

AlixPartners Disruption Index

A bias for action sets
growth leaders apart

When it really matters.sm

2023

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Letter from Simon Freakley, CEO



The world keeps getting more complex. We all feel this every day. Myriad disruptions arise, feed off one another, cascade around the world at an accelerated pace, upend our operations, and knock strategies off course. The leadership challenge is unprecedented: Amid so many formidable issues but daunting long-term disruptions and difficult short-term demands—how should we focus our all-too-finite resources of capital and time?

In our 4th annual AlixPartners Disruption Index, business leaders cite this as the central dilemma, with 85% of CEOs telling us that it has become increasingly difficult to know what to prioritize.

For more than 40 years, AlixPartners has been helping our clients navigate disruption. In an environment of relentless change, the lessons we have learned from our roots in turnaround and restructuring are as relevant for healthy companies as they are for troubled ones. One of the most critical lessons we have learned is that you cannot combat disruption if you are overwhelmed with distractions. You must cut through the noise to find and focus on what really matters. You must be willing to take bold actions to move your company where it needs to go. And to do so at speed.

Our survey identified a segment of companies we call growth leaders—enterprises that are outpacing their competitors. If one thing sets them apart, it is bold action. More than half are changing their business models this year. Across the board, we see them performing better, yet still trying to do more, whether that's fixing their supply chain or attracting the best talent or transforming their business with technology.

And despite all the challenges, including any potential unknowns, growth leaders are optimistic about the future. New technologies promise to solve some of our most existential threats, including those arising from climate change and aging populations. Growing geopolitical competition and conflict could actually demonstrate the need for greater international cooperation. Disruption may be the new economic driver, but it creates opportunities, not just threats.

Leaders must be prepared to meet the challenge of this disruptive age. I hope this report provides some insight into how to do just that.

All best,

A handwritten signature in black ink that reads "Simon Freakley".

The Age of Disruption

We are in an era where the best-built plans of business are waylaid by forces beyond their control. A supply chain crisis. Hyperfast technological change. A pandemic. Climate change that alters industries and spawns more and more natural disasters. A sudden surge in inflation. A revolution in how work gets done—and in what employees expect. A war.

NORMAL IS OVER.

WELCOME TO THE AGE OF DISRUPTION.

3 OUT OF 4

CEOs say their companies are facing a high amount of disruption

72%

say their executive team lacks the agility to deal with it.

AND

That's why we say disruption is the new economic driver. Because every company, every executive team, every CEO must contend not only with the challenges of competitors, costs, and customers, but also with sudden shifts in the business environment and with inexorable, long-term trends that are transforming how businesses win—and lose.

As CEOs look at this disrupted landscape, the data show that they see opportunity and threat in equal amounts. Can they seize the opportunities and defeat the threats?

In the pages ahead, we present the findings of the 4th annual AlixPartners Disruption Index, based on a survey of 3,000 senior executives around the world. We delve deeper into the changing nature of the global economy and what business leaders must do to adapt to and take advantage of these shifts. We will also look at the unique behavior of the companies that are thriving—the one company in five that says it is leading the pack when it comes to growth in their industry.

Disruption is the displacement of businesses, markets, and value networks as the result of economic, societal, environmental, political, regulatory, or technological changes. Technological innovation and adoption, in particular, catalyze and accelerate other disruptive forces.

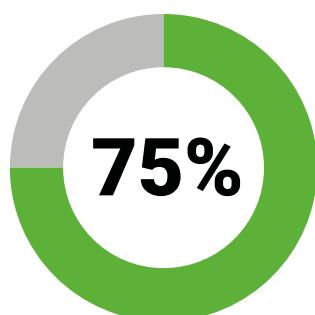
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The pandemic forced business leaders to come to terms with the inevitability of disruption, but as we have seen subsequently, that was just a dress rehearsal. Today's business environment is tougher and more disrupted than ever and that won't be changing any time soon. For those who move decisively and at pace, there is a tremendous opportunity to adapt and thrive.

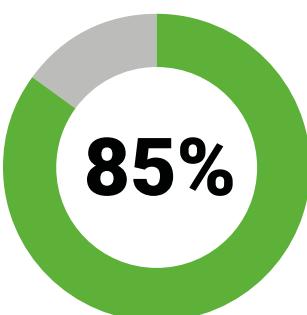
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SIMON FREAKLEY
CEO, *AlixPartners*

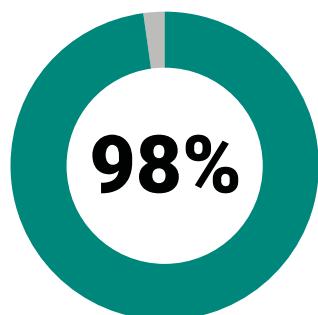


worry that their companies
are not adapting
fast enough

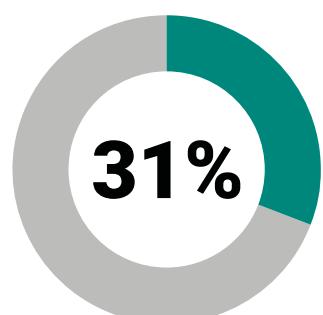


say they don't know
where to start

**In response, companies are changing
their business models:**



expect to change
their business models
in the next three years.



are changing their business
models this year, which is
up six points from last year.

Our findings in brief

82%

expect a recession or economic downturn in their region to last more than a year.

53%

expect a severe or major impact on revenues from a recession.

48%

say their company has been severely or very impacted by interest rates and the inflationary environment.

44%

expect supply chain issues will become less of a challenge for their company in the next 12 months.

18%

say COVID has created or accelerated fundamental change in their industries.

SHORT TERM

LONG TERM

88%

of CEOs have shifted their approach to supply chain management in the past 12 months.

56%

say advancements in technology are happening at a rate their company cannot keep up with.

47%

are leveraging technology to increase productivity in face of workforce shortages.

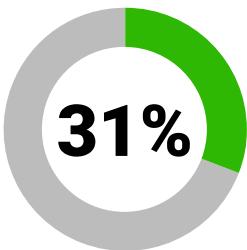
45%

of executives say that their business has been very or extremely impacted by environmental and social concerns—an 18-percentage point increase since 2021.

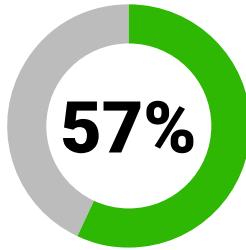
In response, companies are changing their business models



98% are changing their business models now or expect to change over the next 3 years.



31% are changing their business models this year, which is up six points on last year.



And among growth leaders, **57%** are changing business models this year.

Disruption is putting tremendous strain on CEOs

95% report having enough resources to invest in new technologies and digital solutions

85% find it increasingly difficult to know how to start dealing with disruption

83% find that their board of directors often impedes the process

72% worry that their executive team lacks sufficient agility

70% are worried about their own jobs

32% report an inability to find enough employees with critical skills

THE BUSINESS CHALLENGE

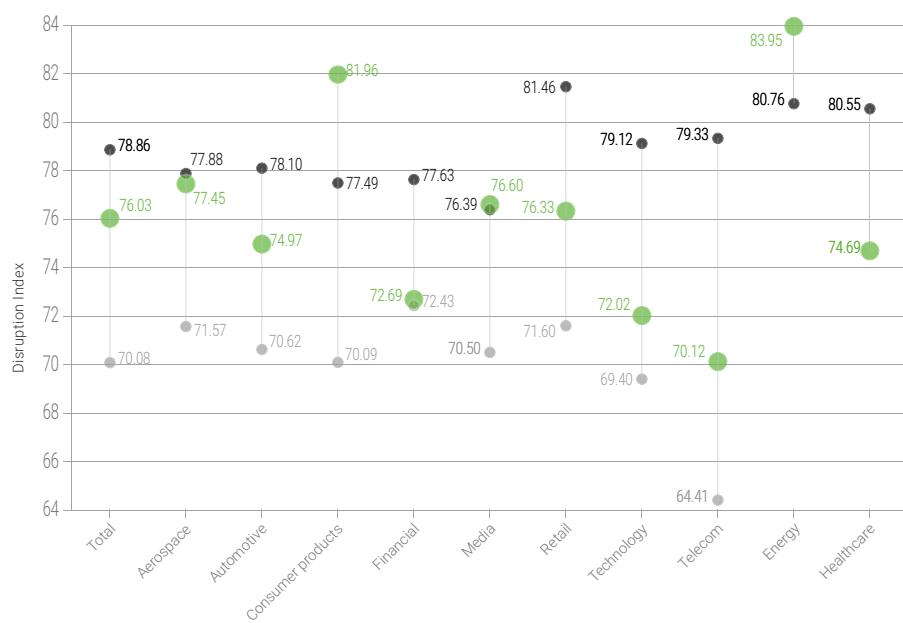
The business challenge

The AlixPartners Disruption Index

The index scores are a measure of both the magnitude of disruption in the past 12 months, as well as the complexity based on the number and degree of challenges reported by executives.

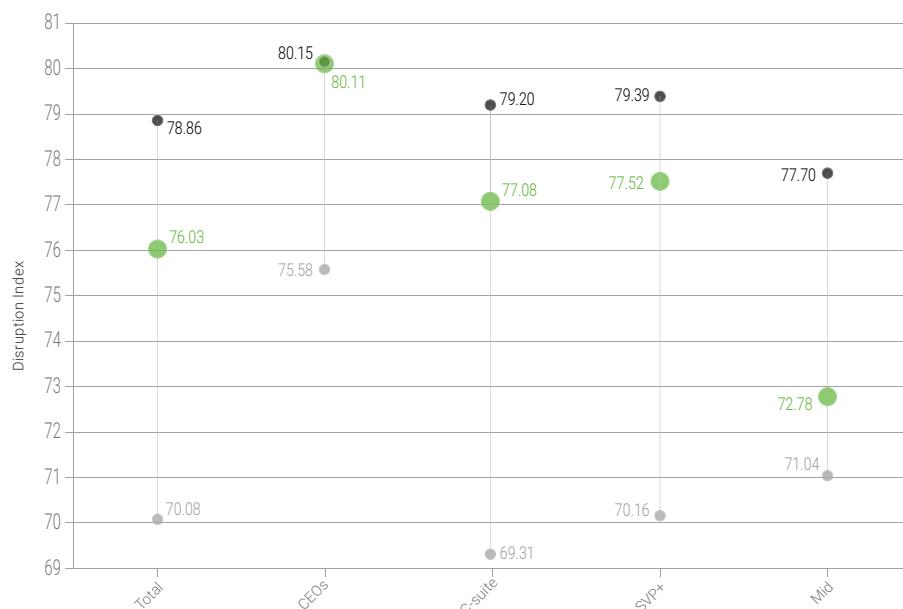
By industries

- 2021
- 2022
- 2023



By seniority

- 2021
- 2022
- 2023



Index scores over time

2021

70

2022

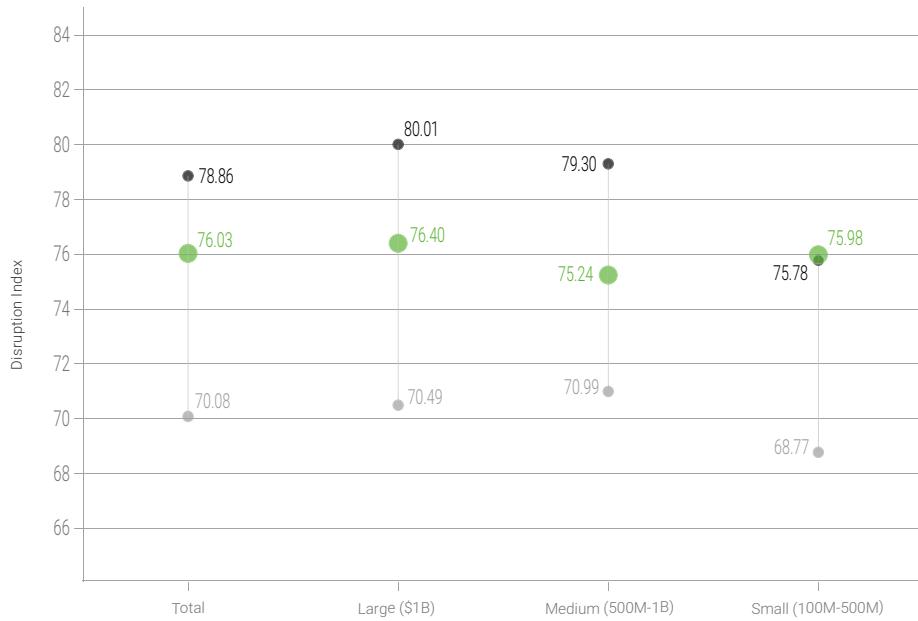
79

2023

76

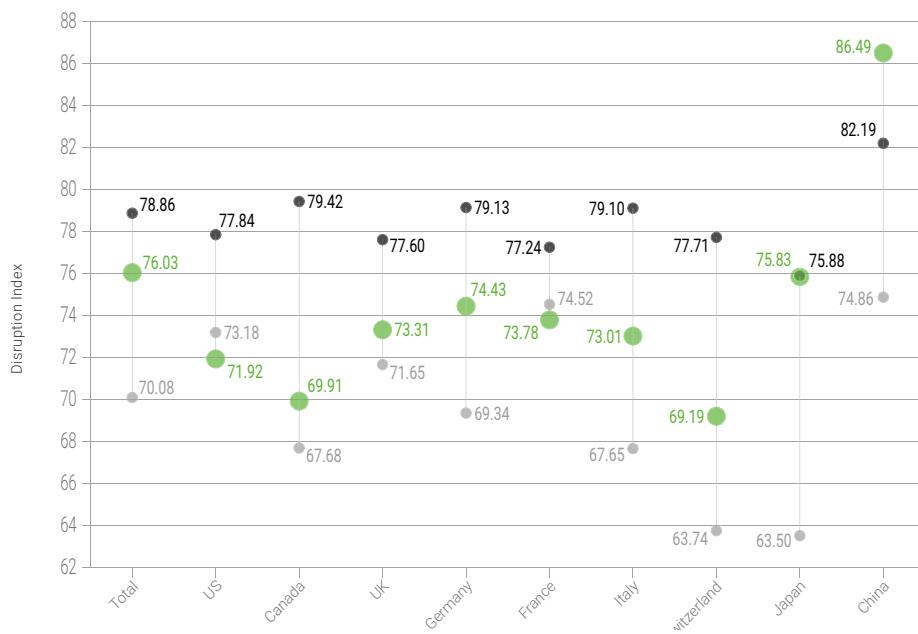
By company size

- 2021
- 2022
- 2023



By country

- 2021
- 2022
- 2023



The Business Challenge

Responding to disruption is the greatest strategic challenge for business leaders, and it is unlike the tests they are used to. They must confront an environment that is shaped not just by the magnitude and sheer number of different disruptive forces, but also by their unpredictability and the complexity of their interconnected impact.

The AlixPartners Disruption Index—a measure of the number and intensity of disruptive forces companies face—edged down this year from 79 to 76, but remained significantly higher than 2021's index number, 70.

This year's decline is unsurprising given where we were in the pandemic and supply chain crises a year ago. After three years, it's perhaps easy to forget that the earlier stages of the pandemic and lockdowns were not just profoundly disruptive to our businesses but to us all personally. While supply chain and workforce constraints, for example, may be

softening, very high levels of disruption persist. When we look at our first survey, which was conducted in the fall of 2020, the index is up substantially (six points) on those levels.

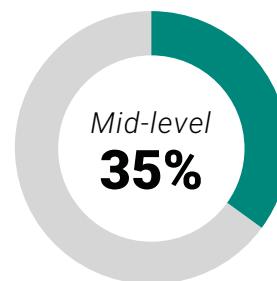
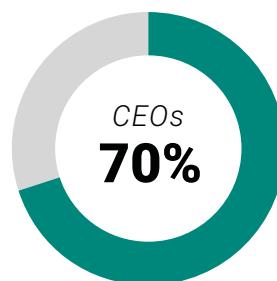
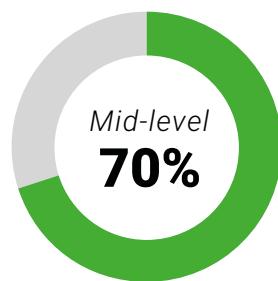
No one would say things are calming down. In fact, nearly four out of five CEOs say their businesses have been highly disrupted, an increase

of 10 percentage points over last year. In addition, 85% of CEOs said that it is becoming increasingly challenging to know which disruptive forces to prioritize, up from 81% last year. A constant and accelerating bombardment of challenges is their single-biggest worry.

My leadership style thrives in a disruptive environment, and yet I am worried about keeping my job due to disruption

Showing percent strongly and somewhat agree

- Thrive in disruption
- Worried about my job



On a regional level, most countries report lower levels of disruption this year. The outlier, though, is Asia, where China reported a 14% increase on the back of resurgent COVID-19 lockdowns and deteriorating economic conditions. Japan also reported a 5% increase year over year. Among industries, energy companies reported higher levels of disruption, on the back of war in Ukraine and price volatility, as did consumer-products companies, which struggled with inflationary pressures and a slowing global economy.

Leadership strategies, business processes, and operating models that worked well in the past break down in the face of disruptive change. Businesses report accelerating the rate of business model change. Executives

in our survey are almost unanimous in saying their business models must change within the next three years (98%, up from 94% last year). Even more dramatically, almost one out of three said they are changing those business models now, an increase of 6 percentage points from last year.

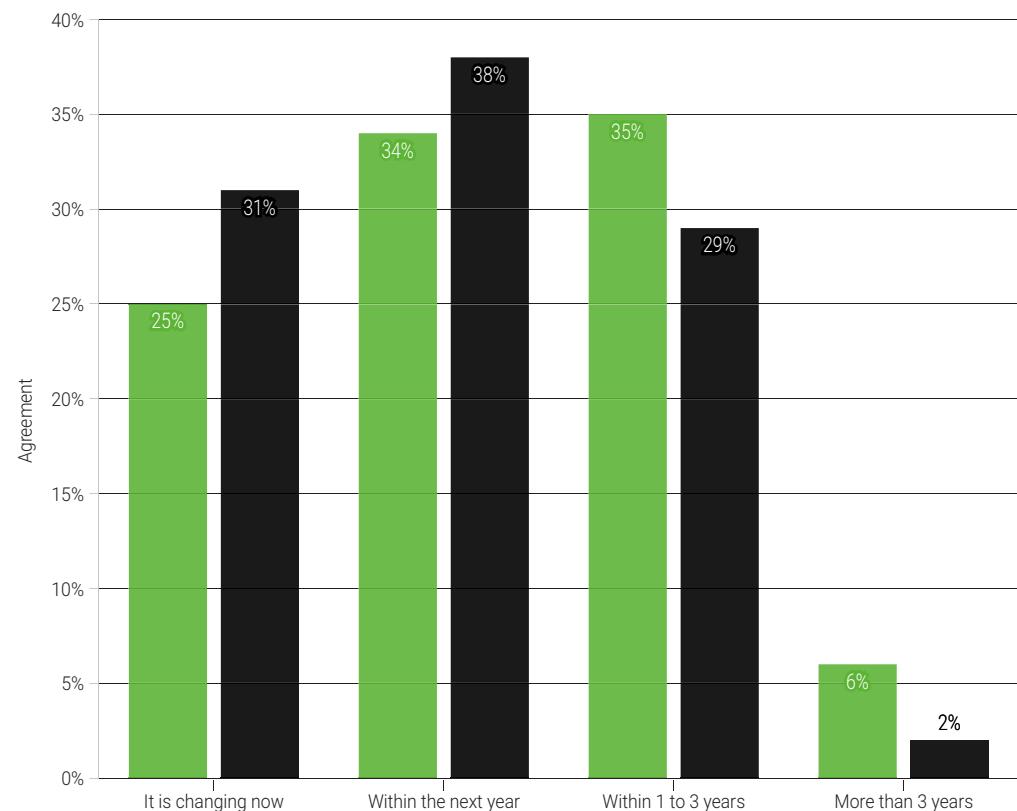
An environment like this is dangerous for the complacent and candy for the energetic. In it, the disparities between winners and losers are growing. Profits are progressively more concentrated among a few top firms. For CEOs, the risks of inertia have never been higher, but the opportunities have never been greater to capitalize on change. At a time when CEO turnover is at historic highs and the chief executive role has increased in complexity, 70% of CEOs

in our survey worry about losing their jobs due to disruption. While down slightly from 72% last year, this figure is still up significantly on pre-pandemic levels, when 52% reported worrying about losing their jobs.

Disruption also appears to hit big companies hardest. This year, 64% of executives in companies with more than \$1 billion in revenue reported being highly disrupted, compared with 58% of those in companies with \$100-500 million in revenue. But smaller companies are more likely to be in reactive mode: The largest companies are 15% more likely to say they drive disruption in their industry.

Expected rate of business model change

● 2022
● 2023



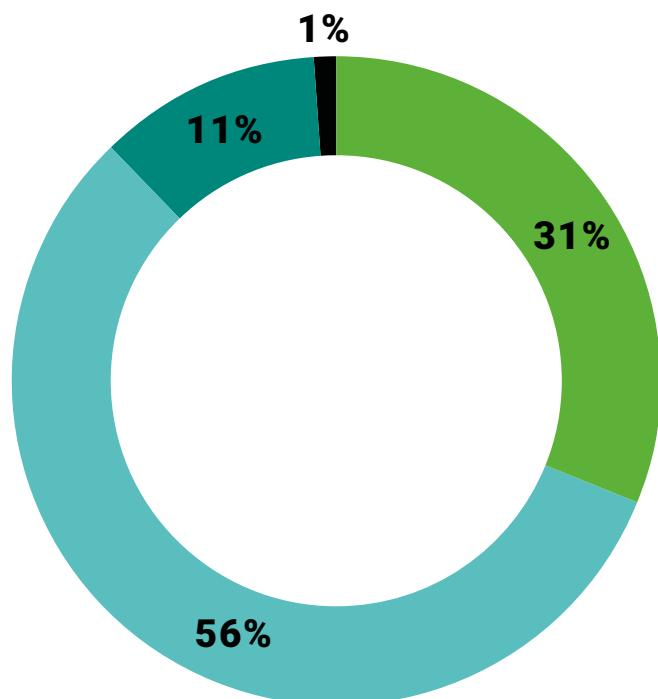
The Business Challenge

Despite these concerns, business leaders are optimistic about the future. After three years of the pandemic, supply chain disruptions, and energy shortages, plus inflation at 40-year highs and a war in Europe, perhaps business leaders are becoming more confident in their ability to manage through competing crises while maintaining their focus on the future. Indeed, business

leaders are about 12% more optimistic about their own companies than they are about the economy as a whole. The opportunities in the future to unlock greater productivity, make life better for people, protect the environment, and increase international cooperation are tremendous, if we can all rise to the challenge.

CEOs' outlook for the future of their business considering a pending recession

- Extremely optimistic
- Somewhat optimistic
- Extremely pessimistic
- Somewhat pessimistic



MOST OPTIMISTIC INDUSTRIES

% somewhat or extremely optimistic

	98%	Aerospace & Defense
	93%	Media & Entertainment
	91%	Telecom & Cable
	90%	Healthcare

COMPANY SIZE

% somewhat or extremely optimistic

89%	Large 1bn+	86%	Medium 500mn - 1bn	85%	Small 100mn - 500mn
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SENIORITY

% somewhat or extremely optimistic

88%	C-suite	86%	Senior	85%	Mid-senior
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Effective leadership is one of those things that you recognise when you see it. There are no rules. Everybody does it in their own way. The best leaders are authentic in their own style. They understand that they don't have all the answers and that they don't even know all the questions. But they bring best of class talent into their teams to help them work out the questions as well as the answers, and they always keep their organisations moving forward.

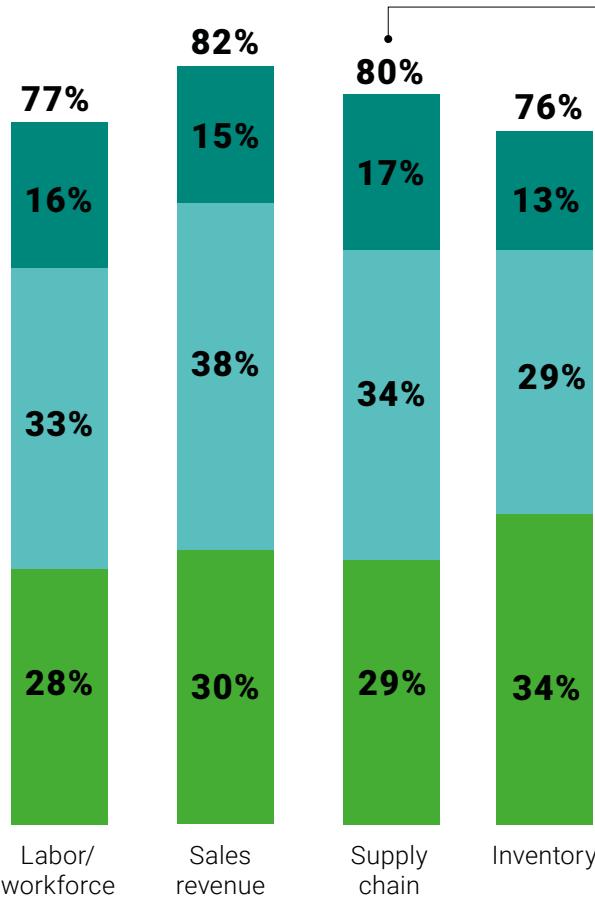
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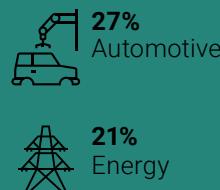
SIMON FREAKLEY
CEO, *AlixPartners*

Potential recession's impact on business

- Severe impact
- Moderate impact
- Major impact



SEVERE IMPACT



COVID-19

One in five (18%) say COVID-19 accelerated or caused fundamental long-term disruption for their business and industry.

IDENTIFYING GROWTH LEADERS

What growth leaders do differently: A bias for action gives some companies an edge

Just under a fifth of respondents to our survey (18%) say that their companies set the pace when it comes to growth in their industry. These are the growth leaders. They are distributed more or less equally among industries—a little less likely than their slower-growing rivals to be in consumer products or retail, and a little more likely to be in financial services or telecommunications.

Growth leaders' response to disruption differs materially from others.

First, while growth leaders don't report higher levels of disruption—64% compared with 61% for the rest—they are much more likely to say that they drive disruption rather than react to it: 77% compared with 47%. They are also more determined to undertake

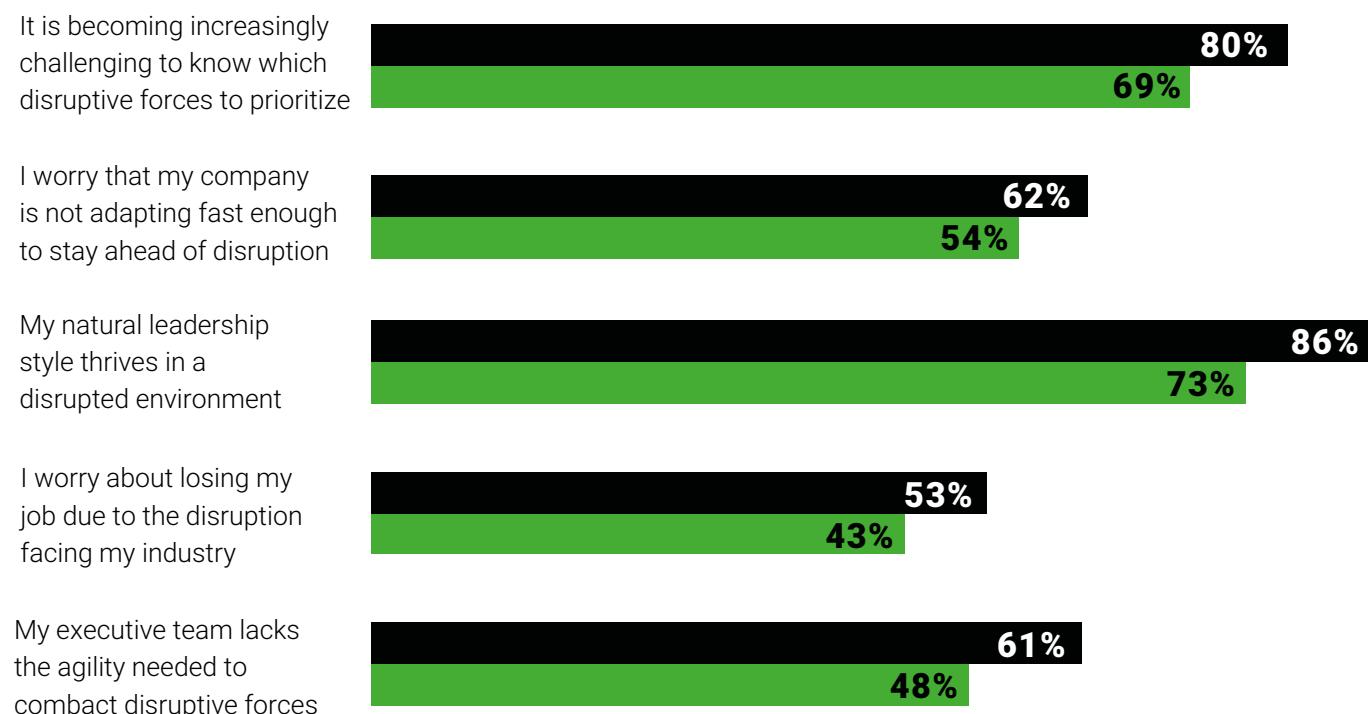
big, bold change: 57% say they are changing business models this year, compared with 25% of slower-growing companies.

But while they are driving and taking bold steps, they are also less satisfied with how well they and their leadership teams are responding to the challenges they face.

Rising to the challenge: Management capabilities of growth leaders vs. others

Showing percentage who somewhat or strongly agree

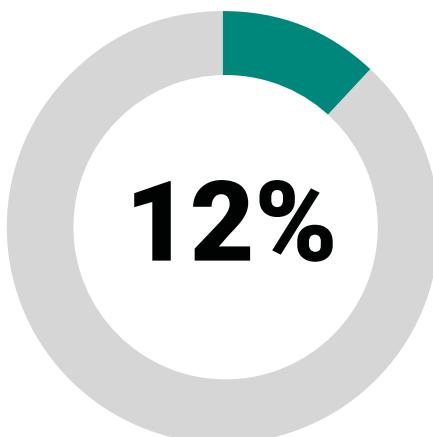
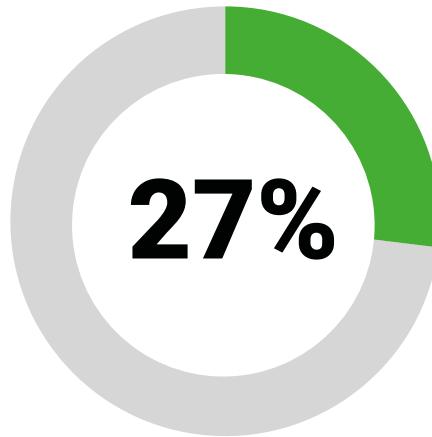
● Growth leaders
● Others



Growth leaders exhibit not only superior performance, but also show greater determination to perform even better.

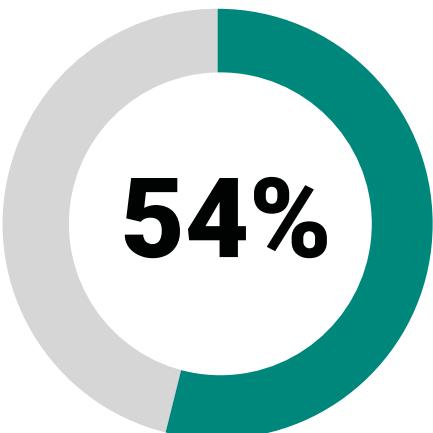
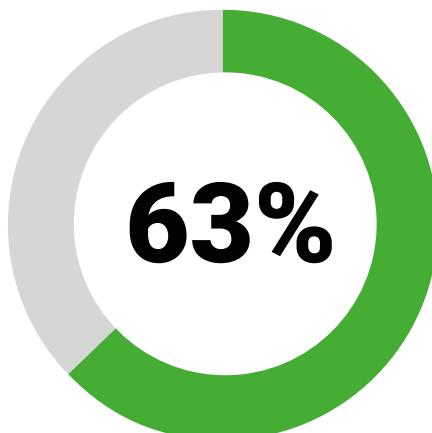
In supply chain, 69% of growth leaders say they are setting the pace in disruption; only 6% of the other companies say they are pacesetters.

Yet the growth leaders are less satisfied: 27% say the supply chain challenge is growing, against 12% of slower-growing companies.



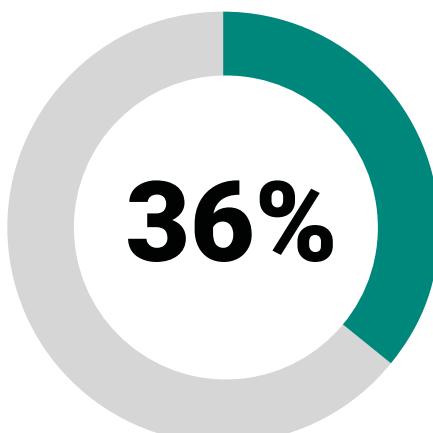
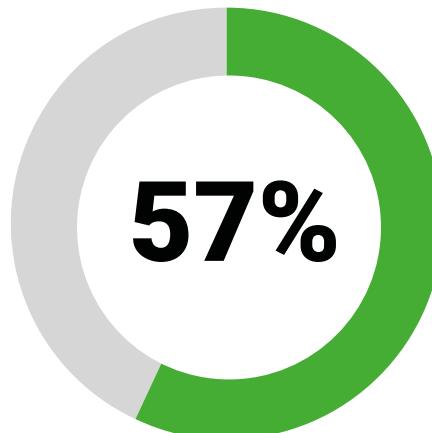
In workforce and talent management, 64% of growth leaders say their companies set the pace; only 8% of the other companies say they are pacesetters. By a 92% to 83% margin, growth leaders are more likely to have an enterprise-wide workforce plan that is linked to strategy.

Yet growth leaders are twice as likely to say that finding and keeping talent is much more difficult, and 63% complain that employees at their company are set in their ways and not open to change, compared with 54% of growth laggards.



In digital tools and technology, 73% of growth leaders say they are setting the pace versus 9% for slower-growing companies

But, again, the leaders are less likely to rest on their laurels: 57% are increasing their technology investments this year, compared with 36% among slower-growing companies.



Identifying Growth Leaders

Finally, the growth leaders appear to be taking faster, bolder measures to prepare for and respond to the slowing economy. In general, they are more likely to believe that a recession will be short. More than half say they are extremely optimistic about how well their companies will fare in a downturn; they are twice as optimistic as slower growers. Nevertheless, the growth leaders are taking more aggressive steps to protect themselves: They are significantly more likely to be building cash reserves (37% vs. 32%) and to be lining up new suppliers (33% vs. 28%); though they plan for greater growth, they are also more likely to be planning layoffs or furloughs (25% vs. 18%).

Growth leaders prioritize investment in digital technologies

Showing percent strongly or somewhat agree

- Growth leaders
- Others

Investing in new technology and digital solutions is a priority for my company's board and leadership team.



My company's board of directors often impede on the process of adopting/implenting new technology



Digital technology is fully embedded across my company



Advancements in technology are happening at a rate my company cannot keep up with



My company has the resources needed to invest in new technology and digital solutions



The majority of my company's workforce fully understands digital technologies and agrees with the objectives



Deepening Disruptions

Four major forces will transform the world economy in the years ahead. These represent challenges—but also huge opportunities.



Demographic Decline

Falling birthrates and longer life spans are remaking societies, with profound implications for economies, industries, and workforces globally.



Deglobalization

The post-Cold War order is fracturing, causing long-term realignment of supply chains and higher costs.



Technological Acceleration

The innovation and adoption of new technologies is happening at a rate unprecedented in history. The mission for companies is clear: Be digital or die.



Climate Transition

The disruptive impact of climate change is a double-edged sword—a transition to a green economy and adapting to the effects of climate change.

DEMOGRAPHIC DECLINE THE WORKFORCE CHALLENGE

Demographic Decline

People are living longer. Birth rates are falling, as are labor participation rates among certain groups.

As a result, workforces in much of the world are beginning to decline for the first time in modern history.

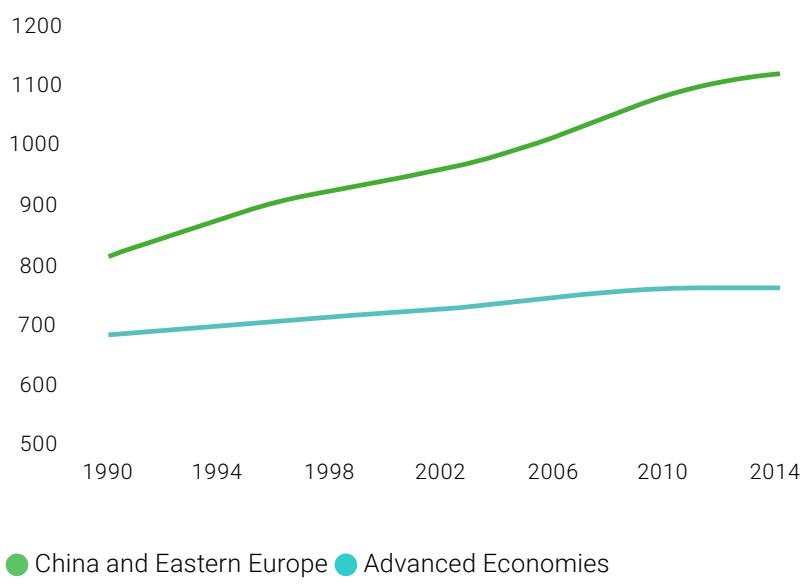
Business leaders will need to address what a shrinking workforce means for how they source and train talent, drive productivity, and employ collaborative technologies—not to mention how they respond to shifting patterns of demand from older consumers. Policymakers will similarly have to consider the implications for monetary and fiscal policy, social safety nets, healthcare, immigration, and economic growth.

Some countries are further along this curve than others. Japan has seen its working-age population decline by over 11 million¹ people since 2000, although it has offset these losses as more women entered the workforce. The Chinese labor force peaked² in 2015 at 800 million. As a consequence of its one-child policy, China has gone from 10 workers per retiree in 1990 to four workers per retiree today³, and will likely drop to two workers per retiree by 2030.

Europe and the U.S. are facing similar, if not quite as dramatic, trends. By 2035, the number of retirees in Germany⁴ is expected to grow by 22% while the working-age population shrinks by between 7% and 11% (even taking into account projections for immigration). For the U.S., the working-age population is projected to grow slowly over the next decade, but labor participation rates for males may constrain this growth, due to higher rates of incarceration, addiction, and disability within this demographic. One bright spot for the U.S. has been a “baby bump”⁵ during the pandemic, as fertility rates increased for the first time since 2007.

Growth in labor supply

(Working age population 20-64, millions)

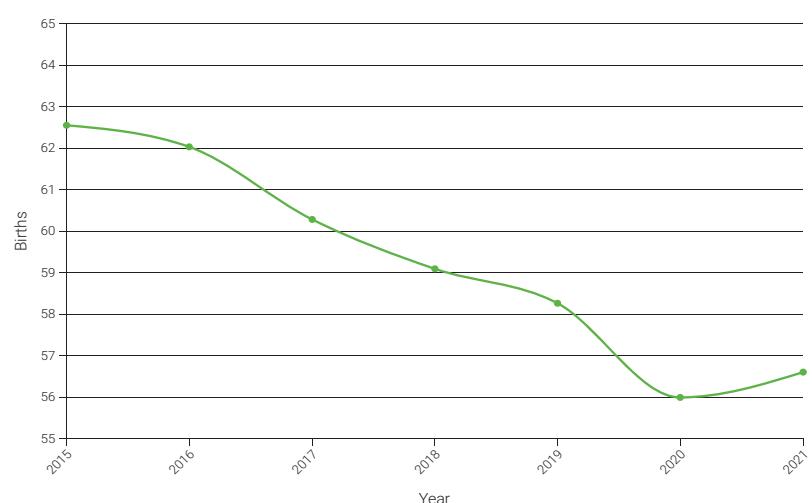


● China and Eastern Europe ● Advanced Economies

Source: UN World Population Database

Working from home baby bump

(US births per 1,000 women aged 15-44)



Source: US Department of the Census

AlixPartners Disruption Index 2023

The world has never before experienced a period where the working population shrinks unrelated to war, famine, or disease. What is even more remarkable is that this comes after a 30-year period in which the accessible labor supply in the

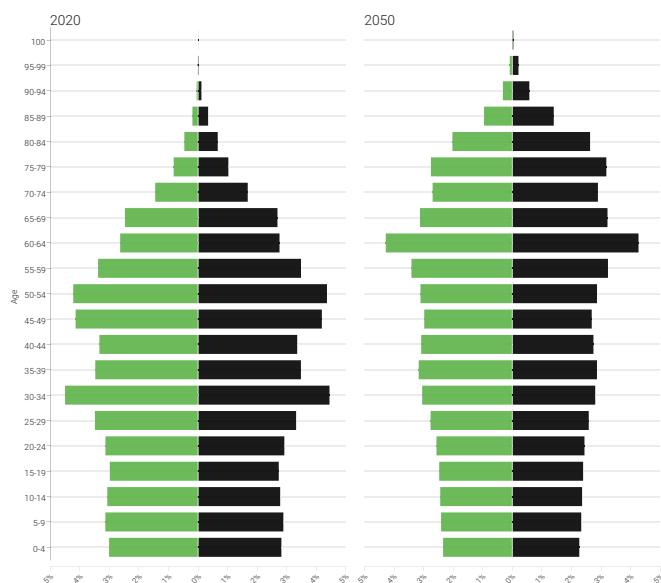
world effectively doubled, as China and Eastern Europe were integrated into the global economy following the end of the Cold War. It is unclear whether that economic integration will continue.

Working age populations in Germany, US, Japan and China (Percent of population)

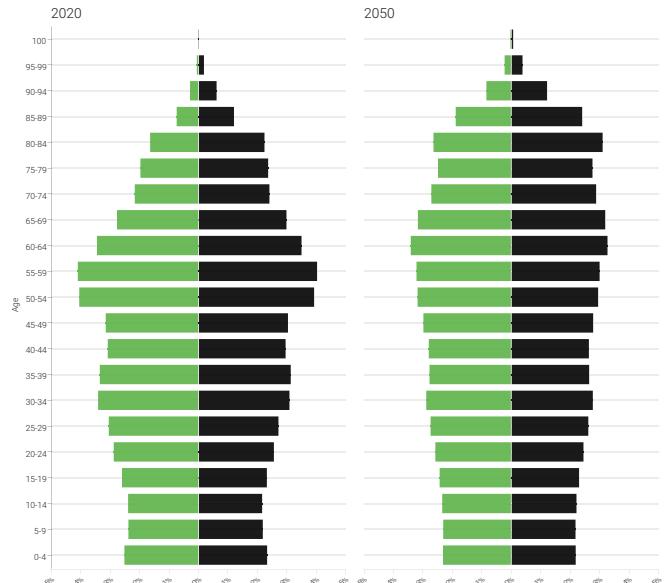
● Male ● Female

Source: UN World Population Database

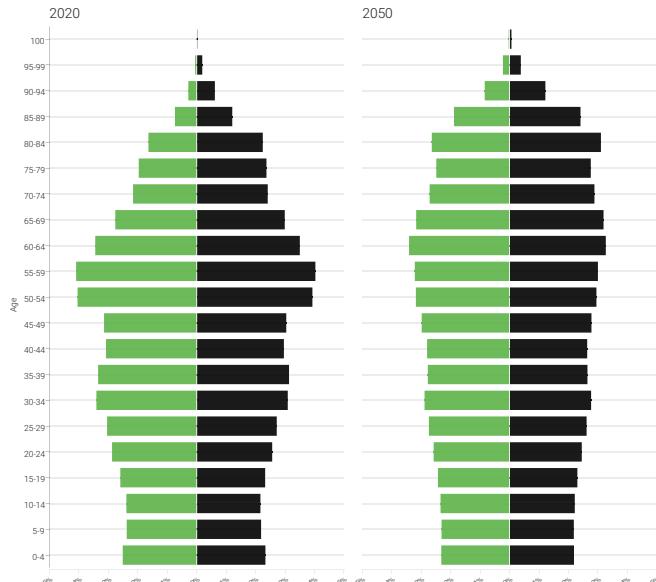
China



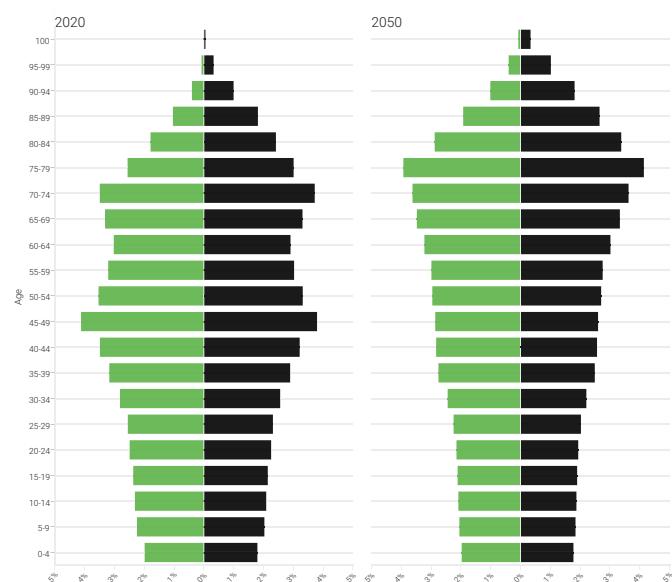
Germany



United States



Japan



Demographic Decline

What does this mean for your workforce?

We are moving from an era of labor abundance to one of scarcity. While the current economic downturn will certainly relieve some of the acute hiring pressures that companies have experienced in recent years, shortages of the most in-demand workers will continue.

In our survey for the AlixPartners Disruption Index this year, executives identified the inability to find enough employees with critical skills as the top

workforce issue impacting the growth of their companies, outpacing concerns over hybrid work, technology, and diversity. Companies are increasingly investing in new technologies in order to plug the productivity gaps they're facing as a result of these shortages. The pandemic shifted thinking on these technology investments by many companies, spurring longer-term investments into deeper tech like computer vision and machine learning.

IN THE VERY LONG RUN

COMPETITION BECOMES MORE ZERO-SUM

Demographic decline affects the demand for goods and services as well as the supply of labor.

The aging and shrinking of populations will shrink demand—for baby clothes, automobiles and college educations—and shift it toward health care, emerging markets, and robotics. When the overall market contracts (or fails to expand) there is more “red ocean” competition. Companies in consumer goods industries will have to create more of their growth by innovating, on the one hand, and by taking market share from competitors, on the other. Both are more difficult when not riding on the back of a growing population.

“

Getting diverse folks in from either undergrad or MBA is not easy, but it's the easier part of diversity and inclusion. The more challenging part is how develop people and give them opportunities and let them see others like themselves who are role models. If you see someone that looks like you in a position of power, it's empowering, it's emboldening. You can say, if they can do it, then I can.

”



**LISA
DONAHUE**

*Managing Director,
AlixPartners*

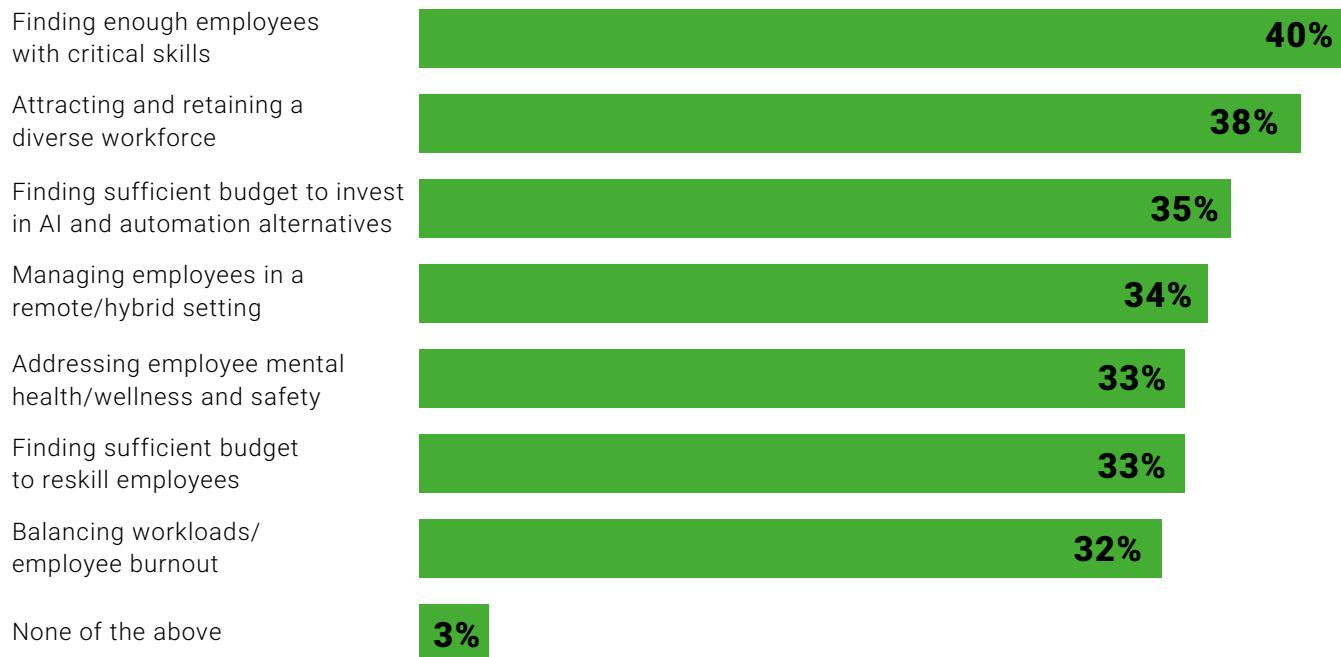
Executives are prioritizing investment in digital technologies

- Much more difficult
- No difference
- Much easier
- Somewhat more difficult
- Somewhat easier

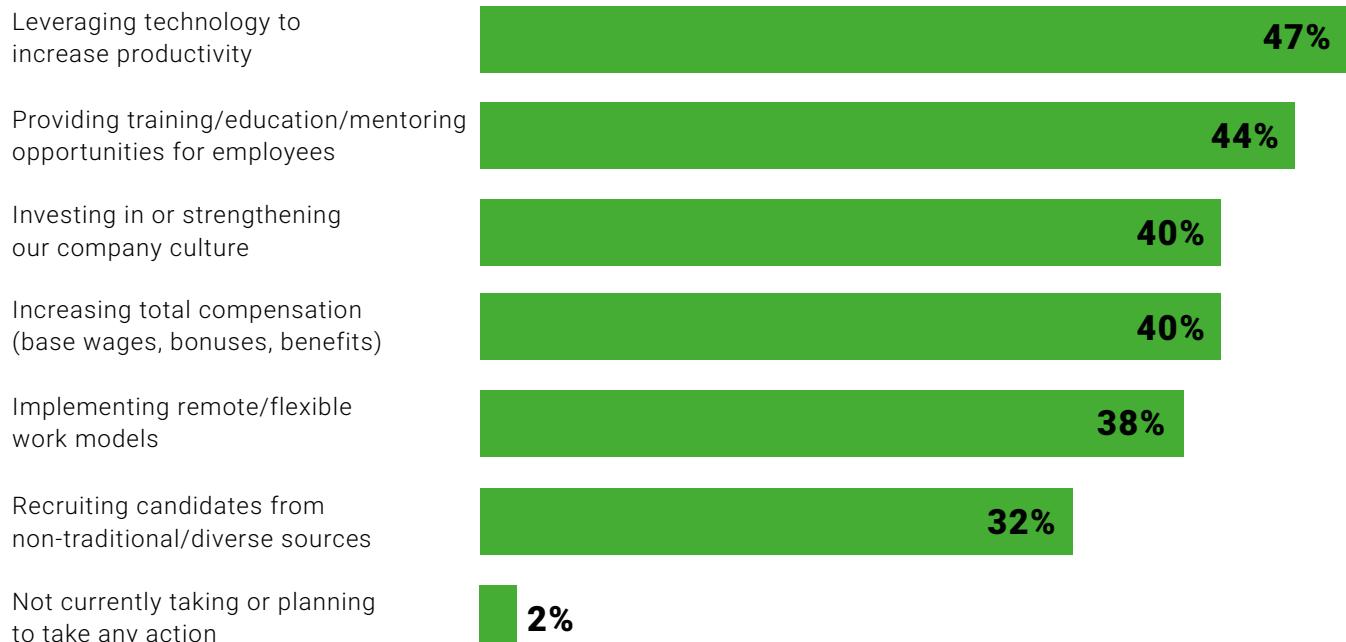


Demographic Decline

Top workforce issues



Top workforce actions (taken or planned)



Companies will have to radically change how they recruit, train, and retain their workforces. They will need to look for talent in new places. As populations age, the makeup of the workforce will necessarily change, particularly as workers delay

retirement. New technologies and ways of working will require higher investments in training and education, and with these investments, the need to incentivize and retain these workers increases.

Demographics may not be destiny, but they will increasingly shape discussions about technology, labor, and the future of work.

“

The war for talent has finally become real. It's not just getting people, it's getting people with the right skills, and also the right behaviors. Hardcore technologists, of course, have got a place, but you need people who can communicate, who can connect with people, with customers. Those hybrid individuals, who are technology-capable but also people-capable are quite hard to find. And they don't seem to be emerging out of the education system in the way that we would all like.

”



**ROB
HORNBY**
*Managing Director,
AlixPartners*

DEGLOBALIZATION: AN ONGOING REALIGNMENT

THE POST-COLD WAR WORLD ORDER IS FRACTURING

Forces that brought the world closer together and helped drive economic and enterprise growth for the past 30 years are waning, as protectionism and geopolitical conflict increase. The accepted logic of globalization—that lower barriers to the exchange of goods, investment, people, and ideas, would drive growth, reduce poverty, and foster international peace and cooperation—has been tempered by the realities of inequality, populism, and hard-power politics.

As global tensions increase, companies are rethinking their manufacturing footprints and supply chains, encouraged in that effort by government regulations and incentives. In the U.S., for example, the government this year earmarked \$52 billion in subsidies for semiconductor manufacturers to build domestic fabrication plants, while also banning the export of advanced technology to China. In Europe, all eyes have turned to securing alternative and reliable supplies of energy following Russia's invasion of Ukraine.

These realignments have been underway for some time, driven by a range of technological and geopolitical factors. Trade as a percentage of global economic activity peaked in 2008. The Trump Administration's tit-for-tat trade wars accelerated this process, as have the one-two punch of the pandemic and the war in Ukraine. The Biden administration, if anything, has been even tougher in its trade policy toward China, while Brexit has added to trade friction in Europe. Other factors, such as the declining share of manufacturing in global output and commodity price fluctuations, may also have contributed to these trends.

Trade is only one measure of globalization. After the end of the Cold War, barriers to the movement of capital, information, and people across borders also fell. New technologies like the internet and smart phones enabled greater ease of communication and a proliferation in the amount of data generated, with over 90% of the world's data generated in the last two years alone.

But barriers in technology and communications are increasing as well. While 60% of the world's population has access to the internet, censorship is growing. According to a recent study⁶, 27 countries have increased their censorship of media, including the internet, in the past year.

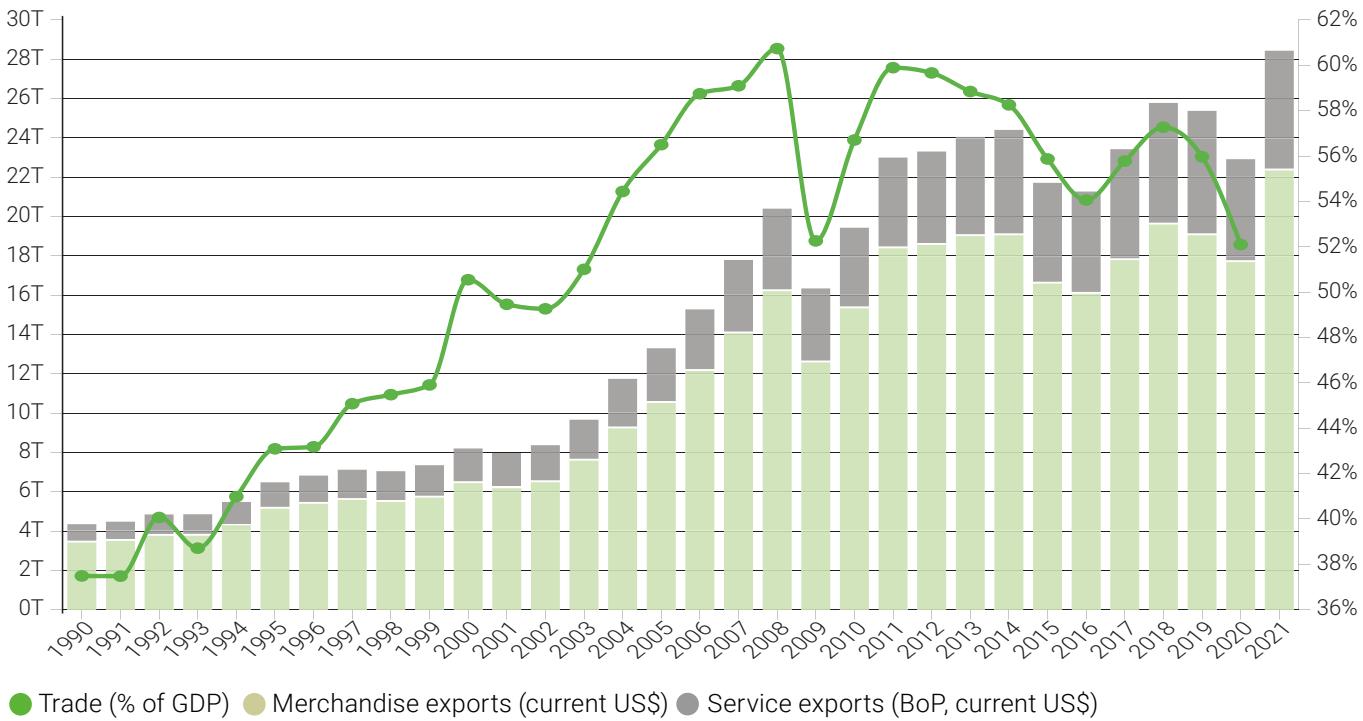
A realignment of global supply chains doesn't mean an end to globalization, of course. A complete uncoupling seems neither likely nor desirable. More than 70,000 U.S. corporations do business in China, for example. China is no longer merely a manufacturing giant—it represents a major market for international companies across almost every industry, from Apple (19% of revenue) to Volkswagen (37%).

What this does mean is that business must prepare for a future of generally higher barriers to trade, higher costs, and greater uncertainty. During periods of trust and cooperation, cross-border trade and investment tend to grow. The opposite is also true.

\$52BN

In the U.S. the government this year earmarked \$52 billion in subsidies for semiconductor manufacturers to build domestic fabrication plants, while also banning the export of advanced technology to China.

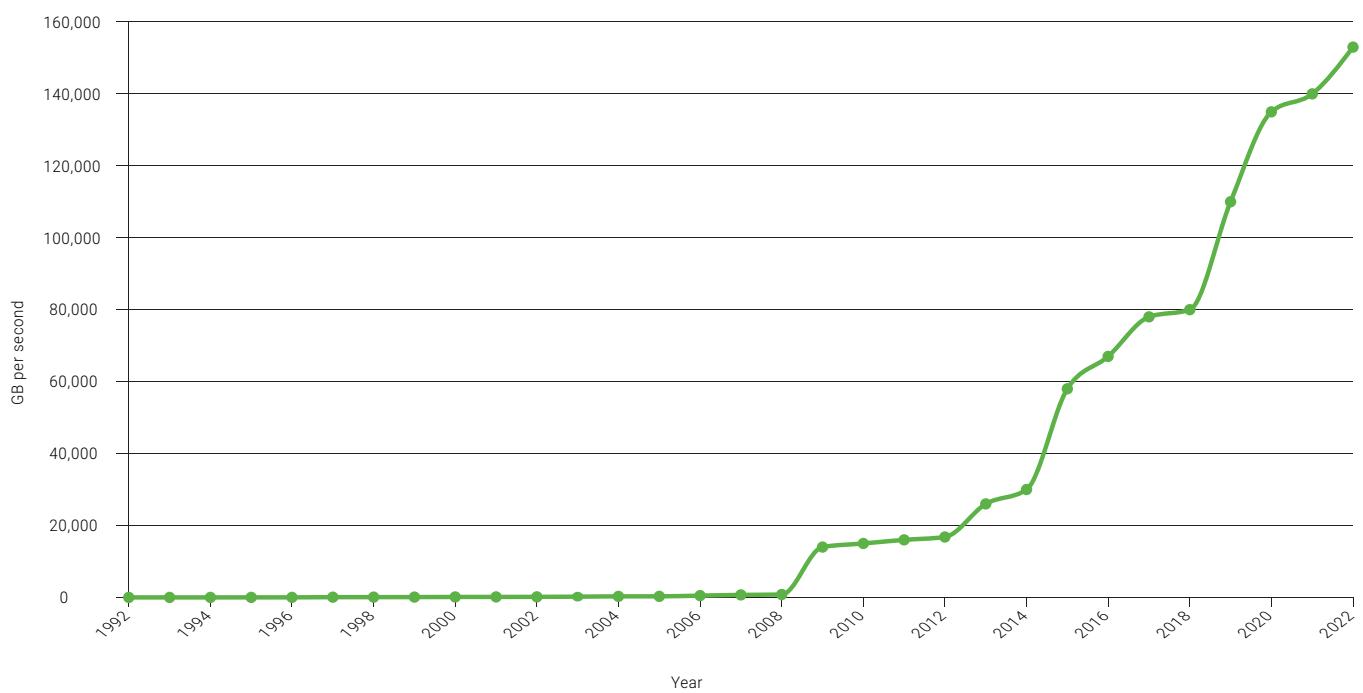
Global trade as % of GDP is moderating



● Trade (% of GDP) ● Merchandise exports (current US\$) ● Service exports (BoP, current US\$)

Source: World Bank

While information accelerates (growth in internet traffic)



Deglobalization

Supply chain implications

Today's supply chains were built over three unusually benign decades: Supply chains faced almost no stress, interest rates were trending down, the world economy was growing, and global trade was reasonably unfettered. Most enterprise resource planning (ERP) systems, for example, were built to optimize normal production.

Unfortunately, we can't return to that

benign environment. The pandemic shone a spotlight on the need to build resilience into supply chains.

Today, many of 2021's supply chain problems appear to be in the rearview mirror. Ocean shipping costs are down. Many raw material prices are falling; there's more deflation than inflation in commodity prices, though there are plenty of exceptions. Fewer components and materials just can't be

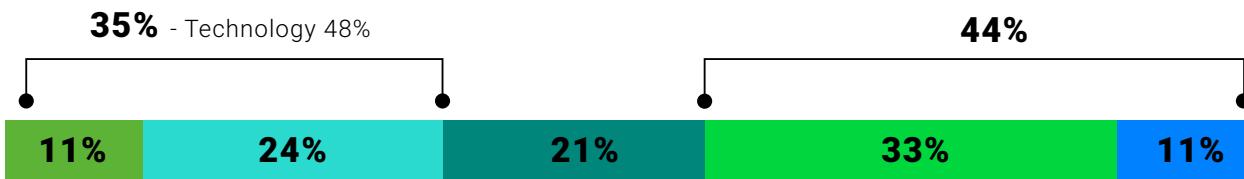
had—again, with significant exceptions. The New York Fed's Global Supply Chain Pressure Index⁷, while high by historical measures, is dropping toward historical norms.

In our survey this year, executives foresee supply chain pressures easing in 2023, following two years of dramatic disruption. But that doesn't mean they plan to go back to what they had before.

THE PANDEMIC SHONE A SPOTLIGHT ON THE NEED TO BUILD RESILIENCE INTO SUPPLY CHAINS

Supply chain challenges
Showing the percentage selected

12 months from now...



Compared to 12 months ago...



- Much more of a challenge
- Somewhat more of a challenge
- No difference
- Somewhat less of a challenge
- Much less of a challenge

Percentages of supply chain disruption challenges

Showing percentage agree

Total	CEOs	
78%	93%	My company needs to diversify its suppliers to protect itself against supply chain disruption
80%	90%	My company needs to invest in AI solutions to combat supply chain disruption
71%	90%	My company needs to renegotiate supplier pricing as a result of supply chain disruption
70%	88%	My company has entirely shifted its approach to supply chain management in the last 12 months
65%	90%	The semiconductor crisis has caused my company to rethink our supply chain strategy
60%	81%	I worry consumer demand for my company's product/services will decrease due to the disruption facing my industry
59%	83%	I fear supply chain disruption will put my company too far behind competition to keep up
54%	80%	My company lacks the talent needed to react and adapt to supply chain disruption
52%	78%	My company does not have the inventory needed to meet consumer demand

Despite these positive signals, the next year may present companies with supply chain problems that are every bit as messy and profit-threatening as last year's, as cyclical issues collide with structural problems that are still unaddressed and increasingly unsustainable.

Today a supply chain needs to solve three problems simultaneously and quickly: It must be able to resolve shortages immediately when they appear. It must defend against inflation and price volatility generally. And it must be resilient by design.

Designing for resilience is particularly critical. Resilience is more than a second source of supply. It may mean localizing or nearshoring to reduce transportation and political

risk. It means mapping suppliers—all suppliers, not just tier one—in terms of risk, health, and performance in real time, and creating advanced forecasting and pricing capabilities. It also entails taking into account environmental, social, and governance factors that might affect suppliers or distributors.

While globalization may not be dead, a deglobalizing world, with the potential for increased geopolitical conflict and structural barriers to commerce, will likely prove one of the most significant challenges business leaders and indeed the broader international community will have to face. In a world as intertwined as ours has become, there are no simple answers.

One step in the right direction, though, is building the resilience into your business—into your entire supply chain—to meet these challenges.

CLIMATE TRANSITION: A DOUBLE- EDGED SWORD

Climate transition

The disruptive impact of climate change works in two directions.

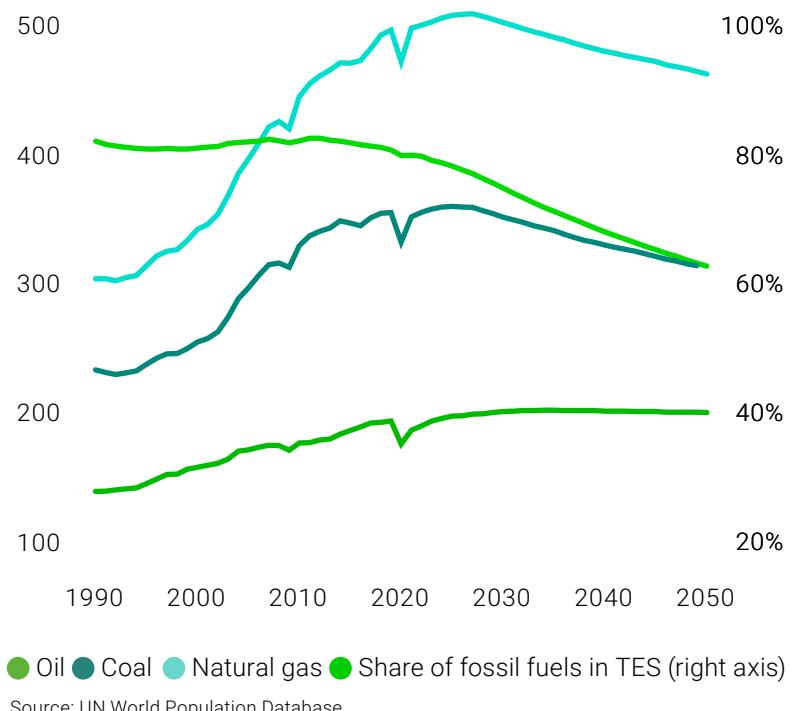
One is the transition to a green economy. As energy production shifts from fossil fuels to renewable energy, companies revamp operations to reach goals of Net Zero carbon neutrality, government policies, and regulations change, and a so-called circular economy emerges where waste is eliminated or recycled.

The other transition is adapting to, and sometimes suffering from, the effects of climate change. As the number and scale of calamitous weather events increases, sea levels rise, and some regions become less productive or habitable. The more business and society can mitigate climate change through a transition to a green economy, the less they will have to adapt to it; and the more they can mitigate and adapt, the less they will suffer.

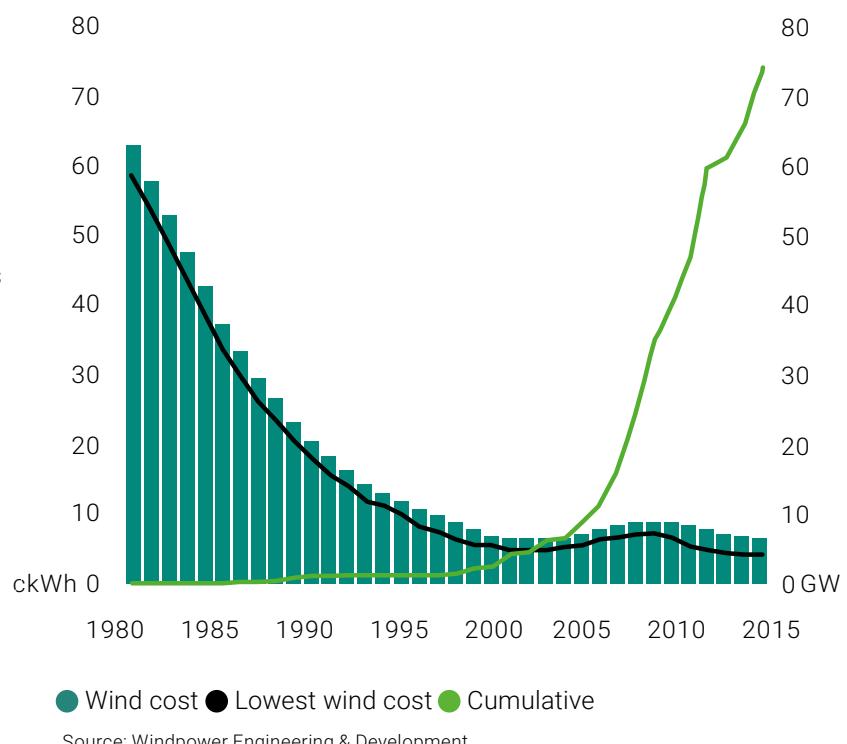
The war in Ukraine underscored the global economy's continuing need for fossil fuels, but it has also accelerated the transition to renewables. For the first time, the International Energy Agency believes that the role of fossil fuels in total energy supply has passed its peak.⁸ Even in China, coal and oil use will decline by the end of the decade thanks to huge investments in renewable energy and other alternative energy sources and technologies.

At the same time, most wealthy nations have successfully decoupled economic growth from carbon emissions, meaning that they are able to increase GDP while reducing their carbon footprint not just as a percentage of GDP but in absolute terms—even accounting for the carbon content of imports and exports. It remains a question when—or even if—emerging economies can make that transition.⁹

Fossil fuel demand in the Stated Policies Scenario (STEPS), 1990–2050



Cost of wind power generation and capacity



Source: Windpower Engineering & Development

THE TRANSITION FROM FOSSIL FUELS TO RENEWABLE ENERGY IS WELL UNDERWAY

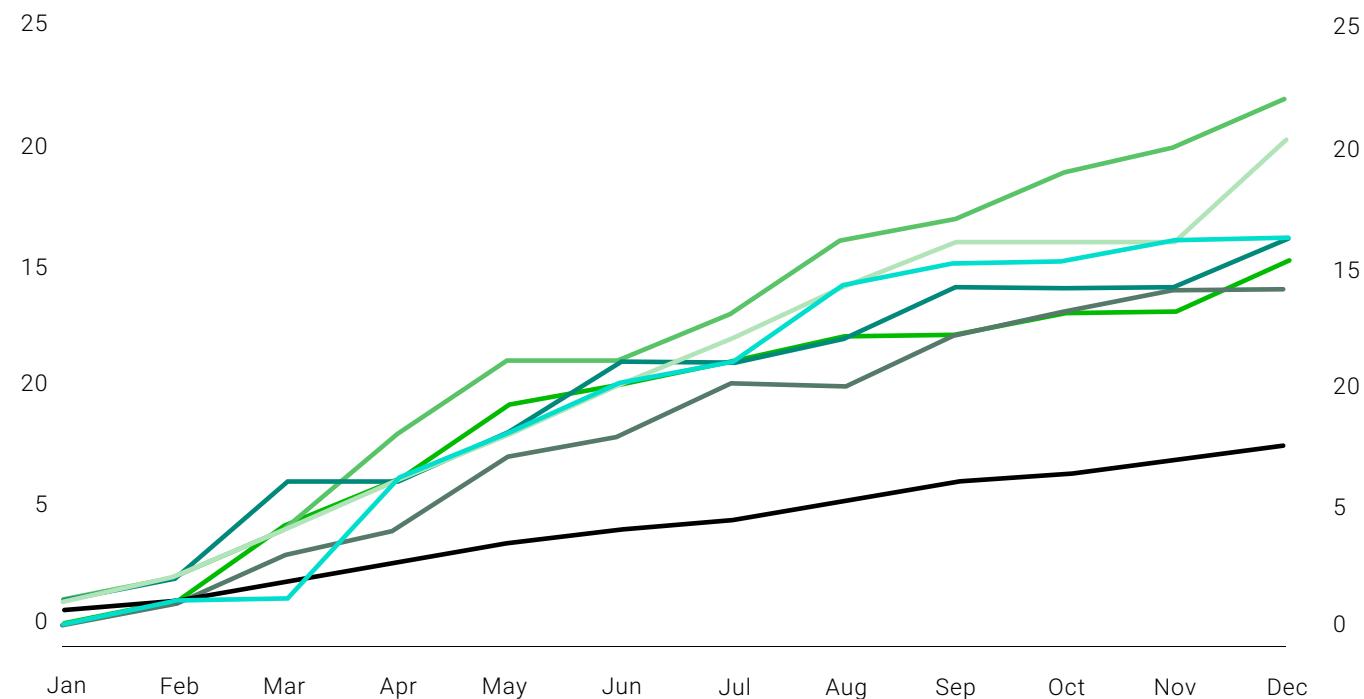
The transition dramatically changes the amount and flow of energy investment. Already today, global clean energy investments, which total \$1.5 trillion a year, are 50% larger than investments in fossil-fuel-based energy. Wind and solar accounted for 76% of new generation capacity in the U.S. in 2021. The shift to renewables has been fueled by price and accelerated by policy. The cost of generating offshore and onshore wind power is expected to decline between 37% and 49% by 2050.¹⁰

Solar power costs show a similar trend.

While industry makes the switch to renewables, companies and citizens must also cope with the costs and risks of climate change itself. Calamitous floods in Pakistan and Nigeria, droughts in Africa and the American West, more and more powerful storms—all these increase risk and cost, endanger existing investments, and will reshape or disrupt business plans in both the

short- and long-term. Since 2000, droughts have increased in frequency and duration by a third, according to United Nations data. In the U.S., billion-dollar weather disasters are occurring more than twice as often now as they have on average since 1980. The insurance industry is, of course, on the hook for some of the direct cost of catastrophe, but climate change affects business planning and decisions for everything, from aerospace and agribusiness to transportation and utilities.

United States Billion-dollar disaster event count (CPI-adjusted) 1980-2021



● 2019 (14) ● 2016 (15) ● 2011 (16) ● 2017 (16) ● 2020 (22) ● 2021 (20) ● Average (7.4)

Source: National Oceanic and Atmosphere Administration (NOAA)

Climate transition and industry disruption

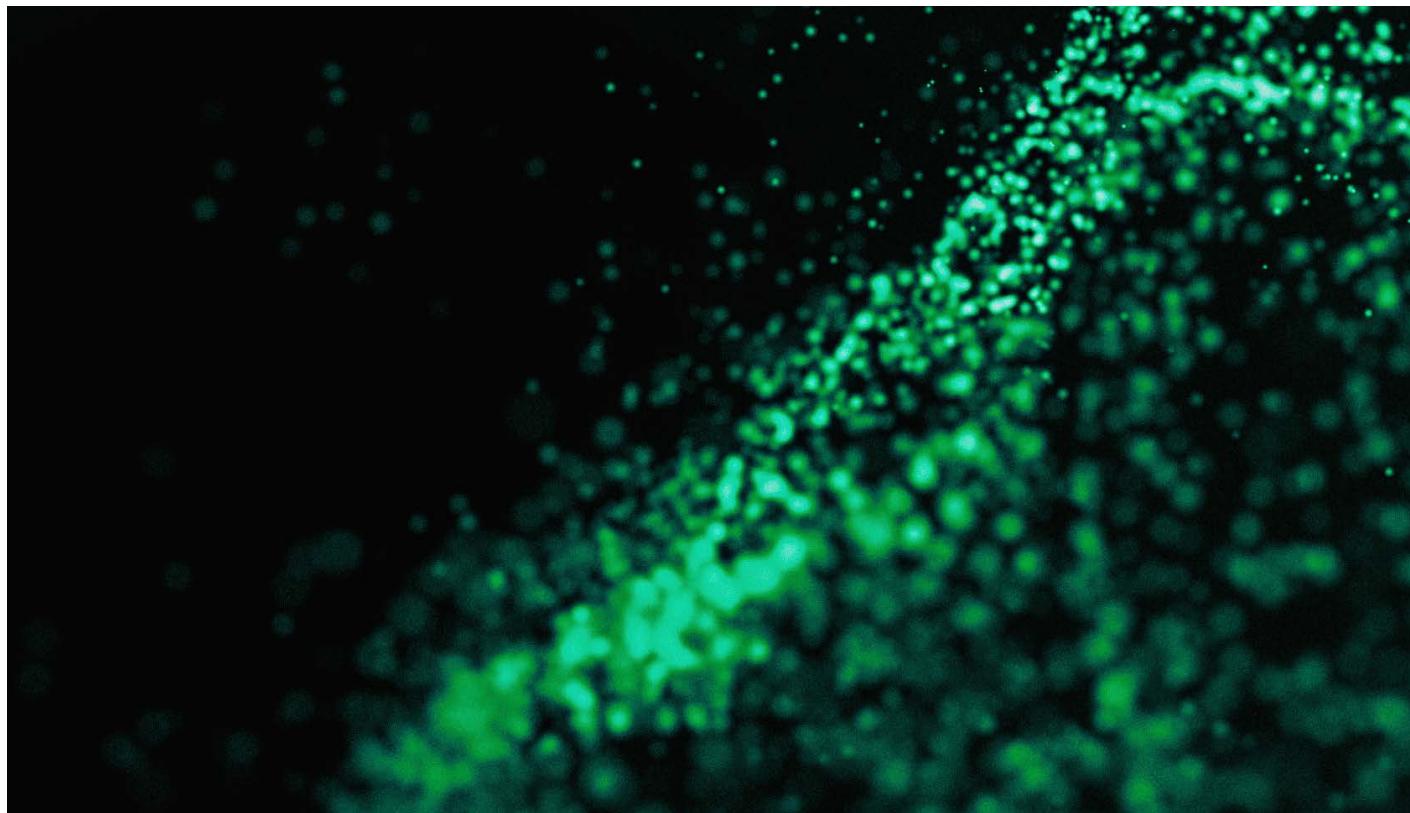
The climate transition occupies an ever-more-prominent place on the agendas of senior executives and boards of directors, with the fastest-growing companies taking a more proactive stance than their slower-growing competitors. Two years ago, just over a quarter (27%) of executives said that environmental and social issues had a very or extremely significant impact on their enterprises. Today, just under a half (45%) say they are experiencing a major impact as they address disruptions from environmental and social change.

Nowhere is the disruptive impact of climate transition more evident than in the automotive industry. Sales of fully

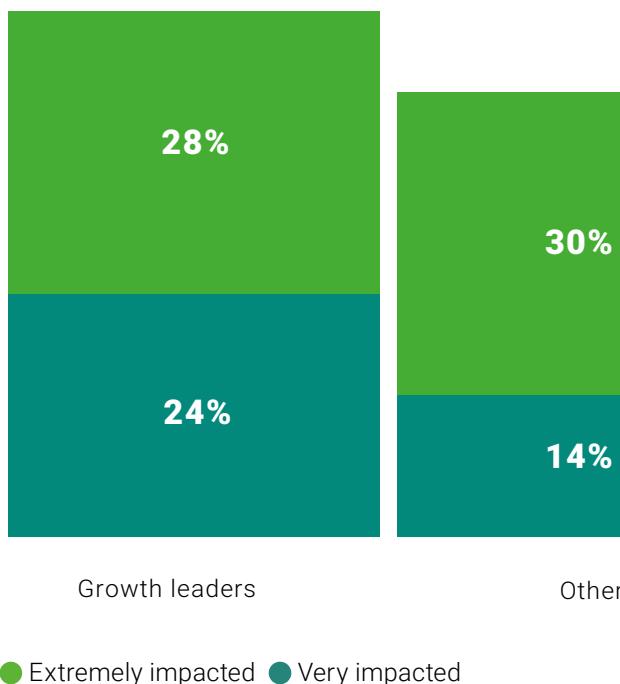
electric and hybrid vehicles doubled between 2020 and 2021; sales of battery electric vehicles (BEVs) are growing twice as fast as sales of hybrids. By 2035, the EU will ban sales of internal combustion engines (ICEs); the U.K. will do the same by 2030, while China, the world's biggest car market, expects 40% of new vehicles sold there to be electric by 2030. By that time, thanks to incentives in the Inflation Reduction Act of 2022, 52% of U.S. vehicle sales will be electric, hybrid, or fuel-cell powered—a greater than tenfold increase from 2021.¹¹

+10PTs

The issue is even more important for growth leaders, who are more likely than other executives to say that ESG concerns have extremely impacted their organization (24% growth leaders vs. 14% others, +10 pts)

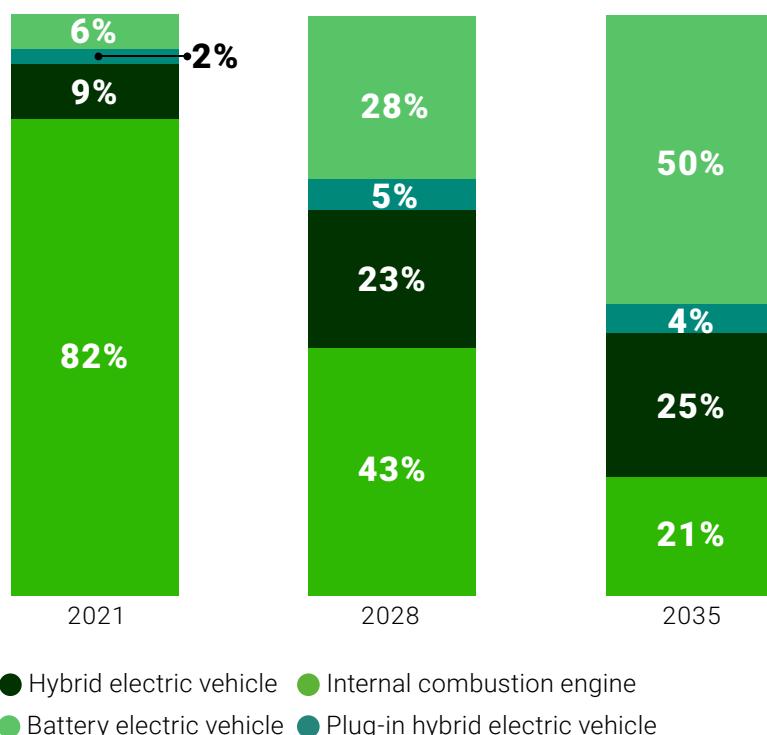


Impact of environmental and social concerns



● Extremely impacted ● Very impacted

Global vehicle sales forecast by power type



● Hybrid electric vehicle ● Internal combustion engine
● Battery electric vehicle ● Plug-in hybrid electric vehicle

Adding it all up, AlixPartners expects battery electric vehicles (BEVs) to be the dominant automotive platform worldwide by 2035.

The transition will not be cheap: Automakers and suppliers are poised to spend more than a half-trillion dollars funding this shift through 2026 alone. The change will upset the entire automotive industry ecosystem. The raw materials and parts used to make battery electric vehicles cost more than twice as much as the inputs for internal combustion engines, largely due to the cost of lithium and other battery components. The transition to battery power for vehicles will by itself cause an 8.1% increase in global demand for copper.¹²

While many vehicle components will be unaffected by the transition (like seats, axles, and steering mechanisms), production of drive trains, sensors, and of course batteries themselves will be altered or require new processes, with huge disruptive effects. Only about 28% of BEV powertrain spending is likely to be accessible by the industry's current supply base. The remaining 72% will be captured by newcomers or by the automobile companies themselves, which plan to insource much of what they used to buy.

Climate transition

The distress to the supply base (by bankruptcies, retooling, etc.) will cost as much as \$70 billion by the end of the decade if it is not actively and urgently addressed.

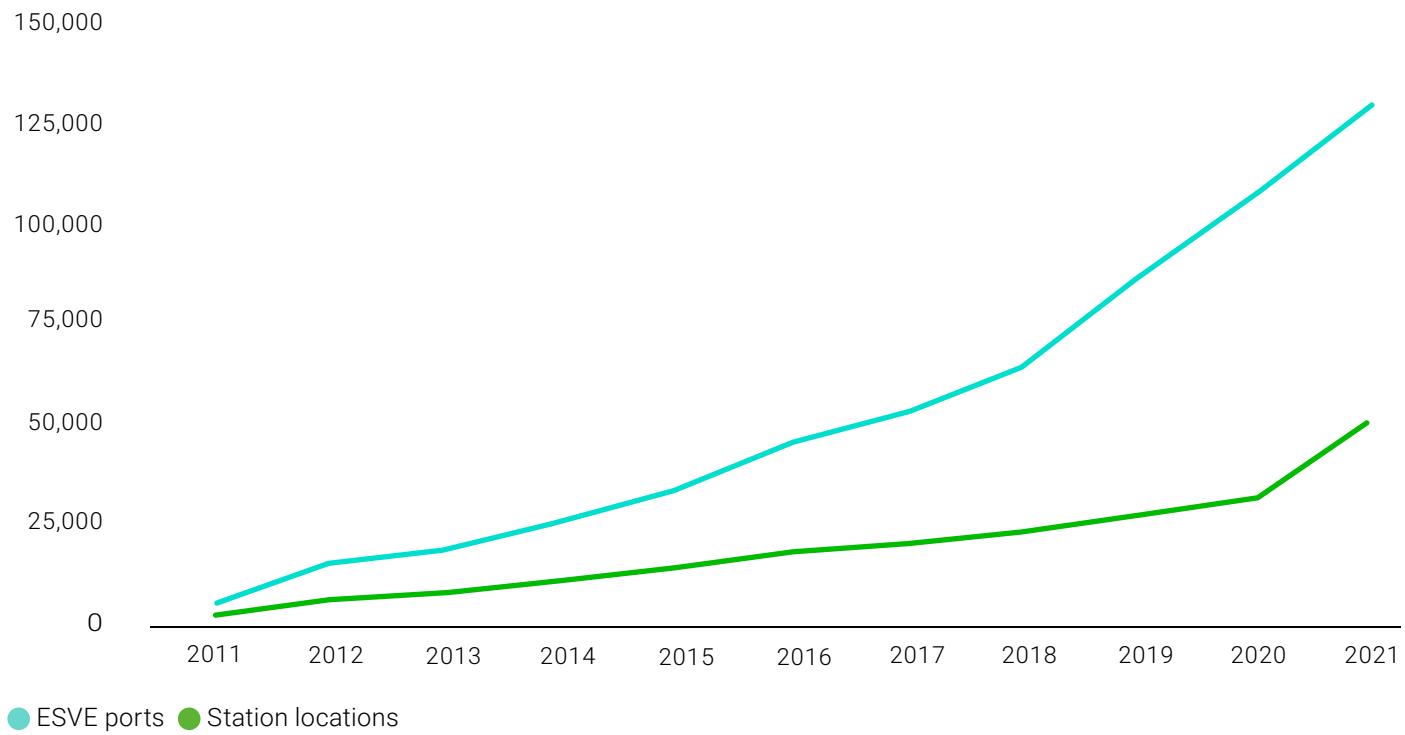
In a big shift partly caused by the transition to BEVs, industry profit pools are flowing from the supply base (59% of economic profits in 2018) and the original equipment manufacturers (OEMs; 63% of profits in 2023).

The disruptive effects will be equally dramatic downstream as gas stations give way to (or transition into) charging stations and face new competition

from charging stations in private homes, apartment complexes, public parking facilities, and retailers and shopping malls. The number of public charging stations has entered the “hockey stick” phase of growth,¹³ aided by federal grants. Ohio alone, for example, will distribute \$100 million over five years to fund rapid charging stations on major highways crisscrossing the state.¹⁴

The value of the public vehicle charging market is forecast to grow at a compound annual rate of nearly 37%, which means that it will double every two years. By 2030, the U.S. will need \$48 billion dollars to fund the growth of its charging infrastructure, only \$11 billion of which has already been committed.

Public and private electric vehicle charging infrastructure



● ESVE ports ● Station locations

Source: Alternative Fuels Data Center

Downstream changes won’t stop with charging, of course. Repair, maintenance and replacement parts—the entire automotive aftermarket, a business with half a trillion dollars in annual revenue in the U.S. alone—are all up for grabs. Mechanics

will do different work. Some parts and jobs, like mufflers and oil changes, will fade away entirely. The mechanics will need new skills, too, and their old nickname, ‘grease monkeys’, will have to go.

“

It has become profoundly obvious to all of us, that the cycles of disruption are becoming more regular and more profound than the economic cycles that executives are so practiced at managing.

Alixpartners has become focussed on disruption because we realised we have unique knowledge about how to handle it. For 40 years since our inception what we've been helping clients navigate disruptions that happened in their markets and their geographies and their businesses. A restructuring, an operational improvement or a governance transition—all of these things one way or another were in response to disruptions in our clients' businesses. What we have learned on the front line of these disruptions can help companies address the profound disruptions that they are dealing with every day.

”



**SIMON
FREAKLEY**
CEO, AlixPartners

TECHNOLOGY ACCELERATION: RELENTLESS CHANGE

NO SOURCE OF DISRUPTION IS BIGGER THAN TECHNOLOGY

Four of the top 10 disruptors that executives cite are technological advances in materials and processes (#1); data privacy and security (#2); automation, artificial intelligence (AI), and robotics (#5); and pervasive connective technology infrastructure (the Internet of Things, etc.) (#9).

And no wonder. Technological change gets faster, broader, and more pervasive every year. It is difficult to think of an occupation or a part of life unaffected by it.

Take, for example, how we make things. Worldwide there are about 3.5 million industrial robots. While slowing economic growth in China (by far the largest market for robots) and Europe may trim sales in the short run, the long-range trend is clear—14% growth, which means the industrial robot population doubles every five years.¹⁵

Or take how we buy things. In 2018, 80% of U.S. consumers planned to visit a retail store for their holiday shopping. Four years later, just 57% planned to, according to the AlixPartners U.S. Retail Holiday Sales Forecast.¹⁶

Or how we pay for things. The value of digital payments, according to Statista, will grow at a compound annual rate of 12.3% between now and 2027, to a total value of \$15.17 trillion worldwide.¹⁷ Meanwhile the number of commercial checks processed by the U.S. Federal Reserve, 3.7 million in 2021, is half of what it was 10 years before and less than a quarter of what it was in 2001.¹⁸

Or how we work. The worst of the COVID-19 pandemic has passed, but the percentage of work done remotely has stabilized at a surprisingly high level, with more than 30% of workdays taking place at home. Seven out of 10 employees working on global teams interact with colleagues from other countries at least once a week.¹⁹ To support these remote or dispersed workers, the market for collaboration software tools, worth \$11 billion in 2018, is expected to reach \$17 billion in 2023.²⁰ These transitions will cause seismic change in what workplaces look like and in the skills people need to perform. In 2020, 84% of employers told the World Economic Forum that they expect to digitalize working processes rapidly, and the WEF estimates that more than half of all employees will require significant reskilling as a result.²¹ Brookings Institution research shows that 70% of jobs today require medium- to high-level digital skills.

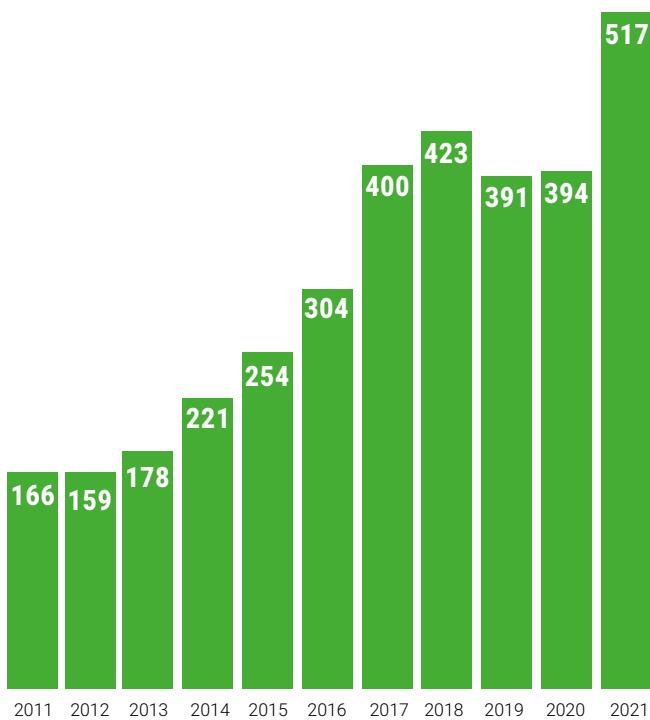
Or how we compete. Accelerating technological change opens the door for new industries and entrants—think fintech, martech, and healthtech, for starters—or causes incumbents to make radical change to survive.

It creates new value and threatens traditional sources of value. It changes how companies interact with customers, and opens new ways in which to delight, or dismay, them.

All of this, in turn, drives enormous growth in the need to protect digital assets—the global cybersecurity market, \$185 billion in 2021, is doubling in size every six years.²²

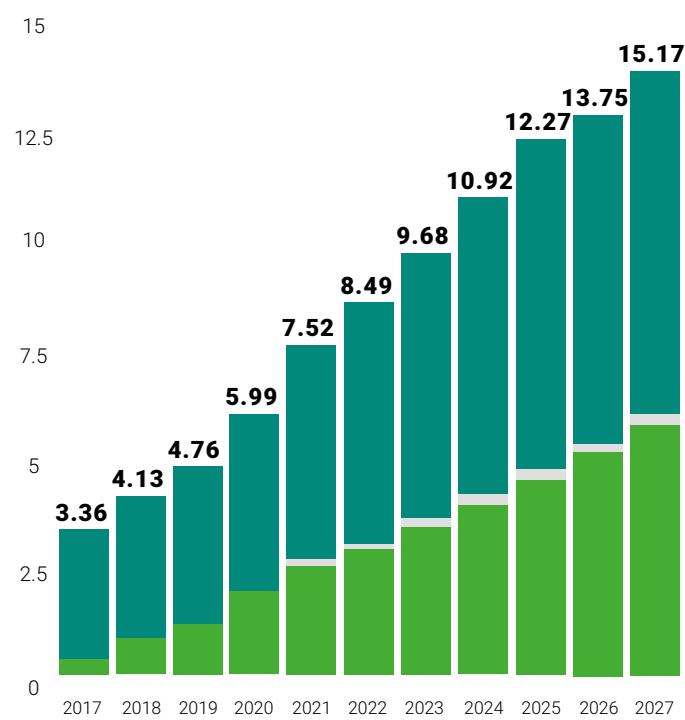
Among the four disruptive megatrends, technological acceleration is unique in one other way: More than the others, it is one where companies can be proactive at least as much as they are reactive. While advanced companies can—and do—try to get ahead of demographic change, deglobalization, and the climate transition, they are much more able to design their own destiny when it comes to technology. On average, business leaders feel that certain technological challenges—such as technological advances in materials and processes as well as AI, automation, and robotics—are more of an opportunity than a threat, while 61% say they are either setting the pace or among the leaders

Worldwide annual robot installations



Source: World Robotics 2022

Increasing value of digital payments



● Digital commerce ● Digital remittances

● Mobile POS payments

Notes: Data shown is using current exchange rates and reflects market impact of the Russia-Ukraine war

Source: Federal Reserve System

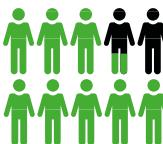
in their industry when it comes to digital tools and technologies. Now, clearly, three out of five cannot be leaders, but that optimistic self-assessment is an indicator of executives' belief that technological change is something they can use to win.

As we will see, however, the fastest-growing companies experience and respond to technological acceleration differently from the rest.

98% 

of CEOs agree that investing in new technology and digital solutions is a priority for their board of directors and leadership team

BUT

 **83%**

of CEOs say their board of directors impedes the process of adopting new technology solutions

Technology Acceleration

“

Technology has a dynamic that hasn't changed very much in the last 30 years. Something emerges which is considered to be highly disruptive. It tends to emerge in a very hyped way. It's promoted by the marketing departments of technology companies. Commentators predict fundamental changes in the future. But the implementation is usually harder and results are more difficult to get than everyone said. It's a matter of statistical record that more than half of those early investments fail. Some kind of pragmatic outcome prevails—practical digital. You have to start by asking, what are the business pressures and opportunities? When you look at those, you can start to imagine how technology might enable them.

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ROB

HORNBY

*Managing Director,
AlixPartners*

Technology acceleration = growth acceleration

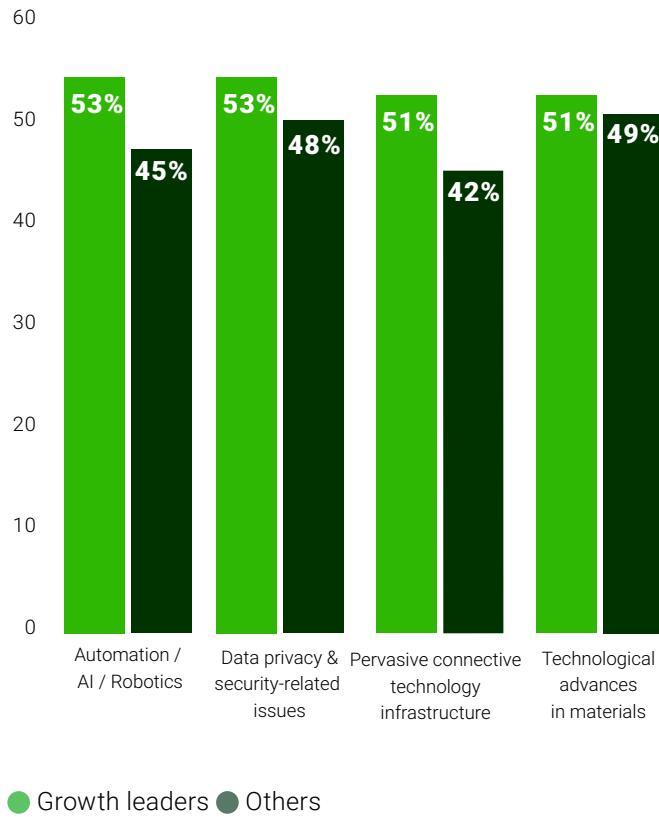
Growth leaders (see page 18) are not more likely to be technology companies themselves, but their attitude toward and response to technological change is markedly different from their competition. What do they do differently?

First, they view technology as a source of competitive advantage. 73% say they set the pace in their industry when it comes to digital tools and technology, compared to just 9% of non-growth leaders. They pay for what they get—57% are investing more resources in digital tools and technologies than they were the prior year, compared to 36% of slower growers—a difference of 21 percentage points. And 94% of growth leaders say that investing in new technology and digital solutions is a priority for

their company's board of directors or leadership team and board.

They also get what they pay for. Growth leaders are more likely than others to believe their company needs to target the most advanced technologies over the next year, such as AI, 5G networking, and quantum computing. But a more striking difference is the growth leaders' focus on practical digital technology.

Technology disruption: Extremely/very disrupted



● Growth leaders ● Others

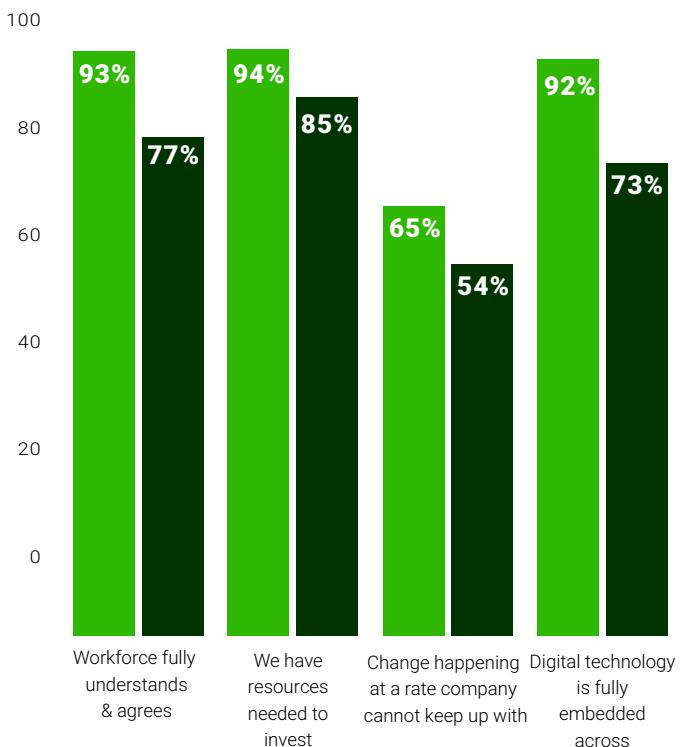
Growth leaders also know that technological change is never one-and-done. While they are more committed to technological change, more invested in it, and more successful at implementing and managing technology than others, they are also more anxious about it. 73% of these companies are setting the pace for technological change, but 65%—roughly two out of three—worry

that the very change they are driving is happening faster than they can keep up with. Given their determination to gain advantage through advanced technology practically applied, it is no wonder that one in four growth leaders (25%) agree their company needs to engage external experts or make strategic hires in order to fully leverage digital technology.

65%

of growth leaders say that advancements in technology are happening at a rate their company cannot keep up with

Organizations' ability to drive technology change Showing percentage who somewhat or strongly agree



● Growth leaders ● Others

94%

of growth leaders say their company has the resources needed to invest in new technology and digital solutions

THRIVING AMID DISRUPTION



Thriving Amid Disruption

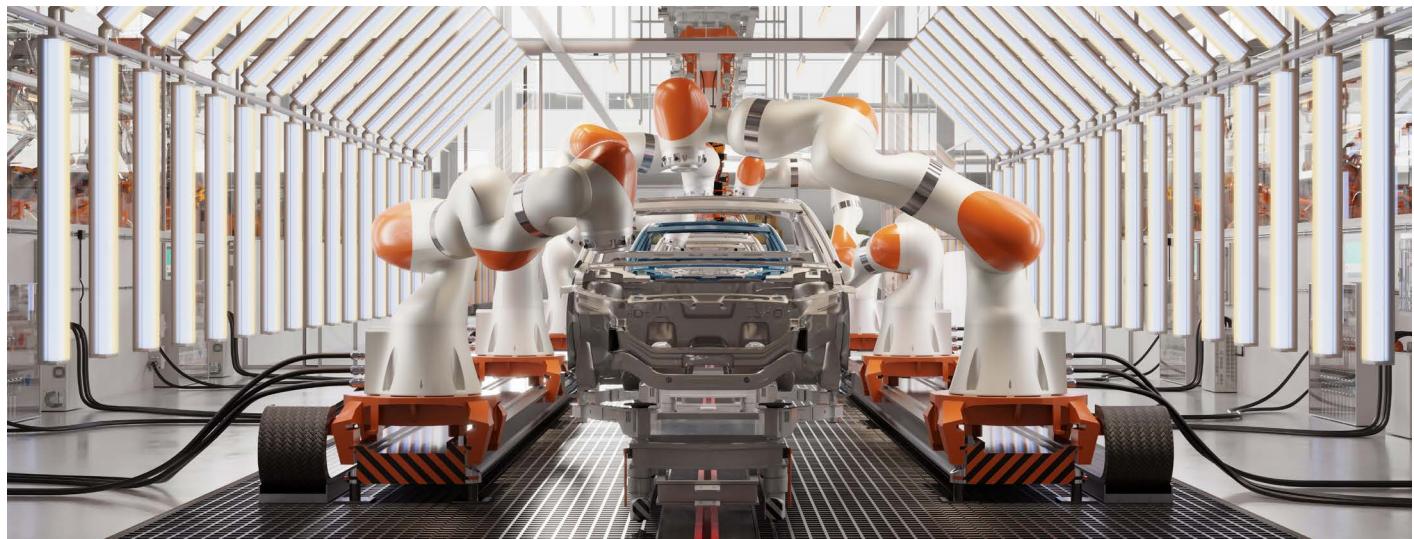
Every executive team performs a balancing act between short- and long-term thinking, delivering this year's earnings while investing for growth and eliminating waste while also innovating in products, services, and processes. It also needs to find the right mix of direction and empowerment, using the power of centralization versus releasing the energy of decentralization.

That is tricky even in a placid business environment, and 2023 promises to be anything but placid. Companies face an extraordinary confluence of forces seemingly bent on knocking them off balance. Their expense budgets have been shoved sideways by inflation. Their revenue forecasts have been blown apart by softening demand and, for some, recession. Rising interest rates are playing havoc with financing, acquisitions, and other

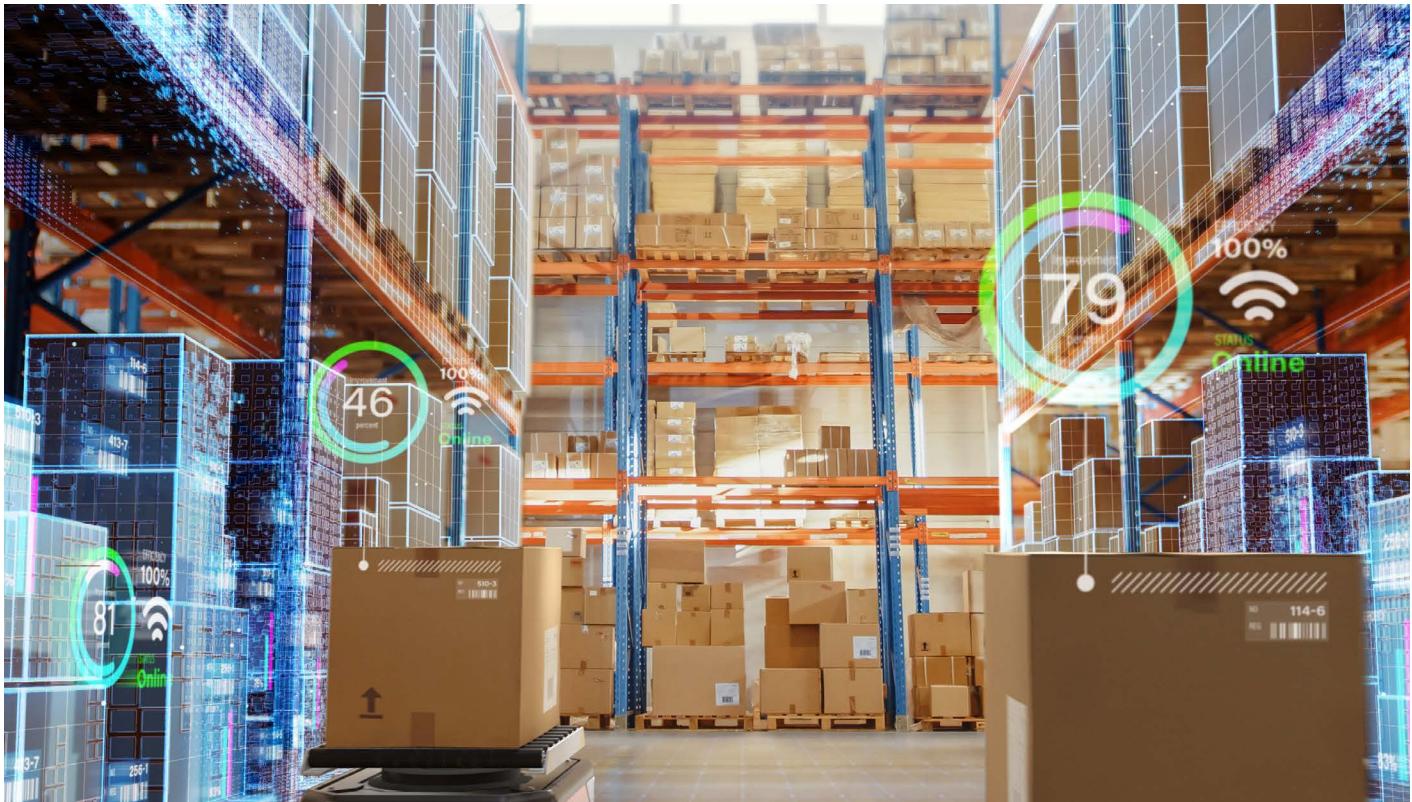
plans. A soaring dollar is messing with costs and revenues. The economic uncertainty is compounded by political uncertainty in Asia, Europe, and North America. And plans can be upended by continuing and unpredictable aftershocks from COVID-19.

More than ever, leaders need the ability to focus tightly on short-term issues while simultaneously envisioning their long-term strategy.

A critical part of that bifocal capability is understanding what the major disruptive forces are, which will affect their company most, and what the effect on industry dynamics is likely to be in both the short and long run. The forces we have described in this report play out differently depending on the company and its competitive context.



**A COMPREHENSIVE
RESPONSE TO DISRUPTION
REQUIRES BOTH SHORT-TERM
AND LONG-TERM ACTIONS**



Long-term



Invest in smart growth initiatives.

Likely closest to your core business, look where you can leverage existing economies of skill and scale.



Prioritize operational superiority.

Base plans on economic profit, which will increase margins and improve working capital management.



Roll out customer-oriented digital solutions that respond to changing consumer behaviors.

The full value of digital transformation comes when cost-oriented programs are paired with investments that improve customer experience.



Transform your workforce today

While some immediate labor market constraints are likely to ease, long-term issues require radical rethinking of the workforce, technology, and the employee value proposition.

Thriving Amid Disruption



Become recession ready

Planning as usual won't suffice for unusual times. A budget and a plan that extrapolate from last year are likely to prove irrelevant; they might even be dangerous. Instead, companies should build five interlocking capabilities for recession readiness:



Tune up financial warning systems

Most companies see danger too late. Indeed, 87% of executives say they feel optimistic (including 31% extremely optimistic) about the future of their business considering a pending recession. Smart companies will take off the rose-colored glasses and deploy early warning systems that produce better visibility into financial flows and identify signals of potential distress across all levels of business (e.g. business units, geographies, channels and even

individual products). Executives at these levels are likely to be the first to spot slowing orders, growing inventory, or delayed collections—but they often miss the broader significance of what they see. Redesign planning and your monthly and quarterly reviews so anyone running a business unit sees and reports all three views of your business: the P&L, balance sheet, and cash flow.



Understand costs and revenues at a deep level of detail

Input costs, raw materials, labor, and transportation—all may be much more volatile than usual. A zero-based cost budget provides much more specific information about sources of cost vulnerability; it is a powerful weapon against disruption. The same is true on the revenue side. Most plans look

more keenly at costs than at revenue, but sudden drops in demand occur in a recessionary environment. What would that do? What assets will be impacted? Which customers, products, and channels are most profitable? Which are most vulnerable?



Maximize cash generation

When times are tough, cash is king. Working capital initiatives need to be built into company plans, with specific targets for how much will be saved when and by whom. Those plans—and the resulting cash generation—need to be actively monitored. This is the moment to hold

onto cash and further build reserves by drawing down lines of credit, and to reexamine balance sheets and business models to identify fixed costs—such as fleets of trucks and server farms—that can be turned into variable costs via outsourcing.



Pre-plan for action

Scenario planning is a powerful recession-readiness tool. What would a mild, moderate, and severe recession do to your business? Which specific parts of the business would be hurt first? Which would be hurt most? What are the early warning signs that will inspire action? Who on your team is best equipped for what might lie ahead? Prepare three scenarios: An easy-to-do set of actions that will conserve

cash with no long-term damage, such as hiring and travel freezes; a lever to pull if a downturn is fairly steep or long, with actions like delaying new product launches or cutting capital spending; and a crisis playbook in case of deep trouble. Prepare these scenarios now, when you don't need them. That way, if business goes south, the question becomes when to act, not what to do.



Improve supply-chain cost, flexibility, and resilience

Recession proofing cannot stop at the company door. Supply-chain disruptions have faded in the headlines, but not in the executive suite: 52% of business leaders say supply chain disruption is more of a challenge for their company than it was a year ago. The combination of recession and inflation changes the challenge. Before, it was firefighting, as companies scrambled to find supply at whatever cost and wherever they could. Now they should renegotiate the prices they just agreed to, so as not to overpay for goods they might not sell. They

should build the same kind of early-warning system they should have for internal operations: control towers that provide real-time information about availability, price, and supplier performance, because a recession might put some suppliers in trouble, particularly smaller tier-two and tier-three companies they might not know well. Margin management must return to a front-and-center position among supply chain capabilities. This requires developing the ability to measure profitability at a granular level and integrate data in real time.

“

We will continue to see supply chain disruptions. I think they're here to stay because they emanate from all different sources. Businesses have worked their way through a whole host of supply side disruption—but now they're encountering increasing demand disruptions. So businesses are right in the middle of that.



DAVID

GARFIELD

*Managing Director,
AlixPartners*

”

Position for near term opportunities

One company's retreat is another company's chance to advance—if it's alert and ready to act. Opportunistic acquisitions and aggressive digitalization are particularly attractive.

A buyer's market.

Companies with cash, strong balance sheets, and strategic foresight can take advantage of the distress of others. What are the actions you would take to reshape your market, if you could? If you plan ahead of time, you will be faster to act when opportunities become available. When it comes to acquisitions, the best positioned buyers will be those with cash, strong balance sheets, strategic foresight, and superior operational capabilities. Rising interest rates may sideline some financial buyers, creating opportunities for those who can buy with less leverage. Operational due diligence—looking deeply into the

plants, processes, and products of target companies—may become more important than financial engineering. Companies with that combination of financial flexibility and operational chops can put themselves in a strong position to accelerate when the economy turns back up.

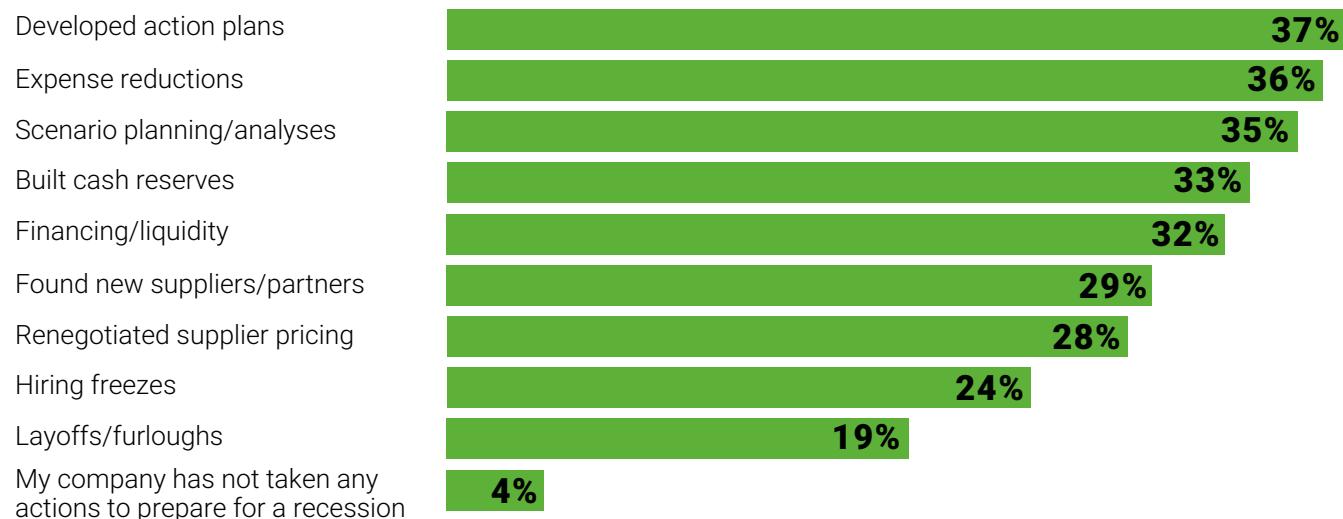
Cost-focused digitalization.

Investments and initiatives that give digital capabilities industrial strength deliver big benefits in both the short- and long-term. Executives are three-and-a-half times more likely to struggle with the execution of their technology

plans than with finding the budget for them. Many digital initiatives, such as predictive maintenance and production and back-office automation, throw off significant savings while also transforming how business is done. Similar opportunities exist in speeding up moves to cloud computing, digital payments, and workforce management. Many companies invested heavily in digitalization to support hybrid work during the pandemic; now three out of 10 executives say that integration of those systems should be a top priority for their IT and operations teams.

Actions taken to prepare for a recession

Showing percentage selected each response, select only three actions



Thriving Amid Disruption

“

They say you should never let a crisis go to waste. I think there are opportunities in today's environment. One is in M&A. There are companies that are struggling, so there are distressed assets that can be acquired at reasonable prices. There are also a lot of companies that are realigning their portfolios, shedding non-core assets. That creates an opportunity to acquire assets that weren't available previously.

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**DAVID
GARFIELD**
*Managing Director,
AlixPartners*

Long-Term: accelerated value creation

The purpose of business is to create value for investors, employees, customers, and communities. Depending on circumstances, a leadership team might prioritize identifying sources of value and competitive advantage, protecting value against risks like data breaches, fraud, and compliance, strengthening value creation in established and new markets, or restoring value where it has been damaged or destroyed. In disruptive times, it is important to be clear about these priorities, then pursue them in an aggressive, accelerated way. Speed to value is inherently good, but it is especially important because macro trends have a way of becoming suddenly urgent as ecosystems reach their tipping points. Change happens slowly, then all at once.

LEADERSHIP TEAM SHOULD THEREFORE ACT NOW TO DESIGN AND LAUNCH

Smart growth

By a nearly two-to-one margin, executives will prioritize organic growth over inorganic growth (M&A and partnerships). Consumer products and telecommunication companies are the most acquisitive industries, but they too put most weight on organic growth. While deals will and should still happen, both strategically and opportunistically, they need to be firmly grounded in a strong ongoing business. M&A gets riskier as rising interest rates add to an acquirer's burden; forecasted positive synergies from deals have a way of evaporating under the hot sun of a tough economy. The smartest growth initiatives—organic or inorganic—are likely to be those closest to a company's core business, where they can leverage existing economies of skill and scale.

Operational superiority

There's never a downside to efficiency, but the upside is even greater when growth is hard to come by. Operations teams should base their plans on economic profit—that is accounting for the cost of capital—calculated by customer, product, and plant. This approach not only increases margins, but can also profoundly improve working capital management. That increases enterprise value in and of itself, but also fuels growth, because the cheapest capital in the world is money you can free up from funding day-to-day operations.

Customer-oriented digital

Abrupt changes in consumption patterns, spending behavior, digital adoption, and workplace practices are rendering longtime

VALUE-BUILDING INITIATIVES IN FOUR AREAS.

customer-care strategies obsolete.

Mapping customer journeys reveals two especially valuable customer-value-creating programs. First are those that make customer journeys easier, quicker, and friction-free. Becoming "easy to do business with" saves time and money for both parties; it also reduces customer churn and increases customer lifetime value—things are doubly valuable in a downturn, when new customers are scarce.

The second category covers investments in customer success, that is, ensuring that customers themselves are getting the most out of what they have bought. The concept of customer success emerged in technology industries (particularly enterprise software), where progressive sellers dispatched experts to help customers use their complex products more fully. Unlike customer service, which fixes problems, customer success focuses on surfacing opportunities for customers.

The full value of digital transformation comes when cost-oriented programs (see above) are paired with customer-oriented investments. Studies by AlixPartners and the MIT Center for Information Systems Research show that these "future-ready" digital companies enjoy profit margins 9.4% points higher than companies where digital operations are scattershot and transactional.

Thriving Amid Disruption

Workforce transformation

The extraordinary tightness in labor markets has loosened. Today, 50% say that attracting and retaining skilled workers will become easier in the year ahead (while just 23% say this will become harder). But the long-term transformational issues remain.

Executives see problems with productivity in remote and hybrid work. Nine out of 10 CEOs (90%) say employees working in the office are more productive than employees working from home or remotely. Four out of five (82%) say the pace of change is making employee skills rapidly obsolete. They also say that new employees entering the workforce do not have the skillset necessary to succeed at their company (81%), and that shifts in employee values and preferences are driving disruption within their company (82%). That includes the set of social and values issues that

fall under the ESG (environmental, social, governance) label; three out of four CEOs (75%) say they feel pressure to take a stance on societal issues to avoid backlash from employees or team members.

Clearly the employee value proposition needs to change. Traditional HR tools, including compensation, training, and retention programs, can do only so much. They need to work in tandem with advanced thinking about AI, automation, work redesign, and business model transformation in a comprehensive, cross-functional program to maximize the return on human capital. Today, less than a quarter of the total market value of large companies can be explained by their physical and financial assets. The productivity of human capital—and intangible assets generally—needs attention across the C-suite and the board.



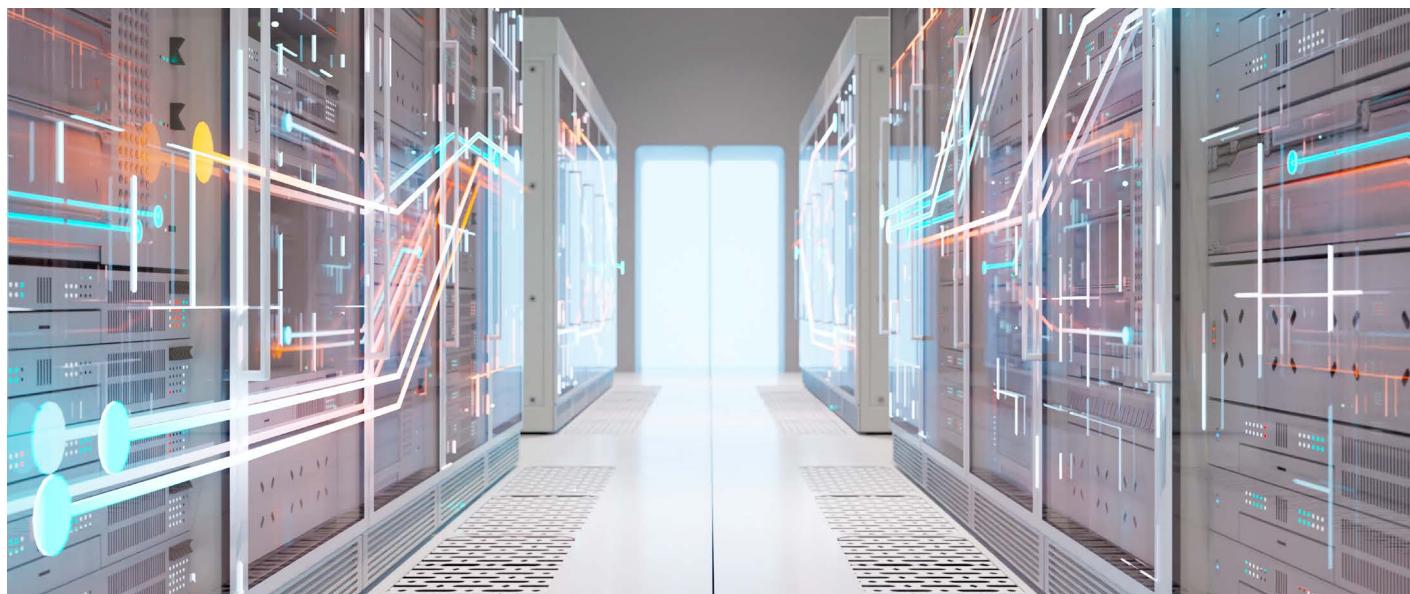
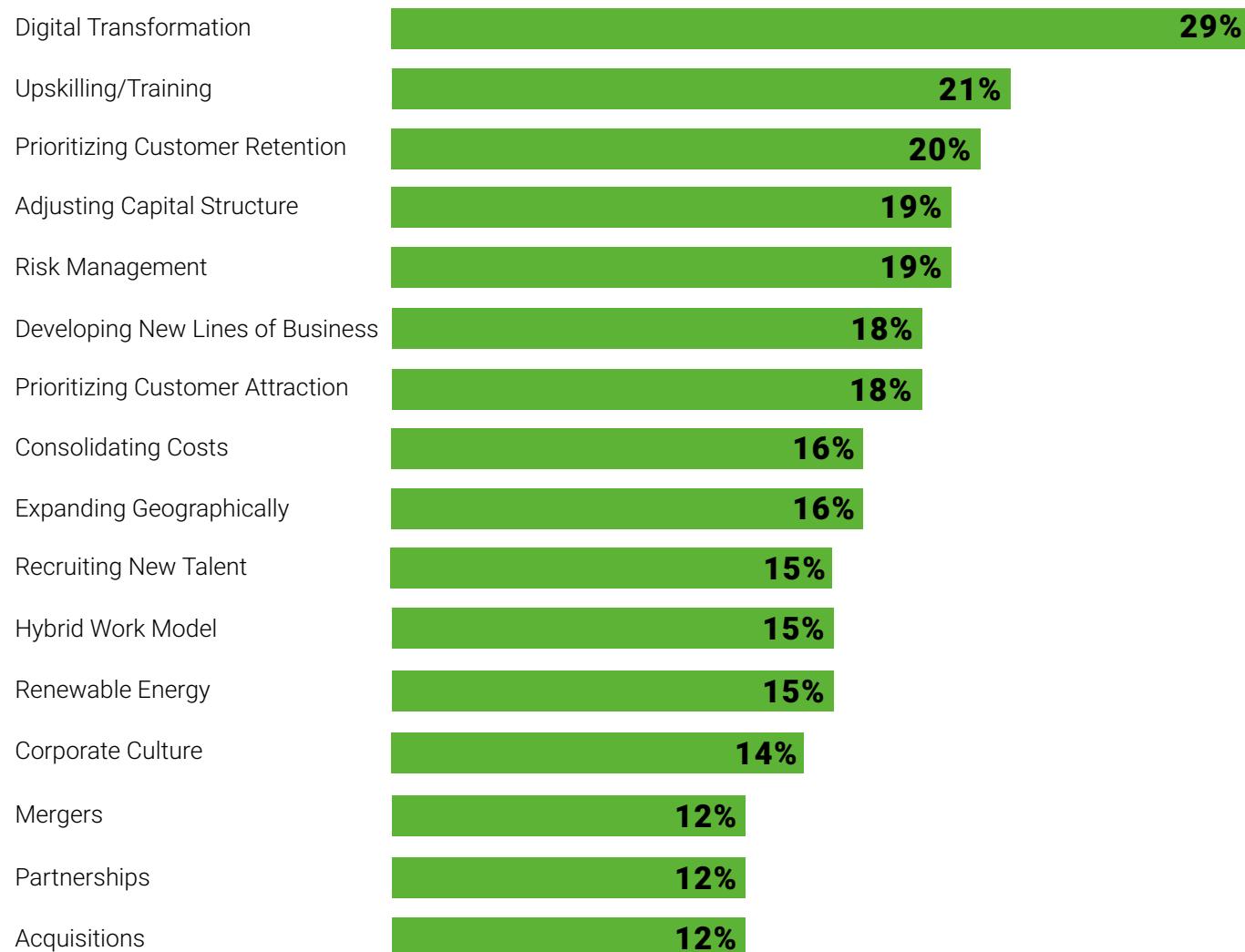
I know what it's like to be in a situation where you've got stakeholders coming from every possible angle with sometimes competing agendas for you. Obviously, you're not going to run the business based on what other people are saying is the right thing for your company. But figuring out what matters to you and what your corporate mission is matters more and more. What are we doing to reduce our carbon footprint? What are we doing about diversity and inclusion? Does our company look like the rest of the world? Those are things that modern leaders really have to think about—in addition to delivering great results, better margins, growth, managing their cash, their cost structure.



**LISA
DONAHUE**
*Managing Director,
AlixPartners*

Where companies are investing to grow

Showing percentage of top three actions



Thriving Amid Disruption

Be prepared to act

In any given market, in any given period, some companies overperform and some underperform. During 2008, the worst year for U.S. stock market performance so far this century, the S&P 500 fell more than 38%²³, but:

61%

Dollar Tree returned 61%,

31%

Vertex Pharmaceuticals returned 31%,

26%

and H&R Block 26%.²⁴

In 2021,²⁵ the Dow Jones Industrial Average rose 19%, but the stocks of Home Depot and Microsoft both jumped more than 50%, while Verizon fell by 11% and Walt Disney by 14%.

Averages don't dictate performance. Leaders and their choices do: when and where to invest, where and when to pull back. Averages are at best a way to gauge how well they played their hands. The same disruptive forces that knock one company back can propel another ahead. Ford's stock nearly quadrupled the same year both General Motors and Chrysler declared bankruptcy.

In a complex, fast-changing time, leaders need detailed and informative data about the performance of their enterprises: the profitability of their assets, the productivity of their people, their efficiency and innovativeness, their cash, and their competitive advantage. They need to be able to see all of these, both holistically and in detail. At the same time, they need

to be monitoring the environment, watching the competitors they know, staying alert for rivals unforeseen and looking for disruptions that might be brief, like thunderstorms, or long-lasting, like shifts in tectonic plates. Like captains on a ship, they need to watch the dials in the engine room at the same time as they scan the sea.

And they need to act. It's no use having bifocal vision—pixels and big picture—without a plan to react to threats and an appetite to exploit opportunities, however big or small they are. The most successful companies we studied this year were not clustered in one industry or one geography. They all faced the same disruptive forces, just as rain falls on the just and unjust alike. No, what sets the leaders apart is their ability to see what's happening in a clear, unbiased way; to see what really matters, and then to act.

“

There's never a perfect time to really look inside and lay bare where you need to make change. Change is hard. Even really good change is hard. A lot of people say, "We're so overburdened. We're so busy. Let's talk in four months, six months." But by delaying you can start to slip into complacency or worse. You become the guy who at the end of the process looks back and says, "I wish I had started this earlier." The right time to take a blank page, look at your organization, your strengths and weaknesses, and what you should be doing differently is now.

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**LISA
DONAHUE**

*Managing Director,
AlixPartners*

INDUSTRY BRIEFS

Aerospace & Defense

In ordinary times, the differences between the commercial aerospace OEMs and the defense prime contractors are often more prevalent than the similarities. The commercial sector is hypersensitive to macroeconomic cycles, while defense is more likely to plow ahead despite fluctuations in GDP or consumer confidence. This creates a volatile backdrop for commercial aviation's financial performance, a stark contrast to the relative earnings stability that defense companies enjoy.

The equation has changed amid almost continuous disruption. Both the commercial and defense ends of the business now face many of the same trade-offs, complexities, and constraints. Supplies of key inputs ranging from semiconductors and titanium to castings and adhesives are subject to interruption or scarcity and are often maddeningly slow to arrive. A small number of suppliers struggle to sort out when and how much to invest, creating a myriad of issues across the supply chain.

A wild card, of course, is the dynamic situation in Ukraine. This has disrupted civilian air travel, availability of supplies, and aircraft orders. At the same time, Russia's aggression has prompted a widespread increase in defense spending plans.

Skilled labor, meanwhile, is costly and hard to come by, and the entire industry wonders where they will find necessary software engineers while still replacing hordes of specialized technicians and mechanics that have left the workforce. Aerospace players

are also overhauling operations and processes to address ESG imperatives and pivot to a more sustainable operational footing. And both are tackling the seemingly endless task of making their businesses more dynamic and connected through digital transformation.

While both commercial and defense players contend with waves of disruption, they also have opportunities to be disruptors themselves through innovation. Enterprises large and small are working on developing electric propulsion systems and sustainable aviation fuels—United Airlines in late 2021 flew passengers aboard a 737 Max powered by 100% sustainable fuel. Elsewhere, investment capital is pouring into companies developing small electric vertical takeoff and landing (eVTOL) vehicles for short-haul deliveries and commuter flights, creating an opening to formulate new micro-transit-business models. And space remains a hotbed of innovation, with scores of companies offering launch services, satellite networking capabilities, and ancillary technologies.

Those innovations promise to vastly expand broadband access to underserved regions and break new ground in Earth observation, among other benefits.

Commercial aviation's patchy recovery from the financial devastation of the COVID-19 pandemic continues; margins continue to recover from 2020's unprecedented 51% falloff in EBIT but remain well below historical levels. And the semi-recovery isn't evenly distributed. Some engine OEMs have returned to pre-pandemic profitability levels, while lessors have thrived amid strong demand. Aerostructure and cabin suppliers continue to post disappointing results as they wrestle with operational issues and restructuring, as well as the accelerating shift to narrowbody aircraft. Supply chain uncertainty; chronic, industrywide labor shortages; and persistent high inflation will likely hamper the industry's continuing financial recovery, but absent fresh economic shocks will probably not stall it altogether.

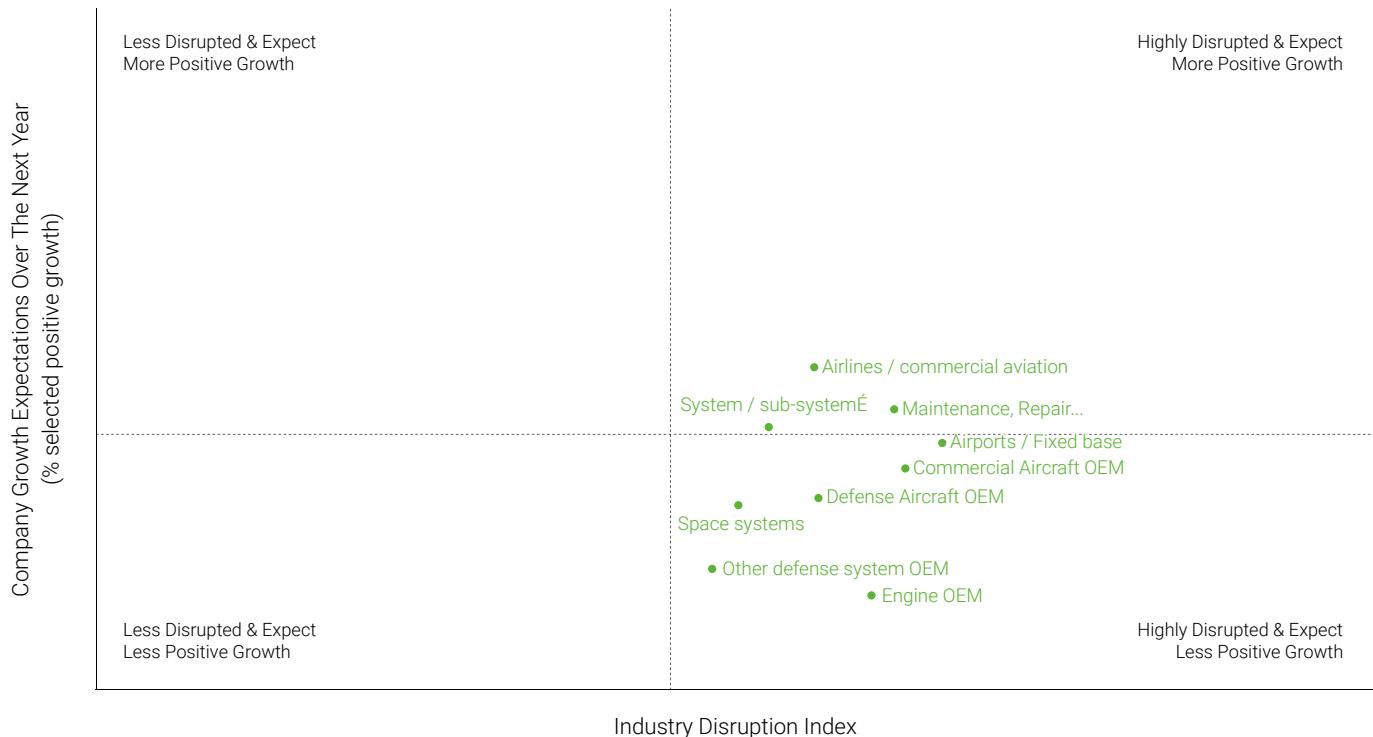
Amid uncertainty over the global economy and despite mounting international tensions, the pace of dealmaking has slowed from 2021's strong showing. The Pentagon's unwillingness to sanction further consolidation among top-tier contractors—signaled by the Federal Trade Commission's rejection of the \$4.4 billion Lockheed-Aerojet Rocketdyne merger in February of this year—has spurred both financial and strategic acquirers to shift their focus to smaller targets, predominately in

the Space sector and FBO and MRO operators. The fading of special-purpose acquisition companies (SPACs) amid increased regulatory scrutiny has also inhibited M&A activity. The trend toward smaller, fewer deals prevails on the aviation side as well, with JetBlue's acquisition of Spirit Airlines being the most notable transaction.

Looking ahead, Europe could emerge as the next focal point of M&A activity on the defense side. The continent's

highly fragmented defense sector may be in for a round of consolidation, fueled by increasing defense budgets and concerns around Russian belligerence. But any increase in dealmaking will have to contend with headwinds in the form of soaring inflation, weakening earnings, and potential funding constraints. Such an environment favors agile, decisive acquirers prepared to pounce on opportunities as they emerge.

Aerospace industry subsectors report high disruption, but fewer anticipate increased frequency.



Automotive

The auto industry has benefited from unusual tailwinds despite the disasters of the pandemic shutdowns and constraints, as well as the impacts from the war in Ukraine. Persistent pent-up demand due to limited vehicle availability has allowed unprecedented net price increases for automaker. Still, don't let the positive near-term automaker picture obscure the storm clouds gathering over the automotive market and the broader economy. The industry now faces increased demand destruction from inflation and interest rate increases—pressure that escalates when combined with the financial and operational stress of the expensive shift from internal combustion to electrified vehicles.

Red flags include softening used-car pricing that hits residuals. Although used-car prices remain elevated and are supported by the low lease return rates, they will return to the long-term trend line but are unlikely to crater below it. In the meantime, vehicle affordability is eroding as rising rates increase monthly vehicle payments.

Initially, component constraints—including critical semiconductor shortages—significantly lifted industry profits by moving the automotive market to a constrained supply environment where net prices shot up. However, as time goes on, these lingering supply shortages are forcing frequent scheduling changes and creating operating inefficiencies, as evidenced by the sharp increase in employees per 1000 vehicles (up 30% for suppliers since the third quarter of 2021 and 42% for OEMs during the same period).

As we predicted from our early work supporting the semiconductor shortage constraints, the problem will only slowly ease and linger through 2023 at least. In addition, supplies of

raw materials for batteries remain tight and are locked up in contracts several years ahead as the industry sees faster EV growth than was industrialized for in recent years. Adding mining and refining capacity is a slow process and so we expect to see flare ups in pricing throughout this decade. Automotive suppliers and OEMs have been moving their industrial footprint to more regional supply bases and getting much more deeply involved in those supply chains in response to the constraints they have been living with. This is on top of the massive shift of resources to electric vehicles, where the industry plans to invest \$526 billion in EVs over the next five years, more than three times more than over the last five years.

One cannot underestimate the challenges that EVs present to the global auto industry. Understanding the rate of capacity development and how individual markets will respond to increased availability of electric vehicles is proving difficult.

As automakers place billions of dollars in bets on EV strategies, they—along

with suppliers—must plan for shifts in raw-material procurement plans, a volatile battery-supply landscape, high incremental development costs, and margin pressure caused by higher costs. The marketplace is fickle, the EV ecosystem is still developing, and automakers must balance short-term profit goals with the high cost of transitioning to a different operating model.

Another persistent headache plaguing the industry is the longstanding, acute shortage of skilled software engineers, electronics functional safety experts, and technicians across the value chain. The shortage is impacting vehicle production, collision repair shops, and dealership service operations. This has impacted production and service in unprecedented ways, leading to plant stoppages, and exacerbated the weeks and months it takes to repair consumers' vehicles, compared to the turnaround in the days before the pandemic.

At present, suppliers have less financial capacity than OEMs to fund their investments in training, supply chains, and the EV transition. Automakers have used the windfalls of the last two years to shore up their balance sheets, while the supply base has held to record debt levels and now faces increased interest expenses and difficulty refinancing debt. In a reversal of pre-pandemic trends, supplier margins and earnings now trail those of OEMs, whose economic profit grew \$13.1 billion from 2020 to 2021, while suppliers' economic profit fell \$13.6 billion.

Looking ahead, the financial pressure on suppliers will likely create acquisition opportunities, making distressed deals one of several

investment themes that could emerge in 2023. Some suppliers are already engaged in exiting their ICE business lines. Others, with their finances already weakened by the COVID-19 pandemic, could see their balance sheets further eroded by higher interest rates and inflation. Both classes of supplier may draw the attention of financial investors skilled at running late-life-cycle businesses. Other M&A drivers include accelerating digital transformation to the connected vehicle with recurring revenue opportunities; adding software engineering and other technical talent; or achieving non-semiconductor supply chain resilience.

Subsectors within the automotive industry are less disrupted with some expecting increased frequency and others expecting decreased frequency.



Consumer Products

Executives in the consumer goods industry have no shortage of worries to keep them up at night. Slowing growth and the need to drive productivity to maintain profitability are top concerns. Ongoing supply chain and labor challenges make that even tougher, and pricing is not likely to be nearly as available as a lever going forward. As a result, pressures on costs and productivity are increasing.

Up until now, consumer goods executives have consoled themselves with the one reliably reassuring figure in their business landscape: the consumer. Despite rising interest rates and surging inflation, despite shortages and stock-outs and despite slowed delivery times, political turmoil and a highly uncertain economic outlook, consumers have (so far) defied predictions of a widespread spending pullback. There are concerns, though, that this consumer resilience may be on its last legs. As we head into 2023, many consumers are already trading down.

At the same time, consumers are also quickly moving online. The pandemic accelerated what had been a gradual channel shift and converted even long-time online skeptics in the process. By 2026, 35% of revenue for the 10 largest consumer categories—or \$1.43 trillion—is expected to come via online shopping. The industry needs to figure

out how to protect margins while still accommodating this expected growth.

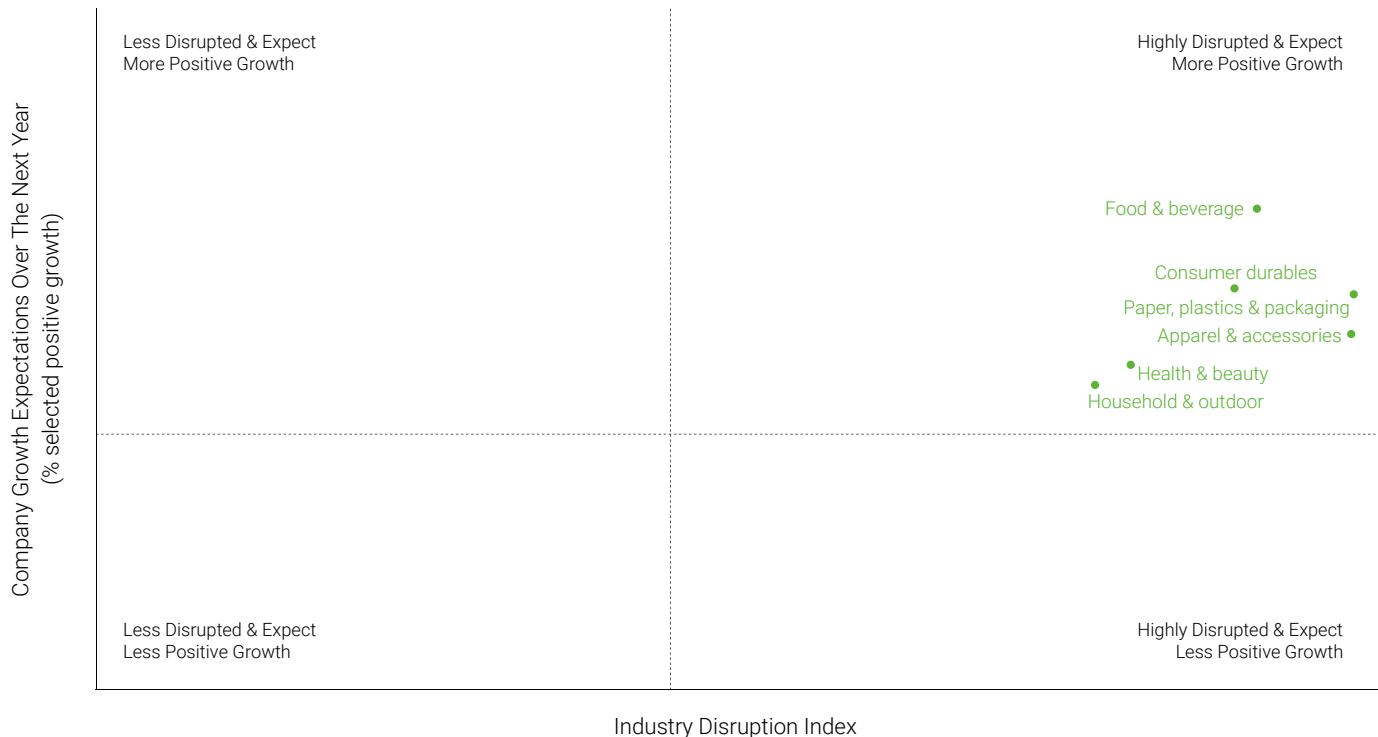
The list of late-night worries can double as a reasonably accurate catalog of consumer-goods executives' urgent priorities. Supply chain issues lead the pack, with most industry executives citing difficulty sourcing key ingredients and securing reliable overseas transportation as the biggest pain points afflicting their business.

Since manufacturing work is incompatible with remote work in most cases, consumer-goods producers have to find other ways to relieve the pressure on workers. Higher pay, additional paid time off to attend to personal business, shift swapping, improving schedule predictability, compressed work schedules, and part-time work options are among the options companies are considering. But all such alternatives are partial

solutions at best and will likely drive increasing costs in the short term and fuller automation of production tasks over the longer run.

Although deal flow is down considerably from 2021's active pace, M&A remains a go-to means of addressing the issues confronting consumer-products companies. Companies have focused on building stronger, more aligned portfolios—examples include PepsiCo spinning-off Tropicana, Mondelez buying Clif Bar, and Kellogg separating into three companies. Private equity activity slowed in the second half of the year as interest rates increased and investors waited for lower valuations. But their substantial amount of dry capital suggests activity will resume.

Consumer products subsectors report less disruption and overall anticipate rates of disruption will decrease.



Energy & Power

Overall energy demand continues to increase globally despite the increase in prices as a result of lower volumes from Russia and OPEC.

In 2022, oil & gas (O&G) producers posted record financial results amid crude-oil prices breaching \$80 a barrel and producers making sizable efficiency gains. At the same time, the renewables sector is growing at a brisk pace, with a projected 8% installed capacity increase in 2022 coming on the heels of 2021's 6% rise. Solar installations accounted for 60% of capacity additions. O&G producers are using a share of strong earnings to invest in decarbonization.

Momentum comes at a price. U.S. O&G producers, which laid off workers at a historic rate after the double hit of the pandemic and OPEC/Russian price wars, are struggling to fill more than 50,000 open positions. The renewables sector grew despite prolonged shortages of semiconductors, polysilicon, and other inputs, along with soaring shipping costs. Solar infrastructure provider SolarEdge, for example, reported a 100% increase in shipping costs. The government and industry groups introduced initiatives to improve supply chains, develop substitutes for

at-risk inputs, and support domestic production of needed supplies, but the industry still depends on imports for many key components. To shake that dependence, infrastructure companies are developing new wind-turbine designs with fewer rare-earth elements, investing in solar cells made from perovskite rather than silicon, and experimenting with low-cobalt or no-cobalt batteries.

O&G players aren't sitting still with decarbonization efforts. They're selective about new drilling projects, shunning carbon-intensive resources with high break-even prices in favor of lower-carbon, more sustainable energy sources. Oilfield service providers are renovating business models to add solutions aimed at renewables companies, leveraging in-house expertise to diversify into cloud services and edge computing, and teaming with startups and university researchers to develop lower-carbon industrial processes. Numerous players are leveraging subsurface exploration and reservoir geology expertise to develop carbon capture, utilization, and storage (CCUS).

For renewables players, the focus going forward will likely be on developing and improving long-duration storage solutions, improving the connectivity of renewables to the energy grid, expanding the market for community solar projects, and innovating solutions such as floating solar photovoltaics. Installing floating solar panels would help mitigate the shortage of land for solar panel installations, and locating them adjacent to hydropower facilities will control costs by sharing substation and transmission facilities.

Energy is among the few sectors to see little falloff in M&A as the economy slowed in early 2022, and such activity is critical to furthering the agenda. On the O&G side, most deal activity will likely take place in the value chain's upstream end. A good example is the \$7 billion tie-up of Colgate Energy Partners and Centennial Resource Development, aimed at building scale in the Permian Basin. Natural gas plays, driven by the need to replace Russian natural gas supplies, are likely to take the form of investment deals rather than straight

acquisitions, and will require additional midstream investments in order to get natural gas to the LNG facilities. Investors with a low tolerance for volatility may remain on the sidelines rather than take on the three- to five-year lead times needed to build new infrastructure. The industry's history of adding too much capacity during boom times may give some investors pause.

On the renewables side of the business, much of the impetus for M&A will come from O&G players increasing their positions in green energy. Occidental Petroleum, for example, is buying solar generation assets to power its drilling operations in the Permian Basin. Utilities may be tempted to sell their in-house, often non-regulated renewables businesses to energy companies aiming to align

portfolios to meet ESG targets. Private equity firms are capitalizing on the green wave by acquiring attractively priced higher-carbon assets from O&G producers.

Though energy & power generation subsectors are experiencing high disruption, few expect increased frequency.



Financial Services

Banks, insurance carriers, asset managers, and fintech players continue to grapple with many of the same issues they have confronted since the onset of the COVID-19 pandemic in early 2020. The difference is that those topics are even more urgent in 2023, and companies now have to address them in an environment of rising interest rates, persistent high inflation, slowing economic activity, accelerating climatic change, and mounting geopolitical tension.

The list of worry points includes:

- Shortages of talent, especially of technologists and data experts
- Unrelenting pressure from investors, regulators, and the public to demonstrate concrete commitment to ESG principles and practices, in particular regarding the environment
- Creating value from digital transformation, which legacy banks in particular have found difficult to achieve
- Proliferating financial and nonfinancial risks, especially cyber threats
- Building, managing, and securing hybrid work environments
- Heightened regulatory scrutiny of lending practices

And those are just the marquee issues. But of most immediate concern is the impact of a slowing economy, rising interest rates, falling share prices, and the end of the boom driven by government support payments in 2020 and 2021. The consequences of this change in the economic weather are sizable and wide-ranging, touching everything from mortgage lending to securities underwriting and the value

of property-casualty insurance claims. Rising interest rates and a prolonged housing shortage are crimping mortgage origination and driving up defaults, slumping share prices have slowed the IPO market to a standstill, and inflation is pushing insurance loss costs higher than increases in premium revenue. Hiring has slowed, and investment banks in particular now have to weigh possible layoffs against the risk of being caught short-staffed when business picks up again.

Yet even as they contemplate reducing headcount in the near term, financial services players still have to compete for data scientists, expertise in emerging technologies such as AI and blockchain, and other skills and capabilities that financial services companies need to compete in an increasingly digitalized operating environment. Attracting such talent is just one reason financial services companies are increasing their focus on ESG issues. Far-sighted banks and insurers are beginning to view ESG not as a burdensome requirement but as a strategic opportunity to differentiate themselves in the marketplace and attract a new generation of workers intent on making a difference in the world. Investments in decarbonization, increased outreach to underserved communities, and stepped-up data

governance to eliminate algorithm bias and ensure fairness in credit and underwriting decisions can both strengthen the industry's appeal to younger workers and advance strategic aims.

Financial services companies will have a hard time attracting digitally minded talent or customers if they're not digital-first organizations. But progress toward digital transformation is fitful at best in the financial services sector, especially at legacy banks. Many of those banks admit they are struggling to realize the financial results, enhanced customer experiences, and fluent business model innovation that successful digital transformation is supposed to deliver. According to a recent survey of banks and credit unions, only half the institutions that claim they are at least three-quarters of the way through their transformations have significantly improved loan productivity; only 28% say they've achieved significant reductions in their operational expense structure; and only around 20% have seen increases in payments revenue and other non-interest income.

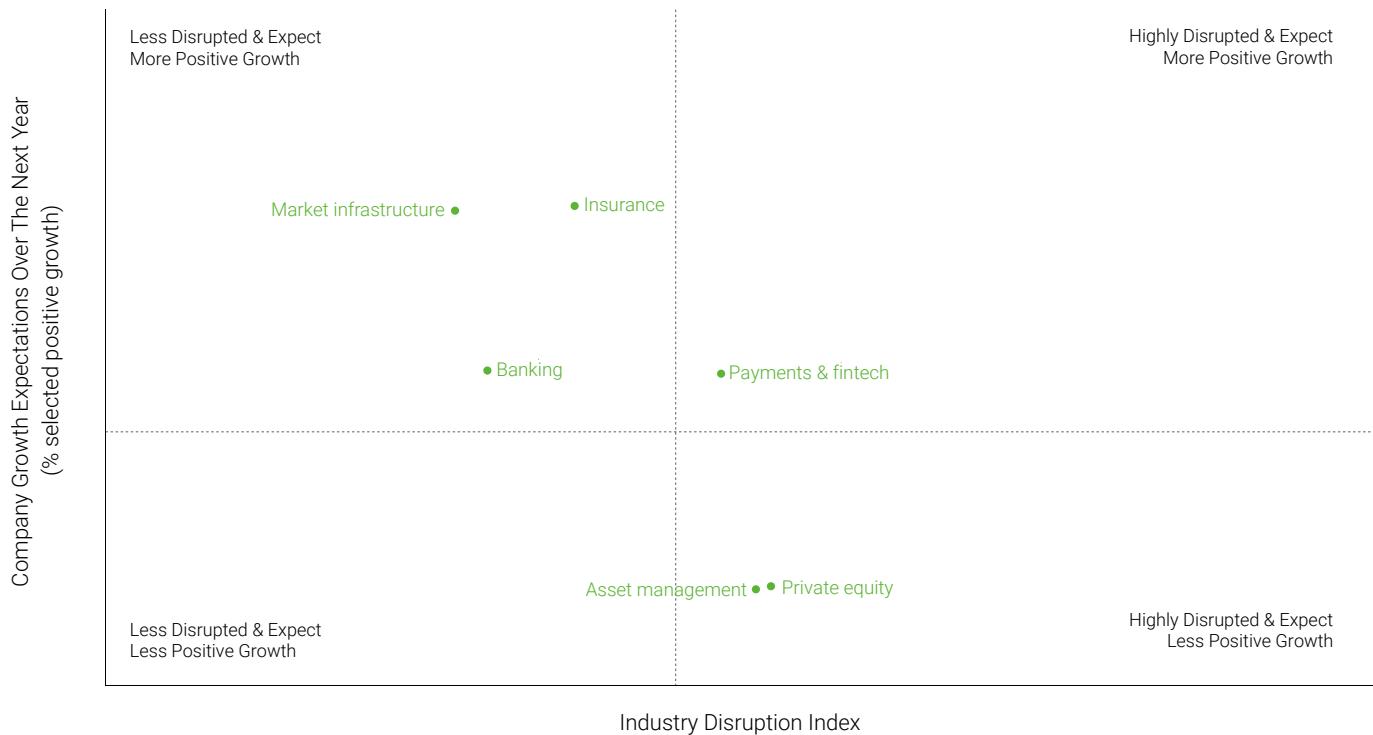
What's holding these companies back? Some observers argue that instead of truly transforming themselves by leveraging digital technology to drive business process innovation, banks are simply grafting digital technologies onto their existing processes. And rather than embracing the possibilities of cloud computing and open APIs, they're hanging onto their core computing technology, which can be ill-suited to the integration needed to improve

customer experiences. This problem is especially acute at smaller and regional banks, which often can afford only off-the-shelf, one-size-fits-all technology.

The slow pace of transformation is also holding back initiatives to strengthen cybersecurity, a key concern for an industry that is a favorite of cyber criminals. In a world where cyber attacks occur every 39 seconds, AI and advanced

analytics capabilities are fast becoming table stakes for financial services companies to mitigate reputational and financial risk, retain customer trust, and satisfy regulatory requirements. Defining remote-working policies and ensuring security for a far-flung workforce are also key components of risk-management programs in the post-pandemic world.

Financial Services subsectors are less disrupted but anticipate increased frequency of disruptive forces.



Healthcare & Life Sciences

Acute labor shortages. Imperiled supply chains. Cybersecurity threats. Urgent ESG demands. Galloping inflation. The issues bedeviling the business world at large are landing with extra force on the healthcare and life sciences sector. They are driving changes in strategy and operations across the sector, from the way healthcare is delivered to its recordkeeping practices, and from drug development to adapting to a new regulatory environment.

Healthcare's return to normal since the easing of the COVID-19 pandemic has been fitful, erratic, and far from complete. Healthcare employment is still well below pre-pandemic levels even as demand for healthcare services is on the rise. The prospect of intractable labor shortages across the sector—from frontline healthcare providers to researchers and vendors of ancillary services such as clinical trial support and contract manufacturing—has spurred medical practices, device makers, and others to invest in technology—including advanced automation, AI, and analytic tools to enable people to do more with less. Orthopedic surgeons, for example, are using wearables to track patients' post-surgical recovery and guide post-operative rehabilitation.

The healthcare ecosystem is also turning to digital technologies to tackle the persistent problem of care coordination, the source of much of the industry's waste and inefficiency. A host of tech companies have sprung up in recent years to enable patients, providers, payers, and labs to pool data in a single location and share it seamlessly and securely.

AI is playing a growing role in applications that stretch the length of the sector, from clinical diagnostics to drug discovery and, significantly, drug trials. AI applications passed an important field test when they helped Pfizer develop, test, and bring to market a COVID-19 vaccine in record time. Building on that success, pharma players are using AI to recruit test subjects, monitor test protocol compliance, and share and analyze trial data.

Healthcare and life sciences organizations are also turning to technology to build more resilient supply chains. Some organizations are prioritizing investment in supply chain visibility after discovering during the pandemic that simply adding safety stock and building new warehouses were not necessarily easing supply shortages among frontline providers. The real problem in many cases wasn't inadequate safety stocks but in matching on-hand supplies to the providers that needed them. Other approaches to improving supply chain resilience included re-shoring manufacturing and reducing the number of ingredients and vendors

needed to produce a single drug.

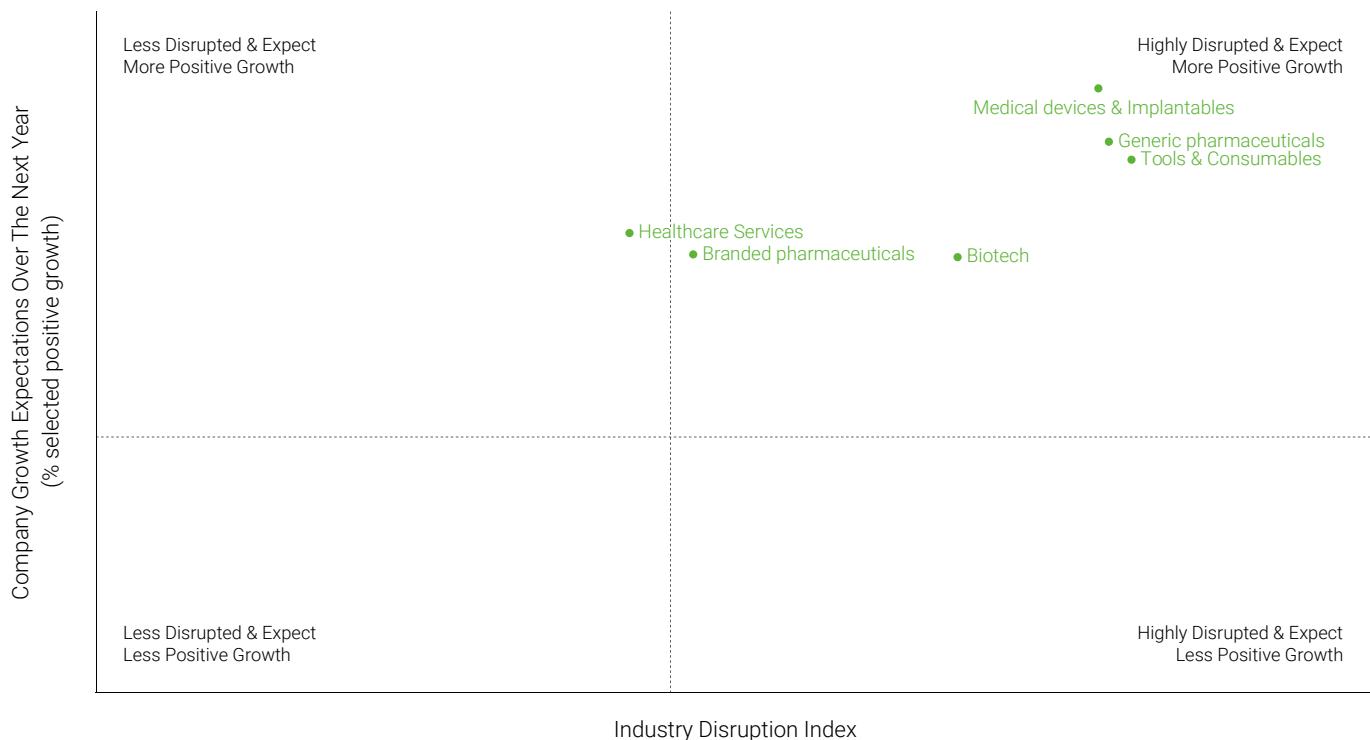
Supply chain improvement programs should not neglect the crucial importance of data security. The number of cyberattacks on the sector ballooned during the pandemic, and the increase in telehealth consultations, remote working, and connected medical devices means a massive increase in vulnerable points along the information chain. Intensified risk analysis and remote workforce assessment will be top-of-the-agenda items for the industry going forward.

While dealing with other pressing issues, the healthcare and life sciences sector is also sharpening its focus on ESG issues. Executive awareness of those issues has expanded considerably since the onset of the pandemic, and a growing number of players in the space have formalized their ESG plans and strategies (though smaller organizations trail their larger counterparts in that respect). Concrete examples of ESG commitments in action include ensuring diversity among clinical-trials subjects as well as the workforce.

The healthcare and life sciences sector has long favored using M&A to address some of the industry's most pressing concerns, and that tendency has persisted in 2022. Although deal amounts are down—in part as a result of increased regulatory scrutiny of mega-deals—volume remains strong. Much of the activity has involved rollups of clinical practices, notably specialist practices such as dentistry

and ophthalmology and long-term care facilities. The deal logic centers on delivering higher-quality patient care while accelerating digital transformation. Private equity firms have been especially active in this arena.

Healthcare subsectors are highly disrupted and expect an even greater frequency of disruption.



Media & Entertainment

Every disruptive event leaves winners and losers in its wake, and of the industries impacted by the global pandemic (that is, all of them), media and entertainment companies have emerged as one of the biggest winners. Consumers leaned heavily into streaming entertainment and online gaming to keep themselves amused during the long months of lockdown and restrictions on movement. Meanwhile, large media companies and platform operators competed feverishly to acquire content producers and set up their own studios.

However, as we face mounting economic headwinds, pressures are likely to increase. Ad spending is one of the first items cut during recessionary periods, which will increase the challenges for media companies and lead them to pursue other sources of revenue. After the financial crisis, advertising spending also took longer to recover than the overall economy. Prior to Q2 2022, linear TV businesses were flat to slightly up; but with the impact from falling ad revenues, coupled with accelerating cord cutting, legacy TV revenues will start falling for the first time ever.

Streaming services were big winners during the pandemic, as people binge-watched their way through lockdowns. As life has slowly returned to normal, though, consumers are reassessing their spending on these platforms. According to a Parks Associates whitepaper, almost 50%

of U.S. broadband households now pay for four (or more) OTT services. Subscriber churn, meanwhile, reached 44% in Q3 2021, and 37% of consumers that subscribed to an OTT service in the last year plan to terminate their subscription because there isn't enough new content.

On the provider side, meanwhile, content acquisition spending is on the rise. Netflix increased its spending in 2021 by 26% (\$13 billion) as original programming became a priority, while Disney invested \$1 billion more in content spending in Q2 2022 than the previous year.

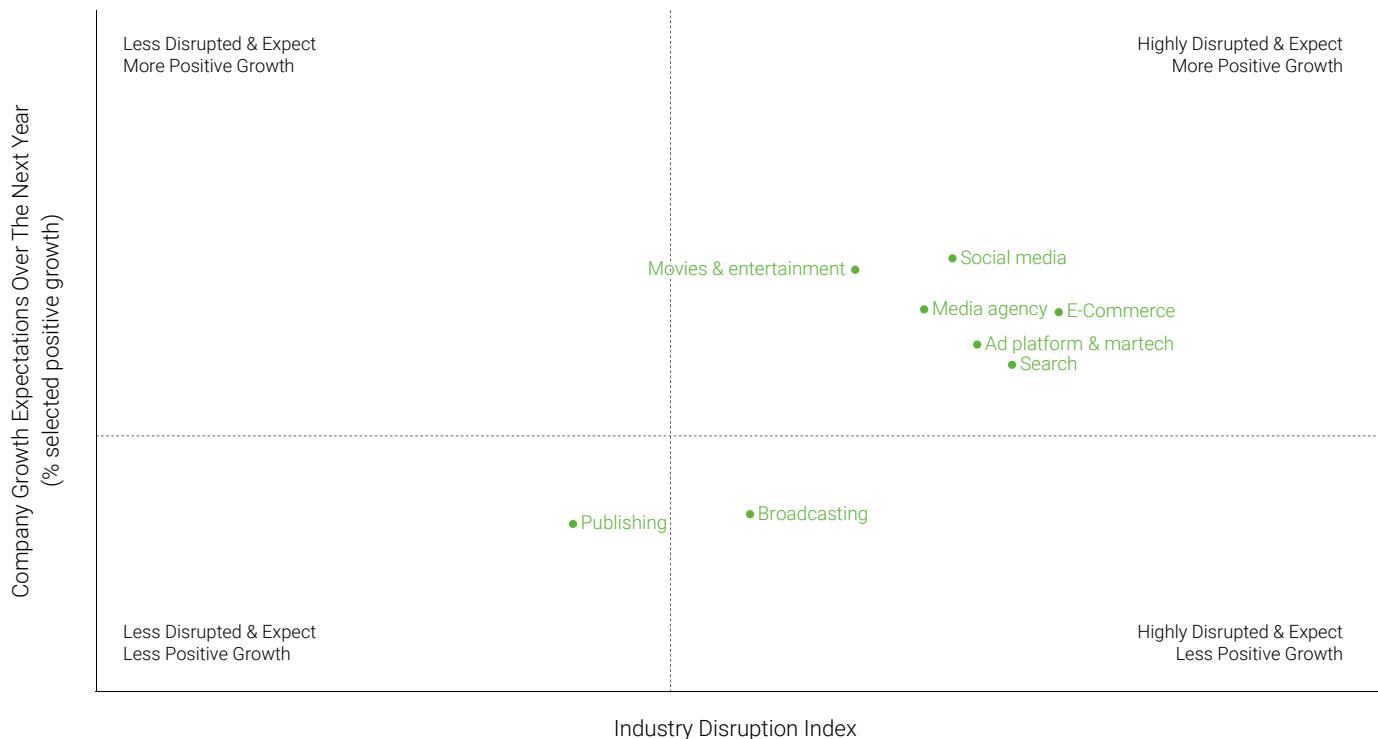
As a result, viewers and providers are paying more, but neither is getting what they want. Viewers want their preferred content in one place, while providers want to reduce customer churn and increase the average revenue per user (ARPU).

The lifting of pandemic restrictions has raised revenues from live entertainment, parks, and other experiential segments. One area that has benefited dramatically is casino gambling, which has bounced back stronger than in 2019, while in the U.S., sports betting has boomed thanks to its legalization in many new jurisdictions.

Expectations around the metaverse have been a catalyst for excitement, particularly in the online video gaming space, and have driven some M&A activity. However, given disappointing adoption rates and cutbacks in the tech sector, some of the momentum in this sector is likely to slow.

Increased regulatory scrutiny will likely be another dampener to further consolidation in this industry as well.

Disruption's pace will slow in 2023



Retail

For a terminal patient, the retail industry actually looks fairly healthy. Contrary to dire predictions of the imminent demise of brick-and-mortar retailing, customers are returning to physical stores as restrictions on movement and mingling are eased. Sales growth continues—though at a markedly slower rate than in 2021—and main streets are reviving as merchants with innovative store concepts take over long-dark retail space. The most funereal reports appear to have been greatly exaggerated.

This is not to say that retailing doesn't face some pretty pressing issues. Consumers are returning to their favorite shops and malls while maintaining the online shopping habit they picked up during the pandemic. Those dual tendencies increase the pressure on retailers to build the technological and analytic capabilities required to serve shoppers regardless of sales channel with seamless and on-brand experiences. They're also having to raise their social media game as consumers, especially younger ones, turn to social media for help in product discovery and research as well as purchasing.

Retailers must also cope with shifts in consumption patterns driven by high inflation. Consumer spending in general has returned to pre-pandemic levels, but inflation is masking variations in volume growth.

Brand loyalty is fading, as evidenced by growth in the percentage of consumers switching brands and retailers. Consumers are less loyal than ever before, driven by simple ability to google a product online to price check it before buying it; the access to products has never been greater. Higher prices are also a factor, as some consumers set aside, or at least deemphasize, their preferences

for greener packaging and strong social purpose in favor of lower-priced private-label brands.

Then there's labor availability, a top-priority issue for almost every industry, but a five-alarm fire for retailers. Shortages of frontline workers and warehouse and fulfillment center employees plagued the industry even before the emergence of the COVID-19 pandemic, and the outbreak and subsequent measures to control it have only aggravated the need for additional recruits. As of July 2022, nearly 1 million retail job openings went unfilled in the U.S., and retail, leisure, and hospitality executives surveyed in August and September named staffing and wage issues as their top concern, well ahead of supply chains, global events, gasoline prices, and loss prevention. Making the shortage even more acute is the growing labor intensity of retailing, in part because of the proliferation of fulfillment options for shoppers, including curbside pickup, buy-online-pick-up-in-store (BOPIS), and third-party delivery services.

Low pay, poor working conditions (including just-in-time shift scheduling), and job insecurity are the leading reasons workers give for leaving their retailing jobs. Retailers

have taken multiple paths to address those concerns and alleviate the shortage: higher hourly wages and bonuses, more predictable schedules, accelerated job-promotion schemes, increased personal time off, and even offers to pay college tuition costs.

But still the jobs go begging, and industry insiders say there's no end to labor shortages in sight.

That prospect, bleak as it first appears, may give some retailers the impetus to shake off old paradigms and set retailing on a new course.

Retail dealmaking has proceeded at a brisk pace in 2022, slowing somewhat from 2021's boom but accounting for a sizable share, both in dollar value and deal volume, of overall M&A activity. Retailers are entering into deals to strengthen and shorten supply chains, seal commercial partnerships, build out networks of distribution centers, acquire technology and digital skills, and in some cases strengthen the ESG value proposition via greener packaging and shipping materials. Those objectives should continue to drive deals and help sustain momentum for M&A.

Retail subsectors are the most highly disrupted and anticipate the frequency of disruptive forces to continue climbing.



Technology

To grasp the magnitude of the waves of disruption that are rocking the business world, consider this: The turmoil has been so severe it has even slowed the seemingly unstoppable momentum of the reigning technology superpowers. In the quarter ended September 2022, leading tech firms reported sharply slower revenue growth and are even taking unprecedented steps to trim their workforces.

Granted, the year-earlier period, which marked the apogee of the post-pandemic recovery, was one of such prodigious growth that a comparative slowdown was almost inevitable. And granted, the strong dollar weighed heavily on the tech giants' sizable non-U.S. revenue streams. But even allowing for those qualifications, it's clear that even the leading tech companies are vulnerable to the forces of far-reaching disruption. Acute, long-running shortages of semiconductors and other components; the rise of innovative, fast-moving competitors; and new constraints on the collection of third-party data have all affected the biggest tech players to one degree or another. And the need for large investments in supply chain optimization, stepped-up sustainability initiatives, and talent acquisition will have a long-lasting financial impact. So, too, will newly aggressive regulatory bodies in the U.S. and EU, which appear determined to curtail Big Tech's market power.

In responding to these challenges, the industry has announced over 100,000 in layoffs. But despite these moves, we think a gap between the demand for critical digital talent and its supply will continue, leading to

continued labor market churn and competition over salaries and other retention strategies.

But "vulnerable" does not mean "helpless." The biggest tech players have massive cash reserves—roughly \$500 billion, combined—to help them weather the volatility. And the wave of digital transformation of enterprise transformation, which depends heavily on cloud services, is still going strong with no end in sight. We expect the largest players to focus on efficiency and a redesign of operating models to build in more flexibility. The emerging players, and those looking to scale up their capabilities, are accelerating their break-even calculations and fitting cost structures appropriately.

The general turn toward providing business customers with "everything as a service" (XaaS) is also strongly in evidence among the smaller tech fry. Many tech companies are adopting service-based business models, with subscription offerings of software, infrastructure, and platforms. Hardware-as-a-service may emerge as the next big thing as business customers hammer out ways to link and coordinate their hybrid workforces.

Digital transformation will continue to underpin the growth tech service providers. Business customers are increasingly looking to cloud-based services to power their transformation, with many developing hybrids of public and private cloud services to control costs, bolster security, enhance resilience, and avoid becoming captive to a single vendor. The complexity of coordinating and integrating multiple clouds and vendors create attractive opportunities for developers of solutions that harmonize the various components of the cloud environment.

As their businesses evolve, supply chain security, stability, and resilience are high priorities for tech companies. With supply chains vulnerable to disruption from any number of different directions, ranging from constrained shipping capacity to climate disasters and geopolitical turmoil, tech providers are making improvements aimed at gaining detailed, end-to-end visibility in their supply networks. Those improvements depend on advanced technologies and capabilities including AI, robotics, and blockchain, among others. Some vendors may draw on the experience gained from their own supply chain improvement initiatives to develop

services or solutions for their customers.

The tech sector, always a hotbed of dealmaking, continues to look to M&A to build scale and capabilities in cloud, analytics, collaboration, and, perhaps most important, security. Although the

size and number of deals have fallen off sharply from the hot pace of the first quarter of 2022, both financial and strategic acquirers can be expected to take advantage of lower valuations and seek targets of opportunity. With the window for IPOs all but closed for the moment, private companies looking to

be acquired may have to adapt to lower valuations than those assigned by their early sponsors and focus on creative deal structures to address potential acquirers' pricing uncertainty.

Technology subsectors are slightly less disrupted and report lower expectations of increased frequency.



Telecom & Cable

The telecom industry has had some protection from strong economic headwinds in 2022 due to its role as a critical infrastructure asset. However, as consumer discretionary spending falls off, the cost of capital increases, and telecoms need to invest effectively for fiber and 5G development (which is already behind), concerns over this sector are growing. Through November 2022, U.S. telecom stocks underperformed the S&P 500 by 12.5%.

In addition, telcos run energy-intensive operations. They drive 2% to 3% of the global energy demand. Mobile RAN, central offices (especially, powering copper networks), and data centers are key drivers of energy consumption. Therefore, energy is also a significant expense on the telco books, running at around 2% of their revenues and 4% to 5 % of their operating costs. As telcos cater to higher data demand across their footprint while supporting multiple technologies, annual energy consumption has been rising.

The need for continued infrastructure investment in a more challenging financial and economic environment will likely define this industry in the years ahead. Their asset mix is changing as well. Telcos are building more of 5G and fiber while divesting towers and, in some markets, data centers.

Private equity, with its substantial dry powder, is likely to be an increasing investor in and partner to the industry, as seen in Apollo's acquisition of \$7.5 billion of ILEC assets from Lumen, the \$3 billion investment by KKR and Global Infrastructure Partners in Vantage Towers, and the fact that AT&T is looking for partners to invest

in a fiber to the home infrastructure buildout JV (valued at between \$10-\$15 billion).

In wireless, subscriber growth will slow, as will discretionary spending on higher-end devices. Operators will need to rethink their device and subsidy strategy. They will need to adjust the device portfolio, build new and deeper partnerships, or provide greater discounts and take a harder hit to bring new customers in or add new revenue, while also exiting legacy technologies to optimize operating costs.

Infrastructure and tower companies are in a more positive position, as tower deployment and core infrastructure is necessary for network stability and future deployment. Even though tower assets have underperformed as of late, domestic leasing activity will lead to positive momentum from these stocks bottoming out. Tower assets with a stable ROI and cash flow (and dividends) in a time of uncertainty may become very valuable and able to procure cheap financing.

These operators are also buying other complementary assets they can

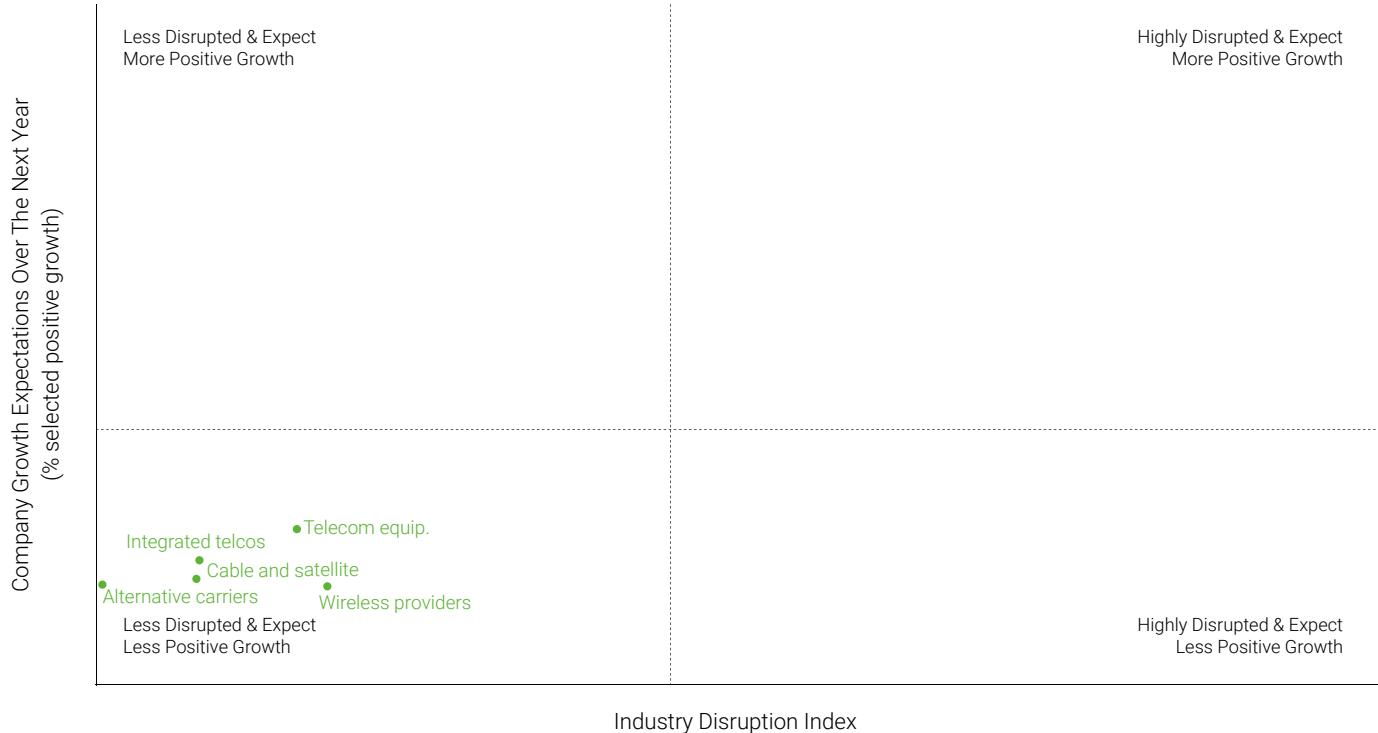
leverage and monetize—specifically data centers and co-location. It is a concerted effort to expand their footprint (not just in terms of region, but also capabilities). One major challenge facing data centers is that power costs are high in the current market, putting pressure on their operating performance and potentially ESG targets. Data activity will only continue to grow, and they will need to leverage more energy to keep up.

Competition is increasing especially in the business segment (private edge networks). Operators are well positioned to succeed but will need to adapt and adopt a different approach to avoid having higher-margin end disintermediated by others.

Overall, telecom is moving into a more difficult market, albeit delayed from some other industries. They need to be prepared to balance reinvestment for the future (5G, cloud) and still hold with subscribers who might pull back.

At the same time, by actively managing partnerships and creating integrated offerings, they can drive returns and create a path to a more profitable future.

Telecom and cable are the most disrupted of the TMT industries in 2021



Survey Methodology

The AlixPartners Disruption Index (ADI) measures the state of disruption across major industries and regions.

From September 2, 2022 to November 14, 2022, we surveyed 3,000 senior executives across 10 industries and 9 countries. We asked them questions on the degree to which their business is being disrupted, the various disruptive forces impacting them, the pace at which these disruptive forces are accelerating, and the strategies they are employing to confront them. Using these responses, the ADI provides a measure of the magnitude and complexity of disruption that organizations are facing, accounting for overall disruption levels as well as the number of disruptive forces confronting an organization.

Business executives defined as...

- Ages 25-65
- Employed in one of the nine countries listed below
- Director level or above
- Company revenue of \$100 million+
- Having insight into disruption trends facing their industry

9 countries:

U.S., Canada, U.K., France, Germany, Italy, Switzerland, China, Japan

10 industries:

Aerospace & Defense, Automotive, Consumer Products, Energy & Power Generation, Financial Services, Healthcare & Life Sciences, Media & Entertainment, Retail, Technology, Telecom & Cable

3,000
executives
surveyed

300
per industry
200-660+
EMEA

All results show combined, global data unless otherwise noted. For the purposes of this report, all fieldwork was conducted using multimodal online and telephone interviews between September 2, 2022 – 20, 2022.

Disruption is defined as significant change driven by forces that displace business, markets, and operating models.

In 2023, 50% of executives surveyed are C-level and 50% of executives are working for \$1B+ companies.

$$\text{AlixPartners Disruption Index} = \sqrt{(10 * \sqrt{\text{Complexity}}) * \text{Magnitude}}$$

The Complexity of Disruption

Number of simultaneous forces impacting companies over the last year



The Magnitude of Disruption

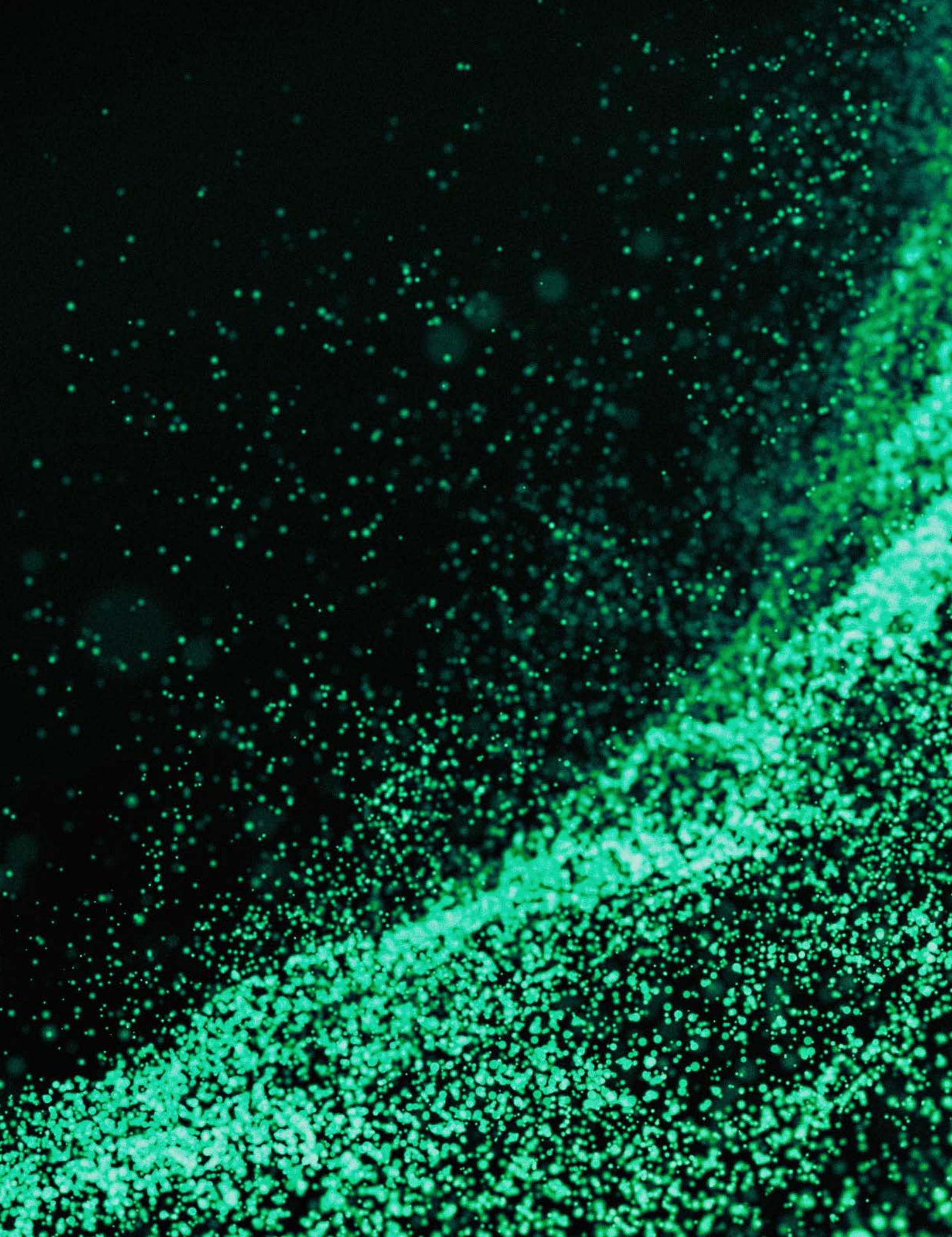
Assessment of how disrupted companies have been over the past year

"How strongly has your company been impacted by each of the following disruptive forces?"
(% at least somewhat impactful, global)

"How disrupted would you say your company has been over the past year?"
(% selected response, global)

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