, and workforce, but trust can be hard to earn, difficult to measure, and easily lost— and underlying assumptions may be hampering their efforts.

By **Ashley Reichheld** *with* **Amelia Dunlop**

We aren't going to tell you that trust matters. We *trust* that you get that already from your own personal and professional experiences where you have gained and lost trust. To help leaders unpack what it takes to build trust, we have conducted extensive research to help you quantify the value of trust. Our research demonstrates that trust is more than a lofty ambition; it is an economic imperative. Workers who trust their employers are 260% more motivated to work (and 50% less likely to leave). Moreover, 88% of customers who trust a brand will buy again.

And trusted companies outperform their peers by up to 400% in terms of market value, according to our research.

Yet, by definition, trust is as human and messy as the very humans who earn it or lose it. And there's a gaping chasm of societal trust—a so-called "trust deficit," defined as when there is more distrust than trust between two or more people.

Measuring and building trust to climb out of that chasm is challenging. That's why we wanted a measure that was both meaningful and actionable in approaching how trust impacts

human behavior—something that would help organizational leaders not just understand trust but also build it, leading to positive outcomes. We couldn't find that measure, so we created our own open-source measure called the TrustID, which is based on the four factors of trust:

- **Humanity**: demonstrating empathy and kindness, and treating everyone fairly
- **Transparency**: openly sharing information, motives, and choices in straightforward and plain language
- **Capability**: creating quality products, services, or experiences
- **Reliability**: consistently delivering on promises and experiences

To create this trust measurement approach, we analyzed over 40 years of trust research conducted by others, conducted more than two dozen in-depth interviews with trust experts, collected more than 200,000 survey responses from customers and workers across nearly 500 brands, ran in-depth focus groups with 50 workers (with a particular emphasis on female workers and hourly/gig workers), completed a financial meta-analysis with more than 300 features per company, and implemented multiple in-market pilots with leading Fortune 500 companies.

Industries and companies develop internally held habits and rules that widely shape conventional wisdom over time. We call these orthodoxies, and some of the most noteworthy surprises in large studies like ours are when data-based findings turn orthodoxies on their heads.

Flipping orthodoxies can unlock value that was previously hidden. For example, Starbucks flipped the orthodoxy that coffee is a commodity, instead designing its business around the idea that coffee is an experience. So in our research, we set out to test the following trust orthodoxies and discovered some surprising insights.

Orthodoxy 1:
Well-known brands are the most trusted

Iconic brands regularly show up in annual, high-level trust surveys.[1] It seems intuitive that large, long-dominant brands with the most customers would also be the most trusted. However, we found that many household-name brands fell below benchmark trust scores in many industries (figure 1)—indicating that brand recognition is not synonymous with trust.

As we went deeper, we discovered a surprising flaw in previous high-level surveys. Asking simply, "Do you trust X brand?" doesn't get at the details of the relationship people have with it. When asked about the four factors of trust, people show not only *that* they trust but *why* they trust. Well-known and "iconic"

FIG 1: Brand recognition is not synonymous with trust: Our research shows that some iconic brands' trust scores are well below industry trust leaders

— Industry leader ••• Industry average

Percent of customers and "aware consumers" surveyed who believe the company should be trusted

Tech/media

18% 19% 26% 28% 30%
A B C D E

Automotive

41% 31%
F G

Consumer products

10% 13%
H I

Iconic brands

Source: Deloitte analysis using TrustID.
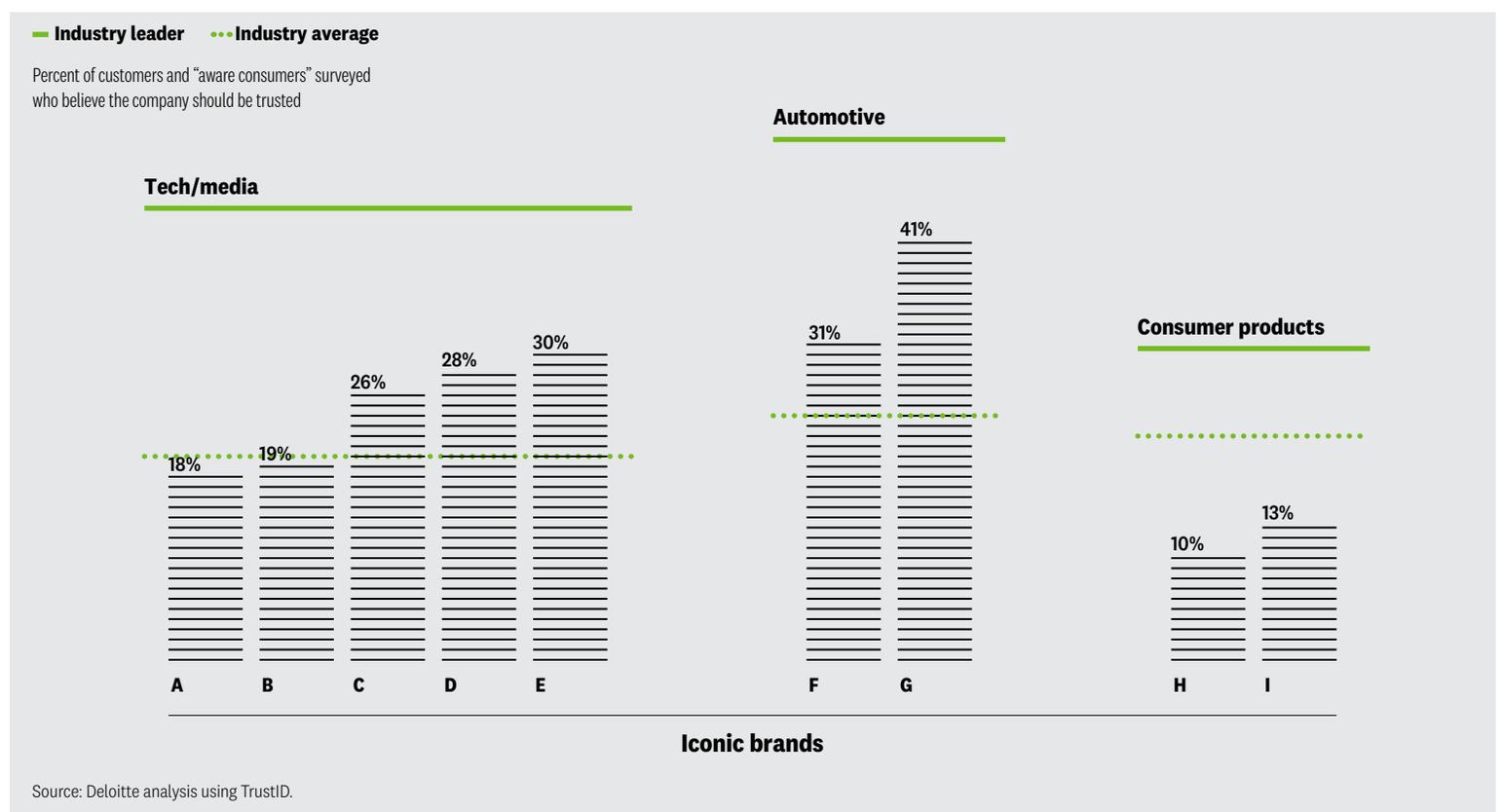
brands invest millions of dollars in marketing and branding. However, marketing alone is not sufficient to sustain high trust. Just having a warm and empathetic—or incredibly funny—Superbowl commercial might keep you in the conversation on social media, but it won't necessarily make customers actually trust you or buy your product.

Orthodoxy 2:
Humanity and transparency trump capability

We believe that elevating the human experience is fundamental to winning in business. As a result, we expected humanity and transparency to be just as (or maybe even more) predictive of behavior than capability and reliability. This was reinforced in our first round of research where we asked customers to rank the importance of each factor. Consumers stated that humanity and transparency matter more in terms of driving their purchase and loyalty. However, what people say is often different from what they do. As we watched what consumers actually did, both humanity and transparency were shown to be overstated in comparison to the importance of the brand's capability and reliability.

As consumers, we like to think that we vote with our wallets and support more human brands, but at the end of the day, many of us still put much of our spending toward brands that are highly capable and reliable above all else. Convenience is still really important: Who doesn't buy what they need online from major retailers when they need it quickly? How many people have actually canceled their social media accounts? And who doesn't weigh a low-priced item against an expensive, purpose-driven one?

This is how we came to understand capability and reliability as table stakes. They are required to compete. Companies with a huge footprint in the marketplace, underpinned by strong capability and reliability, have an advantage that is really hard to overcome. Some brands build trust by focusing on being more human in addition to being reliable and capable. But to be a "trust winner," you need to deliver on all four factors.

Orthodoxy 3:
Trust winners are trusted by all

We also tested the orthodoxy that top-tier trust winners are trusted by everyone. In our research, we surveyed both customers and potential customers who are aware of the brand—familiar enough that they could describe the brand to a friend—but who have not recently purchased or engaged with the brand. We expected to find a small gap between the trust scores from customers and "aware consumers." The data told us otherwise.

Disney Cruises is an example of a trust winner with a large gap between trust among existing customers versus consumers who are aware of the brand. We attribute this to what we call the "superfan effect," which is when ardent customers are so enamored of the brand that they significantly increase the total trust score of the brand, nullifying the "neutral" scores of aware consumers.

In our data set of nearly 500 brands, Disney Cruises has the third-highest trust score among existing customers. Disney's excellence in its businesses, including theme parks, films, television, and other forms of entertainment, earns consistently high ratings. People who like cruises and trust Disney become superfans.

As a result, customers pay a premium for the personalized, high-touch Disney experience. The magic happens with intense attention to detail. For every externally visible experience, there are many things working behind the scenes to make it happen, including training and technology (capability). Disney ran a program in which stateroom hosts took an hour off in their eight-hour shift to engage and talk with guests directly, often recalling their names later (humanity). Cast members (Disney doesn't use the words "worker" or "employee"[2]) are there with guests every step of the way to answer questions and provide information (transparency), which is helpful when docking in unfamiliar ports. Underlying every customer experience is the consistency of the brand (reliability), from Disney tunes piped into hallways, to themed evening shows, to the promise of meeting favorite Disney characters. It's a brand focused on creating and serving superfans.

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Orthodoxy 4:
Trust looks the same across industries

At first, we thought that the attributes that drive trust might look the same across industries because people are the same whether they are showing up at a bank or at a doctor's office. It turns out that there are significant differences in trust with both customers and workers across industries. We drilled down on each factor to understand where leaders for different organizations can most readily increase trust.

For example, we looked at one factor, humanity, and found the following differences for workers in different industries:

- Feeling engaged by your company's culture is more important in tech and retail. This makes sense as a lot of superfan brands exist in retail, and a lot of tech companies put great effort and resources into developing a distinctive culture.
- Having an employer who considers the good of society and the environment is more important in health care. There, organizations are literally caring for society's health. Notably, some of this data was gathered as health care workers were on the pandemic's front lines.
- Employers having a purpose you believe in is more important in banking. Consumer banks market themselves as an important pillar of local communities that serve as trusted guardians of customers' financial well-being. A sense of purpose among workers drives these messages.
- Feeling comfortable sharing new ideas at work is more important in travel and hospitality. This may be born from necessity: There is a vast array of stakeholders who are responsible for delivering on and improving customer experience, such as field agents, branch managers, and franchise owners in hotel, car, and restaurant businesses. The volume and diversity of frontline workers improve the customer experience.

We also found differences in the importance that people assign to the four trust factors based on whether they're a worker in or a customer of the given industry. For instance, the humanity factor operates somewhat differently for customers in those same industries:

- Customers' belief that a brand or organization values the good of society and the environment is more important in tech. Tech companies are some of the largest publicly traded companies in existence these days. Their products permeate society and drive social change. Nearly two-thirds of our survey respondents expect chief executive officers to do more to make progress on social issues.
- Fast and friendly customer support is more important in banking and health care. This attribute of humanity makes sense for these industries because there are often complex customer issues to be solved around payments or insurance, for example.
- Believing that a brand or organization values and respects everyone regardless of background, identity, or beliefs is more important in travel and hospitality, and retail. These are both experience-driven sectors with a lot of in-person interaction between a diverse population of customers and workers.

Like other customer and stakeholder metrics, trust measurements are only truly actionable if you understand the "why" behind them. Our research found that context matters when it comes to how people value the four trust factors: People weigh the importance of the factors' attributes differently based on contextual details such as their role (customer versus worker), the industry, the company culture, and the brand promise, among others. Understanding differences at this level of granularity helps organizations direct their resources to deepen trust with their stakeholders.

Ultimately, we believe it's important as leaders to invest in building trust to deliver better experiences and outcomes for customers and workers alike. ●

This is an edited excerpt from *The Four Factors of Trust*.
Learn more at www.deloitte.com/fourfactors

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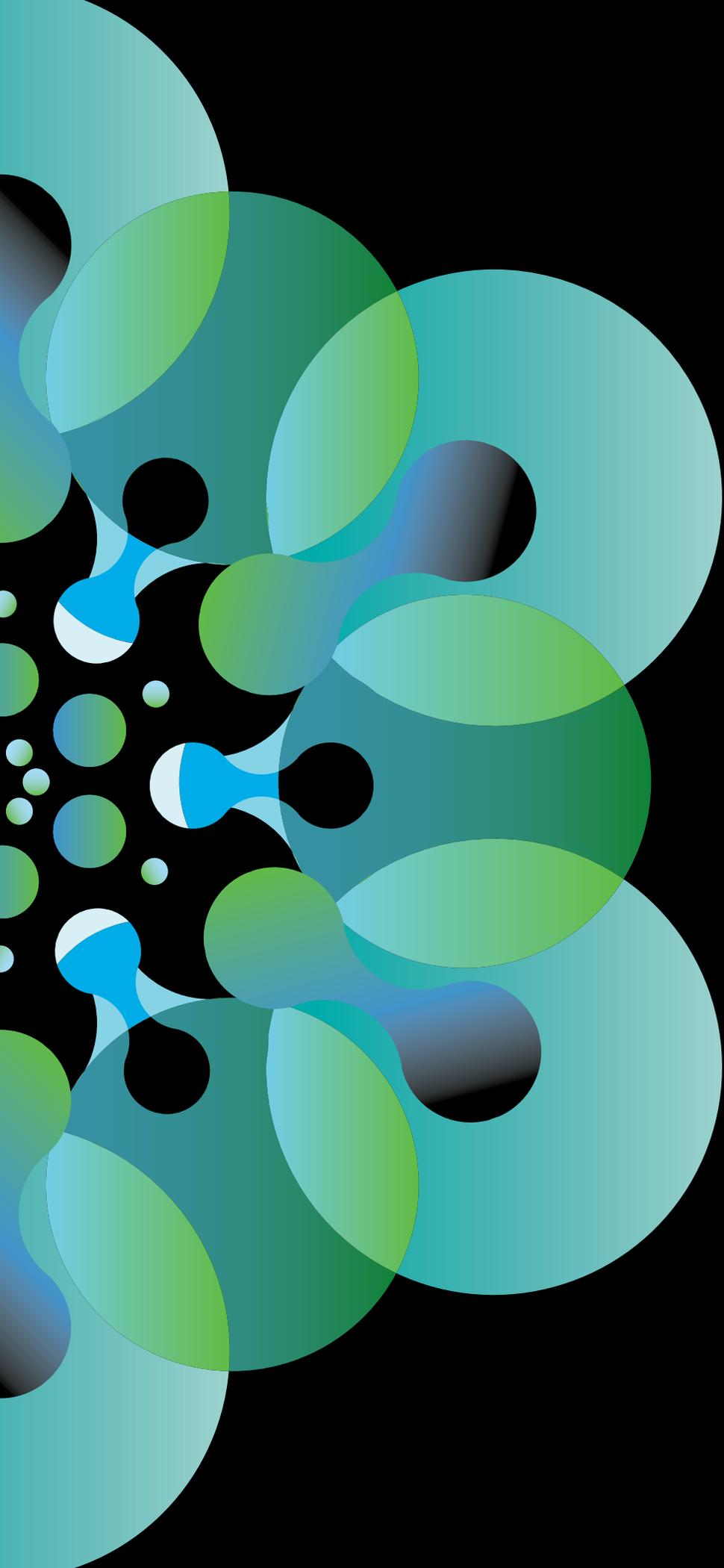
The skills-based organization: A new operating model for work and the workforce

Many organizations are moving beyond the most fundamental building block of work—the job—to apply skills-based models that can meet the demand for agility, agency, and equity.

By **Sue Cantrell, Michael Griffiths, Robin Jones,** *and* **Julie Hiipakka** *Illustrations by* **Jim Slatton**

For over a century, the job has been the dominating structure for work—defining how work is done, by whom, how it's managed and led, and how workers are supported by every HR practice, from hiring to compensation to career progression to performance management. It's so embedded in everything companies do that people rarely stop to question it at all.

But confining work to standardized tasks done in a functional job, and then making all decisions about workers based on their job in the organizational hierarchy, hinders some of today's most critical organizational objectives: organizational agility, growth, and innovation; diversity, inclusion, and equity; and the ability to offer a positive workforce experience for people.

In response, organizations are moving toward a whole new operating model for work and the workforce that places skills, more than jobs, at the center. One company pioneering this move is Unilever: "We're beginning to think about each role at Unilever as a collection of skills, rather than simply a job title," says Anish Singh, head of HR for Unilever in Australia and New Zealand.[1]

According to a global Deloitte survey of more than 1,200 professionals, organizations are increasingly experimenting with what they hope is a better way. By decoupling some work from the job—either by atomizing it into projects or tasks, or broadening it so it's focused on problems to be solved, outcomes to be achieved, or value to be created[2]—people can be freed from being defined by their jobs and instead be seen as whole individuals with skills and capabilities that can be fluidly deployed to work matching their interests, as well as to evolving business priorities. And by basing people decisions on skills more than jobs, organizations can still have a scalable, manageable, and more equitable way of operating. We call this new operating model for work and the workforce "the skills-based organization."

At Unilever, for example, an internal talent marketplace enables people to fluidly move to projects and tasks across the organization based on their skills, either as a permanent employee or as a "U-Worker": a worker who has a guaranteed minimum retainer along with a core set of benefits, and who contracts with Unilever for a series of short-term projects.[3] Patrick Hull, vice president of future of work at Unilever, says, "We see that there's all this opportunity that we can unlock for people that, maybe, we wouldn't have been considering because, as with many organizations, we would have been more in our functional silos."

Increasingly, departmental work at Unilever is being divided into projects, tasks, and deliverables. Ultimately, Hull sees siloed departments breaking down in the future, with a more granular method of viewing employees' contributions focused on outputs and skills rather than on years with a job title, to understand what each employee brings. "When you can get to that level of detail, you can get much more targeted in your recruitment, in your internal mobility of talent, and applying the right talent to the right tasks and projects, and thereby also accelerate business performance."[4]

Organizations are moving toward a new approach

To explore how organizations are thinking about the move to skills-based organizations and how (or if) they're operationalizing it, we conducted both quantitative and qualitative research—surveying 1,021 workers and 225 business and HR executives around the world and across industries, and interviewing nearly a dozen executives.[5] Across all of the 11 workforce practices we asked about, we discovered a plethora of experimentation with (and a strong directional move toward) skills-based organizations, as well as a strong preference from both executives and workers for a skills-based model over one based on jobs. This was surprising. We'd expected more organizations to resist moving away from a jobs-based model for organizing work and making decisions about workers (figure 1) because transforming into a skills-based organization is a fundamental shift from work as we know it that redefines the very core of what we consider work to be—including how we lead, manage, or contribute to work, and how HR supports the workforce across practices.

Despite this overall move to experiment, fewer than one in five organizations are adopting skills-based approaches to a significant extent: across the organization, and in a clear and repeatable way. These early skills-based pioneers are achieving better business results than those with jobs-based practices (figure 2), according to our research, indicating that those who've adopted skills-based approaches to a significant extent are building organizational models that better align to their organizations' needs—and workers' expectations—today.

Skills defined

We broadly define "skills" to encompass "hard" or technical skills (such as coding, data analysis, and accounting), human capabilities or human skills (such as critical thinking and emotional intelligence), and potential (including latent qualities, abilities, or adjacent skills that may be developed and lead to future success). Eventually, we see the word "skills" becoming shorthand for more granularly defining workers as unique, whole individuals—each with an array of skills, interests, passions, motivations, work or cultural styles, location preferences and needs, and more.

FIG 1: Executives and workers want a new approach to jobs and work

Q: "What do you believe is the best way to organize work to create value for workers and the organization?"

Fractionalized work:
Workers who flexibly flow to tasks, assignments, and projects based on their skills and interests
Broadened work:
Structuring worker roles and responsibilities around broad problems to be solved or outcomes to be achieved

Business executives

| 60% Fractionalized work | 21% Broadened work |
| | 19% Traditional work |

Workers

| 38% Fractionalized work | 39% Broadened work |
| | 23% Traditional work |
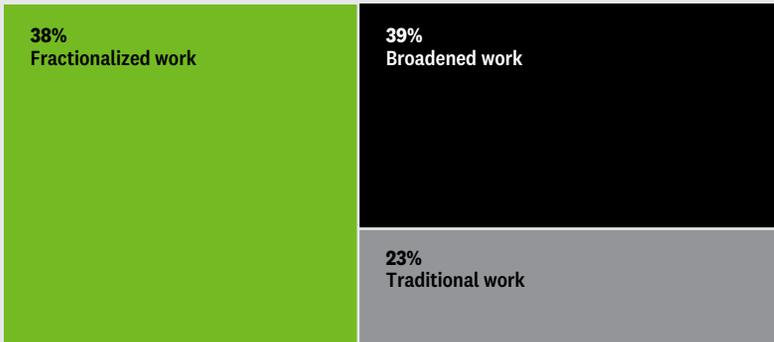
Source: Deloitte skills-based organization survey, May–June 2022.

Many workers believe their employers value job experience and degrees over skills

59% of workers
say their organization values job experience and degrees over demonstrated skills and potential

36% of executives
say their organization values job experience and degrees over demonstrated skills and potential

But workers want skills-based practices and will vote with their feet to get them

73% of workers
say skills-based practices would improve their experience at work

66% of workers
say they would be more likely to be attracted to and remain at an organization that values and makes decisions based on their skills and potential rather than on jobs and degrees
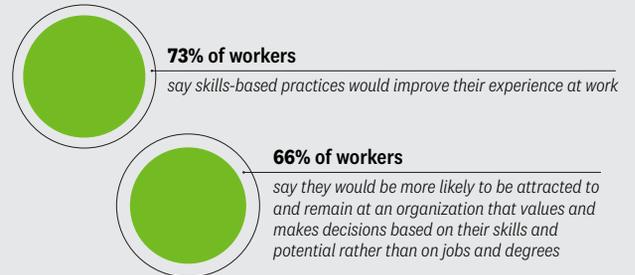
And executives say their organizations are moving toward a skills-based approach

89% of executives
say skills are becoming important for the way organizations are defining work, deploying talent, managing careers, and valuing employees

90% of executives
say they are now actively experimenting with skills-based approaches across a wide range of workforce practices

FIG 2: Skills-based organizations see results

Organizations that embed a skills-based approach* are more likely to …

63%
achieve results** than those that have not adopted skills-based practices

107%
place talent effectively

98%
have a reputation as a great place to grow and develop

98%
retain high performers

79%
have a positive workforce experience

57%
anticipate change and respond effectively and efficiently

52%
innovate

49%
improve processes to maximize efficiency

47%
provide an inclusive environment

* Skills-based organizations' ratio reflects the combined weighted ratios of the HR executive survey item, "Our organization's business and HR executives are aligned on the importance of skills in making decisions about work," and the worker survey items: "My employer treats workers as whole, unique individuals who can each offer unique contributions and a portfolio of skills to the organization," "My organization supports me in pursuing opportunities to create value through activities that are outside of the direct scope of my job," and "My organization makes it easy to apply my skills where they are most needed."
** Results are defined as 11 business and workforce outcomes: meeting or exceeding financial targets; anticipating change and responding effectively and efficiently; innovating; achieving high levels of customer satisfaction; positively impacting society and communities served; improving processes to maximize efficiency; being a great place to grow and develop; placing talent effectively; providing workers with a positive workforce experience; providing an inclusive environment; and retaining high performers.
Source: Deloitte analysis of Deloitte skills-based organization survey, May–June 2022.

The case for change continues to develop

This shift in approach is a result of several broader business shifts.

Organizations' growing sense of responsibility for their workers' welfare

There's a growing acknowledgment of the importance of human centricity at work: 79% of business executives agree that the purpose of the organization should be to create value for workers as human beings, as well as for shareholders and society at large, and 66% are facing increased pressure to show their commitment to doing so, moving from rhetoric to results.

Twenty-seven percent of workers strongly agree that their organization is making progress on this front, while 64% say they would be more attracted to and remain at an organization that does so, indicating that people want to work where they feel the organization is contributing to their growth and realization of their potential, and where they feel seen, valued, and respected. Instead of turning everyone into the same kind of contributor through standardizing them in jobs, skills-based organizations let people's uniqueness as humans shine through, with work tailored to their strengths.

Refocusing work around the people doing it and the skills required to do so—and supplying the necessary skills training—can also increase employability. For example, identifying adjacent or foundational skills of workers who are displaced by automation or whose roles are no longer needed can help organizations redeploy them to work that is needed.

Skills-based organizations can also promote equity: 80% of business executives say making decisions about hiring, pay, promotions, succession, and deployment based on people's skills rather than their job history, tenure in the job, or network would reduce bias and improve fairness; and 75% say hiring, promoting, and deploying people based on skills (versus tenure, job history, or network) can help democratize opportunity and improve access to it.

Workers' demand for more autonomy

Fifty percent of workers we surveyed said they're more likely to be attracted to and remain at an organization that grants them more agency and choice in how they apply their skills to work. However, only 26% of workers strongly agree that their employers treat them as whole individuals who can offer unique contributions and unique portfolios of skills to the organization.

Talent shortages

Seventy-three percent of business executives expect to continue to experience talent shortages over the next three years,

and 70% of those respondents say they're getting creative about sourcing for skills rather than just considering job experience. For example, global commercial real estate firm Cushman & Wakefield looked to understand how the skills and adjacent skills of those who served in the military—such as leadership, project management, engineering, strategic planning, and machinery maintenance—could easily be applied in an entirely different industry and set of roles, thus recruiting from an underutilized talent pool.[6]

The need for agility

In an era of accelerating, often unpredictable change, 85% of business executives say that organizations should create more agile ways of organizing work to swiftly adapt to market changes. COVID-19 is a case in point: A host of examples, such as Virgin Atlantic loaning its furloughed flight attendants to UK hospitals to help with customer care,[7] demonstrate that workers are far more capable than we think of stepping outside their usual jobs to add value in new ways.

Digital transformation

Sixty-one percent of business executives say new technologies that require new skills will be a primary driver of their organization adopting a skills-based approach. For example, automation is pushing organizations to "unfreeze" their jobs, disaggregate them into their component tasks and subtasks, and then hive off those that can be automated and reassemble the remaining tasks into newly formed "refrozen" jobs. But with newer technologies continuously reshaping jobs, many are looking for new structures of organizing work that enable people to continually flex as needed, instead of unfreezing and freezing jobs over and over again.

Decreasing relevance of jobs

Probably as a result of all these factors, the concept of a job itself is less relevant than before. A full 71% of workers already perform some work outside of the scope of their job descriptions, and only 24% report they do the same work as others in their organization with the same exact job title and level. Meanwhile, 81% of business executives say work is increasingly performed across functional boundaries.

And many workers don't even plan on performing work through a "job" at all anymore. Over half of workers (55%) say they already have switched or are likely to switch employment models throughout their careers—fluidly moving from permanent full-time jobs through projects on internal talent marketplaces, freelancing, and gig work, for example.

If jobs are no longer a useful construct to meet organizational goals and worker needs, many organizations are realizing it's time to change their approach.

Seventy-seven percent of business executives agree their organizations should help their workers become more employable with relevant skills, but only 5% strongly agree that their organizations are investing enough in helping people learn new skills to keep up with the changing world of work.

Seventy-seven percent of business and HR executives say flexibly moving skills to work is critical to navigating future disruptions.

The skills-based organization in practice

Skills-based organizations operate based on four principles (figure 3):

1. Liberating work from the confines of the job by reorganizing work as a portfolio of fluid structures, including and beyond the job

2. Reconceiving workers from being employees in jobs to being a "workforce of one"—individuals who work on- or off-balance-sheet, each with a unique ability to make contributions and a portfolio of skills and capabilities that match the work

3. Using skills, rather than jobs, to make decisions about work and the workforce—from who performs what work, to performance management, to rewards, to hiring

4. Building a "skills hub," an engine of skills data, technology, governance, and more, to power these decisions

FIG 3: The skills-based organization: A new model for work and the workforce

WHAT
How is the work organized?
A portfolio of fluid structures in which skills flow to the work, including and beyond the job

Tasks
Projects
Jobs
Outcomes
Problems to be solved

Fractionalized work
Traditional work
Broadened work

WHO
Who does the work?
Individuals with a unique portfolio of skills and other attributes, rather than standardized job holders

Hard skills
Human capabilities
Adjacent skills
Potential

SKILLS HUB
Skills talent philosophy
Skills governance
Skills data and tech
Skills framework and common language

HOW
How are decisions made?
Skills, rather than jobs, inform workforce decisions from hiring to retirement

Talent aquisition
Workforce planning
Performance management
Work and skills architecture
Learning and development
Careers
Rewards
Leadership and succession planning

Source: Deloitte analysis.

Let's explore each to understand how skills-based organizations operate in practice.

Liberate work and workers from the confines of the job

THE BIG SHIFT

FROM: Work organized by jobs in a functional hierarchy
TO: A portfolio of ways to organize work, enabling greater agility and more fluid, meaningful packages of work including and beyond the job

One approach to organize work without jobs is to fractionalize the work: breaking it down into more meaningful chunks of work in the form of projects or tasks that continuously evolve as business needs change, letting workers with a relevant portfolio of skills and capabilities flow to the work. This approach is gaining ground, and is advocated by leading thinkers such as Ravin Jesuthasan and John Boudreau in their recent book, *Work without Jobs*.[8]

Many organizations are experimenting with partial fractionalization in the form of internal talent marketplaces: letting workers carve out a portion of their time from their traditional job to take on projects and tasks anywhere in the organization based on their skills and interests, with opportunities suggested to them through AI-powered matching technology. At Haier, the entire organization of more than 75,000 employees works in a fully fractionalized work model, with an internal talent market that governs how talent is deployed on specific projects, structured into self-organizing, fluid microenterprises, each with 10 to 15 employees.[9]

Some are taking this concept across organizational boundaries, temporarily loaning or borrowing workers from other noncompeting organizations for projects, tasks, or roles in the form of cross-company talent exchanges. For example, the US Department of Defense and private sector defense organizations jointly created the Public-Private Talent Exchange to share talent across organizations through temporary projects and assignments.[10]

But as we laid out in a previous article, *Beyond the job*, organizations can also go the other direction and broaden work, organizing it around flexibly applying skills to achieve outcomes or solve problems.[11] Our research reveals that organizations that do this are nearly twice as likely to place talent effectively and retain high performers, as well as have a reputation as a great place to grow and develop.

Cleveland Clinic, for example, moved from being organized by medical specialties and specific job titles such as "doctor" or "nurse" to broadly defining all staff as "caregivers" responsible for treating not just physical ailments but also patients' spirit and emotions. Instead of organizing departments based on the medical specializations, groups were instead formed around the patients and their illnesses, creating multidisciplinary, collaborative teams—which also sparked innovation in new treatments.[12] Our research suggests that organizations are moving to broaden the job, providing more flexibility regarding what's done within it (figure 4). Twenty-four percent of surveyed workers report that their organizations are already beginning to do this.

> Eighty-five percent of HR executives say they're planning or considering redesigning the way work is organized so that skills can be flexibly ported across work over the next three years.

FIG 4: Organizations are moving to broaden the job

In the past three years,

82% of HR executives *say they have multiskilled workers who can do tasks from different jobs*

79% of HR executives *say they have evolved roles to be bigger and more integrative, often embracing adjacent job functions*

43% of HR executives *say they have reduced the number of job levels and layers*

34% of HR executives *say they have reduced the number of job types*

Source: Deloitte skills-based organization survey, May–June 2022.

Only 14% of business executives strongly agree that their organization is using the workforce's skills and capabilities to their fullest potential.

Although there will always be a place for the traditional job, organizations are increasingly looking to create a portfolio of different ways to organize work, using different options for different workforces or businesses.

Develop the workforce of one

THE BIG SHIFT
FROM: A one-to-one relationship between employees and jobs
TO: A many-to-many relationship between work and skills, with workers seen as unique individuals with a portfolio of skills who may be on- or off-balance-sheet

When workers are unbound from being defined by their organizations as their "job," work is no longer a one-to-one relationship between employees and jobs but rather a many-to-many relationship between work and skills. Workers are seen as a "workforce of one,"[13] or unique individuals with a portfolio of skills and the ability to make meaningful contributions to a range of work.

Organizations that view workers this way are more likely to have better financial results, anticipate and respond effectively to change, and retain high performers, among other results.[14] Even though 72% of surveyed workers say it would improve their experience at work, only 12% say they're able to customize and personalize their work responsibilities based on their unique skills, capabilities, and interests (through projects and internal gigs, or choosing their own tasks) to a significant extent.

An important aspect of viewing workers not as job holders but as unique individuals is recognizing that every individual has the capacity to continually learn and grow, and to decide how they deploy their skills to work. By breaking out of the confines of the job, workers can more easily try new things to continuously learn, build on their adjacent skills to solidify new ones, and leverage their foundational capabilities such as emotional intelligence or problem-solving in whole new ways. This is learning at its best: in the flow of work, experiential, and applied to real problems at hand.

In the past, only select "high-potential" workers were given the opportunity to tackle business-critical challenges or move around to different projects, giving them the development needed to rise. But a skills-based organization gives everyone the ability to access the types of experiences that previously were reserved only for those with perceived high potential, now democratizing opportunity for all.

Use skills to make decisions about work and the workforce

THE BIG SHIFT
FROM: Decisions about how to organize work and make decisions about workers based on the job

TO: Decisions about how to organize work based on skills and, eventually, on other unique attributes of workers as well

If jobs are increasingly less relevant as the only organizing construct for work, and skills become the new underlying unit of work, this requires nothing less than a sea change in how managers and HR operate to support the workforce.

Today, every talent management practice is based on the job. HR writes job descriptions, sets compensation, creates organizational charts, and assigns training—all around predefined jobs. Managers hire, give feedback, promote, and organize their teams around jobs. And workers progress throughout their careers by moving to the next higher-ranking job. Talent management, in this view, is standardized and process-driven, siloed and centralized, and based on a supply-chain–oriented view of the world that assumes that the workforce is an interchangeable resource to be supplied and managed at cost rather than a unique asset to be cultivated.

The skills-based organization turns talent management on its head, redefining and reimagining every talent practice to be based more on skills and less on jobs.

Skills-based hiring

Take hiring, for example. When a work need arises, hiring managers typically default to opening a job requisition and then use algorithms to screen candidates based on prior job experience and degrees. But with a skills-based approach, they would first determine how best to structure the work (through a traditional job or not), the skills needed to perform the work, and who is best positioned to deliver the work (for example, an employee or an external worker such as a freelancer), with workers then being selected based on their skills. By using AI to understand the capabilities workers have that are correlated to their success—using "affirmative" filters that "screen in" based on skills and demonstrated capabilities, even if these workers have never had a similar job before—organizations can open the doors of opportunity and movement to millions who have previously been shut out.

When one telecommunications company needed machine learning skills, for example, it didn't search for those who held machine learning or AI jobs, or who had degrees in the field. Those workers were too hard to hire. Instead, it analyzed profiles of thousands of workers who identified themselves as machine learning experts to understand the aggregation of skills, experience, and pathways these workers took to develop these skills. It then created algorithms to search and hire for those three factors—increasing the talent pool by at least three times what the company had estimated. After hiring the workers who had the adjacent skills, the company then quickly built on the foundation of these skills to train the hired workers with

the specific required machine learning skills. It now has technology that enables workers to compare their skills profile to different types of work and asses their fit, along with a list of skills they need to develop.[15]

In an ever-evolving world of work in which the half-life of hard skills is shorter than ever, it'll be increasingly more important to hire based on adjacent skills, or foundational human capabilities such as learnability. Workers then have the ability to build on the foundation of other capabilities to continually develop the hard skills they need.

Skills-based workforce planning

The move to a skills-based approach for this telecommunications company has the added bonus of providing the organization with a host of skills data to inform workforce planning. Instead of planning for headcount in jobs, it can now plan for skills—understanding not only what skills the workforce possesses today, but what skills the organization could easily have if, with a bit of investment, it builds on the foundational and adjacent skills of its existing workers to develop them.[16]

With a skills-based approach to workforce planning, organizations can plan for the skills they need, where they can get them, and the type of work in which skills will need to be applied. Unilever, for example, has identified more than 80,000 tasks it might need done over the next five years that are likely to be performed by a combination of full-time employees, gig workers, contractors, and those working flexibly.[17]

Skills-based pay

How is pay set if not based on jobs—carefully benchmarked and determined based on hierarchy and market position? The answer could be assessing some combination of the work performed, how well it was performed, the outcomes achieved, and skills needed.

At American multinational manufacturing company W. L. Gore (best known as the maker of Gore-Tex fabrics), employees have no job descriptions upon which to base pay. Instead, employees rank 20 to 30 peers based on added value and contributions to the organization. A committee then uses this information and external benchmarking data to decide on compensation.[18] An alternative method would be to make compensation completely based on an individual's bundle of skills, aligned to market value and the organization's needs.

For many organizations that retain the job, employees may have both a base salary based on their job, and a "skills" salary based on the market value of and organizational need for their skills. This would enable people to still be rewarded in line with market demand for their skills, but jobs could still be far more broadly

defined, thereby unleashing greater mobility for those skills to be deployed across a variety of types of work. Organizations are starting to experiment here: IBM uses AI-based system CogniPay to make pay decisions based on market demand, internal forecast demands, and attrition data for a skill or cluster of skills.[19]

Skills-based performance management

Workers can be rewarded and recognized as they continue to develop their skills. But should skills be considered in the performance management process? This can be a point of contention because performance management approaches typically evaluate worker outcomes or performance toward goals rather than skills themselves.

Google strives to balance skills and outcomes in its new performance management process. Googlers are encouraged to work with their managers to identify and document what their "priorities" should be in terms of their own development, and identify specific learning opportunities based on these priorities to act on in subsequent quarters.[20]

There are additional ways organizations can foster skill development during performance management activities. One example is by clearly defining criteria that indicate that employees are qualified to move into a different role in another part of the same company, and communicating those criteria transparently. During talent reviews, HR and managers should discuss how employees are demonstrating the skills that are seen as critical for future leaders and "next-level" roles. Individuals and their managers should have a shared understanding of which skills are important for the employee to develop, and actively discuss on a quarterly basis (or more frequently) how to get the exposure, experiences, and education that will help them develop and demonstrate those skills on the job, in the flow of work.

Skills-based leadership and management

With a skills-based approach, managers' and leaders' roles shift from managing employees to dynamically orchestrating work and skills through projects, tasks, or problems to be solved, with influence and empowerment of others becoming more important than hierarchy. Managers then share talent across business functions and teams for the greater organizational good rather than hoarding it for their own team.

Managers will still have a critical role to play in communicating the purpose and vision of the organization, defining the work and aligning skills to it, refining how the work is done in a constant cycle of agile experimentation, providing resources and support, and helping workers cultivate an ever-changing portfolio of in-demand skills. However, in some organizations, many of these critical capabilities are diffused through workers at all

Around 75% of executives and workers alike say skills-based pay and transparency regarding what skills are worth would be a positive development.

levels or given to some workers as part of their temporary role at that time, with the result that few, if any, managers might be needed at all. In other cases, the traditional role of the manager may evolve to look more like a project manager.

MATCHING SKILLS TO TEAMS
14% of HR executives say they're matching skills to teams to create optimal team compositions to a significant extent, and 84% say they're doing so at least to some extent.
Case in point: IBM built an AI tool to suggest optimal sales teams using skills and other attributes of people, predicting win probability based on team formation.[21]

Build a "skills hub": The engine of the skills-based organization

Organizations that opt for a skills-based model may wonder how to operationalize it. A crucial engine that powers this model is a centralized "skills hub," with the following components:

A shared skills-based talent philosophy

To move from jobs to skills as the organizing principle of work and the workforce, organizations will need a shared approach regarding the value and prioritization of skills as the connecting thread of talent management, and how they'll inform all workforce decisions. As one Dutch communications company embarked on its transformational journey to become a skills-based organization, for example, it first defined its skills-based talent philosophy.[22]

The good news? Sixty-three percent of business and HR executives already say their organization's business and HR executives are aligned on the importance of skills in making decisions about work and the workforce.

Clear and established governance

Who will own the transformation to a skills-based organization? Organizations will need a clear understanding of skills "ownership" across the enterprise, along with the structures and processes to enable adoption and drive change management efforts. Sixty-four percent of organizations say the HR function currently owns the transformation.

But transforming the very fabric of the way work is done goes beyond HR, requiring cross-functional governance and buy-in. For example, finance will need to change the way it values work so that HR can set compensation levels, procurement will need

to assess and deploy skills when hiring freelancers, and strategy and operations will need to think differently about how to structure and organize work. Ninety percent of business and HR executives say moving to a skills-based organization will require a transformation for all functions and leaders, not just HR.

For HR in particular, this will be a massive transformation: 72% of business and HR executives agree that the role of HR will move away from managing employment to orchestrating work.

A common language for skills

If skills are to become the lingua franca of work and the workforce, organizations need to create a common language and framework for skills. Yet only 10% of HR executives say they effectively classify and organize skills into a skills taxonomy or framework—although nearly all (85%) have some efforts underway.

Strong data and technology enablers

New developments in technology make the skills-based organization possible for the first time. Technologies span the gamut, including AI-powered skills assessment and inference; the matching of skills to work, career opportunities, teams, and learning; the sensing of internal and external skills data to inform workforce planning or skills benchmarking; and managing skill badges, portable skills passports, or stackable credentials. On the work side, AI can now sense what work people really do to create dynamic "work" charts or organizational network analyses instead of "org charts" based on jobs.

Yet organizations still feel they have quite a bit of work to do to take full advantage of such technologies (figure 5). Some organizations don't even know what skills their workforce possesses. And if you're going to be making sensitive decisions about people related to their promotions, pay, or deployment to work based on their skills, then the skills data needs to be verified and valid. Many organizations continue to rely on workers self-reporting their skills and proficiency levels (figure 6).

Obstacles, challenges, and the future of skills-based organizations

Today, the technology to enable the transformation to a skills-based organization is there—or quickly catching up. It's the organizations that are lagging behind, hindered by entrenched mindsets about what it means to manage talent and work, and be a worker. When asked to name the top three barriers to transforming into a skills-based organization, business and HR executives cited technology last. By far the biggest barrier? Legacy mindsets and practices (figure 7).

FIG 5: How organizations use technology to power a skills-based organization

HR executives reporting how effectively they use technology in the service of skills

Identification of the skills that the business strategy demands	63%
Skills-related technology embedded in core HR information systems	63%
Documentation of the full range of each employee's skills and capabilities	57%
Documentation of the skills and capabilities of an organization's off-balance-sheet workers	54%
Stand-alone, AI-driven skills technologies	49%
Skills analytics	45%
A single source of skills data across the entire workforce	33%

Source: Deloitte skills-based organization survey, May–June 2022.

FIG 6: How organizations understand and verify the skills of their workforce

48%
of business and HR executives
are confident that the human capabilities they have documented on their workforce are verified and valid

39%
of workers
strongly agree they have a full understanding of their skills and capabilities

68%
of business and HR executives
are confident that the hard skills they have documented on their workforce are verified and valid

29%
of workers
strongly agree they have a full understanding of the skills and capabilities of their coworkers

How organizations document and validate their workers' skills and capabilities

Credentials	58%
Peer or manager feedback, assessments, or endorsements of skills	55%
Digital assessment tools	46%
Training courses completed	45%
Workers self-reporting their skills and/or proficiency levels	42%
AI inferring skills by analyzing workers' daily behaviors and performance in the flow of work	26%
Auto-populating skills from web portals such as LinkedIn	24%
AI inferring skills from the worker's current job	22%

Source: Deloitte skills-based organization survey, May–June 2022.

Q: "What are the top three barriers you observe in transforming into a skills-based organization?"

Barrier	Percentage
Legacy mindsets and practices	46%
Difficulty keeping up with changing skills needed by the business	32%
Compensation practices restricting us from rewarding people for the skills they possess or develop	32%
Inability to move skills to business priorities	29%
Complexity and difficulty of managing skills-based practices	28%
Lack of common definition or taxonomy of skills	26%
Insufficient skills data	20%
Inability to evaluate performance based on skills	20%
Recruiters or hiring managers not knowing how to source or evaluate skills	18%
Lack of effective skills-related technology	18%

Source: Deloitte skills-based organization survey, May–June 2022.

This is not an easy challenge to overcome. And as skills-based organizations mature, they'll continue to raise many questions and challenges that still need to be solved, including the following.

Managing a portfolio of different types of work arrangements with fairness and equity

When the traditional fixed job is no longer the sole organizing construct for work, and there is far greater variety in types of work, people's work and employment experiences will vary tremendously from person to person. Many organizations may establish a multipronged approach, with some workers in traditional, narrowly defined jobs; others in more broadly defined roles oriented toward achieving outcomes; and still others performing work in talent marketplaces through projects and tasks, with potentially different ways to deploy, pay, and promote people. Not only can this add complexity to existing talent processes but it may also lead some workers to question fairness when one worker receives an altogether different experience than another.

In focusing on their worker experience, organizations will need to be careful not to confuse fairness with sameness. When people are treated the same, differences may be ignored. But when they're treated equitably—with transparent and consistent standards based on a particular type of work arrangement and set of skills-based talent practices—then differences are recognized, celebrated, and harnessed. With this approach, equity is achieved by providing people with fair access, opportunity, resources, and the power to thrive. This essentially human view is critical to the new world of work.

With a consistent framework for varied types of work arrangements put in place, organizations can avoid making individual side deals, where only some workers get to experience varied work relationships beyond the job. The trouble with these individually negotiated arrangements between manager and employee is that they're difficult to control, scale, or manage consistently or fairly.

Overindexing on skills

While we have seen why skills are important to make decisions about work and the workforce, organizations will be in danger if they focus solely on skills. According to Julie Dervin, former head of global learning and development at global food company Cargill: "I think it's important, as you evolve to being a skills-based organization, to make sure that other important aspects aren't lost. When all is said and done, we're talking about our people—humans with varying interests, motivations, mindsets, lived experiences—and skills are just one part of the human performance equation."[23]

As part of an effort to improve diversity, equity, and inclusion, digital agency Forum One updated its skills matrix to go beyond skills to also include worker interests, preferences, and professional development goals. The goal? To provide a holistic understanding of a person's strengths and growth trajectory.[24]

Responsible use of workforce data and AI

When sophisticated technologies such as AI collect more and more data on workers, not only on skills but also other dimensions, do workers find it intrusive? Not necessarily: Our research suggests that workers embrace organizations using new sources of data and AI to better understand them as full human beings, and would prefer this way of understanding them than understanding them solely as jobholders (figure 8).

For example, 79% of workers are completely open to their organizations collecting data on their demonstrated skills and capabilities, and as many as 70% are open to data collected on their potential abilities. Even the most sensitive ways of collecting data—using AI to passively mine worker data as they do their tasks—are seen more positively than negatively, with 53% percent of workers and 44% of business and HR executives viewing these as a positive development, compared with only 20% of workers and 28% of executives viewing them as negative.

But to maintain this trust, organizations need to harness the power of new sources of data and AI responsibly, including monitoring AI for bias. Workers are open to sharing their data, but many want to do so only if their employer clearly tells them how their data is collected and used, and the benefits that will ensue: new opportunities for growth and development; fairer and more meritocratic hiring, pay, or promotion decisions; and more customized work experiences (figure 9).

Making skills data portable and interoperable beyond the boundary of the organization

When skills rather than jobs become the currency of work and the workforce, organizations could evolve so that the most highly skilled workers could become more easily discovered and better rewarded. Sixty-one percent of workers and 60% of business and HR executives say this would be a positive development, with only 9% of workers and 11% of executives saying it would be negative.

But for the entire labor market to become one that rewards ability more than pedigree, verified skills data has to be portable across organizations. Today, most data on the skills of workers, especially employer-verified data, sits inside a company. But when workers leave, all their verified records get left behind, hindering their ability to easily move between permanent roles, projects, or gigs across organizations. Organizations that hire these workers have to rely on self-reported skills, which may not be reliable, or reassess the workers' skills on their own.

Some organizations are trying to find a solution. For example, the Navy, a component of the US Department of Defense, recently launched a platform called MilGears that enables service members and veterans to capture all the skills acquired through training, education, and on-the-job experience during their entire military career in a learning and experience record. This record is linked to the O*NET framework, which links to jobs across the US economy. Defense and Navy service members can identify which validated credentials gained through their military experience apply directly to a target civilian occupation, and determine what skill gaps still exist and how best to address them.[25]

What could help is combining a common language (taxonomy) of skills that spans organizations with portable and credible skills data, ultimately creating global skills passports for each worker. Organizations can also share their overall skills supply and demand data to help educational institutions, workers, and the government better understand at an industry level what skills should be developed.

Balancing worker autonomy and choice with organizational needs

If work is unbound from jobs, and workers are given more opportunities to exercise choice and autonomy in how they apply their skills, what happens if the work that workers want to do no longer aligns with the work that the organization needs them to do?

The rise of internal talent marketplaces so far has been primarily based on workers exercising discretion as to which projects and tasks they want to take on in addition to their "day job," once they negotiate with the manager offering the work. Rarely is a person's performance on this type of work ever formally evaluated, recognized, or rewarded; only 15% of business and HR executives say they capture this data.

If work becomes completely fractionalized into projects and tasks, will some organizations decide to match workers' skills without the workers' agreement, either via algorithms or at the discretion of managers? Surprisingly, 54% of workers say this would be a positive development—perhaps because they would prefer this to being confined to a job entirely—yet only 33% of business and HR executives agree.

Organizations will need to be careful that work doesn't get parceled out only in a top-down or mechanistic fashion, driven by opaque and potentially biased algorithms. Leaders seem ready to cede this type of control: 70% of business and HR executives say providing workers with more autonomy, agency, and choice in the work to which they apply their skills, with subsequently less centralized control by the organization, would be a positive development, and only 4% say it would be a negative one. Ceding control like this can yield big gains in innovation and growth (think of Google's engineers who developed Gmail in their 20% time allotted to letting them apply their skills to solving problems they think are worth tackling),[26] but, as with most organizational transformations, it's a massive culture shift that will require ongoing effort.

Seventy-six percent of workers say they want their employer-verified skills and work-related data to be portable, enabling them to share the data with others once they leave.

Fifty-five percent of executives are open to it.

FIG 8: Workers and executives want a variety of data on, and beyond, skills to make decisions on work and the workforce

Demonstrated skills and capabilities

79%
of workers

*are completely open to having this data
collected on them; 14% say it depends*

60%
of workers

*want this as a criteria to
match them to work*

50%
of executives

*say this data would be very valuable, and
34% say it would be somewhat valuable*

Teaming and collaboration style and preferences

70%
of workers

*are completely open to having this data
collected on them; 22% say it depends*

38%
of workers

*want this as a criteria to
match them to work*

50%
of executives

*say this data would be very valuable, and
45% say it would be somewhat valuable*

Interests and passions

59%
of workers

*are completely open to having this data
collected on them; 27% say it depends*

35%
of workers

*want this as a criteria to
match them to work*

24%
of executives

*say this data would be very valuable, and
53% say it would be somewhat valuable*

Location, schedule, and flexibility preferences

70%
of workers

*are completely open to having this data
collected on them; 20% say it depends*

40%
of workers

*want this as a criteria to
match them to work*

53%
of executives

*say this data would be very valuable, and
42% say it would be somewhat valuable*

Source: Deloitte skills-based organization survey, May–June 2022.

Taking the first steps toward the skills-based organization

In our experience working with organizations embarking on this journey, they typically take one of three different approaches.

1. **Start with a particular talent practice and transform it** to be based more on skills and less on jobs, and then continue to either similarly transform another practice or determine that they have to create a skills "hub" before realizing the transformation.

   For example, Cargill started by transforming learning and development to be based more on skills and less on suggesting learning and development opportunities based on people's jobs. As it proceeded to also adopt skills-based hiring and a skills-based talent marketplace, it realized it had core skills hub work to do to realize the vision. It embarked on an initiative to develop an enterprisewide skills framework, using skills as a unit of measurement to better acquire, manage, and develop its people going forward.[27]

2. **Start with creating a centralized "skills hub"** before expanding out to skills-based talent practices. To do this, they often start by inventorying or creating a language for skills or developing a skills-based talent philosophy.

   One life sciences organization focused on designing a skills-based organizational philosophy and value proposition, and then developed a skill-mapping playbook that enabled it to tag its skills ontology and proficiency levels to learning objects. This enabled the organization to start on transforming learning with a skills-based approach, with an ultimate goal of creating more personalized development opportunities for its employees. It also identified the "hot" skills (skills in high demand but short supply) upon which to focus its efforts. Ultimately, the organization hopes to incorporate skills into many aspects of the talent life cycle in the future, from talent sourcing to compensation.[28]

3. **Start with the work**, either with an internal talent marketplace that lets some work live as projects and tasks outside of the job, or as broadened jobs.

FIG 9: Workers are willing to share their data if they get benefits in exchange

Q: "What would make you more open to letting your employer collect your data?" *

My employer would clearly tell me how my data is collected and used, and the benefits that will be achieved	50%
My data would open new opportunities for my growth and development, but it wouldn't influence hiring, deployment, performance assessment, pay, or promotions	44%
My employer would use only data that is objective and verified to inform hiring, pay, or promotion decisions, with the intent of making them fairer and more meritocratic	43%
New work opportunities such as roles, assignments, teams, or projects would be suggested to me based on my data	41%
I would have control about what data is shared and with whom	41%
I could validate and correct my data as needed	39%
I could have more customized work experiences based on my data	31%

* Asked of workers who said "it depends" when asked if they would be open to having their employer capture data on them.
Source: Deloitte skills-based organization survey, May–June 2022.

Trane (formerly Ingersoll Rand) started with broadening the job, doing away with highly specialized jobs spread across 28 distinct job grades. Instead, it created broader job "clusters" that share similar broadly defined work responsibilities and outcomes, spread across seven job grades, and narrowed down to only 800 job titles with a set of skills for each job. This allowed the organization to effectively build a skills-based development and career strategy, enabling employees to assess their career goals and current skills, find a future role, and create a development plan for growth. Using the platform Fuel50, the company now has a career assessment, matching, and development system—which the organization believes has increased employee engagement and retention by double digits.[29]

Whatever the archetypal journey chosen, here are some fundamental practices to consider.

Think evolution, not revolution

Few organizations will be willing to abandon jobs and hierarchies entirely. But there might be certain spots in your organization where making the transition to a skills-based model, either fully or partially, will yield significant benefits. Consider places where skills are changing so fast that talent practices can't keep pace, where you could use diverse thinking and skill sets to solve problems or to innovate, or where you're spending time determining what automation or humans should do but never seem to be done. Most organizations start small and build out from there, with the majority starting with the transformation of a single talent practice rather than starting with the bigger challenge of reorganizing work beyond the job.

### Always lead with the 'why'

"Start by defining the 'why,' which is your value proposition and your business case to support this multiyear journey," says Dervin about her experience at Cargill. "It involves a lot of change at a very systemic level in people processes and the way things are done."

For Cargill, this "why" included the ability to create greater speed and agility, including speed to market; better respond to customers with the right skills accessible when the business needs them; provide more opportunities for workers to grow through unique career experiences by applying their skills to different areas within Cargill; reduce variable costs by letting employees take on new projects and tasks instead of paying contractors or off-balance-sheet talent; and better utilize the workforce by unlocking untapped capacity.[30]

Find your pain point or lowest-hanging fruit

When starting with a skills-based practice, pick an area where the business case is the biggest, based on your organization's specific needs and pain points. Many organizations, for example, are now emphasizing the value of skills, not just degrees or experience, when hiring—both in response to a tight labor market, and to improve equity, diversity, and workplace culture.[31] Alternatively, start with those practices that have the clearest connection with skills today, such as learning and development or talent acquisition, or that can use mature technologies that are easily available as upgrades to existing HR information systems such as talent marketplaces.

By moving to a skills-based approach, leading organizations can pivot from a traditional model aimed at scalable efficiency that grew out of our industrial past to one that is far more suited to a world in which speed, agility, and innovation rule the day— and in which people expect more meaning, choice, growth, and autonomy at work. ●
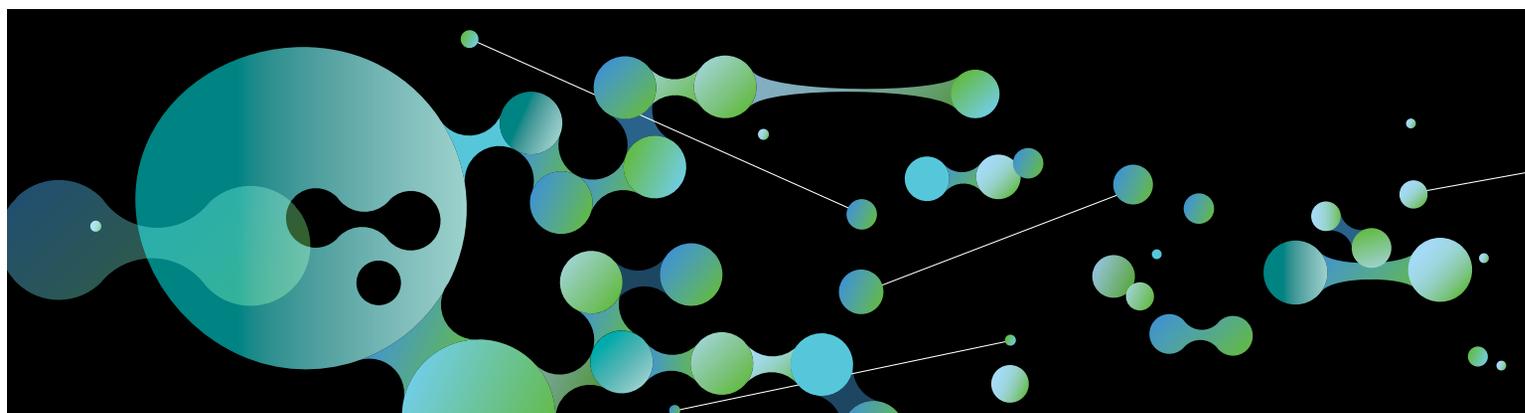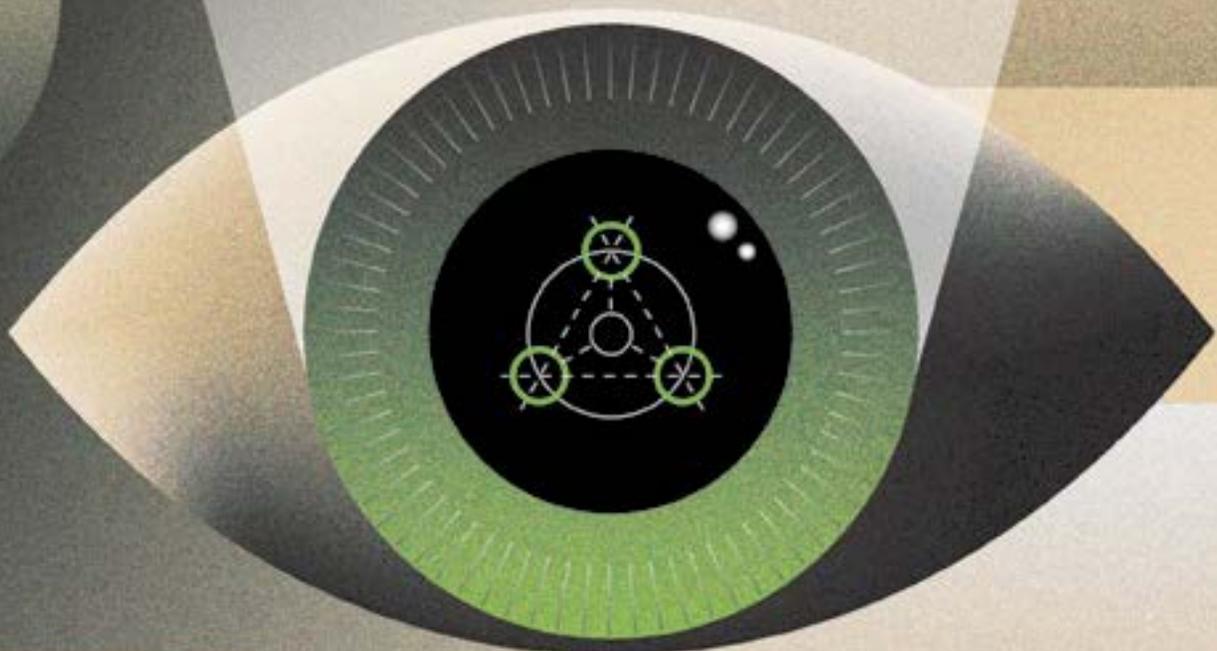
Unleashing value from digital transformation

Our analysis of 10 years of financial disclosures from more than 4,000 global organizations reveals where digital transformation actions can increase enterprise value—and, just as importantly, where they can erode it.

By **Tim Paul Smith, Tim Bottke, Gregory Dost,** *and* **Diana Kearns-Manolatos** *Illustrations by* **Jim Slatton**

Digital transformation is on everyone's agenda. But the hardest part of any transformation is not deciding whether to embark on it; it's understanding whether you're seeing distinctive returns on your investment. Organizations often struggle to determine which actions drive the most impact and which investments yield the most enterprise value.

We examined which actions can increase the odds of transformation success, and we identified the actions that drive value: those that, when combined, can create outsized returns on tech investments *and* those that, when done in isolation, can destroy it. According to our analysis, the right combination of digital transformation actions can unlock as much as US$1.25 trillion in

additional market capitalization across all Fortune 500 companies. But the wrong combinations can erode market value, putting more than US$1.5 trillion at risk. The takeaway: Getting digital transformation right takes more than just ambition and bold investments.

The power of being intentional in both words and actions

We applied data science to a decade of public shareholder filings, investor relations statements, and financial data. This covered more than three million pages of financial disclosures for 4,651

US and global firms listed on the New York Stock Exchange. The goal was to assess what impact, if any, digital transformation initiatives have on enterprise value, as determined by market capitalization.

We analyzed these financial disclosures to ascertain how companies talked about their digital transformation actions—namely, how they spoke to (1) implementing a digital strategy; (2) their discrete, strategically aligned technology investments; and (3) their efforts to prepare their people and processes for digital transformation. Since these investor communications are governed by SEC regulations, they serve as a proxy for digital transformation intentions and the actions taken by the enterprise.

We applied natural language processing to scan the documents for keywords related to these actions.[1] We then used a series of financial models[2] to look for correlations[3] between how the companies explained their digital transformation plans to investors and other stakeholders, and what valuations were assigned to the companies.

The findings

We found that the link between strategy and action is *the* determining factor in a company's ability to derive the most value from its digital transformation. Research shows these actions can increase enterprise value if executed with intent, yet not all actions are created equal.

Clarifying the actions

Our research began with a frequency analysis of terms commonly used to set strategies, enable technologies, and mobilize the enterprise for digital change. Once this data set was formed, we then pivoted to the relationships between select groups. These relationships were analyzed via clustering terms into various actions (figure 1).

These are the focal points most often discussed with our clients undergoing digital transformation and comprise a useful frame to understand how enterprises drive their efforts. In practical terms, they are defined as:

- **Digital strategy:** The strategic possibilities created by digital transformation. Examples of digital strategy terms include new digital capabilities, new markets, and new products—essentially, terms that describe efforts to enable a larger strategy, sometimes spanning multiple business units.
- **Tech aligned to strategy:** The technologies that come with digital transformation. When we say, "aligned to strategy," we mean these technologies are being harnessed to achieve some discrete goal and bring the strategy to life.
- **Digital change:** The organization's ability to adapt to and adopt new processes, resources, and ways of working. It refers to the more qualitative, human characteristics necessary for a transformation, encapsulating a multitude of talent domains.

FIG 1: These three actions are defined using the following keywords associated with digital transformation

Change capability	Digital	Enterprise strategy	Technology
Operating process, agile, agility, operating efficiency, capacity to change, workforce transformation, etc.	Digital strategy, digital capabilities, digital innovation, digital transformation, digitally enabled, digitize, digitization, digital ecosystem, emerging technology, etc.	New segment, new portfolio, competitive positioning, product innovation, business transformation, new products, new markets, etc.	Digital reality, big data, artificial intelligence, machine learning, cloud, RPA, cloud-native, Internet of Things, IaaS, PaaS, SaaS, XaaS, digital twin, edge technology, blockchain, cybersecurity, etc.

Action 1: Digital strategy

Focuses on statements that speak about the overall organizational strategy next to the broadest digital terms

Action 2: Tech aligned to strategy

Focuses on statements that speak about the overall organizational strategy next to more specific individual technologies

Action 3: Digital change capability

Focuses on statements that speak about the broader digital terms next to terms indicative of organizational change

Source: Deloitte analysis.

DIGITAL STRATEGY · TECH ALIGNED TO STRATEGY

We launched a **new product** as part of our **digitization** effort. It uses **AI** to make our customer experience more personalized based on **crowdsourced** information on how users engage with the app.

DIGITAL CHANGE CAPABILITY

DIGITAL STRATEGY · TECH ALIGNED TO STRATEGY

As part of our **digital transformation** initiative, our enterprise has invested in **IoT** to increase efficiency. We expect it will streamline supply chain **operations** and allow us to improve our **market position.**

DIGITAL CHANGE CAPABILITY

DIGITAL STRATEGY · TECH ALIGNED TO STRATEGY

Digitization is a high priority for our **business transformation.** We plan to continue investing in **cloud** technologies to create greater **efficiency** and agility for our enterprise.

DIGITAL CHANGE CAPABILITY

How the individual actions drive value

Each of these actions was correlated to market capitalization. We examined the impacts of each individually and in various combinations to understand which combinations could yield the greatest value—and which could yield the least. Several distinct patterns emerged:

Digital strategy

When a company articulated its digital strategy in its financial disclosures, we observed a significant positive impact on valuation. This is where many organizations start their digital transformation value journey, though only 44% have a high maturity related to this action.[4] We hypothesize that the market understands the impact of "digital" on all companies regardless of industry and gives management credit for taking action to modernize the business in support of a broader strategy. Perhaps evidence of action, no matter how general, demonstrates an organization's prioritization of digital goals.

Technology aligned to strategy

When we found evidence of technology aligned to strategy in companies' financial disclosures, the valuation impact was ***two times higher*** than that of digital strategy. We believe the higher valuation is due to the specificity of technologies mentioned (figure 1). This likely gives stakeholders a more tangible sense of strategies employed, and a way to keep closer tabs on where the enterprise is placing its capital bets—which, for many, can be massive. Many of these technologies are also viewed as emerging or leading-edge and can reflect a forward-looking approach to improved performance.

Digital change

Despite the positive news around the previous two actions, our research uncovered a cautionary tale for digital change. When analyzing disclosures that articulated change programs in general terms or without reference to specific digital actions, we found that market capitalization eroded. When observed on its own, digital change was nearly ***three times less impactful*** than digital strategy and put existing market cap at risk of erosion.

We believe this occurs for two reasons. First, change for change's sake, without purpose or any ties to a broader strategy, is insufficient. It lacks the specificity to mobilize stakeholders and rally them around shared interests. Second, many stakeholders understand that change can yield a high degree of uncertainty. Without a specific plan, stakeholders discount management's ability to move the organization forward.

Confidence is lost, momentum is impaired, and leadership could be viewed as chasing the latest management fad.

Consider Agile adoption over the years. Solving for a scaled Agile organization and achieving enterprise agility[5] is certainly complex. It involves upskilling talent, building the right product teams, and instilling a new organizational mindset. But it goes well beyond that. To realize the value of Agile—the products enabled, the velocity expected, and the customer experience impacted—it all has to tie back to the enterprise strategy. If an Agile enterprise is built without these in mind, the enterprise is simply adopting a management trend and not taking full advantage of Agile as a solution. Our research suggests this is a path to value destruction.

Individual actions: The upshot

According to our analysis, if you can only do one thing, focus your efforts on technologies aligned to strategy because it drives superior market value. And the more specific you can be with stakeholders, the more you're rewarded in the market. There's power in being vocal about your actions with investors and other stakeholders. Think about investor relations as a possibly overlooked tool in your arsenal—a way to signal your confidence in the plans you have made and the actions you intend to take, and to demonstrate how strongly digital transformation figures into the enterprise's plans.

How combined actions shape value

After we analyzed each of the actions individually, we looked for combinations that could unlock (or destroy) even more value. The results are compelling: Specific combinations of actions can yield up to a 5% increase in market capitalization, while other combinations can lead to significant value erosion risks of as much as 9%.

Transformers rejoice: Value is there if you execute with intention

The most positive combination is the digital trifecta: the presence of an articulated digital strategy, where specific technology investments are aligned and set, and the organization is mobilized and ready to manage the change. This equates to a value impact *1.2 times* that of digital strategy applied individually, and nearly *3.5 times* that of change capability on its own.

While it would be easy to dismiss the trifecta catalyst as conventional wisdom, the evidence shows otherwise.[6] Only 34% of Fortune 500 companies we analyzed showed signs of being strategic about their technology investments in their financial disclosures. It's possible that the remainder are making important investments but have lost the plot line, are reluctant to disclose "too much" to competitors, or don't know how best to convey the impact of those investments.

Transformers beware: Where you have the will, make sure you have the way

Our analysis revealed that change capability is the wild card: Its presence can make or break value for the enterprise. On its own, it's a value eroder. As part of the trifecta, it's a value catalyst. But when it's entirely absent, we observed the worst outcome of all.

We found evidence that the combination of digital strategy and technology-aligned investments *without* change capability results in a significant erosion of enterprise value. The losses are *10 times greater* than those seen with the other value destroyer: digital change on its own. In fact, it's the most negative combination, posing a 9% value erosion risk that could cost Fortune 500 firms US$1.5 trillion in value.[7]

But how can that be? How can the same actions that create an outsized return also destroy value? Digital transformations require buy-in at the onset, commitment to sustain, and

> There's power in being vocal about your actions with investors and other stakeholders.

WHAT IMPACT DO INDIVIDUAL TECHNOLOGIES HAVE ON MARKET CAP?

While our analysis suggests that discrete technology investments aligned to strategy can drive twice the competitive market capitalization than simply having a digital strategy, certain technologies are quicker to yield value than others.

Cloud was first out of the gate to spark digital transformation. It's also a natural fit for our analysis, as it serves a forcing function from the strategy to the operating model changes that come in adoption. AI and cyber increase value, though over longer horizons. As adoption accelerates, we expect the same value impacts. Cloud is the leading indicator that foundational tech will drive returns if wielded intentionally.

HOW DO HIGH-PERFORMING ENTERPRISES FARE?

Deloitte has researched the impact of digital transformation using other value measures and found similarly positive results. Our Exponential Enterprise index of 500 large-cap US enterprises shows that the "leaders" (Exponential Enterprises), with both a high capacity for change and an ability to win had, on average, 176% higher forward price to earnings than the lowest performers in their industry.[8]

We ran our financial model on this subgroup of highest-performing organizations[9] and found that, on average, Exponential Enterprises garner *12.5 times* the market cap increases than other organizations. However, while they see higher highs for actions that increase market cap than other organizations, they also are at greater risk of suffering from lower lows—and shouldn't take their privileged position for granted.

Our findings were largely consistent across all industries we studied—consumer; energy, resources, and industrials; financial services; government and public services; life sciences and health care; and technology, media, and telecommunications—and for organizations of all sizes, with a few variations:

- **Large-cap organizations (US$10 billion or more)** benefited more from technology aligned to strategy than smaller organizations.

- **Small- to mid-cap organizations (less than US$10 billion)** benefited more from digital strategy than larger organizations.

- **Financial services** doesn't see a positive impact on market cap related to a digital strategy until other factors are added. Instead, for financial services firms that discussed digital strategy on its own in their financial disclosures, we saw a correlation with a loss in market cap. In addition, the combination of digital strategy and technology aligned to strategy is a highly positive scenario for financial services firms, especially compared with other industries.

- **Energy, resources, and industrials** doesn't see positive impacts on market cap from technology aligned to strategy until other factors are added. It's also the only industry cluster for which we saw statistical significance for a combination that wasn't significant for any other industry: tech aligned to strategy enabled by a change capability. For organizations in this industry, this new combination showed a highly positive correlation to market cap.

- Tech aligned to strategy holds its significance when compared with companies that experienced **M&A activity.**[10]

- **Dividend-paying companies,**[11] compared with nondividend payers, saw minimal correlation for the individual factors and combinations, likely given the fact that the payment of dividends itself is highly correlated with increased market cap.

- **MIT Culture Index** high-scoring innovation companies saw a positive market cap correlation, suggesting that being a highly innovative company could have a positive impact on market cap.[12]

organizational incentives to match. If you lack the capability to adopt and use those technologies or to bring the organization along on the change, you've wasted significant time, attention, and capital. Digital transformation, in this instance, becomes a distraction for management and top talent. Stakeholders are savvy enough to understand how hard transformational change can be and, as a result, significantly discount the value of the enterprise.

To combat the risks, how and when the organization directs its change capability can be a difference-maker. While it has a negative relationship to market cap on its own, when combined with one or two of the other actions, it's an essential value catalyst. It turns the most negative scenario into the most positive one.

Capitalizing on it all

Our research shows that the power of digital strategy, brought to life by specific technology investments, and underpinned by change capabilities, can meaningfully shift a company's valuation (figure 2).

This is easier said than done, as unlocking each takes significant time, effort, and expertise. So for the companies that aren't leading in this today, what can executives do to capitalize? Our research findings point to four actions:

1. **Be deliberate.** When we analyzed approximately three million pages of financial disclosures, we didn't look simply at the coexistence of digital strategy, technology aligned to strategy, and change capability. Rather, we examined both the coexistence and the proximity of those factors, and it's the proximity of the factors that shows which companies are linking these concepts most deliberately. Proximity also made the difference in distinguishing companies that tend to outperform their peers in market valuation. Put simply, as you take deliberate action to advance your digital strategy, as you make the choice to invest in certain technologies, and as you evolve your organization's change capability, make certain that you understand how those three factors are mutually enabling and reinforcing.[13] Absent that alignment, your investments may not deliver the returns they could be producing.

2. **Communicate with purpose.** Our analysis is rooted not only in what these statements say companies are doing, but also in how companies communicate with the market about their choices. Undoubtedly, the vast majority of organizations today are making some form of technology investment to improve how they operate and how they go to market, though nearly two-thirds are unable to link their technology investments to their strategy. Nor are they able to talk about the relationship between the two. Words without action can erode value. Actions without words also limit value potential. Take stock of where you're investing, craft a thoughtful narrative, and communicate accordingly.

3. **Get close to the technology so you can get specific.** Digital strategy is valuable, but technology aligned to strategy is twice as valuable. With the latter, companies that see added benefit are getting very specific about the technology investments they make, and they're demonstrating how those technology investments further their enterprise strategy. It's not enough for executives to approve and fund

technology; they also need to have a fundamental understanding of the technology. Be sure to invest the time—and invest in the relationships—necessary to get close to the technology: what it is, how it works, how it's architected, and why it matters. And be certain that this understanding carries through into strategy discussions.

4. **Prepare, prepare, prepare.** Any approach to digital transformation is suboptimal if it isn't underpinned by change capabilities. And there's only so much a company can do to fast-track. Change capability means bringing the right skill sets and culture, as well as agility. Unlocking all of this takes time, and the benefit goes to those who start earlier. Start now.

Succeeding with digital transformation requires assembling the right pieces in a multivariate puzzle. We examined multiple approaches here, but as we step back and think about the main insight from our analysis, it's ultimately that intentionality matters.

FIG 2: How digital transformation factors correlate to market cap

**Digital strategy +
tech aligned to strategy +
digital change capability**

MOST POSITIVE COMBINATION ("THE TRIFECTA")
All three factors are present, and the organization is fully aligned for as much as a 5% market cap lift.

Tech aligned to strategy only +2x

Digital strategy only

Digital change capability only -3x

MOST NEGATIVE COMBINATION
Digital strategy and tech investments are aligned, but change capability is not present, risking as much as a 9% market cap erosion.

**Digital strategy +
tech aligned to strategy**

Positive correlation

Negative correlation

Correlation to market cap

Source: Deloitte analysis.

Digital transformation is a continuous effort[14] that extends well beyond one single technology, platform, or skill set. It's the fabric for enterprise survival in the face of continuous disruption. Getting it right means crafting a strategy that places purposeful digital bets. Getting it right means allocating your capital to new technology that can power your strategic initiatives. Getting it right means mobilizing your organization and adopting a change mindset with no defined horizon (or a horizon that could go well beyond your tenure). And getting it right means explaining to stakeholders that your digital transformation actions are intentionally aimed at increasing the odds of your organization's ongoing success. ●
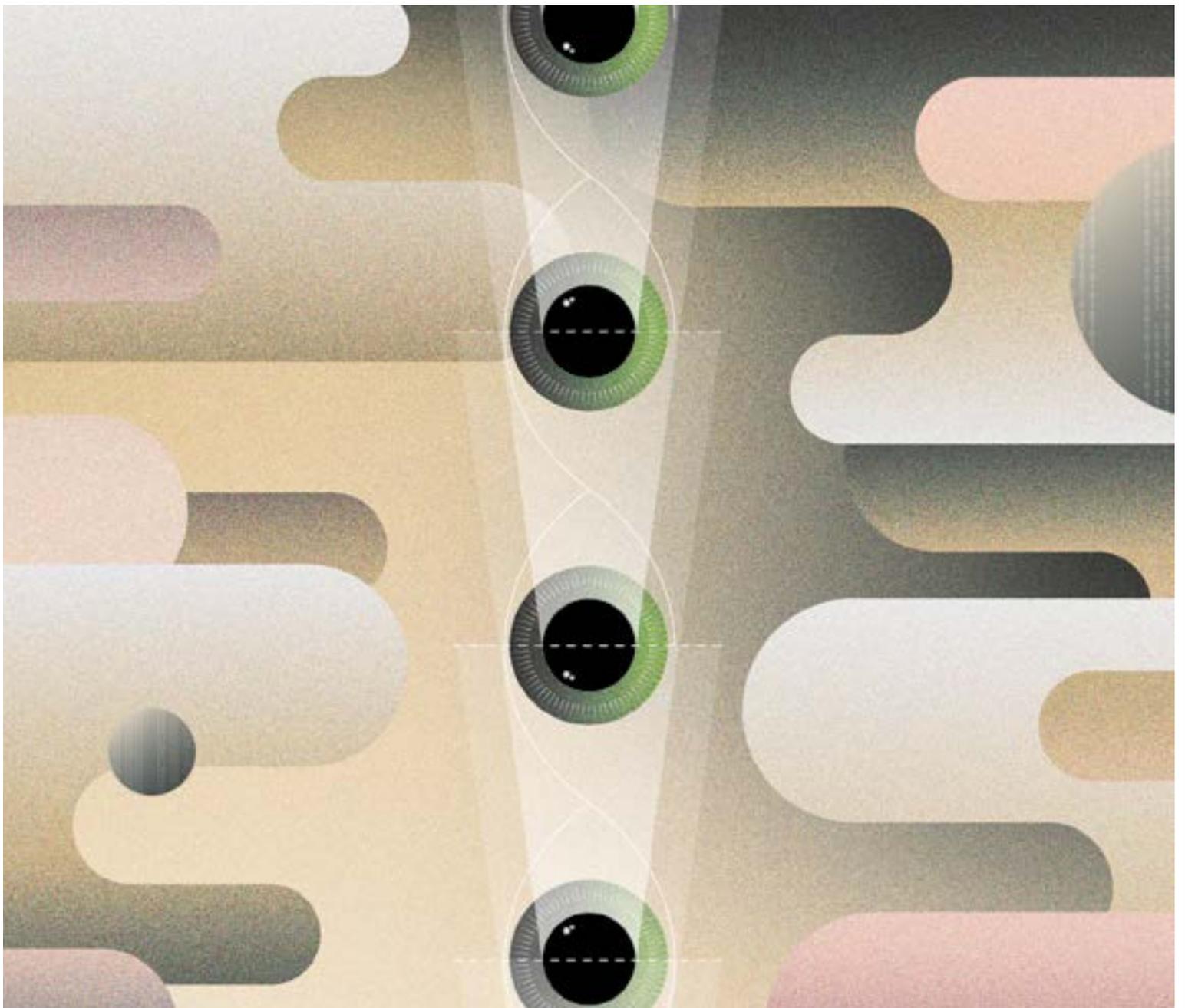
ABOUT THE RESEARCH

For our data science analysis, we examined 10 years[15] of business and financial data[16] from 10-K filings with the US Securities and Exchange Commission covering US and global[17] companies listed on the New York Stock Exchange as of April 2022, which totaled 4,651 organizations.[18]

We removed high- and low-market-cap outliers[19] that could skew results, which left more than three million pages across 18,039 filings[20] for organizations with US$7.5 million to US$3.5 trillion in market cap. Our method and data set were inspired by research that our coauthor Tim Bottke conducted for his book, *Digital Transformation Payday*.[21]

We chose to use these particular documents because information listed in financial findings is governed by regulatory requirements: You can't say something in a 10-K statement if you're not doing it. Thus, it enables us to begin to correlate action and outcomes. Specifically, we applied natural language processing to scan the documents and look at how those organizations talk about their digital strategy, existing or planned technology investments aligned to their strategy, and preparedness for people and process transformation (change capability) within investor communications, management discussions, and analysis sections of their public filings.[22] These mentions—and, more specifically, the way these topics were mentioned—help give us a sense of the real-world actions that organizations are taking with respect to digital and tech investments.

Then, using a financial model,[23] we looked for correlations between these three factors and the companies' market capitalization, which helps us look beyond the direct value of technology investments (for example, did this technology yield operational savings from increased efficiency?) to their organizationwide impact.

While we acknowledge that there are some limitations to this approach—namely, that some organizations may be taking some of these actions but not highlighting them in their filings—we did find that those organizations that specified their actions in this area showed correlations with value. We hypothesize that this may be due in part to confidence: Those who are most confident in their digital actions are more apt to celebrate their impact.

A look at our US$1.25 trillion value calculation and more

Our research found organizations with digital transformations that combined digital strategy, the technology aligned to strategy, and a strong change capability have the most to gain. How much? There's no easy answer, but we ran the numbers to help guide organizations on what ultimately needs to be a very individual value journey based on what's possible, what's probable, and their potential.

The maximum path to value: What's possible?

Overall, organizations that brought together all three digital transformation actions saw as much as a 5% competitive market cap lift relative to others that didn't take these combined actions. This is not a 5% topline return for digital transformation, but rather the relative difference—versus peers—that can be gained from the trifecta combination of these three actions when comparing group A (those in this winning scenario) versus group B (all others).

To make that more tangible, we can look at an example. If group A is all Fortune 500 companies today, their total market cap is US$37 trillion. An approximate +5% differential in market cap across all 500 companies is as much as US$1.89 trillion that they could gain compared to others. When we account for organizations that may already be getting it right,[24] we see a value potential of US$1.25 trillion available to this group versus others.

A realistic value path: What's probable?

Realistically, what's optimal isn't always what's probable or what the typical organization might expect to achieve. Therefore, we dug deeper to look at what might be probable for the average organization (figure 3).[25]

Our analysis found that even if organizations set their sights low and do the minimum working toward this scenario, they could expect an approximate +0.4% average market cap lift versus peers. If all Fortune 500 companies even minimally improved relative to their peers, that approximate +0.4% lift would be, on average, US$147.8 billion. And when those that are already starting to get it right are factored in,[26] it's a US$97.5 billion value potential.

The impact that action can have: What's the potential?

Finally, to understand how mimicking the actions of a high-performing organization might impact that value potential, we ran another simulation[27] and found a probable 1% average increase versus peers. Again, if we look at the Fortune 500 companies today, their total market cap is US$37 trillion. An approximate +1% increase in market cap across all 500 companies is as much as US$370 billion. However, 34% of companies already have tech aligned to strategy. For the remaining companies, we can see a value potential of US$244 billion available relative to others.

● **Exponential Enterprise companies**   ● **Overall companies**

Digital change distribution

Digital strategy distribution

Tech aligned to strategy distribution

Data inputs

Distribution of market cap change across 2 million modeled scenarios

Correlated market cap change

+~0.4% COMPETITIVE INCREASE IN MARKET CAP ACROSS ALL FORTUNE 500 ORGANIZATIONS IS US$147.8 BILLION

+~1% COMPETITIVE INCREASE IN MARKET CAP ACROSS ALL FORTUNE 500 ORGANIZATIONS IS US$370 BILLION

Source: Deloitte analysis.
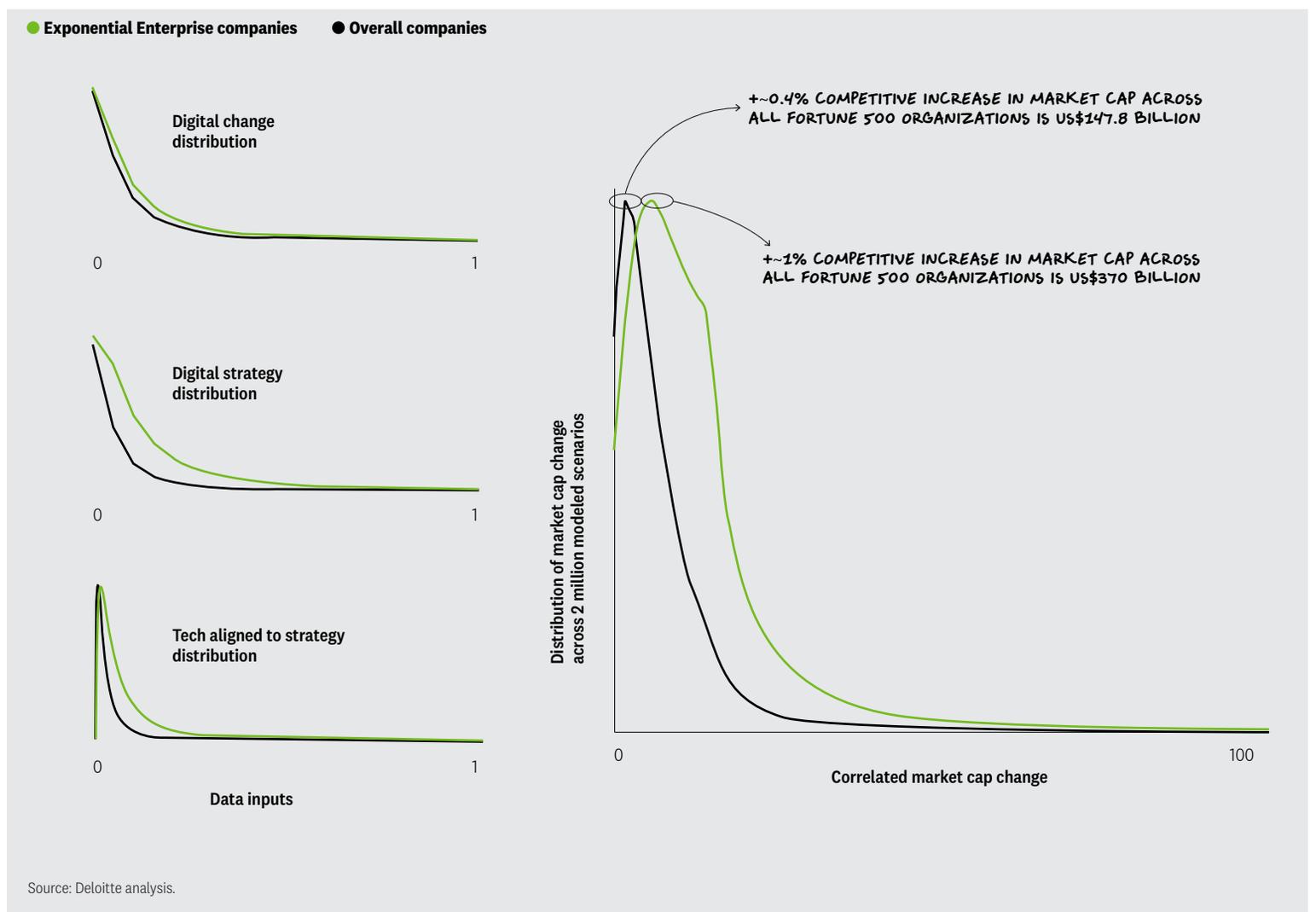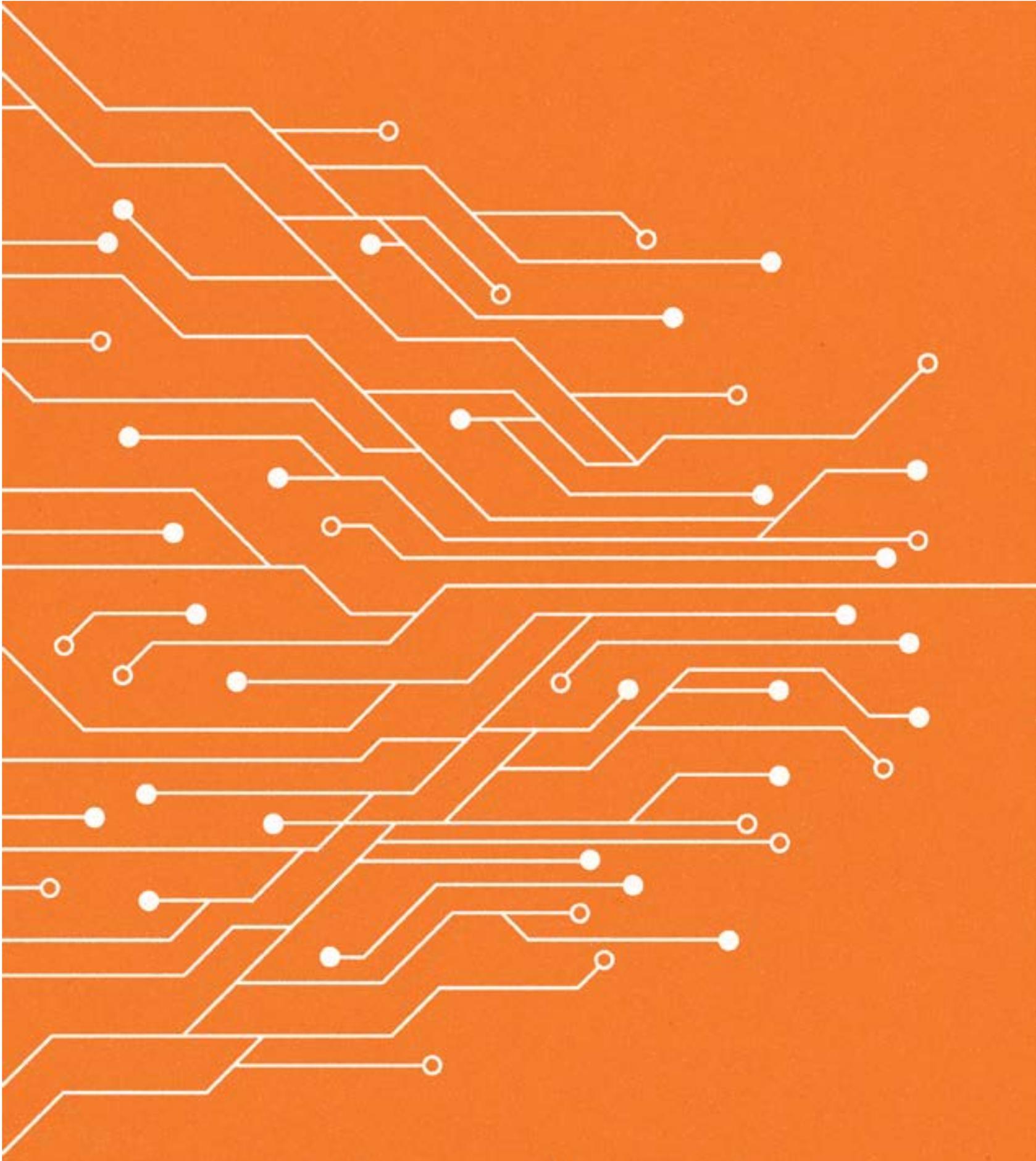
Assessing the technology deficit in the boardroom

The Deloitte Global Boardroom Program's survey of directors and corporate leaders reveals a gap between the tech stewardship that organizations need from their boards and what many boards are currently delivering.

By **William Touche, Dan Konigsburg,** *and* **Jo Iwasaki**

Illustration by **Dan Page**

Over the past few years, technology investments and deployments have expanded dramatically to help organizations compete and win market share in the digital economy, increase automation, enable remote work, implement resilient supply chain analysis and management solutions, and deploy the latest cybersecurity tools to protect operations and defend against growing cyberthreats, among other strategic priorities.[1]

To understand the degree of board engagement in technology today, the Deloitte Global Boardroom Program surveyed more than 500 directors and C-suite executives in 55 countries in early 2022. Overall, the survey revealed a gap between organizations' growing demand for more tech understanding and engagement from their boards and the level of tech leadership that's currently coming from the boardroom.

More technology = more need for board engagement

Digital transformation that was underway in many organizations has moved forward at a rate few could have predicted prepandemic.[2] And thanks to digital and advanced technologies, such as cloud and artificial intelligence, "innovations—often being advanced by the large cloud platforms—are building on each other to create business opportunities that, a few years ago, did not exist," a recent Deloitte Global article explains.[3]

Meanwhile, cyberattacks have proliferated around the world. In the United States, for example, the Identity Theft Resource Center's latest annual report revealed that 2021 was a record-breaking year for the number of compromises.[4]

Amid this rapidly advancing technology landscape, the Deloitte Global Boardroom Program's survey asked respondents about their tech plans and projects: Top future investment intentions involve enhancing data assets, using digital to improve the customer experience, and transforming cyber defense systems (figure 1).

Top challenges to boards' technology engagement

Most directors in the survey feel good about their level of engagement with tech issues: Over 80% of directors are at least somewhat confident in their ability to understand, review, and challenge the technology strategy and agenda at their organizations.

Among those respondents, nearly half say their boards rely on support from the executive/management team or an external specialist to steer the technology agenda. And 25% say either a committee or a specialist board member steers the agenda, with just 10% saying the board handles it capably on its own.

As for the 20% of directors who see room for improvement, most say their board "is wholly dependent" upon the executive team, and some believe that the board needs to develop a plan to improve its ability to provide effective engagement.

Delving deeper, however, cracks in the foundation begin to appear prominently in two areas: first, whether boards are providing enough oversight on tech matters, and second, a lack of tech fluency among board members.

**FIG 1:** Data, digital (CX), and cyber are top tech priorities

● **Board respondents**   ● **C-suite respondents**

Q: "Over the next three years, my organization plans to:"

|	Board	C-suite
Invest in our data capabilities to enhance effectiveness and decision-making	73%	81%
Improve customer experience (CX)	71%	73%
Transform our cyber defense	58%	65%
Transform the technology skills of our workforce	49%	61%
Invest in artificial intelligence and robotics to enhance productivity	47%	56%
Invest in technology tools to optimize our supply chain	43%	46%
Increase our focus on technology to accelerate the green transition	34%	33%
No major changes anticipated	2%	2%

Note: Multiple-choice question.
Source: The Deloitte Global Boardroom Program, *Digital frontier: A technology deficit in the boardroom*, 2022.

Fewer than half of executives and board members we surveyed believe their board is providing enough oversight on technology matters (figure 2). Could some boards be experiencing optimism bias?

Both directors and C-suite respondents cite these top five challenges to effective board oversight (figure 3): There's an overreliance on management for decision-making, the board has deficits in tech fluency, the governance structure around technology concerns is unclear, management information on tech matters is not well defined, and the links between technology investments and the organization's strategy are unclear.

FIG 2: Mind the gap: Fewer than half of both board and C-suite respondents say their boards provide enough tech stewardship

Q: "Is your board's oversight of technology matters sufficient in both scope and depth?"

	No	Yes	Not sure
Board respondents	27%	45%	28%
C-suite respondents	41%	41%	19%

Note: Percentages may not add up to 100% due to rounding.
Source: The Deloitte Global Boardroom Program, *Digital frontier: A technology deficit in the boardroom*, 2022.
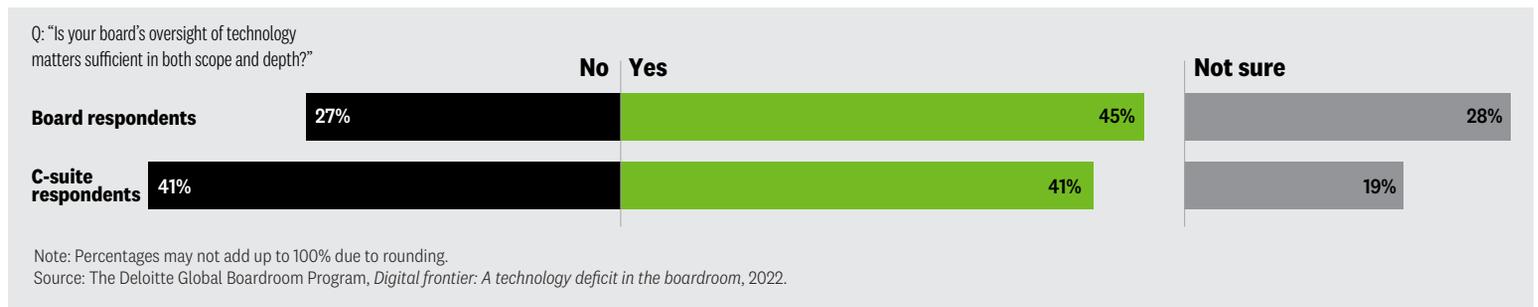
FIG 3: Top five challenges to board oversight of digital, cyber, and new technologies

Board respondents — C-suite respondents

Too much reliance on management or internal or external experts for decision-making — **1** 40% / **1** 42%

There is a deficit in technology fluency on the board — **2** 38%

The technology governance structure is not clear enough in our organization — **3** 36%

Management information in relation to technology matters has not been well defined — **4** 34% / **2** 33%

It is not clear how technology links to strategy — **5** 30%

Note: Multiple-choice question.
Source: The Deloitte Global Boardroom Program, *Digital frontier: A technology deficit in the boardroom*, 2022.

Among nontechnology companies, boards that do have a tech expert on the board often have only one—and these boards can rely too much on that one director to serve as the de facto "tech translator," letting the rest of the board off the hook.

Sheila Talton, a board member at Deere, SYSCO, and OGE Energy, and president and CEO of Gray Matter Analytics, thinks having technology knowledge among board members is critical to any organization's success: "Companies that lack a technologist on their board are being shortsighted. Conversely, forward-looking companies do tend to have technology people on their boards. They understand it's not just about managing risks; it's a competitive advantage."

An environmental, social, and governance (ESG) analyst from State Street Global Advisors noted that board tech proficiency may become increasingly important: "As companies begin to acquire capabilities and deploy alternative technologies, incorporating these technologies into core business segments, the board skill set needs to evolve as well. Companies need to make sure that their boards truly understand what these new technologies mean for the business."

Challenges from outside the boardroom

Our survey uncovered a number of other pain points that can negatively impact board stewardship of technology matters.

Concerns about the tech leadership team

Respondents' level of confidence in their organizations' technology leaders is mixed. Only 36% of directors and C-suite executives express full confidence in their tech leaders; 49% of board directors and 43% of C-suite execs say they're "somewhat" confident, but there are areas for improvement. And roughly 10% of directors and 12% of executives say they don't have confidence in their tech leaders.

Lack of integration with strategy

About 30% of respondents say they don't think that technology is sufficiently integrated into their organizations' strategy. While 61% of directors believe that it is (figure 4), 13% could not answer the question. Clearly, if tech is fundamental to strategy execution, this linkage needs to be well understood and is where board stewardship could be especially valuable.

Difficulty assessing the value derived from tech investments

Board and C-suite respondents to our survey find effective measurement of tech investments very difficult (figure 5). About 40% of respondents say their biggest challenge is being able to demonstrate cause and effect between technology investments and growth. Further, approximately 30% say that focusing too much on return on investment and short-term gains dominates thinking, instead of focusing on long-term value measures. And a quarter of respondents say the biggest barrier to figuring out the ROI of these investments is their organization's fragmented reporting and use of separate key performance indicators and metrics to assess outcomes.

FIG 4: Nearly half of respondents don't think—or don't know if—technology aligns with strategy

Q: "Is tech integrated enough into your organization's strategy?"

	No	Yes	Not sure
Board respondents	27%	61%	13%
C-suite respondents	31%	61%	7%

Note: Percentages may not add up to 100% due to rounding.
Source: The Deloitte Global Boardroom Program, *Digital frontier: A technology deficit in the boardroom*, 2022.
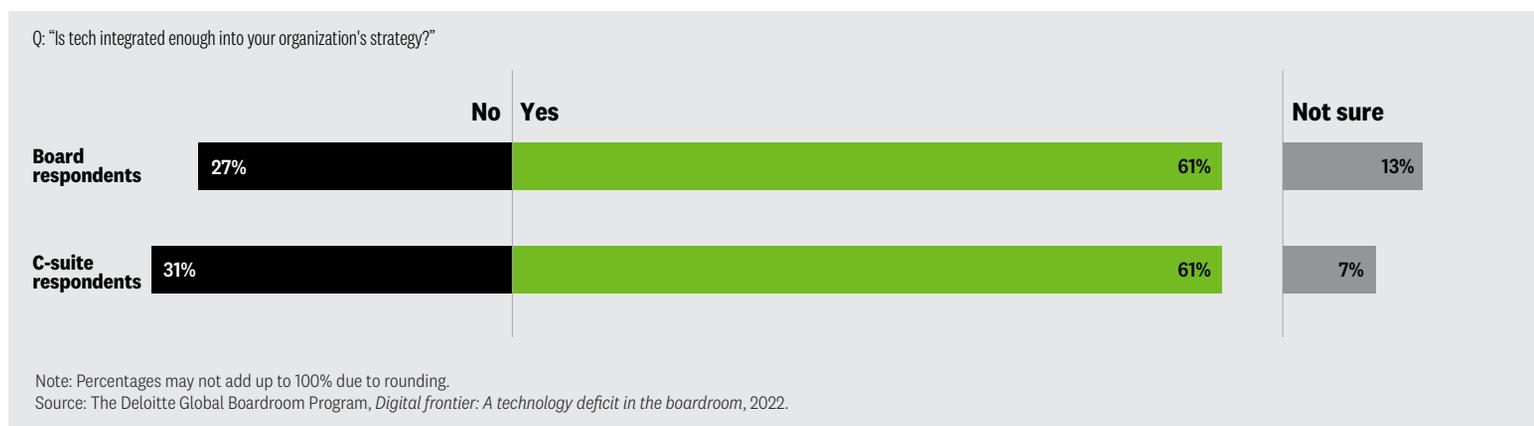
FIG 5: The technology/ROI conundrum

● **Short-term performance and capex/opex dominate conversations**   ● **Fragmented reporting: separate KPIs and metrics**
● **Inability to show how tech enables growth**   ● **Other**

Challenges to assessing the value of investments

By role

Board respondents	26%	26%	42% / 6%
C-suite respondents	35%	24%	41% / 1%

By region

Americas	29%	28%	40% / 3%
Asia Pacific	35%	29%	33% / 3%
EMEA	25%	21%	48% / 7%

Note: Percentages may not add up to 100% due to rounding.
Source: The Deloitte Global Boardroom Program, *Digital frontier: A technology deficit in the boardroom*, 2022.

Rahul Samant, CIO of Delta Air Lines, says he has had more success communicating the return on tech investments when he has taken a team approach and linked it to broader business metrics. "When meeting with the CEO or the board on tech investments, one or more of my business partners, such as the chief customer experience officer, the chief operations officer, or the chief commercial officer, are always with me. They are the best validators when I need to explain what value tech investments have brought. I say: 'Hey, remember three years ago, we invested in building this data platform. Guess what? That foundation has been powerful and we've now started to equip our operations teammates with insights, allowing them to take even better care of our customers. And that's contributing to our net promoter score.' That validation coming from a business partner is way more credible than my saying: 'Remember that business case from three years ago? I'm here to tell you I met my ROI goals,' since that is hard to prove stand-alone, anyway."

Not investing enough in technology

Nearly half of survey respondents say their organization isn't investing enough in technology to meet the key strategic objectives of outpacing the competition and addressing opportunities and risks (figure 6). C-suite respondents were more likely to say their organization needs to step up investment than the board directors.

Board governance on tech investments and initiatives could play a critical near-term—and long-term—role

Board stewardship of tech issues and investments could add the additional layer of protection—and foresight—that organizations need, according to our research.

For example, our research revealed some potential process deficiencies around protecting organizations' data assets. Among the C-suite executives and board directors surveyed, there was a significant lack of confidence in their organizations' ability to protect their critical data (figure 7). Half of respondents say they feel their data is well protected and understood. The rest either aren't sure if their data is well protected (around one-third) or believe that they need to do more to understand and protect their data assets (15%).

The ESG analyst from State Street Global Advisors told us that, in their experience, when it comes to cyber and data security, audit and risk committee members "are often quite conversant" on the topics, but the board overall tends to "defer

FIG 6: Most aren't investing enough to reap key benefits
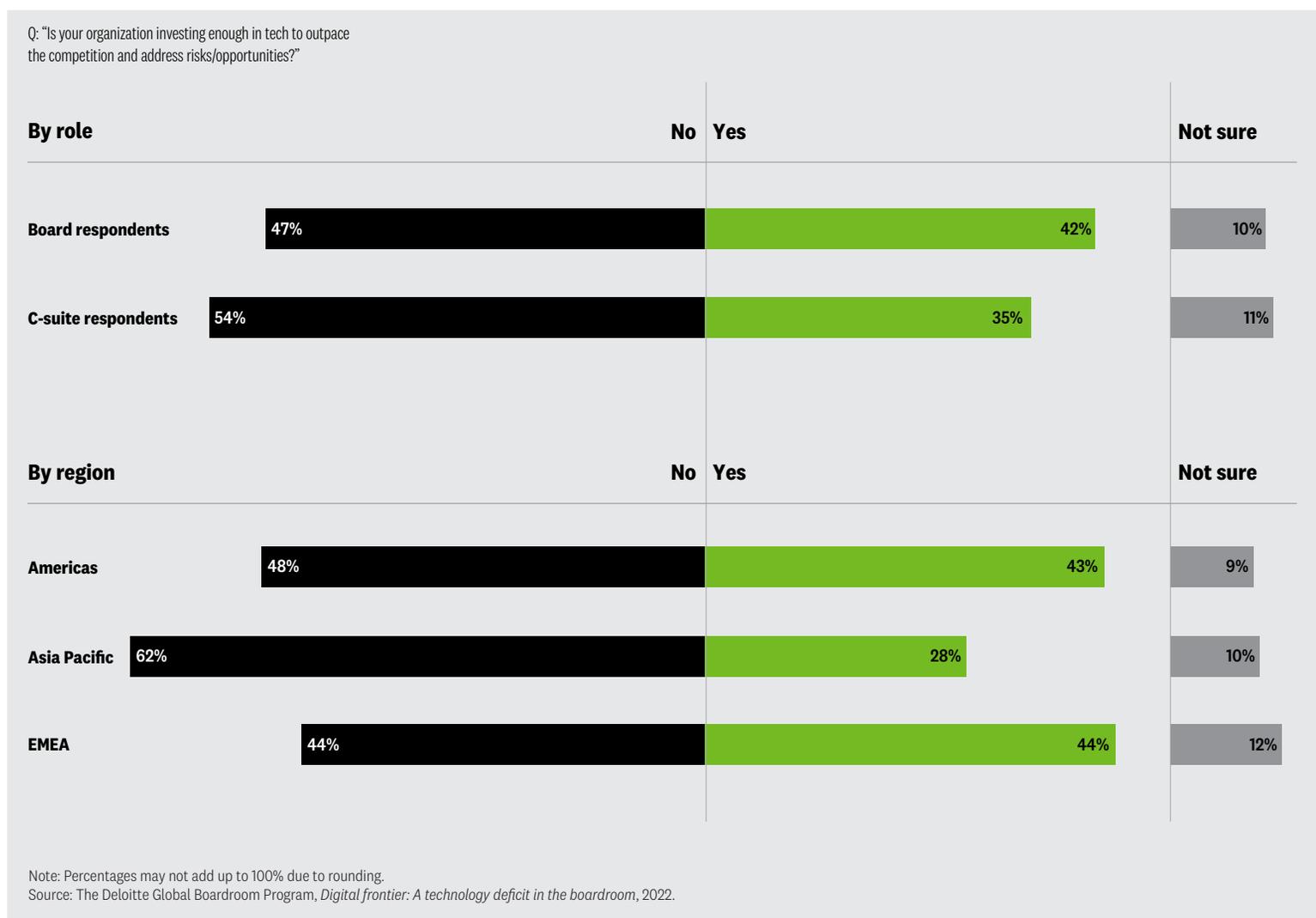
Q: "Is your organization investing enough in tech to outpace the competition and address risks/opportunities?"

By role	No	Yes		Not sure
Board respondents	47%	42%		10%
C-suite respondents	54%	35%		11%

By region	No	Yes		Not sure
Americas	48%	43%		9%
Asia Pacific	62%	28%		10%
EMEA	44%	44%		12%

Note: Percentages may not add up to 100% due to rounding.
Source: The Deloitte Global Boardroom Program, *Digital frontier: A technology deficit in the boardroom*, 2022.

to management to answer these questions." While in-depth discussions are fine to delegate to committee work, the ESG analyst thinks this reveals a lack of discussion in the boardroom and that all board members should be able to answer basic questions such as what types of cyberthreats are posed to the company: "I'd rather see a board member be able to identify key infrastructure that they're monitoring closely and the type of data they think is particularly sensitive at the company. That will take it to the next level and reassure investors that the board understands the issue."

Moreover, boards' leadership concerns involve different time horizons than CEOs', which could help organizations make the tech investments they need to ensure their sustained success, says Rich Nanda, a principal at Deloitte Consulting LLP and leader of its strategy and analytics portfolio of offerings. "While management tends to think more about the relevance of adopting new technologies over the next few quarterly periods, board members are much more willing to explore 'what-ifs' and the art of the possible, envisioning future possibilities." ●

FIG 7: Q: "Does your organization have defined protocols to protect its critical data assets?"

● Yes, we understand our data assets and they are well protected   ● We understand our data assets, but I am not sure if they are well protected

● No, we need to do more to understand and protect our data assets   ○ Not sure

By role

Board respondents	49%	31%	13%	7%
C-suite respondents	54%	25%	20%	1%

By region

Americas	49%	33%	13%	4%
Asia Pacific	40%	36%	19%	5%
EMEA	56%	24%	14%	6%

Note: Percentages may not add up to 100% due to rounding.
Source: The Deloitte Global Boardroom Program, *Digital frontier: A technology deficit in the boardroom*, 2022.

Taking stock of manufacturers' supply chains

A joint study by Deloitte and Manufacturers Alliance examines how US manufacturers are working to improve their supply chains' strength and resilience.

By **Paul Wellener, Stephen Gold, Aaron Parrott, Kate Hardin,** *and* **Stephen Laaper**

Illustration by **blindSALIDA**

Over the past two years, manufacturers have had to deal with a range of supply chain issues—from shipping and transportation delays driven by truck driver shortages and congested ports to an inadequate supply of parts and labor shortages. These supply chain issues that stem from disruptions have been deemed "unprecedented" but are also a sign of what's to come. Future disruptions are inevitable—pandemics, geopolitical tensions, weather-related issues caused by climatic events—so manufacturers are working to build in both redundancy and resilience, according to recent research from Deloitte and Manufacturers Alliance, a US-based executive development and business

insights organization for manufacturing leaders.

In July 2022, Deloitte and Manufacturers Alliance jointly fielded a survey to understand the impact of disruptions on the manufacturing supply chain over the preceding 18 months and gauge manufacturers' response. The online survey of more than 200 US-based manufacturing executives was supplemented with a series of interviews with manufacturing and supply chain executives.

Developing more resilience and redundancy is especially challenging in current conditions in which manufacturers are trying to minimize costs while facing rising costs of energy, materials, and labor; current' workforce shortages; and ongoing

logistics challenges resulting from two years of pandemic-related disruptions.[1] Eighty percent of survey respondents experienced a heavy supply chain disruption in the 12 to 18 months preceding the survey, and 50% reported that the disruptions had negatively impacted their productivity and profits. Therefore, to prepare their organizations to meet future challenges head on, respondents are investing their efforts in tried-and-true supplier management initiatives: strengthening existing relationships, engaging multiple suppliers, and deploying digital tools for increased visibility. But they are also deploying new tactics that allow them to combine efficiency with resilience.

Where respondents are feeling the crunch

Shipping delays, parts shortages, and transportation delays top the list of issues that have negatively impacted manufacturers' supply chains over the past year and a half (figure 1), resulting in profit losses of up to 13%.

The top operational concern among surveyed executives is rising shipping costs (figure 2). Indeed, shipping costs rose by over 77%[2] from January 2021 to August 2022 due to increased fuel costs, labor costs, and logistics challenges. Underlying all these concerns is labor, where costs continue to rise. Indeed, total compensation cost per hour worked rose by 6.2% to US$42 in the manufacturing industry in Q1 2022.[3]

The next category of operational concerns cited was those affecting inbound supply, characterized by suppliers struggling to meet demand and the continued shortage of critical parts.

These problems, in turn, translate into outbound challenges: Thirty-one percent of surveyed respondents mentioned the inability to fulfill ongoing contracts as one of their top operational concerns. Also high on the list were challenges associated with implementing contingency plans such as switching suppliers.

How manufacturers are building supply assurance

To address these operational concerns and reduce the disruption to their business, 83% of respondents are strengthening existing supplier relationships, 81% are pursuing multiple and regionally diverse suppliers, 76% are working to increase visibility into their supply chains with digital solutions, and 65% are moving away from a "just in time" approach to "just in case."

FIG 1: Shipping delays have had the biggest impact on surveyed manufacturers' supply chains in the last 12 to 18 months

Shipping delays	Parts shortages	Transportation delays	Talent shortages	Restricted supplier network	Cyber risk failure	Supplier bankruptcy	Excess inventory
59%	56%	56%	53%	50%	46%	41%	41%

Source: Deloitte analysis of 2022 manufacturing supply chain study data.
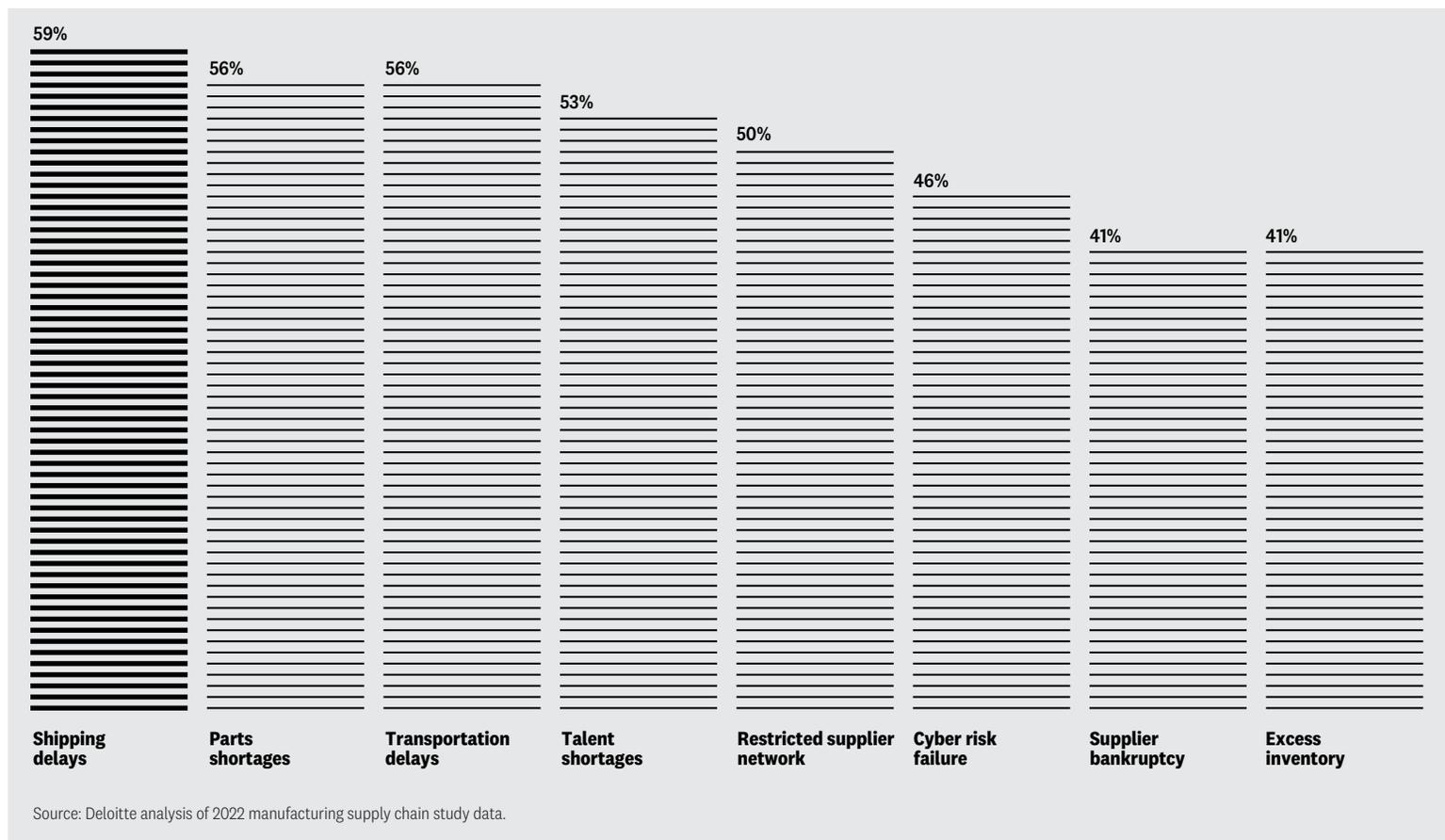
Strengthening existing relationships

The sudden shift to a supply-constrained business model meant executives had to lean on their suppliers to manage forecasts, lead times, inventory strategies, and costs.

In many cases, quarterly supplier reviews have turned into daily calls between senior supply chain executives and their suppliers' CEOs or CFOs, sharing information and helping each other navigate the business environment. For example, one company worked through its supplier as a partner to find an alternate source of chips during the chip shortage, thereby achieving greater flexibility and visibility. Another company worked closely with suppliers as shipping options from Asia were reduced and freight was moved to air cargo, which incurred higher costs.[4]

Supply chain executives have been drawn into management not just of their primary suppliers but increasingly of secondary and tertiary suppliers too. Several executives interviewed noted that, previously, they didn't get involved beyond Tier 1, but they've had to increase visibility due to the dynamics of the current environment. For example, if Tier 3 suppliers were unable to give firm dates for shipping, often this potential weak point wasn't visible to primary suppliers or to the company itself, and potential delays weren't flagged early enough. To address this risk, one company we interviewed has begun working closely with its own suppliers to apply transparent decision-making based on metrics and benchmarking to that supplier's suppliers. This can provide the company more visibility and clarity in terms of the companies with whom its suppliers are contracting.

FIG 2: Top operational concerns range from rising costs to logistical issues in inbound supply challenges, affecting manufacturers' ability to fulfill ongoing contracts

Concern	Percentage
Rise in shipping cost	46%
Product issues from suppliers who are struggling to meet demand	43%
Logistical challenge while implementing a new supply chain model or contingency planning	43%
Continued shortage of critical parts	41%
Cost challenge while implementing a new supply chain model or contingency planning	40%
Limited availability of suppliers to form new relationships	40%
Inability to fulfill ongoing contracts	31%
Excess or obsolete inventory due to inaccurate forecasting	31%
Limited ability to diversify suppliers	30%
Uncertainty in consumer demand	27%

Source: Deloitte analysis of 2022 manufacturing supply chain study data.

Engaging multiple and regionally diverse suppliers

About 90% of survey respondents have multiple suppliers, but only 44% have regional diversification of suppliers. According to our study, companies with regional diversification were less affected by recent supply chain disruptions than companies with suppliers concentrated in one region. However, dual sourcing may increase costs. Forty-three percent of survey respondents noted cost as the top constraint in having multiple suppliers.

Building "bench strength" by engaging multiple suppliers is key to creating redundancy in the supply chain, but this may be easier said than done in highly concentrated industries. For example, the semiconductor shortage has affected industries from automotive to handheld electronics. But in the semiconductor supply chain, some suppliers are unique. Worldwide, there's only one epoxy supplier and two suppliers of cutting-edge chips, for instance.[7]

To build resilience, in some cases, manufacturers are actively partnering with other manufacturers or are investing in their suppliers to support building more production capacity. Executives interviewed described a continuum of collaboration ranging from buying capacity in advance from suppliers to actually taking equity stakes in or acquiring certain critical suppliers.

Merger and acquisition activity in manufacturing continues to be strong, having increased substantially over the last three years. The industry recorded 52% year-on-year growth in such deals in 2021.[8] Some of these transactions represent vertical integration along the supply chain, suggesting a possible trend. One example of such integration is Tesla's recent acquisition of ATW Assembly and Test Europe GmbH to enhance its battery cell manufacturing capacity, which highlights the integration to develop capabilities in-house.[9] In an example from the aerospace and defense industry, Safran bought Aubert & Duval, a French supplier of metal powders for additive manufacturing and other powder-based part production technologies, from mining firm Eramet. The acquisition, jointly carried out with Airbus and investment firm Tikehau Ace Capital, was completed in 2022.[10]

Increasing visibility with digital capabilities

Armed with real-time market intelligence and predictive technologies, manufacturing executives can better navigate current market volatility and pivot more quickly to their plan B.

Seventy-eight percent of surveyed respondents agreed that using digital solutions or monitoring tools would enhance visibility and transparency throughout the supply network.

For most survey respondents, the lines of visibility start to blur beyond Tier 2+ of their supply network. But 73% of the respondents who do have visibility beyond Tier 2 reported that they had already implemented digital solutions. One executive mentioned launching a control tower that enhanced visibility into suppliers but also integrated different parts of the supply chain. Others are using Industry 4.0 tools such as AI and bots to integrate the supply network as part of a larger digitization strategy for manufacturing. Several supply chain executives we interviewed said that the early months of the pandemic helped them realize they needed to enhance their digital capabilities to weather the disruptions, and their spending on digital technology has continued to increase over the past three years.

Companies have also been undertaking value stream mapping of their supply chains for many years to determine where their raw materials come from and identify any potential points of failure in their supply chain. One executive said his company had developed a "scorecard" of its contracts, organizing them by age of contract, importance of the input to the final product, and history with the supplier. With this value mapping and contract prioritization, it becomes possible to "design out" reliance on niche suppliers in certain cases.

Emerging technologies such as digital twins can develop capabilities to run various simulations and assess multiple variables to determine where and how alternative materials or suppliers could be utilized. As companies continue to diversify their supplier base, the optimization process could become increasingly complex. The digital twin can also help identify underlying inefficiencies and bottlenecks, and could assist in making an informed decision on selecting the desired supplier and the right facilities and transportation capabilities to achieve supply assurance.

Moreover, digital technologies are a key enabler to risk mitigation and assessing external risks in terms of components or materials. Survey results showed that 88% of respondents have concerns about legal, financial, privacy, intellectual property (IP) theft, or cybersecurity due to the supply chain ecosystem; 55% have a comprehensive cybersecurity strategy in place for such concerns. According to our study, original equipment manufacturers feel better prepared than suppliers on IP and cybersecurity (figure 3).

Companies are actively trying to have a diverse mix of suppliers to tackle supply chain disruptions. For example, GM recently announced a deal with lithium supplier Livent and a separate cathode material deal with LG Chem. These contacts can provide GM with the battery materials it needs to help with its goal of building one million electric vehicles annually by the end of 2025.[5] In another example, Tesla has recently signed a long-term supply agreement with Vale for the supply of nickel for its batteries. With this agreement in place, Tesla has a total of seven nickel suppliers, spread across multiple regions.[6]

Moving away from just-in-time approaches

Manufacturers seem to be drifting away—maybe only temporarily—from just-in-time approaches to help manage the constraints of higher labor and materials costs, logistics bottlenecks, and labor shortages. One executive explained that, in early 2021, his team decided they needed to move away from the focus on cost and orient increasingly on business continuity and customer satisfaction. Executives draw a distinction between operational challenges, which can be solved through improved supplier relationships and visibility, and logistics and external challenges, which are out of the supplier's or company's control. However, to manage external challenges, supply chain leaders need to be well-equipped and strike the right balance between agility, resilience, and efficiency.[11]

The persistent labor shortage in manufacturing, which has been exacerbated by the pandemic, has contributed to port delays, slower warehouse processing, and a truck driver shortage. As one executive explained, no matter how reliable your supplier is, a labor shortage at a port can still cause a shipping delay. To address this disruption, building redundancy or resilience is needed. One company shared that it's looking at diversifying supply routes on the West Coast, possibly adding a Canadian port as an alternative.

The past two years have demonstrated that the familiar formula of minimizing costs and maximizing efficiency in global supply chains is often no longer enough. In response, manufacturing executives are taking steps to build redundancy into supply chains to assure business continuity. And though these efforts may lower margins, they can increase agility, reflecting the new balance that manufacturers are aiming to achieve. ●

Research and analysis by the Center for Energy and Industrials

FIG 3: Risk mitigation: Among survey respondents, 88% are concerned about legal, financial, privacy, IP theft, or cybersecurity
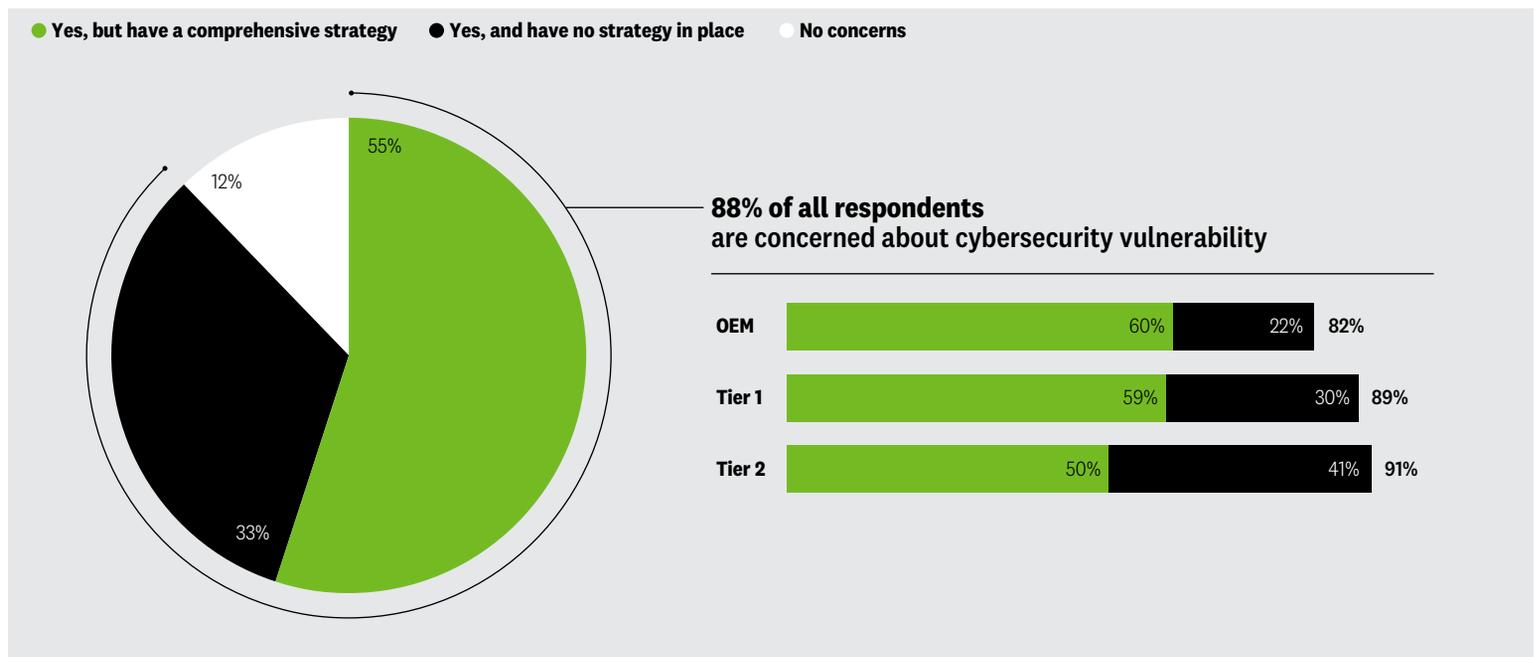
- ● Yes, but have a comprehensive strategy
- ● Yes, and have no strategy in place
- ○ No concerns

55%
12%
33%

88% of all respondents
are concerned about cybersecurity vulnerability

OEM	60%	22%	82%
Tier 1	59%	30%	89%
Tier 2	50%	41%	91%

Endnotes

P16
Quantifying the value of tech companies' 'trusted actions'

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P21
Counting the glass ceilings that remain

1. Alison Rogish, Neda Shemluck, Patty Danielecki, and Samia Hazuria, *Advancing more women leaders in financial services: A global report*, Deloitte Insights, June 16, 2022.
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P40–41
Flourishing in ambiguity

1. The authors explored the implications of the networked environment we operate in and the shift from the monolithic firms to firms as extended ecosystems, in Peter Evans-Greenwood and Giselle Hodgson, *Strategy and the art of the possible*, Deloitte Insights, July 6, 2022.
2. In *Good to Great*, Jim Collins argues that the leaders of successful businesses tend to have a hedgehog's disposition: to know and act on one big idea. He is referencing philosopher Isaiah Berlin's essay *The Hedgehog and the Fox*: "A fox knows many things, but a hedgehog knows one big thing." While this might have been true in the past, we live in uncertain times. Commentators such as Nate Silver (in *The Signal and the Noise*) have called for decision-makers to become more foxlike. See: James C. Collins, *Good to Great: Why Some Companies Make the Leap ... and Others Don't*, 1st ed. (New York: HarperBusiness, 2001); Isaiah Berlin, *The Hedgehog and the Fox: An Essay on Tolstoy's View of History*, 2nd ed. (Princeton, NJ: Princeton University Press, 2013); and Nate Silver, *The Signal and the Noise: Why so Many Predictions Fail—but Some Don't* (New York: Penguin Press, 2012).
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4. Evans-Greenwood and Hodgson, *Strategy and the art of the possible*.
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6. We might consider this *deciding to not act*, though this is itself an action as it involved suspending operations and furloughing employees. When confronted by a choice, choosing not to decide is effectively a decision to accept the default. Indeed, this is the key insight from the oft-referenced trolly problem. While many commentators focus on whether to switch the tracks or not, the more interesting question is how one came to be at the switch at a point in time when a decision was required.
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P42–45
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2. Susan Cantrell, "Beyond the job," *People+Strategy Journal*, Summer 2021. Reprinted in *Deloitte Insights Magazine*, October 2021.
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P68–77
Unleashing value from digital transformation

1. We used natural language processing (NLP) techniques including feature extraction, topic modeling, and proximity scoring to develop our NLP crawler. It was trained to understand the association between words using proximity scoring—a method that scores the word pairs on relevance based on how close together they appear.
2. While there are many that could have been selected, the Ohlson Model was stable and allowed consistency with the prior academic research.
3. We understand that correlation—where one action relates statistically to another action—is not causation—where one action causes another to happen—but there is still significant insight organizations can gain by better understanding correlated data.
4. Presence of the factor was based on high or more mentions in the top third.
5. Lars Cromley, Jonathan Holdowsky, and Diana Kearns-Manolatos, *When scaling Agile, engaged self-aware leadership matters. A lot.*, Deloitte Insights, September 30, 2022.
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7. Deloitte analysis based on Monte Carlo simulation of the most negative scenario with inputs modeled based on the behavior of digital strategy and tech aligned to strategy with no digital change capability. The simulation modeled the delta between the current rate and moving up to the 99.9th percentile, which showed a correlated market cap erosion of 9%. For *Fortune* 500s in our data set, we removed those with no sustained digital change capability to get 354 companies that have a market cap of US$16.69 trillion and a value erosion risk of US$1.5 trillion.
8. The Exponential Enterprise index establishes a frame to define a truly high-performing enterprise—based on natural language processing scans related to high capacity to change and ability to win. Given these two parameters, 500 large cap US enterprises were scored on a scale of 100 based on their public documents—10Ks, investor reports, and others— and to what extent they held these attributes. Those scoring 50 points or more for both change and win scores were Exponential Enterprises. This finding compares companies with both top-quartile ability to win and capacity for change to companies with bottom-quartile ability to win and capacity for change—normalized by industry. See: Monitor Deloitte, *The exponential enterprise*, accessed December 23, 2022.
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10. For this analysis, we brought in M&A activity data from Capital IQ. The analysis considered the financial data for the years before and after an M&A event for all companies that had one from 2011 to 2021 and compared market cap correlation data for those with an M&A event to the tech aligned to strategy action and its correlation data.
11. Based on Vanguard data, we categorized statements based on companies that were dividend paying, which covered 301 companies across 1,815 records, and companies that were nondividend paying, covering 3,498 companies across 16,224 records.
12. Our analysis of highly innovative companies considered a subset of 500 firms from the MIT Culture Index, matching 264 companies with our master dataset and modeling for the period of 2015 to 2020 to match with their innovation score during the same period.
13. Our data science analysis shows there are clearly interaction effects across these three factors that need to be accounted for when combined.
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15. Business and financial information was from 2011 to 2021.
16. Financial information for this analysis was accessed using analytical tools Intrino and CapitalIQ.
17. These filings are in accordance with Generally Accepted Accounting Principles (GAAP), and therefore can provide a useful lens into global financial dynamics.
18. Analysis was conducted over April–September of 2022.
19. The outlier removal process took the over 30,000 statements available for this group and removed companies whose market cap was either too high or too low, which could potentially destabilize the model.
20. A large, structured global data set such as a 10K is preferrable for a large-scale empirical analysis looking to understand the relationships between peers. With 10Ks averaging between 75 and 100 pages per filing, this gave us over 3 million pages of historical business and financial information to analyze.
21. Tim Bottke, *Digital Transformation Payday* (New York: Wiley, 2022).
22. We further tested our models using five-fold cross-validation and the Monte Carlo (MCMC) approach.
23. While there are many that could have been selected, the Ohlson Model was stable and allowed consistency with the prior academic research.
24. Thirty-four percent of these organizations already have tech aligned to strategy per our analysis.
25. We ran a Monte Carlo simulation 2 million times.
26. Thirty-four percent of *Fortune* 500 companies already have tech aligned to strategy per our analysis.
27. We ran a second Monte Carlo simulation, this time tuned to mimic the behavior of high-performing organizations in the Exponential Enterprise index.

P78–85
Assessing the technology deficit in the boardroom

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P86–91
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The organizational resilience movement

Some research and insights have a short shelf life, while others continue to gain color and context. In each issue of Deloitte Insights Magazine, *we look back on research we published and ideas we pitched, and evaluate whether they've stood the test of time.*

By **Bill Marquard**
Global leader of Deloitte's resilient organization and leadership program

What we said then

"Resilience is not a destination; it is a way of being. A 'resilient organization' is not one that is simply able to return to where it left off before the crisis. Rather, the truly resilient organization is one that has transformed, having built the attitudes, beliefs, agility, and structures into its DNA that enable it to not just recover to where it was, but catapult forward—quickly."

The essence of resilient leadership: Business recovery from COVID-19, Deloitte Insights, April 2020.

What we say now

So, based on what we've learned from navigating through the onslaught of disruptions caused by COVID-19, geopolitical tensions, and concerns about an impending global recession, is resilience a way of being, or has it proved to be a means to an end—a way for organizations to weather the current storm?

There's a parallel to be drawn in the quality movement: Today, quality is embedded in the fabric of every organization, virtually a nonnegotiable expectation from all stakeholders. It's a way of being for 21st-century organizations.

Yet in the second half of the 20th century, quality was a competitive differentiator and something that needed to be worked at through explicit levers such as statistical quality control, total quality management, and the implementation of ISO 9000 standards. We needed an exercise regimen to build the quality muscle repeatedly, until it became a lifestyle.

Isn't resilience following a similar path? In conversations with executives, in business media, and in this very publication, there's ample evidence that leaders of organizations around the world are following an exercise regimen of resilience reps spanning strategy, supply chains, finance, systems, operations, and the workforce, with a goal of achieving resilience as a way of being—a means to its own end. It seems we're in the midst of the resilience movement. ●

Access more insights on how to build a more resilient organization at
www.deloitte.com/resilience