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What matters most? Six priorities for CEOs in turbulent times

With economic troubles mounting, it's a time to tighten belts and put on hard hats. But don't forget the jet pack to accelerate into the next phase of growth.

November 2022

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Introduction

If an executive had fallen asleep in 2019 and just woke up, she wouldn't recognize the business world of November 2022. The COVID-19 pandemic rewrote the rules, and now a new and potent disruption seems to arrive every other day. You know the list of issues; we won't go through them here. Suffice to say that managing complex organizations is much harder today than it was just a few years ago. And the hardest task of all for CEOs is to decide what needs to be done now and what can wait.

In short, what matters most today? Just as we did last year, we've spoken with hundreds of leaders this year and found six priorities that feature prominently on CEO agendas worldwide. They're the moves leaders are taking to shore up defenses *and* gain ground on rivals—which is very different from the purely defensive agenda that many companies are following.

Start with—what else?—resilience. No doubt, it's a corporate buzzword, but if you strip away all the extraneous baggage that the concept has collected, resilience is emerging as a vital "muscle" for companies operating in a world of endless volatility and disruption. The pandemic asked companies to move much faster. Now inflation seems to be here for the duration, thanks in large part to depleted supply chains, especially in energy. That's causing companies to deploy their newfound speed across all six dimensions of resilience: finance, operations, technology, organization, business model, and reputation. US companies are pursuing one path; European companies are responding slightly differently, as befits their circumstances. For CEOs, the overriding question today is: How resilient is your company?

A second priority centers on an old-fashioned virtue: courage. With lots of indicators flashing red, it's tempting for business leaders to pull back a bit, postpone some initiatives, and scale back on growth plans. Tempting, but wrong (for most companies). The best leaders and companies are ambidextrous: prudent about managing the downside while courageously pursuing the upside. These leaders are thinking about the next decade, not the next month. Many are spurring their organizations to rethink opportunities and reset the strategic gameboard in light of the current volatility. As one CEO said, "I don't want to benchmark our performance to the industry—I want to reinvent the industry."

Going for greatness within a company's industry is one thing. Venturing into an entirely different sector is another, more complicated story—one that today's leading CEOs are writing. More than half of top executives consider business building a top three priority. How do they do it? They begin by setting the bar very high (think unicorns), and then they protect the new business from business as usual. The most fertile ground for new-business building is green technologies; our research has identified 11 such whose collective value could be $12 trillion in a few years. To claim a leading position in these value pools, CEOs need to remember that, in these capital-constrained times, they have an edge that start-ups do not: they can endow new businesses with the assets needed for success.

Building a new business inevitably means new and better technology, CEOs' fourth priority. That's especially true when going after new green business opportunities. It's true for all the nontech companies that are making the shift to put software at the heart of their business. And it's also true for all the companies seeking to get maximum value from their digital transformation. But that's just the start;

technology is always evolving, offering new opportunities to CEOs looking to transform their business. For inspiration, take a look at the top tech trends we've identified, working with 100 of the world's leading experts. Which of these trends will your company use to gain an edge? Find the right ones, then follow the path that hundreds of unicorns have established to build a successful digital business.

What a difference a year makes: the road to net-zero emissions, our fifth CEO priority, has taken a most unexpected turn. Only last November at COP26 (2021 United Nations Climate Change Conference), business leaders' pledges to target nearly 90 percent of CO_2 emissions for reduction signaled that the private sector was truly engaged for the first time. Then major new headwinds began swirling—surging inflation, war in Europe, energy insecurity, and a potential global recession. These are the most serious challenges in at least a generation, many leaders have told us. But there's some surprisingly good news: the goals of sustainability, economic competitiveness, affordability, and national security dovetail as never before. It's up to the CEO to adapt, mitigate, and knit these concepts into a vehicle that goes from zero to net zero; the how-to can be found here.

The people needed to make all the foregoing happen are never far from the minds of leading CEOs. The sixth priority we've heard is that leaders need to reengage employees. In recent years, the contract with workers has become a little too transactional for anyone's liking—we pay you, you show up, see you tomorrow. In the wake (we hope) of the COVID-19 pandemic, CEOs need to find a new plane of engagement. Getting the hybrid work model right is one dimension. But a requirement to spend two days in the office, say, is going to get old really fast without some new incentives. CEOs need to think hard about the office of the future, a place where workers want to be—to see friends, riff on new ideas, and find enough meaning in their work to get them through the next week of pallid video calls. Do these things well, and you'll find your retention problems are eased.

The CEO is the company's ultimate strategist. Less well understood is that he or she is also the ultimate integrator, charged with identifying the issues that span the enterprise and formulating a response that brings all the right resources to bear. To do that well requires a broad range of contradictory perspectives: outside in and inside out; a telescope to see the world and a microscope to break it down; a snapshot view of the immediate issues and a time-lapse series to see into the future. We hope this article and the in-depth readings available below give CEOs the clarity they seek.

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Navigating inflation: A new playbook for CEOs

Few chief executives have faced the challenge of leading a company through an inflationary spike like today's. Lessons from strong leaders and bold action can help CEOs make the decisions that only they can make.

by Asutosh Padhi, Sven Smit, Ezra Greenberg, and Roman Belotserkovskiy

Last year, policy makers, economists, and financial-market participants fiercely debated the higher inflation then under way. Was it a transitory problem, caused by dislocations from the COVID-19 pandemic that would inevitably fade, or was it a more fundamental and potentially permanent shift? CEOs told us that they viewed this debate as detached from the business environment in which they operated. For them, higher inflation was already "permanent enough" to start asking whether a fundamental shift in the way they led and managed their organizations was required. We agreed.

In the first months of 2022, it became increasingly apparent that this year and next—and possibly longer—inflation rates well above the approximately 2.0 percent that planners have come to expect (and central banks have targeted) will prevail. The consumer price index rose by 8.5 percent from March 2021 to March 2022 in the United States, a 40-year high, 7.5 percent in the eurozone, and 7 percent in the United Kingdom. Some 60 percent of advanced economies grapple with year-on-year inflation above 5 percent.[1] Russia's invasion of Ukraine, and the resulting disruptions to the energy, agriculture, and minerals markets, have made it likely that inflation will be higher and more persistent than even revised expectations suggest (Exhibit 1).

Following a well-established inflation management playbook, central banks worldwide are raising interest rates to temper demand and regularly issuing statements to try

[1] Agustín Carstens, general manager of the Bank for International Settlements, in a speech to the International Center for Monetary and Banking Studies, April 5, 2022.

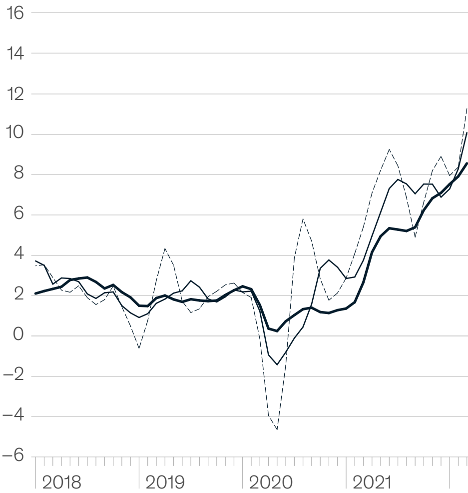
Exhibit 1

Shocks to commodity prices from the Ukraine invasion reaccelerated inflation’s rise and raised future expectations.

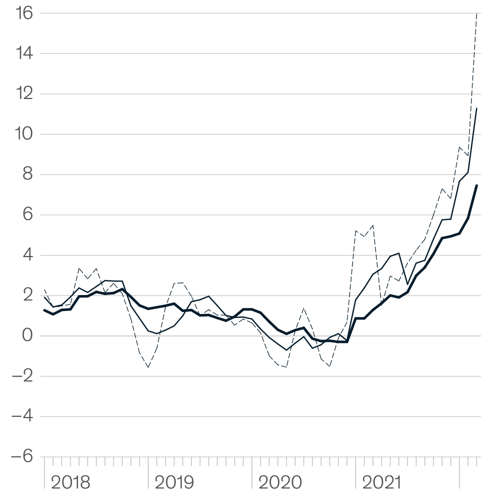
Consumer price index, annualized change, %

3 month — 6 month — 12 month

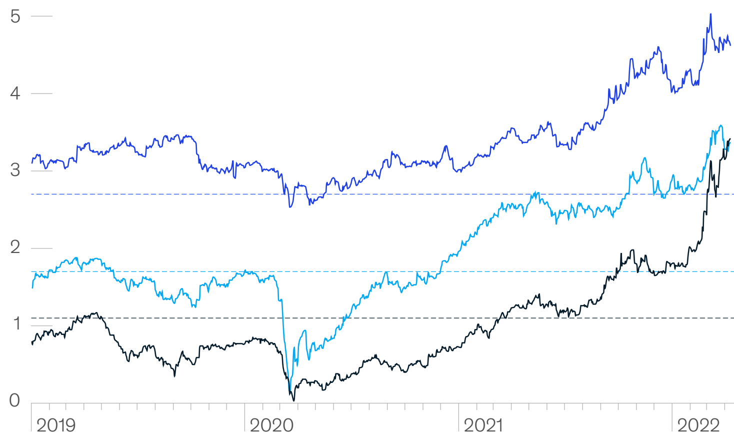
United States, through Mar 2022



Eurozone, through Mar 2022



5-year market-based inflation expectations, break-even inflation,[1] %



	Average, 2010–19, %
United Kingdom	2.7
United States	1.7
Germany	1.1

[1]Inflation compensation required to equate the total returns from investing in nominal and real bonds. Available for countries that trade both instruments.
Data as of Apr 5, 2022.
Source: Bank of England; Deutsche Bundesbank; Eurostat; Haver Analytics; US Bureau of Labor Statistics; US Federal Reserve; McKinsey analysis

and keep in check consumer and business expectations of future inflation. This task is becoming more urgent, as markets now expect inflation over the next five years in the United States, the United Kingdom, and Germany to be 1.5 to 2.0 percent higher than their 2010–2019 average.

Even if the central bankers succeed, progress will take time. Two more years of higher inflation are a long time for business leaders. The ad hoc crisis response that many have been following thus far is reaching the end of its usefulness.

How can CEOs guide their management teams, employees, boards, and a wide range of external stakeholders through this period? For starters, it's important to recognize that the CEO's focus cannot be limited to inflation's implications for profitability. Operating in today's uncertain environment, with a much wider range of stakeholders, means that leaders must think about performance in much broader terms. The rapid decisions CEOs had to make in recent weeks about operations in Russia are only the latest examples of these expanded considerations. CEOs must lead with the complete business cycle and their complete slate of stakeholders in mind. External relations professionals can help stakeholder management, but there are many conversations and decisions where only the CEO can lead.

Like central bankers, CEOs need an inflation management playbook. They can start scripting it by asking themselves and the senior leaders of key operational areas the following questions:

- Where will customers see value in this new environment? How can we design products, services, and experiences to deliver this value?

- What is the fastest way to stabilize and redesign stretched and, in some cases, broken supply chains? What capabilities will I need to increase my company's resilience and control costs?

- What direction should I give to help procurement leaders create value?

- How is the new talent landscape affecting compensation, benefits, and workplace norms? What can I do to attract and retain employees in today's shifting labor market?

- How should I pursue repricing in an inflationary environment? How can I form a through-cycle and strategic mindset for my customer relationships?

- How can I set priorities and organize to direct all this activity?

The CEO is an organization's ultimate integrator. Our research into the behaviors and mindsets of excellent CEOs shows the pivotal role that chief executives play in setting a clear direction, aligning the organization, managing stakeholders, and serving as "motivator in chief." The best CEOs act boldly, of course, but also operate from core mindsets that often belie the classic image of the hard-charging executive: they approach important decisions by listening first, treat "soft" culture topics as a hard material advantage, empower employees, and ask questions constantly.

In this article, we draw upon our work with hundreds of companies and tap into deep research to construct an inflation playbook that should help CEOs no matter what direction inflation takes. Remember, during the height of the COVID-19 pandemic, companies demonstrated their ability to reinvent themselves more quickly and thoroughly than they had once thought possible. They can do that again.

Redesign product and service offerings for value and availability

CEOs know that design choices for products and services are critical for responding to the volatility of commodities, the scarcity of components, and higher production and servicing costs—all while maintaining the core functionality customers require. Consider these examples of agile approaches that best-practice operators across sectors have used:

- *Rapidly redesign products and services to adjust to new realities.* One industrial-technology company redeployed more than 50 percent of a single unit's engineering capacity to rapidly redesign products so that they used semiconductors available in the market. Automotive manufacturers facing semiconductor shortages "de-featured" products to maintain production and sales in the face of these shortages.

- *Challenge specification orthodoxies.* Faced with historically high costs for lumber and other inputs, a manufacturer redesigned many products to specifications that overseas manufacturers could reliably meet. In this way, it reduced its dependence on high-cost regional suppliers—and dramatically simplified its product portfolio.

- *Redesign the way you provide service.* With transportation costs increasing rapidly, so is the value of loading trucks and containers efficiently. A manufacturer used its engineering expertise and tailored digital tools to completely rethink packaging and the loading of packages. It reduced costs significantly as a result of reduced freight demand.

- *Promote near-substitutes.* Consumer-packaged-goods companies identify product substitutes—often private-label equivalents that can be sold at lower costs than branded products. These substitutes maximize margins and increase the value to customers.

Mobilizing cross-functional expertise to quickly identify and implement alternative solutions to product and specification challenges will be the key for companies that seek to mitigate scarcity and the impact of inflation. In many cases, only the CEO can break down the barriers to innovation and reward the organization for taking risks counter to typical incentives. Leading their organizations' reimagined design is an opportunity for CEOs to nimbly implement short-term tactics to cope with inflation and capture the longer-term opportunity to forge stronger relationships with customers.

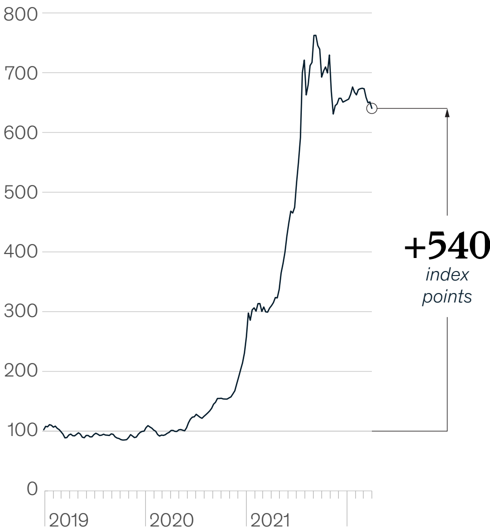
Clean-sheet and build digital, integrated, transparent, and agile supply chains

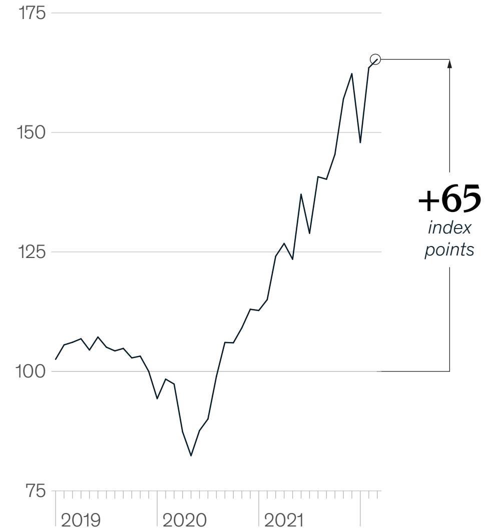
Well before the invasion of Ukraine in February 2022, new tariff regimes and increasing shipping and trucking rates that emerged during the pandemic had called into question the old-school thinking that made cost optimization the primary goal of managing supply chains.

In 2021, our research and discussions with hundreds of supply chain leaders found that an overwhelming majority had problems in their global manufacturing and supply footprints. Global shipping costs have risen significantly (Exhibit 2). In response, many

Exhibit 2

Globally, shipping costs have increased significantly over the ocean and on land.





[1]12 major trade lanes.
[2]Full truckload dry van only.
Source: Baltic Exchange; Cass Information Systems; Haver Analytics

companies moved to increase inventories and find new sources for raw materials. But far fewer have successfully tackled such difficult tasks as reducing the number of SKUs and diversifying their manufacturing base. The global response to Russia's invasion of Ukraine means that supply chains are further strained: air carriers are using alternate, often less-direct routes because of airspace closures, shipping companies are suspending activities near the conflict zone, and many multinationals are scaling down or stopping operations in Russia.

The logistics of carriers and gnarly supply chain topics had once been the exclusive domain of backroom spreadsheet managers. Today they are standard topics around C-suite and boardroom conference tables. We see several critical issues that CEOs should push their teams to pursue aggressively.

Make your entire supply chain visible

Just under half of the companies in our survey say they understand the location of their tier-one suppliers and the key risks those suppliers face. Remarkably, only 2 percent make the same claim about suppliers in the third tier and beyond. That matters because many of today's most pressing supply shortages, such as semiconductors, happen in these deeper supply chain tiers and can be solved only by understanding industry dynamics at the "tier-n" level.

CEOs must push their organizations to collect the data required to create this n-tier mapping and prioritize suppliers by the importance to their business. Who should the CEO be calling on personally to ensure they cement critical relationships?

Identify and manage potential supply chain risks

Depending on a company's sector and needs, CEOs must factor in a range of risks, including those involving finance, regulation, reputation, and data security. Operational-risk management is particularly important: examine the vulnerabilities inherent in the concentration of suppliers in the same area and the visibility of operations and processes, labor, manufacturing, and delivery. Do you have a transparent view of the parts of the value chain exposed to internal or external disruptions? Are you confident that controls are in place and options are available to minimize the impact of these risks?

Make seamless end-to-end planning a CEO priority

End-to-end planning involves several things. On the supply and demand side, companies must plan for longer lead times and earlier ordering. The financial implications of increased transportation, energy, and materials costs on working capital must be understood. The reorder points and stock of critical materials in inventory have to be reviewed. Production programs must be reprioritized in the event of foreseeable shortages.

CEOs recognize that all of this entails investment for which there needs to be a return. Will customers pay a premium to ensure the availability of goods? Will suppliers accept cost sharing to lower the risk of disruption in demand for their products while balancing these costs by raising their own productivity? The CEO's most difficult task may be persuading investors to accept resiliency as the new table stakes and to change their view of expected risk-adjusted returns. The good news is that digitalization will likely play an important role in answering these questions, and digital efforts often pay back their costs in 12 months.

Transform procurement to create value, not just cut costs

Over the past two years, critical supplies have been scarce or even unattainable at any cost within needed lead times. Prices for nearly all supplies have been rising in tandem globally, and labor market disruptions have affected nearly everyone. Procurement leaders have told us repeatedly that this is the toughest market environment in at least 20 or 30 years. New and changing circumstances have upended decades of procurement practices and management capabilities honed to globalization and just-in-time deliveries.

CEOs are beginning to recognize that purchasing leaders can be full-fledged strategic partners by expanding their focus from the cost of goods sold (COGS) to creating value and helping the enterprise succeed. In response to these needs, procurement leaders have implemented, in weeks, actions that previously would have taken months and years. Some examples follow:

- *Expanding focus to "everything is in play."* In response to the scarcity of contracted labor and higher prices from suppliers, the supply chain team of one electric utility partnered with procurement to redesign end-to-end engineering and construction

workflows. This change tightened governance, maximized demand, simplified requirements, changed how work was allocated, and put in place new contractor management processes. These moves all helped to ease inflationary pressures.

- *Basing contracts on the current reality.* An industrial manufacturer faced across-the-board cost increases from suppliers. In response, it documented every such rise in fine-grained detail to better understand the exact cost drivers of each product or service, to improve internal cost models, and to build better contracts indexed to the right commodities and input costs.

- *Rethinking logistics and geographic sources.* Facing challenges to product deliveries from Asia, one electronics manufacturer increased sourcing of production in the United States and Mexico. Another purchased its own fleet of aircraft to deliver products from Asia to end-user markets.

- *Considering vertical integration.* Retailers are making acquisitions to control value chains for key products. Automotive manufacturers are contracting directly with foundries to reserve capacity. Energy producers and utilities are exploring investments to onshore the manufacture of key production components for renewable energy.

- *Investing in technology and process automation.* Taking a page from law firms, a mining company shifted its technical-services contractors to 15-minute increments for billing and gave them the technology needed to track their time. By minimizing the rounding up of hours, the company saved 5 to 8 percent of costs across contractor trades.

CEOs can empower procurement leaders who are uniquely positioned to integrate a deep understanding of the business with supply market insights. These leaders can play a more central coordinating role across operations, finance, commercial, and other functions and thus help the broader enterprise become more efficient and resilient.

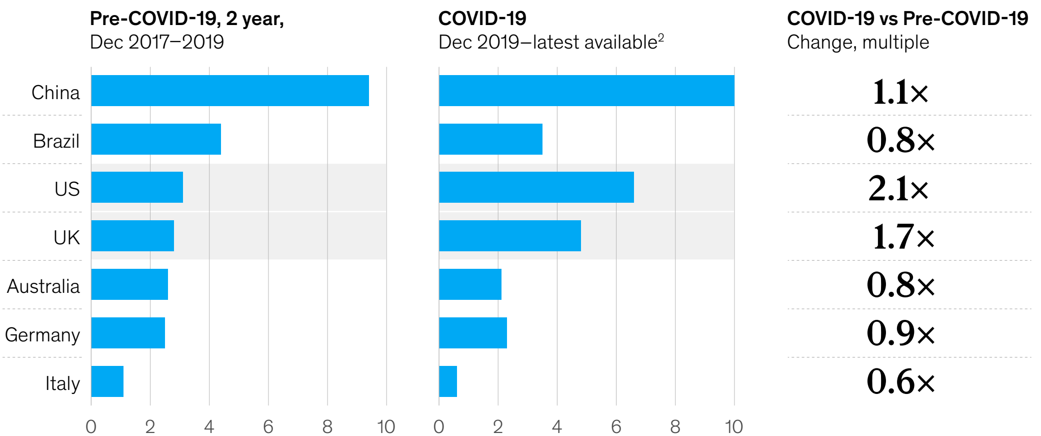
Adjust to the new talent game

Employee wages and benefits are one of business's biggest costs. Wage increases put pressure on a company to maintain margins potentially by increasing prices. At the same time, wages and benefits are one of the most important levers employers have to attract and retain employees and help them ensure that they can provide for themselves and their families in a higher-inflation environment. The progression of wages and benefits are top of mind for CEOs.

Private-sector wages in the United States have increased at a 6.6 percent annualized rate since December 2019. That is more than twice the rate of the two years before the COVID-19 pandemic. Wage increases reached 6.4 percent in the United Kingdom over the same period, while furlough and other labor market policies that were followed during the pandemic resulted in less disruption and kept eurozone wage inflation thus far in check. Differing labor market policies and conditions have led to a broad dispersion in wage growth around the globe (Exhibit 3).

Exhibit 3

The United States and United Kingdom have experienced significant increases in wage growth.



[1]Aggregate wages capture: Australia, Brazil, Italy: total economy; Germany, UK, US: private sector; China: total urban and rural earnings per employee.
[2]US through Mar 2022; Italy, UK through Feb 2022; Brazil, Jan 2012–Feb 2022; Australia, China, Germany quarterly data through 2021 Q4.
Source: Australian Bureau of Statistics; Brazilian Institute of Geography and Statistics; Federal Statistical Office of Germany; Haver Analytics; National Statistical Institute of Italy; Office for National Statistics of the UK; Oxford Economics; US Bureau of Labor Statistics; McKinsey analysis

In a tight labor market, the departure and mobility of workers creates wage and inflation pressures as companies compete for workers.[2] Understanding why employees are leaving their jobs is the first move for CEOs trying to play the new talent game. Workers we surveyed across seven countries believe that the cost of switching jobs has gone down significantly and that there is much less stigma attached to gaps in a résumé. People who voluntarily left their jobs without having another in hand cited factors such as uncaring leaders, unsustainable expectations of work performance, and a lack of career advancement. In the current labor market, employees believe they can find work whenever they are ready for it.

To rebuild relationships and retain current employees while attracting new ones, CEOs must guide their companies to take a new approach to talent, focusing on the following core principles.

Don't believe it's enough to rethink compensation and benefits
Market compensation and benefits packages are just the ante. To attract and retain disillusioned employees, companies can't just write one big check after another and expect that to be successful. Leaders must simultaneously pay constant attention to both compensation and cultural factors.

There is no one right way to reimagine compensation; some trial and error will be involved. With pay transparency at an all-time high, companies run the risk that a salary misstep could prompt even more departures. Think about how your company can help

[2] Renato Faccini, Leonardo Melosi, Russell Miles, "The effects of the 'Great Resignation' on labor market slack and inflation," Chicago Fed Letter, No. 465, February 2022.

employees find the sense of purpose and belonging that can make it more attractive to join and, ideally, more attractive to stay. Subsidizing services such as childcare—in the office or in a hybrid setting—could help employees with some of the competing demands of work and home.

Make your work model 'sticky'

How can CEOs help their management teams shift focus to anticipating and addressing the concerns of employees by fostering a sense of inclusion, psychological safety, and community? Exit interviews won't go away, but why not add "stay interviews" that ask people how they're doing, what they need, and what aspirations they may have for other roles?

Frontline managers may be encouraged to try scheduling, staffing, and hiring innovations. Some companies have tried offering "well-being" bonuses to employees or providing them with extra days off for professional development or mental-health breaks. One theme park and entertainment company offered to pay 100 percent of the tuition costs for employees seeking higher education.[3]

Find nontraditional and 'latent' workers

In the United States alone, more than 80 million people already in the labor force (either working or looking for work) don't have four-year college degrees but have or can develop the skills that employers need to get the job done. These include students, part-time or contract (or gig) workers, people in one-person start-ups, and people who are not actively seeking a traditional job at a traditional employer but might want jobs under the right conditions. And this could be the moment to bring back the record number of women who left the workforce during the pandemic. To reach these women and men, companies must actively challenge the barriers to entry, rethink role requirements, and change the process of searching for employees.

A CEO can signal the importance of these new possibilities by taking a lead role in reporting the feedback the organization is hearing, transparently setting the goals and aspirations for change, and directly participating in important hiring and retention activities with employees.

Set prices to strengthen customer relationships

It's a fundamental question in inflationary environments: What to do about pricing? As costs rise, repricing to sustain margins is nobody's idea of a good time; it is typically unpleasant for companies and worse for customers. But CEOs have a chance to reframe customer relationships strategically by viewing repricing as an opportunity to forge deeper relationships with customers. The CEO can direct these conversations toward sharing common challenges and helping management to meet both their anti-inflation goals and those of their peers.

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[3] Timothy Bella, "Dolly Parton's Dollywood says it will pay all tuition costs for employees pursuing higher education," *Washington Post*, February 9, 2022.

CEOs can ask a number of questions to help surface opportunities for strategic repricing:

How can we adjust discounting and promotions and maximize nonprice levers? Companies that consistently address total customer and product profitability are likely to weather inflationary cycles better than those that focus solely on cost changes. A manufacturing company facing a surge in demand for high-cost, low-volume products, for example, lengthened its lead times, especially for custom products with lower margins. Sales teams were trained to explain the new service levels and encourage customers to opt for more standardized alternatives. The result was an overall productivity increase that maintained margins without price increases.

Can analytics help us personalize more effectively? Best-in-class companies typically ground their price increase recommendations in analytics. These organizations examine their customers' end-to-end profitability, willingness to pay relative to a comparable peer set, and the margin performance (at a product and service level) expected from price changes. Retailers have long used personalization tools to tailor promotions; B2B companies now have dynamic segmentation tools that allow them to do the same.

Can we communicate our value more effectively? Raising prices in response to inflation is seldom a one-and-done move; it is full of unintended and unexpected consequences. Companies that manage price increases well often have a council of cross-functional decision makers who can respond quickly to feedback from customers and markets.

Taking advantage of the opportunity to forge new pricing relationships with customers in a higher-inflation environment will test many CEOs in their role as the ultimate integrator of the enterprise. Keep inflation high on the company's agenda with regular communication and role modeling, particularly with the leadership of sales and the frontline sales teams. Keep one eye on short-term margins and price fluctuations and the other on strengthening ties with customers and communicating value more effectively.

An inflation program management office

Managing the implications of inflation across a broad operational landscape calls for a cross-functional, disciplined, and agile response. During the pandemic, many CEOs instituted response nerve centers, flexible structures with enterprise-wide authority to coordinate the response to and return from the pandemic and to test approaches to recovery. Similarly, some companies erected inflation nerve centers to manage the potential downside of inflationary pressures by breaking down silos, enhancing transparency between functions, and concentrating on the crucial leadership skills and organizational capabilities required to get ahead of events rather than react to them.

Failing to coordinate across functions can have expensive consequences. A company that relied on monthly meetings among supply chain, operations, and procurement teams needed more than 30 days to decide on its action plan to counter inflation. Then, an additional 30 days were required to execute. During those two months, raw-material prices increased by almost 50 percent. Monthly business reviews or quarterly supplier workshops are not enough to handle fast-moving price changes, fluid negotiations with suppliers and customers, and the internal adjustments such pressures require.

We believe that CEOs should opt for a more proactive, durable management office for their inflation program. Such a center can benefit the entire enterprise by improving the pace and quality of its decision making and helping it to focus more on strategic action and less on firefighting. Achieving this goal requires a few important steps that only the CEO can take:

- setting a clear mandate and goals, communicated to the entire organization, for the inflation management office

- empowering the CFO or another direct report to coordinate these activities and carry out the CEO mandate

- selecting a team of functional leaders (for instance, HR, commercial, supply chain, operations, engineering, and finance) who have a bias for action and may not be department heads

- making it clear that decisions must often be taken in the face of significant uncertainty and that mistakes will undoubtedly be made

- insisting on a systematic, fact-based approach to transparently track execution, diagnose wins and losses, correct course, and learn

A nimble, well-informed decision process can keep up with rapid change by making it clear when certain thresholds are met and generating responses to problems. Many companies will find that they have most of what's needed to create such a center. These resources can be organized to form an agile capability in a few weeks rather than months or years. With the inflation program management office up and running, CEOs can be freed from the day-to-day details of the anti-inflation effort to focus instead on the issues they are uniquely positioned to address, from higher-level board and stakeholder discussions to shifting their strategies to best capitalize on the current environment.

Someone, somewhere, pays for every uptick in inflation. Customers pay at the end of the supply chain in higher prices. Suppliers pay when their customers derisk production by seeking alternatives to their products. Shareholders pay higher costs as the ante for competing and maintaining a viable business. With the right playbook as a guide, the best CEOs will successfully manage the impact of the current higher-inflation environment and establish a new level of organizational resilience no matter where prices move next. Q

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Risk & Resilience Practice

Something's coming: How US companies can build resilience, survive a downturn, and thrive in the next cycle

The US economy continues to throw off mixed signals. But one thing is becoming clear: executives should prepare for an extended period of higher interest rates.

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Since our July 28 article, the US economy has produced another confusing batch of signals. Start with the good news: Q2 GDP was revised higher, consumer sentiment moved a touch higher, Q2 corporate profits rebounded (rising 6.1 percent in the quarter, after falling 2.2 percent in Q1),[1] headline and core inflation moderated slightly, and two new regulations (the Inflation Reduction Act, and an executive order to forgive student loans) were signed, aimed at helping companies and households.

But it's not all sweetness and light. An August survey of CEOs found that 81 percent of leaders expect a recession.[2] And while the upward revision in Q2 GDP is welcome, the –0.6 percent reading is precisely in line with McKinsey Global Institute's downside scenario. The latest report on job openings showed that the labor market remains white hot. While more people are rejoining the workforce, that's both good and bad news: more workers could ease labor shortages but also create more demand, stoking inflation.[3] In addition, the Bureau of Labor Statistics' latest consumer price index indicated that core inflation has increased. For a complete wrap-up of all the US and global economic news, see "Global Economics Intelligence executive summary, August 2022."

Amid all the uncertainty, one trend has been consistently clear: the US Federal Reserve's stated commitment to fighting inflation, using the tools at its disposal—higher rates and "quantitative tightening." As Fed chair Jerome Powell said, the Fed's "overarching focus right now is to bring inflation back down to our 2 percent goal. Price stability is the responsibility of the Federal Reserve and serves as the bedrock of our economy. Without price stability, the economy does not work for anyone."[4]

The clarity and commitment may have reassured some executives. But not all have yet come to terms with the scale of the effort required. It might take years to reduce inflation to the Fed's target level. Consider these comments from the head of the Federal Reserve Bank of New York: "I think inflation expectations are well anchored. We've communicated over and over and over again our commitment to achieve that 2 percent goal. . . . Today we're very clear on that . . . the situation is very challenging. Inflation is very high. The economy, like I said, has a lot of crosscurrents. I do think it'll take a few years, but we're going to get that done."[5]

What does that mean for US companies? It's likely that the private sector is entering a new era of "higher for longer" interest rates and cost of capital. The good news, such as it is, is that higher rates, while unpleasant and potentially painful, are becoming less of an uncertainty and more of a sure thing. Companies need to draw on the proven playbook for success in a world of slower growth, higher inflation, and more expensive capital. That's a big switch from the activities of the past several months, when many management teams have been putting out fires, so to speak—finding fixes for problems like rapidly rising costs for raw materials and labor. And as Fed chair Powell indicated, it won't be easy—the switch to a higher-for-longer environment "will bring some pain to consumers and businesses."[6]

In this update, we'll look at two new McKinsey research efforts (one on consumers, one on corporates) that point up the ways that consumer behavior is affecting corporate profits and will likely continue to do so. We'll close with some notes from the field on what we see companies doing today, and four strategies that can help companies thrive in a higher-for-longer world.

Higher for longer: The risk of entrenched inflation

How high, and for how long? Those are quickly becoming the questions of the day. On the first, our recent work with hundreds of US companies

[1] "Corporate profits," US Bureau of Economic Analysis, August 25, 2022.
[2] "CEO confidence deteriorated further in Q3," The Conference Board, August 17, 2022.
[3] Chris Anstey, "Summers discounts rise in labor force, sees 6% unemployment risk," Bloomberg, September 2, 2022.
[4] "Monetary policy and price stability," US Federal Reserve, August 26, 2022.
[5] "Transcript: WSJ Q&A with New York Fed President John Williams," *Wall Street Journal*, August 30, 2022.
[6] Ibid.

suggests that executives should not worry about whether the next rate hike is 75 basis points or something else. It's the terminal rate that counts, and how long rates remain there, since a quick pivot seems unlikely. Many economists currently expect the Fed's key lending rate to top out at about 4 percent or slightly higher, which equates to a prime rate of about 7 percent.[7]

On the second question, history provides some guide. Alan Blinder of Princeton University notes that of 11 rounds of Fed tightening since 1965, one lasted three years, most lasted from one to three years, and only one was over in less than a year.[8] All but three resulted in an official recession, and only one qualified as what Blinder calls a perfect soft landing.

The difference between one year and three or four is enormous, of course. The key distinction between a quick resolution and a drawn-out battle is the degree to which inflation has become entrenched in consumers' and business leaders' minds. Two new McKinsey research efforts point up the challenges some companies face in a higher-for-longer world.

Consumers: Seeing inflation everywhere

When we surveyed 4,000 US customers in July, they were alarmed at the rapid onset of inflation (Exhibit 1).

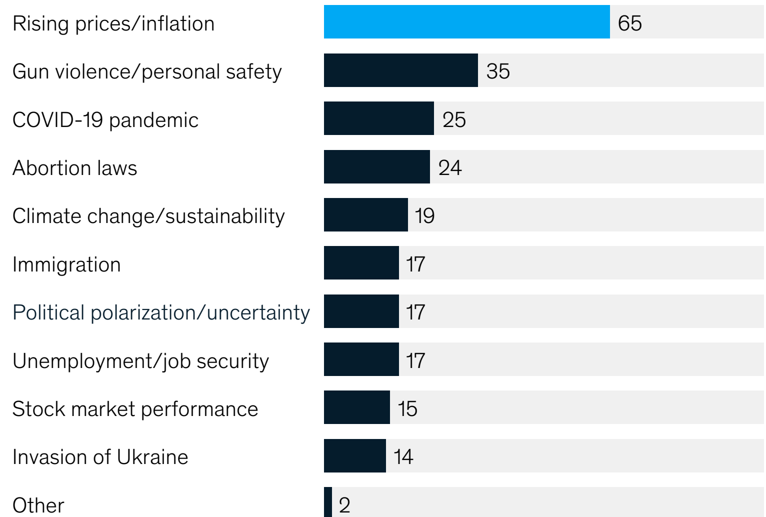
It's no wonder that consumers are somewhat shell-shocked. When we look across the broadest measures of consumer spending on goods and services, we see that inflation is widespread—over the past 12 months, prices have increased in more than 90 percent of categories, a rate of diffusion not seen since the 1970s (Exhibit 2).

Not only does this create challenges on its face, but, as our colleagues identified in their recent consumer

Exhibit 1

Two-thirds of US consumers are concerned about inflation.

Top 3 concerns,[1] % of respondents



[1]Question: What are the greatest source(s) of concern for you right now? (Choose as many as 3 from provided list of options.)
Source: McKinsey US Consumer Pulse Survey, July 6–10, 2022; n = 4,009 sampled and weighted to match the US general population 18+ years

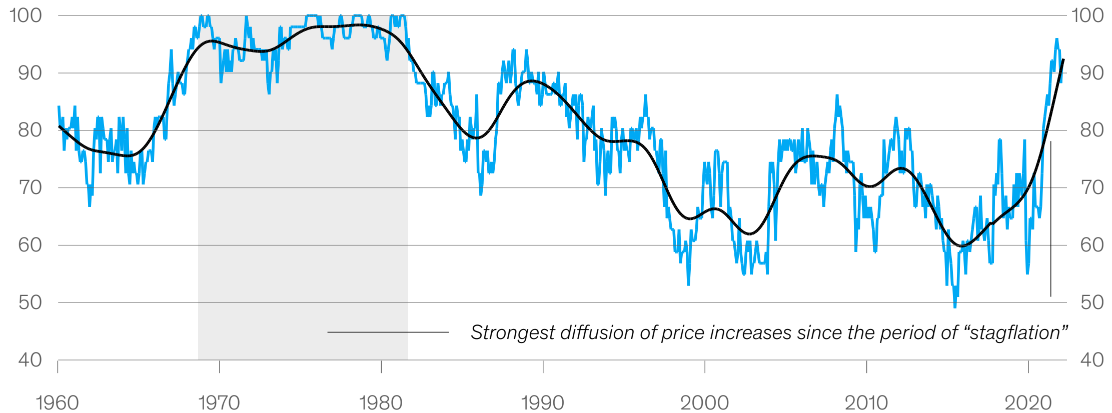
[7] See, for example, Kristine Aquino and Michael Mackenzie, "Traders brace for 4% peak in Fed rate as bond rout intensifies," Bloomberg, June 13, 2022.

[8] "Alan Blinder on landings hard and soft: The Fed, 1965–2020," Princeton University Bendheim Center for Finance, February 11, 2022.

Exhibit 2

Pricing pressures have spread across more than 92 percent of consumer spending categories.

Consumer spending categories with price increases over previous year through June 2022, % share (3-month moving average of 12-month inflation diffusion indexes)



Source: Federal Reserve Board of San Francisco; SGH Macro Advisors; US Bureau of Economic Analysis; McKinsey analysis

survey, consumers' perceptions of inflation may even exceed the rate of inflation itself. One potential implication of these facts and perceptions is that higher inflation may become entrenched in consumers' outlooks—precisely the phenomenon that the Federal Reserve seeks to avoid.

All in all, it's a daunting outlook. Consumer sentiment rose very slightly in August but remains at an all-time low (Exhibit 3).[9]

Corporations: The forward-looking view on profits

As companies reported their earnings from the second quarter, it was evident that changing consumer behaviors are hurting results, especially among consumer-facing sectors. What comes next? We looked into equity analysts' most recent estimates of both revenue and earnings for the full year 2022 and compared with their estimates from the beginning of the year (Exhibit 4). On the revenue side, we found that the median analyst expects the trend (materials and commodities up, consumer companies down) to persist. Since equity analysts think about this in nominal terms (that is, not adjusting for inflation), this also held true across many other industries, perhaps as pass-through inflation costs outweigh volume declines.

The story on earnings, however, is far bleaker. The median analyst expects EBITDA margins to decline in all but a handful of industries. Not only do analysts expect that consumer-facing industries will face pain but they also expect that this pain will ripple through most other industries as well. Making matters worse, this measure of earnings does not even account for higher borrowing costs.

Operating in a higher-for-longer world

We've seen companies take many of the short-term moves our colleagues outlined in their playbook for inflation. Some of the most common include pricing adjustments and managing exposure to input costs. Some companies are also

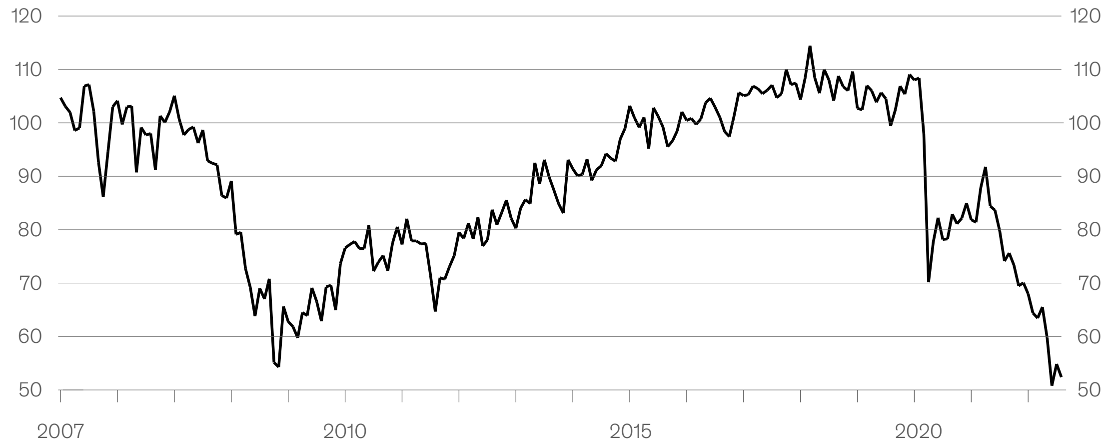
[9] Survey of Consumers, University of Michigan, August 2022; Survey of Consumer Expectations, US Federal Reserve, August 2022.

Exhibit 3

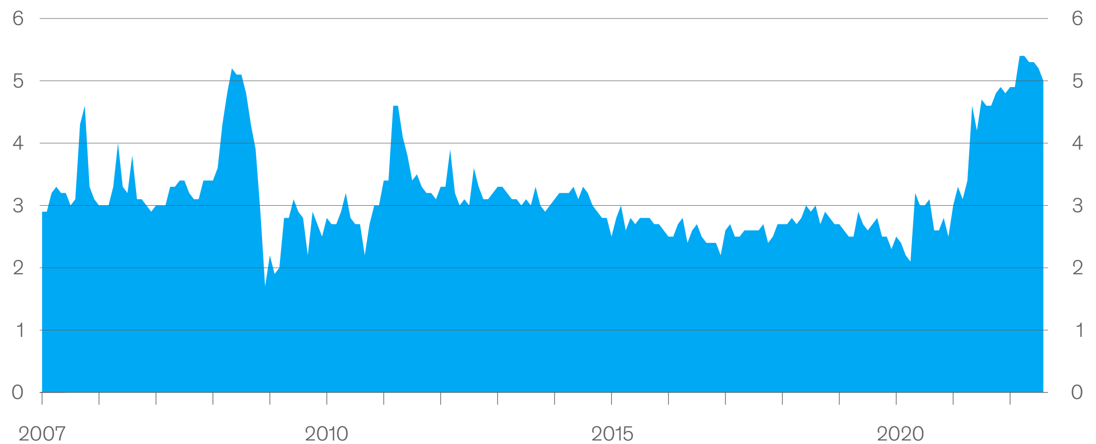
Consumer sentiment remains at an all-time low; expectations of inflation remain near an all-time high.

Consumer sentiment and consumer expected inflation rate through August 2022

Consumer sentiment, index (2005 = 100)



Consumer expected inflation rate, next year, %



Source: University of Michigan; McKinsey analysis

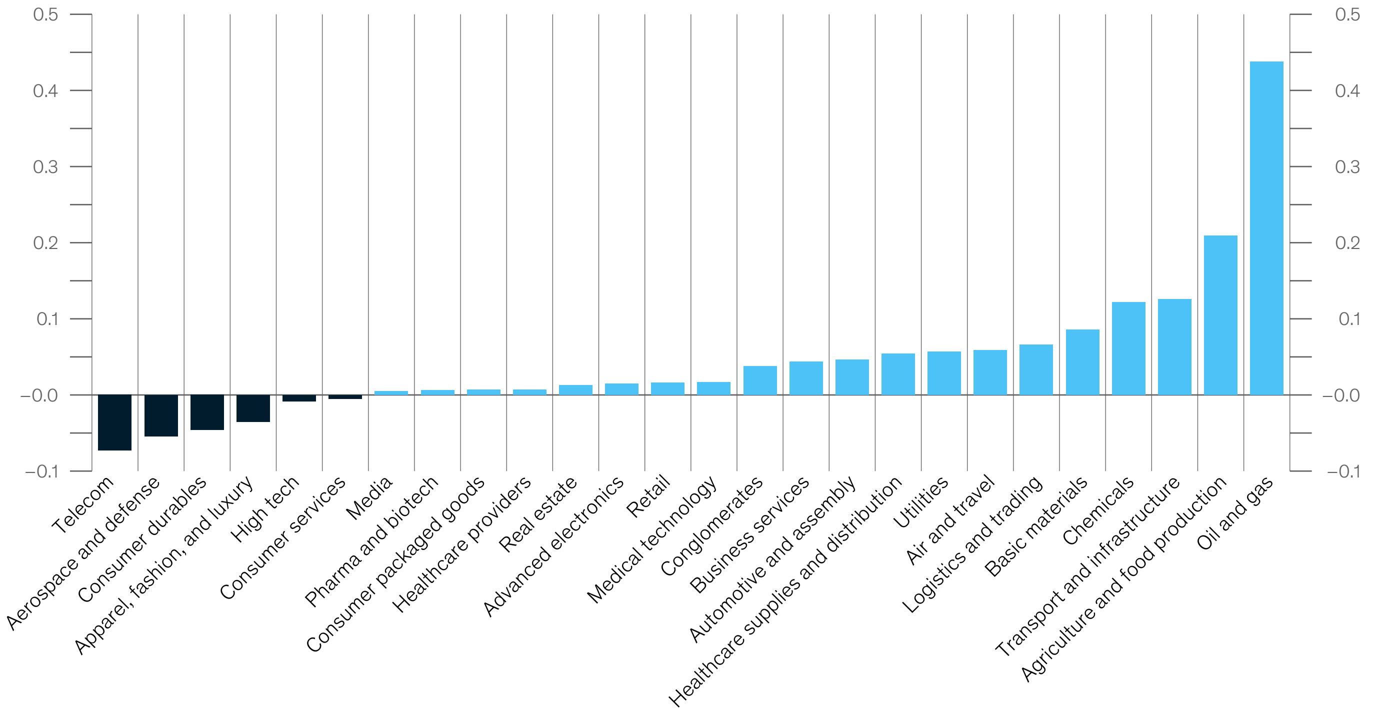
taking action on operating expenses. These short-term moves can help many companies. But they're more like firefighting than putting in fire-resistant materials—and in a higher-for-longer environment, companies should also be thinking about more structural solutions that not only manage costs but also build resilience and can drive long-term value creation. Here we offer four themes that business leaders can consider. It's a complex and difficult program and will require leaders to build new strengths to see it through. But the payoff will be worth the effort and investment.

Growth: Opting in. Growth is always a top priority for C-level executives but remains elusive for many. In fact, about a quarter of companies don't grow

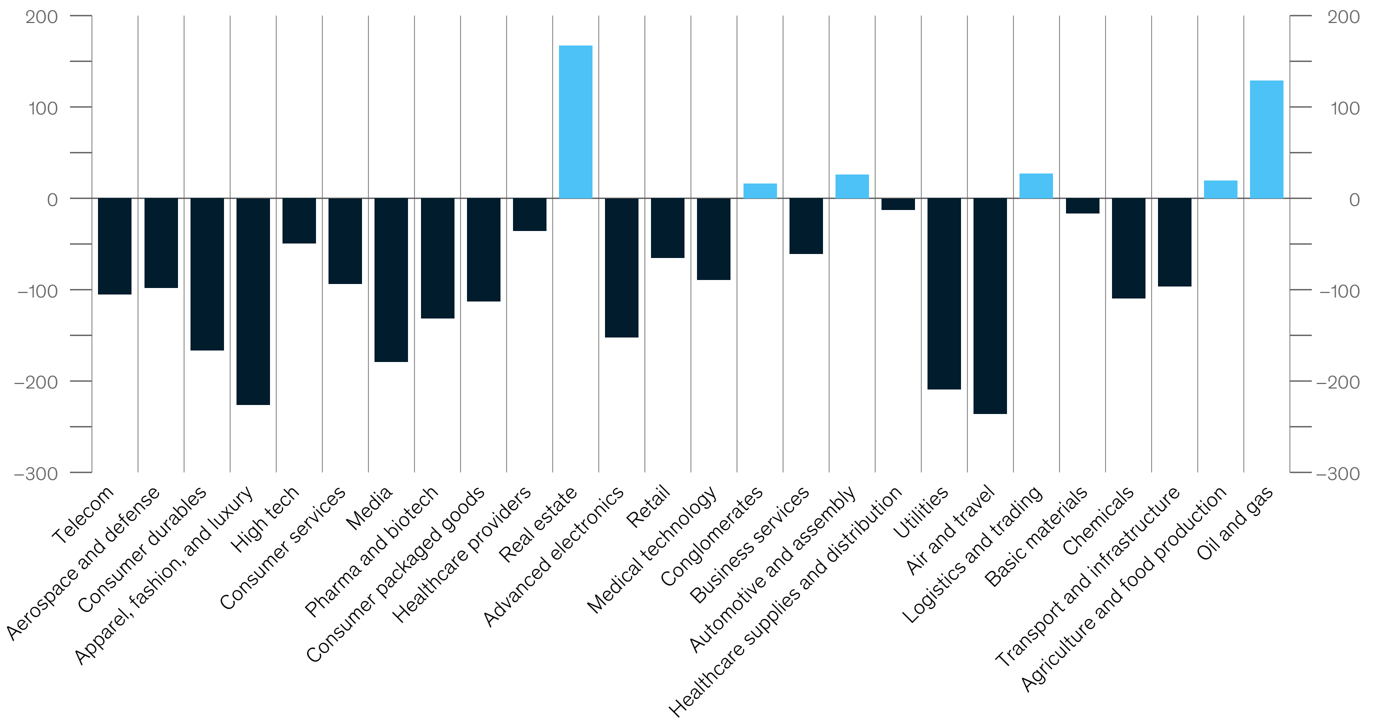
Exhibit 4

Analysts expect revenues to rise broadly, but earnings to fall.

Median analyst expectations of revenue margin, Aug 2022 vs Dec 2021,[1] % change



Median analyst expectations of EBITDA margin, Aug 2022 vs Dec 2021,[1] % change



[1]Data set includes top 1,000 US companies by market cap in 2021, excluding financial and insurance companies and some subsidiaries, holding companies, and companies that have delisted since; calculated using weighted average YTD local currency.
Source: S&P Global; McKinsey Strategy & Corporate Finance Insights; Corporate Performance Analytics by McKinsey

at all, often because leaders don't look widely for growth opportunities and then hedge their bets, often zeroing in on just a couple of initiatives. Inflation and the rising cost of capital have made it even harder to know where to invest. In an economic moment like this, a structured approach to growth is paramount.

Outperforming executives break the powerful force of inertia by prioritizing growth, a choice that shapes behavior, mindset, risk appetite, and investment decisions across the organization. Intriguingly, our research shows that growth-oriented leaders react decisively to shorter-term disruptions that can be turned into opportunities—what we term "timely jolts"—and build organizational resilience and agility to respond to change and leverage disruption. A higher-for-longer environment is exactly the kind of jolt to growth that leading companies recognize and take advantage of.

Talent: Closing supply–demand gaps. Even in this environment, many companies are still hiring. But our research indicates that talent pools in many industries are drying up as employees quit to enter other sectors, go after nontraditional opportunities such as gig-economy work, or leave the workforce altogether. Shortages of digitally savvy workers are especially acute: in our recent survey, nearly 90 percent of C-suite executives said they don't have adequate digital skills.

Leading companies are taking several approaches to strengthen their workforces. Many have sought to motivate workers with more meaningful assignments and better opportunities for career advancement. Often, these approaches go hand in hand with training in skills that are hard for companies to find. Some companies are choosing to deemphasize (or discard) requirements for education and relevant experience and hire people from unconventional backgrounds—other industries, adjacent majors, overlooked colleges and universities—who are ready to learn. We're also seeing businesses streamline their hiring processes and enhance candidate experiences to attract more applicants and lift conversion rates.

Evidence also suggests that improving workers' emotional experience on the job can do more for retention than employers might expect. McKinsey surveys of managers and employees found that employers often fail to understand just why workers leave their jobs. In particular, employers tend to overrate "transactional" factors such as pay and development and underrate the "relational" elements—a feeling of being valued by managers and the organization, the companionship of trusting teammates, a sense of belonging, a flexible work schedule—that employees say matter most. Companies that successfully create this kind of meaningful purpose can benefit from greater organizational cohesion and resilience.

Sustainability: Staying the course. In a slowing economy, with margins under pressure and the cost of capital sharply higher, should companies invest in sustainability? Our answer is yes. In an economically constrained environment, a through-cycle view on sustainability can be a lever for companies to build resilience, reduce costs, and create value.

Companies in hard-to-abate sectors can protect their core by building resilience against transition risks. Putting an accurate price on the current volatility of fossil fuel prices could make sustainability investments more economical. And transitioning to greener asset and product portfolios can protect against customer attrition as standards continue to tighten. Further, in a slowing economy, a strong sustainability strategy can accelerate growth by creating value. Companies may adjust their business portfolios to capture larger shares of segments with major green growth potential, while others may launch new green businesses altogether. Green products and value propositions may also allow companies to differentiate themselves and gain market share or seek price premiums.

Supply chain: Rebuilding for resilience and efficiency. For many leaders, the COVID-19 pandemic revealed a painful truth about modern approaches to managing supply chains: engineering these vast systems for high efficiency had introduced vulnerabilities. Operational

weaknesses such as overreliance on certain suppliers, scant inventories of critical products, and overstretched production networks left companies exposed to shortages and disruptions. Many supply chain leaders declared intentions to make supply chains more resilient, and many did so—though often in the most expedient way possible, by building inventories. Companies can take other, more complex moves to build resilience. For example, our experience suggests that reconfiguring supply networks cut costs by 4 to 8 percent.

Moreover, companies can both build resilience and extract additional savings from already-lean supply chains. We've found that a careful assessment of supply chain vulnerabilities can reveal opportunities to lower spending with high-risk suppliers by 40 percent or more. Adjusting transportation modes and routes and distribution footprints around trade tensions, tariffs, possible customs-clearance problems, and likely disruptions can also lower transportation costs by some 25 percent. Then there are the benefits of refreshing products with modular designs that involve easy-to-find components rather than highly customized ones. This can result in margin expansion of 25 percent, while lessening the risks that come with depending on just a few suppliers.

The plot thickens. As contradictory evidence pours in, the US economy remains too tricky to forecast easily. Companies should rely on scenario planning and prepare a set of long-term moves that will help them thrive in a higher-for-longer environment.

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A defining moment: How Europe’s CEOs can build resilience to grow in today’s economic maelstrom

Can leaders lift their companies to the next frontier of resilience—not only to survive but also to thrive?

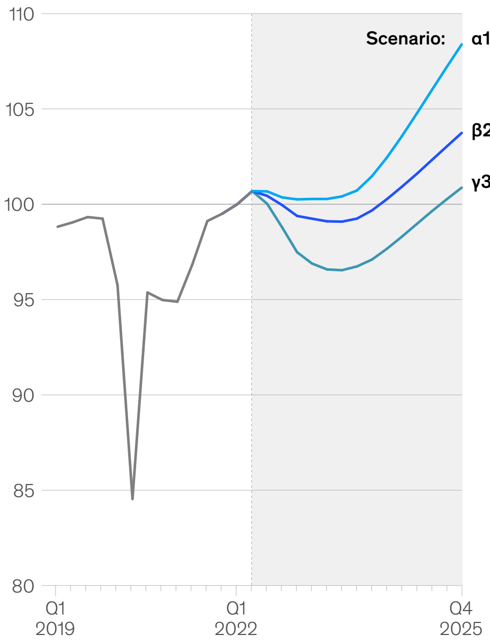
by Hemant Ahlawat, Homayoun Hatami, Maria del Mar Martinez, Alfonso Natale, Thomas Poppensieker, and Andreas Raggl

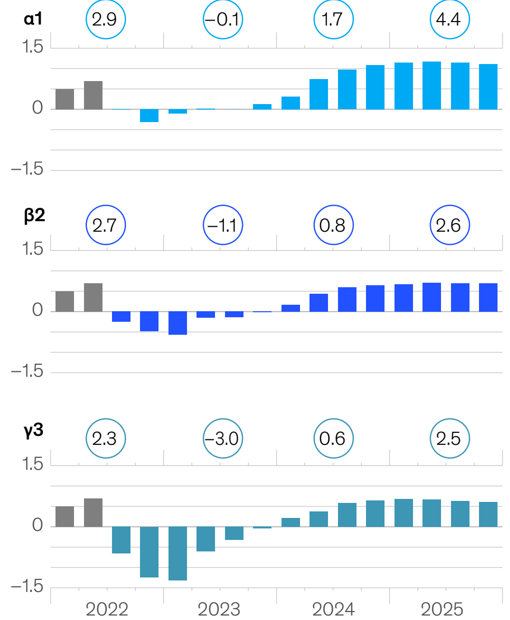
A confluence of crises and disruptions has darkened European skies. The energy crisis is already dire and could get worse. The war in Ukraine continues, an unabated humanitarian tragedy. The cost of life’s essentials has gone through the roof—prices in some countries have risen eightfold. Business signs are weakening. In July and August, purchasing managers’ indexes indicated contraction for the first time since early 2021. China, a key supplier and customer, is wrestling with its own economic problems. The effects of climate change are pronounced across the continent, with drought and extreme heat curtailing hydropower and even putting industrial production at risk. The energy crisis threatens to derail the net-zero transition. Semiconductor shortages, technological shortfalls, and labor shortages remain. The latest McKinsey scenarios, undertaken in partnership with Oxford Economics, suggest that European GDP will most likely contract overall in 2023 (Exhibit 1).

How will Europe’s business leaders respond? This is a defining moment for a generation of executives who have never been tested in quite this way. Yes, today’s leaders have faced down the global financial crisis, the euro crisis, Brexit, and the COVID-19 pandemic. All were challenging in their way; each crisis called for ingenuity, grit, and determination. Many business leaders met these challenges exceptionally well. But today they face a unique confluence of crises that is of another magnitude. The playbooks of the past will be only moderately helpful.

Exhibit 1

Economic scenarios plot potential impact of disruptions on the eurozone GDP growth path 2022–25.





[1]McKinsey and Oxford Economics scenarios, Sept 12, 2022.
Source: National statistics agencies; McKinsey, in partnership with Oxford Economics

Businesses need new approaches to build the resilience required in these decisive times, through a perceptive *response* to current challenges, *foresight* to anticipate the next round of disruptions, and capability for *adaptation* that will set the business on a foundation for successful growth.

A defining leadership moment

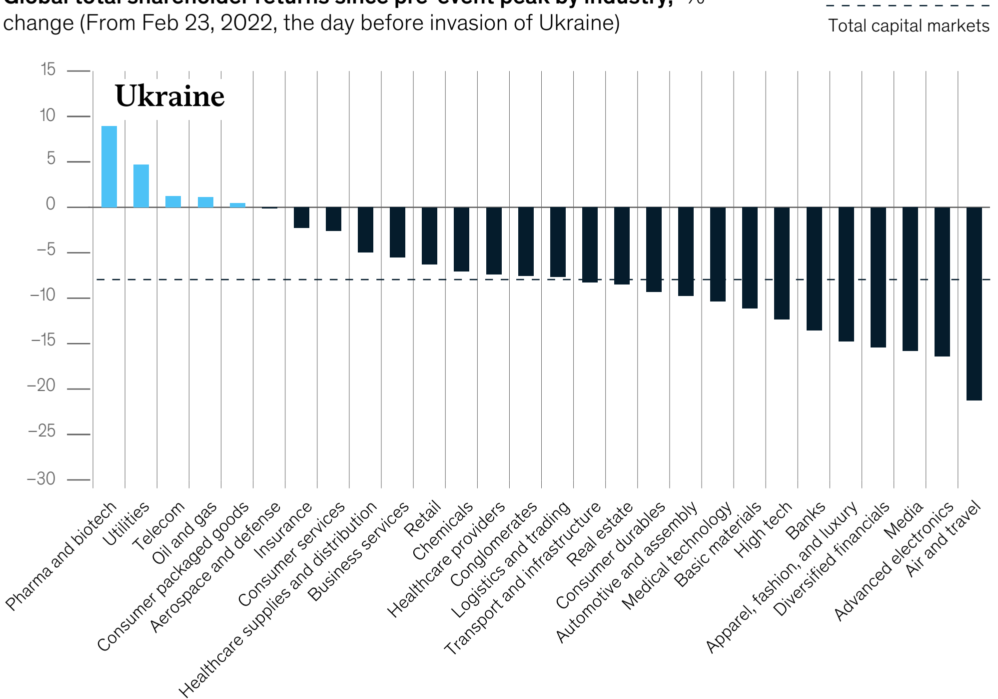
No crisis is ever the same as the previous one; neither can it be managed in the same way. Likewise, no industry is affected the same way in different crises (Exhibit 2). With the exception of pharma, no sector showed positive returns throughout the pandemic and the more recent period of geopolitical turmoil. Moreover, in the current confluence of crises the vast majority of companies have produced negative returns.

Executives have reacted to each disruption separately but with all-consuming responses; they're fighting fires. But before they can recover from one, the next crisis is at the door. This approach is not sustainable in a context of continuous disruptions. Leaders are now discussing *resilience* as the essential condition. How can organizations arrive at a resilient stance, alert to what is over the horizon and ready to withstand shocks and accelerate into the next reality?

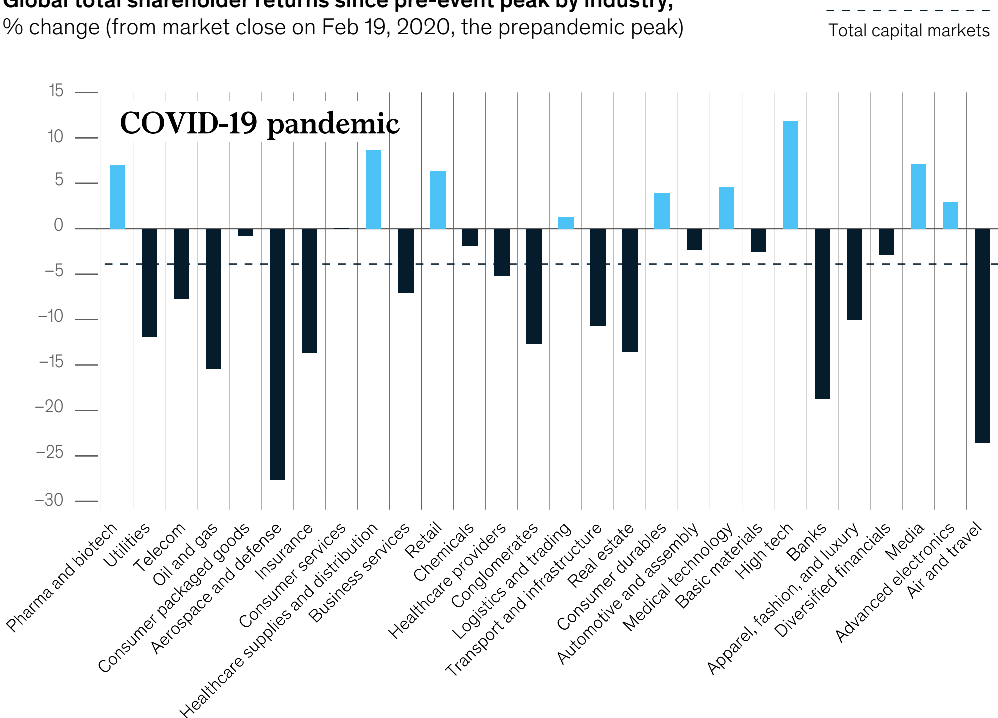
Exhibit 2

Impact on capital markets from Russia's invasion of Ukraine is of a different order than the COVID-19 impact, and uneven across sectors.

Global total shareholder returns since pre-event peak by industry,[1] % change (From Feb 23, 2022, the day before invasion of Ukraine)



Global total shareholder returns since pre-event peak by industry,[1] % change (from market close on Feb 19, 2020, the prepandemic peak)



[1]As of July 6, 2022.
Source: S&P Global; Corporate Performance Analytics by McKinsey

Some think of resilience as the ability to recover quickly, but it is more than that. *Resilience is the ability to deal with adversity and shocks and to continuously adapt and accelerate for growth*. Consequently, truly resilient organizations bounce back better than before and go on to thrive in a hostile environment. They play defense well, and they also go on offense.

This is indeed a defining leadership moment. The last remotely comparable moment was the energy crisis of the early 1970s, an event that no CEO of today experienced as a leader. Here are a few of the practices that we've seen leading executives use recently:

1. *Don't follow the old rules.* Setting up a crisis task force, for example, the go-to move in past years, is a waste of time; it will be outmoded before it is up and running. Leaders need to find a more flexible and consequently durable stance, engaging the whole organization by embedding a crisis-resistant DNA over time.

2. *Prepare for the recession, but at the same time, prepare to exit it.* Recessions may be shallow and brief; companies can accelerate through the downturn. This is essential: resilient organizations open an early lead, however small, in comparison with peers. This lead can be significantly widened during the following recovery and growth period. The early advantage can help companies succeed in the long run.

3. *Use scenarios rather than forecasting.* Forecasting has failed to adequately capture many key events of recent decades, including slowing globalization, the COVID-19 pandemic, the supply chain disruption, and the return of inflation. Learn to plan with scenarios and triggers, regularly revisiting and adjusting them.

4. *Develop a resilience agenda* that addresses burning short-term issues (for example, financial flows, supply chain disruptions) as well as longer-term challenges (for example, geopolitical shifts or the speed of organizational adaptations). Ensure that resilience is measured, so progress can be tracked and return on resilience investments can be maximized.

5. *Focus on resilient growth* by reviewing your competitive position and finding strategic opportunities in the current environment (such as acquisitions or new business-building ideas).

Exemplary moves

Leading companies are already making resilience a reality, defending their franchise while also accelerating growth through the disrupted environment. Here's what they've done in the recent past:

- *Restructuring the balance sheet.* An automotive supplier wanted to achieve a particular credit rating, a target that required an increase in the amount of debt it could service under stress. Presenting the new capital structure to investors, equity analysts, and the rating agencies, the company was able to make an additional €3 billion in investable assets available to implement a five-year strategy.

- *Reconfiguring the supply chain.* To achieve operational resilience, a global electronics manufacturer with a global production footprint (more than ten plants) and a large

multitier supply base assessed the relative vulnerability of 5,000 unique supplier and plant combinations. The company identified around 100 high-risk suppliers and then discovered that 25 percent of its spending was concentrated in this segment. By reconfiguring the supplier network, the company reduced the higher-risk spending by more than 40 percent.

- *Decarbonizing core assets.* A global mining company with dozens of mines worldwide sought to embed ESG along its value chain into the core business. The company defined targets and adopted strategic initiatives to create a pathway to net-zero emissions across the enterprise. Detailed decarbonization plans were developed for each site, with steps to reduce greenhouse-gas emissions by 30 percent by 2030. Once implemented, the plan will lead to large reductions in both operating and capital expenditures.

- *Derisking manufacturing analytics.* A global agriculture products leader wanted to deploy advanced analytics within its supply chain and manufacturing operations. Aware of the potential data and analytics risks this entailed, the company made derisking and safeguarding critical data and analytics through data governance and model risk management an integral part of the effort. The move built enterprise-wide confidence in analytics resilience and allowed the company to capture the full potential of the effort.

- *Next-generation scenario planning.* A leading automotive company created two hypothetical scenarios (a technological disruption and market breakdown), then assessed the potential impact on the business and the resilience levers that would best mitigate that impact. The analysis suggested that up to 60 percent of sales losses could be mitigated. This led to a decision to diversify geographically and reduce the risk of dependence on single sites, set up some anticipatory information mechanisms, and reduce the fixed-costs intensity in some production locations.

- *Anticipating the future.* A utility with annual costs of $5 billion was facing rising prices from suppliers, in particular for basic materials. To address cost pressures strategically, the utility created an “inflation nerve center,” using tech-enabled analytics. The center identified spending priorities, anticipated and quantified inflationary risks, created live dashboards showing inflationary impact, and established a proactive process and set of levers to manage inflationary pressures. This helped the company understand the magnitude of inflationary risks across its cost base using an analytics-driven approach.

- *Turning a crisis into a growth opportunity.* A global pharma company addressed the recent disruptions in healthcare supply chains, services, and access to healthcare professionals. The company designed a home-delivery system to help patients with rare diseases continue receiving treatment in the safety of their own homes. They further created a partnership with a start-up company to provide patients with physical therapy programs through virtual channels. These innovations allocate and deploy resources more effectively; they also inspired the company to undertake a groupwide agile and lean organizational transformation.

Why resilience matters: What still works and what doesn’t

Companies cannot effectively respond to the current economic crisis in precisely the same way as they did in earlier crises. But some basic lessons can be drawn from past

experience. McKinsey research on the financial crisis of 2007–08 shows that resilient companies not only perform better than their peers through a downturn and recovery—they also accelerate into the new reality, leaving peers further behind (Exhibit 3).

The research indicated that companies that win through resilience do three things well in a disrupted environment:

1. They make faster and harder moves in productivity, preserving growth capacity.

2. They create more operational and financial optionality in their balance sheets, adjusting leverage or cleaning legacies.

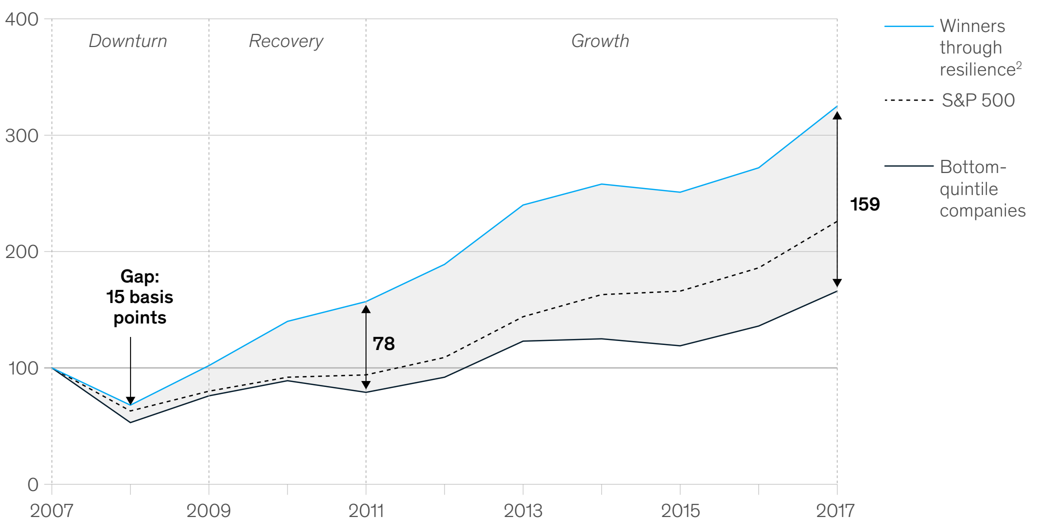
3. They act swiftly on divestments in the downturn phase of disruption and on acquisitions at the inflection point of recovery.

Not only do leading companies do these three things well, they also do them at the most decisive time for their future well-being. They react in the downturn when it matters most and are therefore able to open an early lead in comparison with peers, which can be widened significantly during the recovery and growth period. Recovery and growth periods following downturns are often longer than the actual downturn, so leading companies are well positioned to outperform the others in the long run. A turn in the cycle is a moment that requires true leadership to embark on either offense or defense. But the best-performing companies don't wait for that turn to finally reveal itself—or not: they act with intentionality and courage in the face of profound uncertainty about the macroeconomy.

Exhibit 3

Resilient companies play defense and offense simultaneously.

Total shareholder returns of 1,140 global companies,[1] 2007–09 financial crisis, index (2007 = 100)



[1]Calculated as average of subsector median performance. Includes 1,140 companies (excludes financial institutions groups and real-estate investment trusts).
[2]Winners through resilience defined as top geometric mean total shareholder returns quintile by sector.
Source: Corporate Performance Analytics by McKinsey; MSCI; McKinsey analysis

The next frontier of resilience

Faced with overlapping disruptions and a complex European situation, executives need to decide where to concentrate their forces now, over the next six months, and beyond. The key questions to answer are about response, foresight, and adaptation:

1. *Response:* Do I have the right capabilities and am I acting on all resilience levers to respond adequately to the current situation?

2. *Foresight:* Can I anticipate what is going to happen next?

3. *Adaptation:* Am I able to adapt fast to a new situation?

To answer these questions, leaders must take a step back and apply a comprehensive resilience lens. Forward-looking companies have begun to structure their resilience agenda across the three activities—response, foresight, and adaptation. They are further differentiating their response, targeting actions in the six dimensions of the enterprise. Whether moving to defend or advance, companies may pull from a large range of resilience levers that are tailored to their specific profile, industry, and starting position. With fast adaptation, companies can meet their longer-term goals of sustainable and inclusive growth for customers, employees, investors, and the larger community.

Let's take a closer look at response, foresight, and adaptation.

Response
First things first. With severe challenges pressing, companies may have to address immediate gaps in their resilience profiles. They may face financial challenges such as liquidity constraints, or they may have to resolve disruptions in their supply chain, such as missing key inputs for their products. Before jumping into action mode, companies may take a step back and consider an initial resilience assessment to gain the needed perspectives on the six dimensions of institutional resilience (Exhibit 4).

How prepared is the company to withstand repeated shocks and disruptions? What short-term growth opportunities are within reach, and what will it take to capture them? What changes will enable the company to make that crucial pivot to accelerate into new realities? In domain after domain, and capability by capability, the assessment will discover where investment in resilience is needed and identify the actions that will close the gaps, defend value, and advance to new growth.

As illustrated in the exhibit, each of the six resilience dimensions will have its own specific set of levers that allow a company to play offense or defense. For example, in digital resilience, a robust digital, analytics and cyber risk framework may on the defense help to safeguard the company against digital failures or cyberattacks while on the offense it may pay dividends in at-scale digital transformation by ensuring robust and scalable business application of data and analytics.

It is essential that companies understand the levers available to them across the dimensions, the offensive or defensive capabilities, and the time horizon for creating impact. The specific nature of resilience levers and their relative importance is also a function of the industry a company is operating in.

Foresight: Moving beyond targeted responses

As companies weather the storms of today, they must also anticipate and prepare for larger and possibly stranger events to come. To anticipate and respond to crises and opportunities, scenario analysis has proven to be the most effective tool, as long as it is supported by the required data and state-of-the-art analytics. Scenario narratives should be accordingly developed, stress-tested in analytics-based simulations, and connected to early-warning systems based on key indicators.

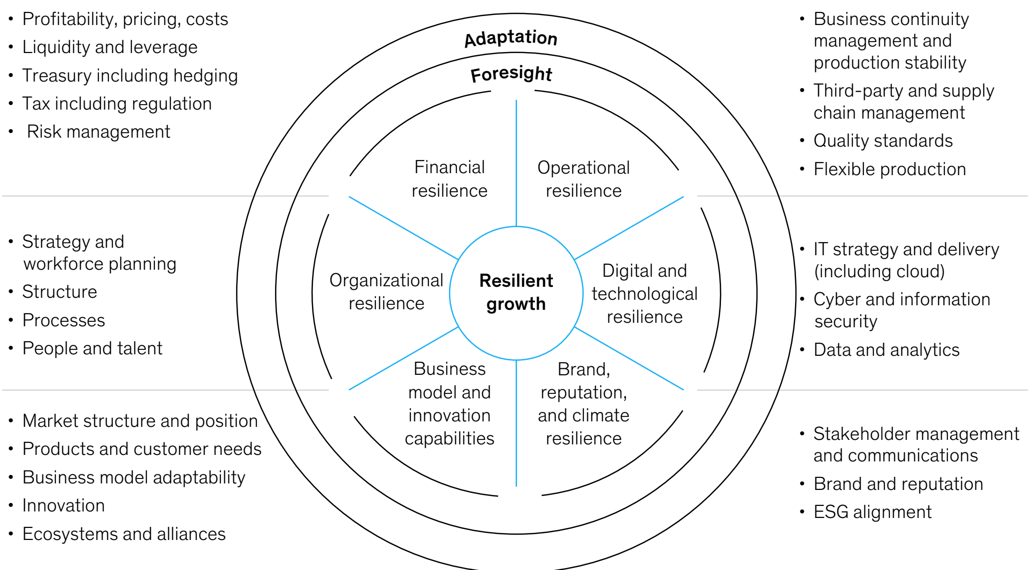
Crucial variables must be factored into the scenarios, including, for example, the evolution of semiconductor prices, energy costs, and the availability of critical raw materials. Management decisions have to be based on more than purely qualitative discussions. To understand the impact of hypothesized scenario inputs on financial outcomes (such as EBITDA, for example), an analytics-based approach can produce a reasonably accurate data-driven fact base in a timely manner.

That is the approach taken by financial institutions in response to the stringent regulation (such as stress-testing requirements) triggered by the financial crisis of the early 2000s. Companies can take the approach as a starting point, widening the scope of the scenarios, thinking outside the box on possible inputs, and increasing the depth of analytics engines across a large number of industries.

It is crucial to embed such an approach—data and analytics–based scenario and stress-testing—into the ongoing strategic-planning process and management dialogue. This process must also be revisited regularly and assumptions and scenarios adjusted to the changing environment. This will ensure that appropriate mitigation and management actions will be derived on a regular basis. A one-time analysis will simply not suffice.

Exhibit 4

The key levers of a resilient response lie across six enterprise dimensions.



Adaptation: Not just surviving but thriving

Foresight may help a company anticipate potential future outcomes through simulation and early-warning indicators. Only so much can be predicted and prepared for in advance, however. This is where adaptation, the third key activity of resilience, comes in. The resilient organization is flexible, able not only to react but capable also of adapting to new situations, especially the unforeseen ones.

Adaptation to the new environment requires deep investment in resilience. Adaptive companies are able to capture growth opportunities under adverse conditions. To confront the toughest times, leaders must possess a strong, resilient mindset, acting as role models, communicating an entrepreneurial spirit, and encouraging free thinking across an agile organization. Leaders send the right messages, providing strategic clarity and acting based on early-warning and foresight analytics. They are creating institutional resilience in the following five areas:

- *Speed of response.* The organizational structure and operating model is set up in an agile and flexible way, to facilitate collaboration across teams, with a bias toward action over bureaucracy. Decision-making and escalation processes are fast, roles are clear, and decisions are effectively executed once made.

- *"Owners" mindset.* A strong sense of ownership pervades the organization. Curiosity and humility prevail; learning and adaptation are continual. Rather than avoiding challenges, people strive to innovate and explore new opportunities. The company pushes its own boundaries and questions the status quo and long-held beliefs. Individuals are empowered to think and develop in an entrepreneurial spirit, reskilling and upskilling as the business environment changes. Knowledge-sharing across the organization is encouraged, through cross-functional collaboration, mentorship, and open communication. Empowerment and decentralization are fostered, with only the most strategic decisions going to the senior leadership team.

- *Workforce planning and skill set of the future.* To execute new, adaptive strategies, the company will need to do some resource planning. Find the best people with the right skill sets and give them the resources they need to cope with present and future needs. Resilience strength resides in an organization's people. Hear what they have to say and value their experience. Let them adapt to new realities, so that talent can be strategically reallocated as needs change. The positive feedback this creates will attract more top talent to the company.

- *Capital redeployment.* Resilient organizations can make investment decisions and reallocate capital quickly, based on changing scenarios. These decisions can be taken with a forward-looking perspective on expected scenarios; the decisions are then effectively communicated across the organization.

- *Crisis response.* Clear and effective responses need to be activated in crises. Resilient companies have a well defined and understood response tool kit; roles and responsibility are set. An effective, timely response is ensured by a fast-mobilizing organization. Leadership accountability is clearly defined and communicated, ensuring full alignment on delegation of authority and escalation mechanisms in the event of disruptions.

Leaders ensure that risks are assessed at all stages of the value chain, and they instill resilience throughout business operations.

From adaptation to growth

A company's own resilience assessment will help identify areas of strong resilience, which typically will serve as the catalyst for a growth initiative. Resilience has to be measured, so that progress can be tracked to ensure return on resilience investments. For example, companies may act from a position of strong financial resilience with strong balance sheet and liquidity positions to create room for inorganic growth moves, particularly when target valuations are low in their industry. Or in sustainability, they may leverage an above-peer ESG position to double down on new growth opportunities. This could involve deeper transition to greener asset and product portfolios, which protect them against customer attrition as standards continue to tighten. The result for such a company will be still greater differentiation—and better position to gain market share and seek price premiums. In another situation, a strong, resilient digital backbone can help elevate companies' ambitions to adopt an aggressive digital agenda to raise their operating model and ways of working to new, more competitive levels.

The resilient company, beyond operating under "business as usual" scenarios, shows its mettle in crises and disruptions, using foresight to shift gears fast, swerve from danger, and then accelerate into new opportunity through adaptation. The enabling mechanisms are its agile organization design and decision-making structure—with clearly defined roles and responsibilities. Everyone should know what to do when storms come. Whether this moment leads to a turn in the business cycle or to a continuation of recent inflationary trends, it is a time when companies can make the kind of pivot through their resilience that strengthens their growth trajectory for the next several years.

European business leaders face a deeply unsettled economy, with potentially existential risks for those companies that enter the crisis with weaknesses in their balance sheet and business model. We've found that most senior executives are highly capable of playing defense in volatile and uncertain environments. Protection is a must, but opportunities for growth are also emerging. The exceptional leader finds the path to the next frontier of resilience, answering essential questions of where to shore up defenses and where to place bets on the future. The resilience framework we've outlined can help leaders see and understand gaps and identify growth opportunities even in the heaviest of seas. Q

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Strategic courage in an age of volatility

Today's challenging environment requires business leaders to hone their edge in three critical areas: insights, commitment, and execution.

by Michael Birshan, Ishaan Seth, and Bob Sternfels

The late Brazilian car-racing champion Ayrton Senna once said, "You cannot overtake 15 cars in sunny weather, but you can when it's raining." Well, there's been no shortage of downpours in recent years. We're living in a world where new shocks—the war in Ukraine, the return of inflation—have been layered onto earlier shocks—a deadly global pandemic, supply chain disruptions—that in turn were layered onto, and dramatically accelerated, long-standing trends such as digitization and sustainability.

In almost all our recent conversations, CEOs, board members, and other business leaders share with us a common sentiment: this combination of shocks has created perhaps the most challenging environment management teams have ever faced—and one that likely won't change anytime soon. We have entered an age of volatility.

Such stormy times test leaders' mettle. Today, some are pulling off the racetrack and looking for shelter. Others, however, are changing to wet-weather racing tires and stepping on the gas.

Indeed, we see two types of business leader emerging. The first type adopts a cautious and defensive posture in dealing with the volatility and uncertainty. These leaders are hunkering down and concentrating on the threats here and now. Scenario planning, resilience preparation, balance sheet management, near-term efficiency drives, and careful inflation monitoring are core areas of their focus. These leaders are in a strategic "wait and watch" mode as conditions unfold. In our experience, the majority of senior executives fall into this category.

But we see a second type of leader as well—one who is taking all the right defensive actions while also leaning into the volatility, using it as a catalyst to galvanize action around new opportunities. The current disruption has invigorated these leaders' mindset

of moving forward boldly, and they are rejuvenating elements of their strategy that may have been dormant. These leaders are playing both offense and defense.

That's a sound approach. Our research on corporate resilience shows that defense-only postures tend to lead to median company performance, while offense-only stances deliver a mix of occasional wins plus some catastrophic failures. The best leaders and companies are ambidextrous: prudent about managing the downside while aggressively pursuing the upside. These leaders are thinking about the next decade, not the next month. Many of them are spurring their organizations to rethink opportunities and reset the strategic gameboard in light of the current volatility. They are reevaluating their M&A strategies amid lower valuations, making more dramatic resource reallocations, reimagining their workforce and talent proposition in a hybrid post-COVID-19 world, and taking a long-term view on innovation and growth. As one CEO we recently spoke with said, "I don't want to benchmark our performance to the industry—I want to reinvent the industry."

What distinguishes these two leadership mindsets? Is it intrinsic differences in risk appetite? Does one group have a better-honed management microscope (looking at the near term), while the other prioritizes the telescope (gazing out toward the longer term)? Or is there some other intangible that leads these management teams and their organizations to operate differently?

As they start to create value from volatility, we see the ambidextrous management teams thriving rather than merely surviving in this environment. These leaders, who are both prudent and bold, are honing three types of edge to create "alpha" in organizational performance: in insights, in commitment, and in execution. CEOs and boards should challenge their companies on the extent to which their organizations can credibly claim to have each edge—and if they don't, how they can develop it, rapidly.

The insights edge

When what is likely to happen is clear, understanding it more deeply than others may be useful but is not imperative. But, as financial traders know well, when volatility is high, an insights edge generates great value. It may not be possible to be right every time, but seeing accurately through the fog 10 percent more often than your rivals is a substantial competitive advantage. That requires investing the resources, time, and effort to go beyond conventional analysis of conventional data that generate conventional wisdom.

An insights edge comes from granularity, depth, and diversity. Granularity is necessary because the interaction of shocks with trends is playing out differently around the world. For example, as the supply of food and metals is disrupted owing to the war in Ukraine, Chile, which has both in abundance, is experiencing a different type of shock from Sri Lanka, which does not have them on hand. Depth of insight is important because the real impact often comes from the second or third bounce of the ball: suppliers' production issues cause disruption down your value chain (such as wire harness producers in western Ukraine that frequently impede production for European automotive OEMs).

As for diversity, remember that in most circumstances where some claim “nobody saw it coming,” the situation had, in fact, been noticed by a good number of people, the COVID-19 pandemic being a recent example. In a world of increasing convergence across sector ecosystems (what we refer to as the “death of SIC codes[1]”), diversity of insight requires going beyond sources within your company, or even your industry, and seeking out perspectives from other industries and from disruptors across industries.

To build an insights edge, one large global bank, for example, recently assembled its more than 70 chief country officers and used their collective wisdom to home in on trends and market- and industry-level insights that it then disseminated to sales teams to drive sharper client opportunity identification. Centrally capturing the knowledge of its many geographically dispersed leaders and turning it into an institutional capability has given the company an advantage with clients. The CEO of another financial institution, meanwhile, created a task force on inflation, led by the chief strategy officer, that consulted a range of experts (including rating agencies, advisers, and banks) to form a “house view” on potential inflation scenarios. The group then drew out implications of each scenario—along with the upsides and downsides—for every business and function. This investment in insights has given the company an ability to adjust quickly to a range of macroeconomic developments.

Questions you might ask to build an insights edge:

- Do we have full visibility into our supply chain, including third- and fourth-tier suppliers, the risks embedded in those relationships, and our options for strengthening the supply chain’s resilience through dual-sourcing and in-region manufacturing?

- Is our understanding of the transition to net zero nuanced enough, including the value upsides of some nongreen assets as the transition progresses, the likely declines rather than increases in some green premiums, and how carbon borders may shift trade flow?

- Are we evaluating our portfolio at a granular enough level and fast enough pace to see region- or segment-specific headwinds and tailwinds that a higher-level view may obscure?

- How intimate an understanding do we have of our customers and end consumers, and are we able to gather changes in consumer sentiment rapidly and continually?

- Do we have a mechanism to pick up signals from across the organization, including geographic leaders and commercial financial planning and analysis, on a regular basis—or, better still, in real time—and distill them quickly into options the organization can act on?

- Are we building a culture that is diverse, inclusive, and externally oriented enough to capture signals from outside our company or industry and solicit thoughtful contrarian perspectives from across ecosystems—or are we collecting perspectives from the usual suspects and telling ourselves that constitutes insight diversity?

- Have we built digital and analytics capabilities across the enterprise—from data collection and governance to machine learning—that yield cutting-edge proprietary insight?

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[1] Standard Industrial Classification of sectors by four-digit codes.

- Are our scenario analyses and risk identification sufficiently creative or do we risk falling prey to a failure of imagination about what could happen?

The commitment edge

As important as knowing what to do is doing it promptly and with sufficient ambition. The half-life of decisions has collapsed, requiring more frequent evaluations of whether choices made a few months or even weeks ago still make sense. What differentiates bold leaders and leadership teams isn't moving in the right direction—which most do eventually—but doing so decisively before others have mustered the collective confidence to commit. In the face of uncertainty, these leaders' mindset is to act and adjust, not watch and wait. After Russia's invasion of Ukraine, for example, BP announced its plan to divest its Rosneft stake quicker than many stakeholders expected and before most other companies had evaluated their Russia posture and presence. This decision turned BP from one of the international companies most invested in Russia to one cited as an exemplar of decisive reaction.

Resource commitments that are large enough to materially affect the company's trajectory are as important as speed. The acceleration of trends is increasing the returns on sizeable, well-placed bets, given the variance between leading industry performers and the also-rans (exhibit). Our research on resource allocation, digital strategy, sustainability, and numerous other topics has shown that those who move early and at scale gain significant advantages. In other words, fortune favors the bold.

For instance, one US financial services CEO challenged the notion of a physical return to the office postpandemic. Instead, he pushed the company to reimagine long-held norms surrounding how, where, and when work could be done with the goal of building competitive differentiation in the market. By mobilizing an enterprise-wide effort that drew on employee and customer preferences, leading-edge data, and innovations in other industries, the organization was able to design a flexible working model that dramatically reduced its real estate footprint and carbon emissions, increased its attraction and retention of a diverse workforce, and drove adoption of new hybrid working norms.

Questions you might ask to build a commitment edge:

- What are our "billion-dollar beliefs," and are we betting sufficiently boldly on them?

- Is our top management team effective at committing decisively to strategic choices, or do we need to change the team's membership, processes, or mindsets to ensure they can?

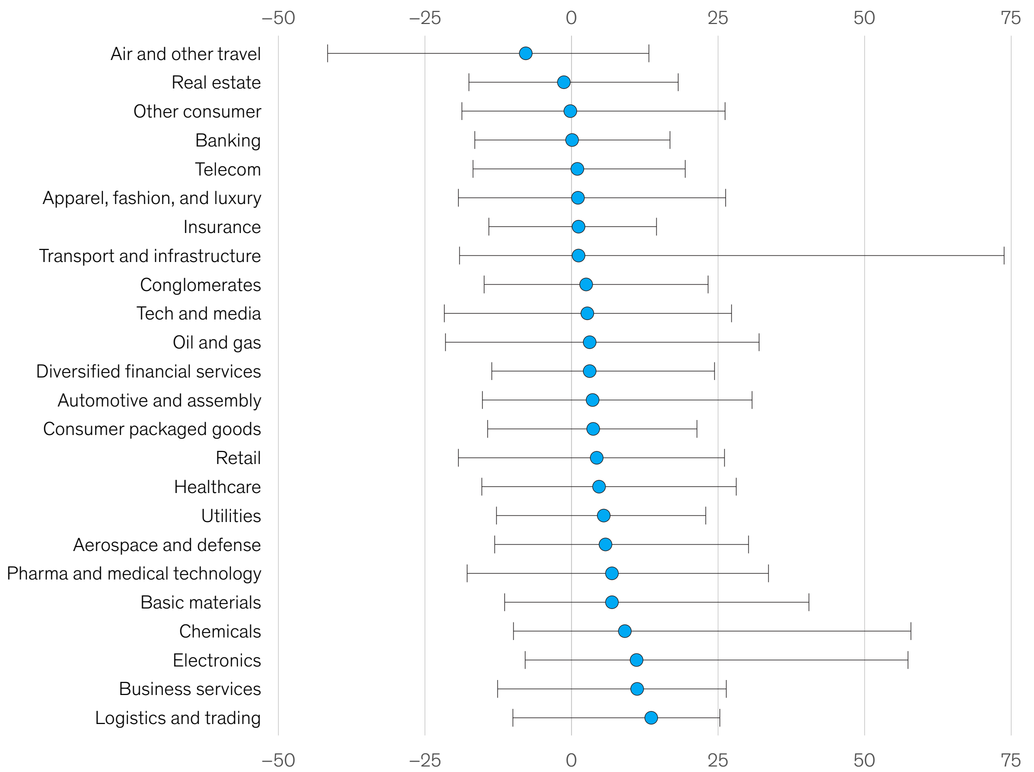
- Have we engaged the board sufficiently in developing scenarios and responses to them so that our governance does not hold back bold moves at key moments?

- Do we embrace the mindsets of growth leaders who see and seize opportunities?

Exhibit

Shareholder return averages hide considerable variance within sectors.

Distribution of total shareholder returns by industry, CAGR 2019–22,[1] %



[1]Data as of July 31, 2022.
Source: S&P Global; Corporate Performance Analytics by McKinsey

- Have we developed an "offense playbook" for bold moves such as M&A and divestments that is ready to be activated when a trigger point is reached?

- Can we ring-fence a portion of our capital and operating expenditure to redeploy dynamically as opportunities and threats emerge during the year?

- Do we keep continual track of how far industry peers, leaders in other industries, and cross-industry disruptors are moving so we can act at sufficient scale?

The execution edge

Execution is the third competitive edge for an age of volatility. The ability to execute well is always valuable, of course, but just as volatility drives up prices of stock options, it likewise raises the value of strategic options—the ability to rapidly pivot in response to changing conditions. Once you have the commitment to act, capturing the value of those actions requires an execution edge, especially in situations where moving first confers an advantage.

A central source of an execution edge is speed: getting things done fast and well. The life sciences sector famously executed at a rapid pace to develop the first COVID-19 vaccine. Similarly, a leading building-materials company navigated the pandemic with greater resolve than several industry peers because its leadership team included many who had led businesses during the global financial crisis and thus were experienced at handling rapid market changes.

The pandemic has been both a petri dish and a catalyst for innovating ways to increase speed, making it a valuable capability as an endogenous part of strategy. Speed matters in today's volatile environment; leaders and organizations that break down silos, streamline decisions and processes, empower frontline leaders, and cut through slow-moving hierarchies and bureaucracies will have a clear edge. Research by McKinsey and the Harvard Business School found that companies that had launched agile transformations before the pandemic performed better and moved faster during the crisis and its aftermath than those that had not. Agile organizations had this edge because they already possessed the processes and structures that proved critical to adapting to the COVID-19 crisis, from cross-functional teams to clear data on desired outputs and outcomes for key customer journeys.

Questions you might ask to build an execution edge:

- Are we reinventing our organization for speed?

- Is our technology stack modern and modular enough, and are we paying down our tech debt fast enough so that our technology accelerates rather than constrains execution?

- Are our capabilities that underpin growth—such as marketing, customer experience, sales, and pricing—strong enough for this era?

- Have we done enough to shift procurement from a valued "utility" function to a source of strategic competitive advantage in creating value from volatility?

- Can we create the balance sheet flexibility to execute bold moves in tougher times?

- Are we able to build new businesses with the agility and ambition of a disruptor, while harnessing the reach and resources of an incumbent?

- Have we institutionalized the transformation best practices that enable organizations to "get stuff done," such as high-cadence, disciplined initiative tracking and a transformation office?

- Do we codify the lessons from significant past experiences—important acquisitions, recessions, and crises—into playbooks and dry-run their execution so they become second nature?

John F. Kennedy once observed that the word “crisis,” when written in Chinese, is composed of two characters—one represents danger, the other opportunity. He wasn't altogether correct on the linguistics, but the sentiment holds: times of crisis, disruption, and volatility require courage from leaders to make bold strategic choices. It's also a chance to leave less-creative rivals in the rearview mirror. Q

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Playing offense to create value in the net-zero transition

Decarbonization will reshape the economy, opening new markets and imperiling others. Now is the moment for companies to spot green growth opportunities and move boldly to take advantage.

This article is a collaborative effort by Michael Birshan, Stefan Helmcke, Sean Kane, Anna Moore, and Tomas Nauclér, representing views from McKinsey's Sustainability and Strategy & Corporate Finance Practices.

Call it the Great Reallocation. As the dangers of climate change have become more apparent and urgent, investors, customers, and regulators have raised their expectations for companies, demanding that they set targets for reducing net emissions of greenhouse gases (GHGs) to zero and offer clear plans for achieving them. The momentum toward net zero is undeniable: nearly 90 percent of emissions are now targeted for reduction under net-zero commitments,[1] and financial institutions responsible for more than $130 trillion of capital have declared that they will manage these assets in ways intended to hold warming below 1.5°C.[2]

This wholesale shift toward institutions and projects that emit minimal GHGs may create the largest reallocation of capital in history. At present, about 65 percent of annual capital spending goes into high-emissions assets. But in a scenario where the world reaches net zero in 2050, McKinsey analysis suggests that this pattern would reverse; 70 percent of capital outlays through 2050 would be spent instead on low-emissions assets. And as organizations adjust their operating budgets, they would pay trillions of dollars for renewable energy, circular materials, and other low-emissions inputs during this time frame.[3]

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[1] Net Zero Tracker, Energy and Climate Intelligence Unit; Data-Driven EnviroLab; NewClimate Institute; and Net Zero Climate; all sites accessed in 2021. Includes countries that have achieved their net-zero targets or have put them into law, in policy documents, or made a declaration or a pledge.

[2] Via the Glasgow Financial Alliance for Net Zero.

[3] For more, see *The net-zero transition: What it would cost and what it could bring*, McKinsey Global Institute, January 2022. The report's analysis is not a projection or a prediction and does not claim to be exhaustive; it is the simulation of one hypothetical, relatively orderly path toward 1.5°C using the Net Zero 2050 scenario from the Network for Greening the Financial System (NGFS).

These dynamics mean that businesses must make bolder moves. For years, many large companies have responded to the prospect of a net-zero transition by playing defense—protecting their cash flows with sustainability programs that address regulatory mandates and the basic expectations of shareholders and nonfinancial stakeholders. But the reallocation under way to achieve net-zero goals will spur booming demand for climate-friendly goods and services and the green energy, equipment, and infrastructure needed to produce them. Some sectors will grow by several multiples.[4] Considering this trend, we've identified 11 high-potential value pools that could be worth anywhere from $9 trillion to more than $12 trillion of yearly revenues by 2030.

Growth-conscious executives should see these sustainability-driven shifts in value as a call to play offense. Pivoting their strategy to embrace this moment, first movers are gaining the upper hand by using low-cost green financing to build out carbon-free production capacity and fill big, recurring orders for scarce commodities such as green steel or recycled plastics. Risk won't disappear, of course, but leaders in the net-zero transition will be those companies that recognize new possibilities for value creation and make credible efforts to pursue them.

Four approaches define the strategies of companies that are already taking advantage of the net-zero growth opportunity. First, companies are adjusting business portfolios with particular attention to industry segments with major growth potential. Second, building green businesses then enables companies to penetrate markets that their current models cannot serve. Third, differentiating with green products and value propositions in existing markets allows companies to gain market share and price premiums. Finally, decarbonizing legacy businesses boosts their value. In this article, we lay out the opportunities, parse the trade-offs, and set out a path for thriving in the net-zero economy.

New industry dynamics, new opportunities

A net-zero economy would differ greatly from our present economy—which means the transition to net zero would involve profound, sometimes disruptive, changes. McKinsey analysis suggests that, in a scenario where the world reaches net zero by 2050, economic output would progressively (and permanently) tilt away from goods and services that are emissions-intensive and toward those that can be made and used without emitting GHGs. These shifts would, in turn, ripple along entire value chains, altering the dynamics within industries.[5]

Automakers, for example, would cease to manufacture cars with internal-combustion engines and roll out electric vehicles (EVs) instead. Oil consumption would drop, in part because drivers would no longer need to fuel up—and electric-power generation would increase to help charge the world's expanding fleet of EVs. A much greater share of that electricity would come from renewable sources such as solar and wind, rather than today's coal- or gas-fired power plants.[6]

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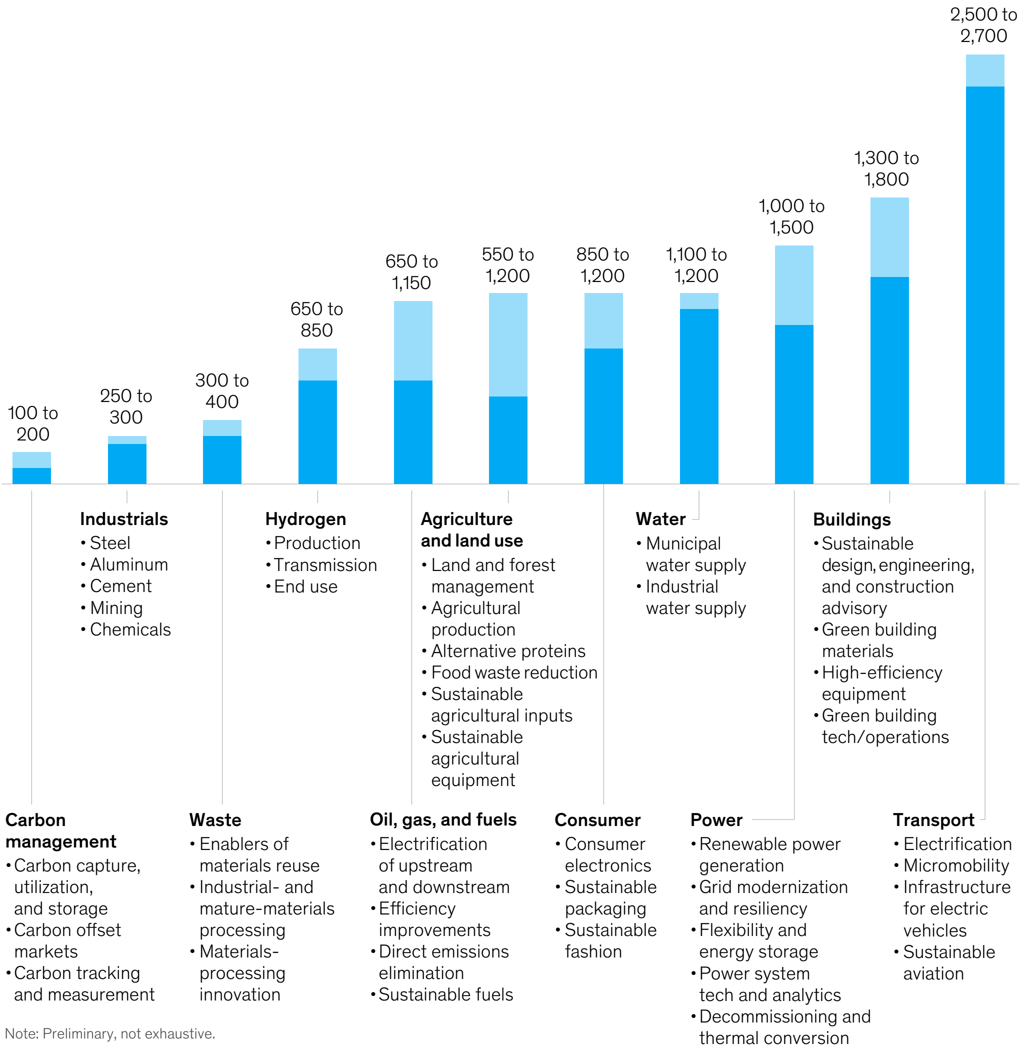
[4] Ibid. The scenario used in this analysis is the Net Zero 2050 scenario from the Network for Greening the Financial System.
[5] Ibid. The scenario used in this analysis is the Net Zero 2050 scenario from the Network for Greening the Financial System.
[6] Ibid. The scenario used in this analysis is the Net Zero 2050 scenario from the Network for Greening the Financial System.

Exhibit 1

Eleven high-potential value pools could be worth more than $12 trillion of yearly revenues by 2030 as the net-zero transition advances.

Addressable market size in 2030, selected categories, $ billion



Note: Preliminary, not exhaustive.

Dynamics like these have already begun to play out. In categories such as energy and materials, vehicles, food, and packaging, demand for green products and services is growing strongly. And as the net-zero transition advances, markets for zero-emissions offerings should expand further, while markets for emissions-intensive offerings shrink. For example, in the net-zero scenario noted above, production of hydrogen and biofuels would increase more than tenfold by 2050. Fossil fuels, however, would account for a dwindling share of energy use, with oil production dropping by 55 percent and gas production by 70 percent in 2050, compared with today.[7] We estimate that burgeoning demand for net-zero offerings would create unprecedented opportunities: 11 value pools could generate more than $12 trillion of annual sales by 2030. These include transport ($2.3 trillion to $2.7 trillion per year), buildings ($1.3 trillion to $1.8 trillion), and power ($1.0 trillion to $1.5 trillion) (Exhibit 1).

[7] Ibid. The scenario used in this analysis is the Net Zero 2050 scenario from the Network for Greening the Financial System.

Certain markets for green products and services are also proving to be more lucrative than markets for conventional offerings, as green premiums start to kick in. The most profitable opportunities have emerged in fast-growing niches such as recycled plastics, meat substitutes, sustainable construction materials, and chemicals, where margins can be 15 to 150 percent higher than usual as demand for traditional products softens. In the plastics market, for example, consumer-packaged-goods players are changing their sourcing practices to reach sustainability targets. According to the Ellen MacArthur Foundation, six of the top ten fast-moving consumer goods companies have committed to use less virgin plastic and more recycled content in their packaging by 2025.[8] Now, recycled polyethylene terephthalate (PET) commands a price premium of $300 per metric ton, on average, over virgin PET (compared with an average premium of $40 per metric ton from 2011 to 2019).[9] Other recycled polymers, such as high-density polyethylene (HDPE) or polypropylene (PP), are trading at even higher premiums. Green premiums may decline over time, as supply catches up to demand. In the near to medium term, though, we expect these premiums to widen in sectors with significant supply–demand imbalances—creating opportunities for suppliers.

Some of the markets described above are for the low-emissions real assets—such as solar and wind farms, industrial machinery, ships, and trains—needed to drive business operations in a net-zero economy. Demand for these would trigger unprecedented capital reallocation: $3.5 trillion in new spending on low-emissions assets each year through 2050. Another $1 trillion per year that now goes toward high-emissions assets would instead pay for low-emissions capital stock.[10]

The flip side of increased spending on low-emissions assets is the stranding of today's emissions-intensive assets. McKinsey analysis suggests that some $2.1 trillion of assets in the global electric-power sector alone could be stranded by 2050. And since many assets that are prone to stranding now sit on the balance sheets of listed companies, their early retirement could erode enterprise values.[11]

Other signals herald the flow of capital toward enterprises and projects that exhibit readiness for a net-zero future. The more than 450 institutions belonging to the Glasgow Financial Alliance for Net Zero, which represent more than $130 trillion of financial assets, have promised to align their portfolios with net-zero goals. The European Union has pledged to mobilize €1 trillion in public and private financing to support the European Green Deal. And national governments are considering their own climate-finance packages. Amid these developments, companies should be able to raise the funds they need to reposition themselves for a net-zero economy.

The case for early action

Given that there is much uncertainty about the pace at which the net-zero transition will progress, executives may be apprehensive about mistiming their companies' net-zero moves. Understandably, many CEOs worry that their company will get ahead of its custom-

[8] *Global commitment 2021 progress report*, Ellen MacArthur Foundation and United Nations Environment Programme, November 2021.

[9] IHS Markit.

[10] *The net-zero transition*, January 2022. The scenario used in this analysis is the Net Zero 2050 scenario from the Network for Greening the Financial System.

[11] Ibid. The scenario used in this analysis is the Net Zero 2050 scenario from the Network for Greening the Financial System.

ers, investing in new assets and incurring production-cost increases before those customers demand low-emissions offerings or are willing to pay green premiums. In that event, the company could put itself at a disadvantage to rivals that sit back and wait.

However, initial experience suggests that in many sectors, companies that are among the first to pursue net-zero opportunities enjoy greater success. First movers stand to gain the most in B2B industries in which demand for low-emissions offerings already exceeds supply, in part because incumbents with wide asset bases and thin margins have been reluctant to invest in new production capacity. Our research suggests that green leaders among EU chemicals companies, for example, have seen their enterprise multiples increase by a factor of two to five, while laggards' multiples have remained flat.[12] We have also observed the value-creation advantages of green leadership across many other sectors.

In some industries, bold new entrants are getting ahead by locking in customers to tap green financing and set up operations. For example, H2 Green Steel, a Swedish start-up, secured purchasing contracts from automotive OEMs and construction companies in need of low-emissions steel, then used these contracts to help raise $105 million in initial funding—including stakes from some of the same OEMs that had agreed to become the company's initial customers. Situations like these could pose challenges for companies lagging behind: once first movers have won the earliest customers in a market where customer relationships are difficult to undo, fast followers will have trouble making up ground.

With first-mover advantages still up for grabs in many new value pools, now is the time for companies to rise out of a defensive crouch and start playing offense.

Playing offense: Four moves for creating value

Until recently, many companies have responded to the transition only by issuing net-zero plans that show they are keeping pace with rising stakeholder expectations and regulatory requirements. This is playing defense—trying to prove that a company will survive, perhaps generating less free cash flow but avoiding the mortal risks of stranded assets and a nil terminal value (see sidebar, "Playing defense: The basics of managing transition risk").

Playing offense means showing that your business model is built to outperform during the net-zero transition, with a free cash flow that grows relative to expectations. But because the world's transition pathway is unclear and difficult to predict, companies will need to develop "strategy under uncertainty" like never before.[13] No single formula will work for every company, or even for all companies in a given industry. In the oil and gas sector, for example, some companies are choosing to dispose of hydrocarbon busi-

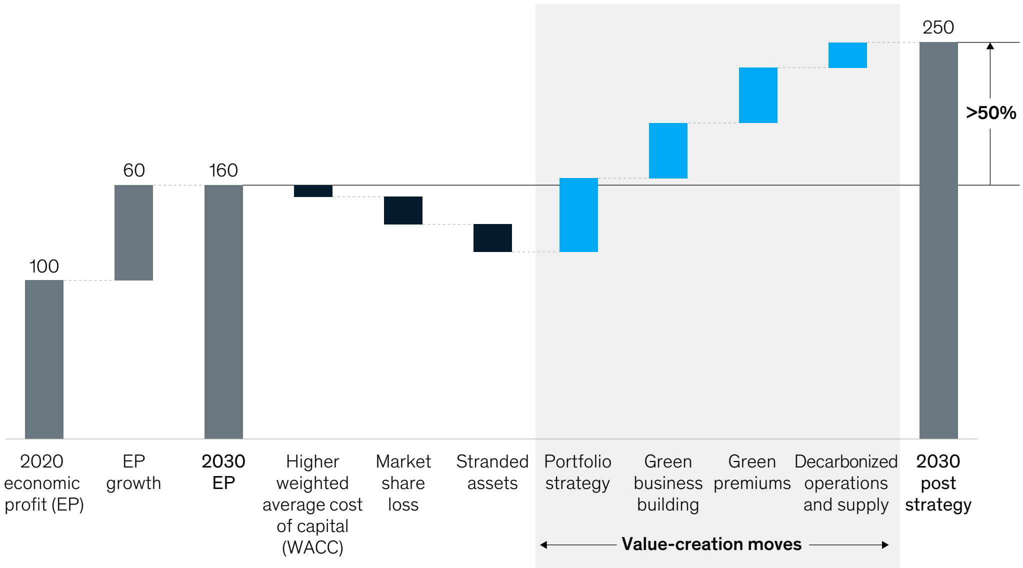
[12] "Enterprise multiple" refers to the ratio of enterprise value to earnings before interest, taxes, depreciation, and amortization (EV/EBITDA). Analysis includes all EU chemical companies rated by Refinitiv in 2020 in the industry of "chemicals" and is based on weighted average of TSR of the companies in the respective clusters; "green leaders" are defined as companies that improved environmental, social, and governance (ESG) score as well as shifted toward a green portfolio; "green laggards" are defined as those that improved neither ESG score nor did a green portfolio shift. An ESG score increase is defined as a greater than five improvement in "ESG combined" score in Refinitiv rating between 2016–19; portfolio shift assessment based on analysis of M&A moves since 2011.

[13] "Solving the net-zero equation: Nine requirements for a more orderly transition," McKinsey, October 27, 2021.

Exhibit 2

To create value in the net-zero transition, leading companies are making four complementary moves.

Economic profit modeled with top-down assumptions,[1] illustrative



[1]Based on a selection of leading companies that have made meaningful use of all four value-creation levers.

nesses. Others are staying in these markets by seeking resources with low emissions intensity and low breakeven prices.[14]

What these divergent strategies have in common is their intention to create value. Here, we describe four complementary moves for playing offense in the net-zero transition (Exhibit 2).

Transform the portfolio

McKinsey research on corporate strategy holds two important lessons for executives who are thinking about how to create value during the net-zero transition. The first is that a company's choice of industry to compete in accounts for roughly half its share of available economic profit.[15] The second is that successful companies regularly reallocate capital, shifting resources away from businesses as soon as they detect a slowdown in their growth and putting those resources into businesses with stronger prospects.[16] With these lessons in mind, executives will want to make careful assessments of their current industries' growth potential and reorient business portfolios toward healthier segments.

Starting with the existing portfolio, sustainability leaders reallocate from emissions-intensive businesses to low-emissions businesses, either transforming emissions-intensive businesses through decarbonization, which we explain below, or divesting them. Neste, a fuel and chemicals producer based in Finland, earned more than 50 percent of its operating

[14] "The big choices for oil and gas in navigating the energy transition," McKinsey, March 10, 2021.

[15] Chris Bradley, Martin Hirt, and Sven Smit, "Strategy to beat the odds," *McKinsey Quarterly*, February 13, 2018.

[16] Stephen Hall, Dan Lovallo, and Reinier Musters, "How to put your money where your strategy is," *McKinsey Quarterly*, March 1, 2012; Sandra Andersen, Chris Bradley, Sri Swaminathan, and Andy West, "Why you've got to put your portfolio on the move," *McKinsey Quarterly*, July 22, 2020.

Playing defense: The basics of managing transition risk

Companies that are slow to adjust to the net-zero transition face real risks, including stranded assets, a higher cost of capital, and revenue slippage due to lost market share or shrinking markets. But even businesses that move quickly will have exposures. Here are three basic moves that companies can make to find and mitigate their vulnerabilities.

- **Know your ratings:** Environmental, social, and governance (ESG) ratings are imperfect and sometimes obscure, but important nonetheless: they provide a basis for the stock indexes that some asset managers use to construct passive index funds, and they also help inform active investment choices. Companies can "tear down" their ESG scores by examining the underlying performance measures and making comparisons with peers and rivals.

- **Understand—and manage—your exposure:** Climate change presents significant financial risk—much of it not yet fully priced into either company plans or valuations.[1] As stewards of shareholder capital, companies must take stock of their true exposure, both physical risks from a changing climate and changes to market share and margin as markets evolve. Preparing reports according to the framework of the Task Force on Climate-related Financial Disclosures, underpinned by climate risk modeling, is one way to do this.

- **Move from pledges to plans:** Some transition risks arise because important stakeholders have too little information about how companies intend to approach the transition. If investors aren't convinced that a company has a sound plan in place, for example, they may charge a higher cost of capital. Businesses can manage risks such as these by building on their net-zero commitments; setting out actionable, detailed transition plans; and discussing these plans with investors so they better understand the company's thinking about how it will avoid risks and create value during the transition.

[1] "The Inevitable Policy Response 2021: Policy forecasts," Principles for Responsible Investment, March 17, 2021.

profit from oil products in 2015. But in 2018, the company's renewable-products business contributed 70 percent of its operating profit. The company's market capitalization tripled from 2015 to 2021, with 90 percent of the valuation based on the renewable-products business.[17] Major investments in new technology, feedstock platforms, and green-refinery capacity, along with targeted go-to-market strategies, played a large part in this transformation.

Next, leading companies look for transition-driven growth opportunities at the granular level of industry subsegments and fund growth initiatives with capital taken from parts of the business that are less likely to see increasing demand during the net-zero transition. They also think creatively about ways to match their existing capabilities to growing niches. One industrial-equipment company identified growing end markets for components used in renewable energy and air treatment and applied its expertise in tooling to develop new machinery types. The business has earned significant green premiums from the sale of these new products, which now make up the bulk of its portfolio.

Many portfolio-transforming moves require substantial capital outlays. They also carry real risk, not least because of undecided regulation, which could greatly influence the markets for emerging climate technologies such as green hydrogen or carbon capture. Companies can mitigate some market risks by forming consortiums where buyers, sellers, financiers, and other value-chain participants might work together on innovation or reach offtake agreements that stabilize demand against regulatory uncertainty. The Mission Possible Partnership is one effort to get institutions in hard-to-abate sectors to work together on advancing climate solutions.

Build green businesses

Innovative green upstarts are emerging across nearly every sector, from transport (for example, Einride, Northvolt, Tesla) to nutrition (for example, Beyond Meat, Impossible Foods). Incumbents, however, often struggle to build successful green businesses. Sometimes, practical challenges hold them back, such as the difficulty of incubating nimble new ventures within larger corporate structures. In other cases, the barrier is a lack of ambition—an unwillingness to create a new business that might overtake or disrupt the old one. Incumbents can also find it difficult to reckon with the uncertainties, in areas such as technology, regulation, and demand, that can surround emerging markets for green offerings. For these reasons, they can miss opportunities to create value.

Rather than surrender before these challenges, established companies should recognize that they can endow in-house ventures with significant advantages over independent start-ups. In our experience, this is a matter of exploiting three resources that start-ups typically lack: assets, capabilities, and relationships.[18]

- *Assets.* Incumbents can use their balance sheet to provide green ventures with capital. They can also share real and intellectual assets, reducing a new venture's start-up costs. Polestar, the EV brand valued at more than $20 billion, built its first models using automobile platforms and technologies from its parent company Volvo Cars—allowing for an asset-light business.

[17] Neste annual reports, 2015 and 2018.

[18] "Building new businesses: How incumbents use their advantages to accelerate growth," McKinsey, December 12, 2019.

- *Capabilities.* Incumbents possess the talent, processes, corporate services, and technologies that new ventures often need. Hydro-Québec, for example, made use of the utility's existing technical expertise, deep knowledge of power networks, and capital engineering capabilities to develop the Electric Circuit, the province's largest and most reliable EV-charging network.

- *Relationships.* Incumbents can provide new ventures with an edge by giving them access to important stakeholders, particularly existing customers. In some instances, the parent company itself can act as a customer to the new venture—providing captive demand. Mercedes-Benz Group and Daimler Truck Holding have announced a joint plan to build a battery-recycling plant that will process end-of-life batteries from the EVs they make. Many of the portfolio companies in Launchpad, BP's clean-energy ventures arm, sell into the parent company. Incumbents' relationships with suppliers, investors, partners, and regulators can also be valuable to new green ventures.

Seek price premiums through differentiation

As discussed above, companies can charge premium prices for goods such as recycled plastic that are in high demand because customers prefer their sustainability attributes. Some companies selling products with strong sustainability attributes—whether lower-carbon materials or items needed for climate resilience and adaptation—have seen their sales grow 50 percent faster, or more, than competitors selling conventional offerings. To capture such opportunities and identify others that might emerge, businesses should develop an outlook on markets for sustainable products. Two considerations stand out as especially important when gauging a customer's willingness to pay green premiums: their commitments to lower supply chain (Scope 3) emissions and their potential carbon-tax liabilities.

To charge green premiums, companies should also help customers understand the green attributes of their products and the value conferred by these attributes. Customers often struggle to distinguish between sustainable and greenwashed products, so companies must explain their products' sustainability attributes in clear, accurate terms. Leaders furnish customers with transparent, independently verified information, including environmental product declarations (EPDs) and life cycle assessments (LCAs). They also take care to teach marketing and sales teams how to communicate technical information in ways that customers can understand.

Smart branding can help companies reach sustainability-minded customers. New companies may have an easier time achieving a credible position of distinction. But some incumbent businesses have successfully repositioned themselves after making meaningful portfolio shifts. Florida Power & Light, for example, both transformed its business and rebranded as NextEra Energy and has since seen its shares increase in value more than sixfold.[19]

Transform operations and supply chains

We have described how some companies are moving into faster-growing markets and collecting green premiums by decarbonizing their existing goods and services. But companies that decarbonize their operations can create value in other ways, too. When they use the discipline of sustainability to make their operations more efficient—in

[19] As of mid-February 2022.

both environmental and financial terms—they can achieve cost savings that allow them to lower prices and gain market share, boost profits, or generate funds for other sustainability projects. Evonik Industries, the specialty chemicals player, reduced its operating costs and increased its sales by decarbonizing its operations.

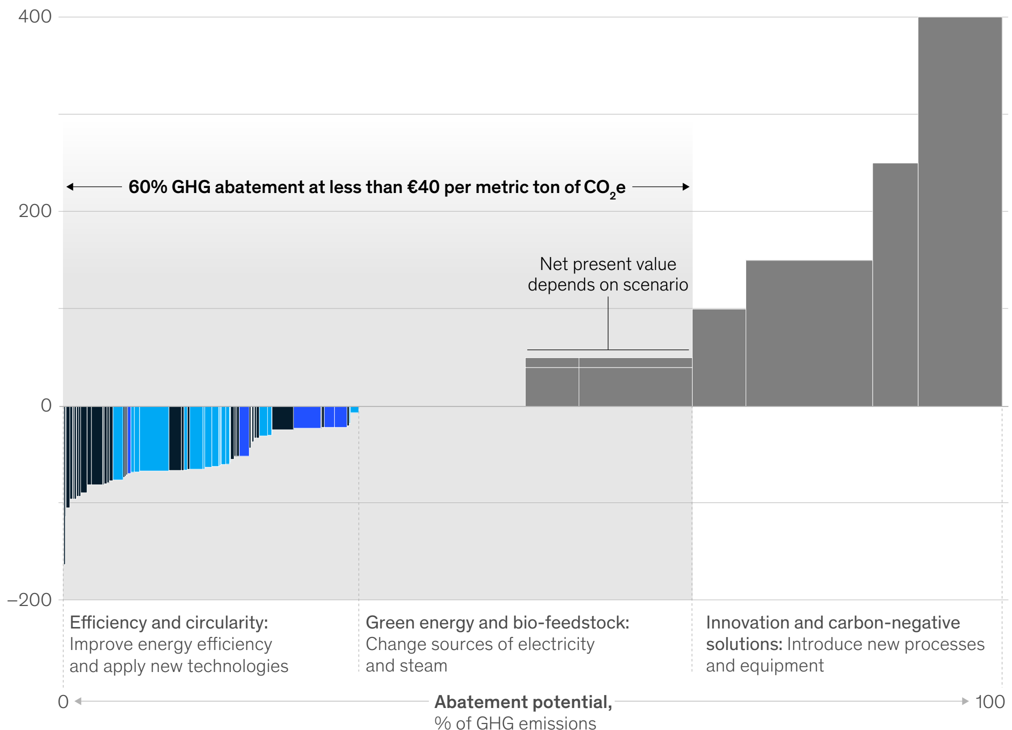
There is considerable room for improvements in sustainability performance. In our experience, the heaviest-emitting mines can have 20 times the GHG intensity of the least-emitting mines. In metals, the spread can be a factor of up to 15. The financial spread could get wider still: as the cost of renewable energy falls and the price of carbon rises, companies with the least carbon-intensive assets and operations should find that their operating expenses decrease more.

Decarbonizing often does require some up-front capital spending. Leading businesses prioritize investments in decarbonization and other sustainability efforts as they do other capital outlays—by seeking the most economical options. We see them using company-specific GHG abatement cost curves to identify initiatives with positive or neutral net present value (NPV). One materials company found that it could abate 30 percent of its GHG emissions with NPV-positive measures, plus 15 percent using measures that were NPV-neutral, and a further 15 percent at moderate cost. The total: 60 percent emissions abatement, all for less than €40 per metric ton of CO_2 equivalent (Exhibit 3).

Exhibit 3

One materials company identified the potential to abate 60 percent of greenhouse-gas emissions for less than €40 per metric ton.

Greenhouse-gas emissions (GHG) abatement cost curve for one site, preliminary, € per metric ton of CO_2e[1]



[1]Carbon dioxide equivalent. Includes all greenhouse gases.

In many cases, companies can improve the sustainability of their products by working closely with suppliers. That is because energy, materials, and components account for much of the typical product's GHG footprint. Switching to low-emissions inputs, however, can be complicated for various reasons. Scarcity is one of these. As noted above, demand for recycled plastics already exceeds supply, and the same is true for some other low-emissions materials. For example, McKinsey analysis suggests that demand for flat green steel in Europe could exceed supply by up to 50 percent in 2030. To secure the green supplies they need, companies should move now and sign long-term contracts. Companies that achieve supply security can not only make good on their net-zero pledges but also distinguish themselves from competitors that run into shortages and fail to deliver low-emissions offerings as a result.[20]

Many companies will find it impossible to decarbonize completely—that is, to achieve net zero—without future breakthroughs in technology or end-to-end transformations of their products and operations. That is to be expected: the net-zero transition is, after all, a transition, a process expected to unfold over almost 30 years. But this reality should not discourage companies from initiating feasible changes today, for the first-mover advantages available now are too great to pass up.

The commitments and actions of governments, investors, and customers have gotten the net-zero transition under way. As it progresses, the economy will change, and vast new markets for low-emissions offerings will open. Companies that approach the net-zero transition only as a potential source of risk to their existing business run a risk of a different kind—the risk of failing to capitalize on the Great Reallocation. Instead, their task should be to anticipate where growth is likely to occur and go on the offensive, making bold moves in pursuit of immense opportunity. Q

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[20] Anna-Christina Fredershausen, Eric Hannon, Stefan Helmcke, and Tomas Nauclér, "It's not easy buying green: How to win at sustainable sourcing," McKinsey, February 25, 2022.

Leap
by McKinsey

Where delegation fails: Five things only the enterprise CEO can do to build new businesses

Business building is increasingly important for company resilience, and CEOs are uniquely suited for the job. Here are five tasks that CEOs can undertake to build successful new businesses.

by Shaun Collins, Ari Libarikian, and Kurt Strovink

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This may be the most challenging time in more than a generation to be a CEO. Global uncertainty, a concussive series of tech-driven disruptions, and an ever-broadening set of risks have piled onto an already daunting set of pressures in running a business.

Those pressures likely go a long way toward explaining the increasing importance of new-business building. More than half of CEOs and business leaders count new-business building as a top three priority, and for 21 percent of them, it's number one.[1] More telling, business leaders expect 50 percent of total revenues to come from new products, services, and businesses in five years' time.[2] And, as leaders eye the increasingly fraught economic outlook, new-business building is also an important pillar in establishing resilience. During the COVID-19 pandemic, we saw that organizations whose top organic growth strategy was new-business building were more resilient, reporting either smaller decreases or greater increases in their growth rates than their peers.[3]

Those new-business aspirations are simply impossible without an active and fully engaged CEO. In fact, if a CEO isn't ready to commit, it's probably better for the company *not* to pursue a new business.

Competing priorities mean that CEOs need to be conscious of the unique aspects of their role as chief executive that allow them to have the greatest impact on building new businesses (see sidebar, "CEO traits and behaviors that support a new business"). Of course, an important function of the CEO is to delegate various tasks to teams and empower leaders across the business. But our research, combined with our experience building more than 300 new businesses, reveals a cluster of activities for which the CEO's involvement has an outsize impact—from continually raising aspirations to systematically building and sustaining support for the new business to resolving natural organizational tensions and barriers.[4]

In digging into this set of activities, we found that there are five tasks that can't be delegated—tasks that only CEOs with their overarching strategic focus and decision-making authority can do. When CEOs adopt these measures as part of a clear playbook, they can succeed in building new businesses.

1. Set the bar high: Look to launch unicorns

If companies expect 50 percent of their new revenues to come from new businesses, products, and services, they need to aim high.

Too often, however, new businesses fail to lead to transformational value, with about four-fifths generating less than $50 million in revenues, according to our research.[5] The CEO has a challenging role to play to ensure that the time and resources that go into a new business are worth it. The CEO's laser focus on value is crucial in keeping the organization from being distracted by the latest hot idea that might sound good but that doesn't have the market potential to be transformative.

Orienting the entire company toward this level of value starts with identifying a clear aspiration, ambitious goals, and specific targets. For example, the CEO of one insurance company was explicit in wanting to quadruple the size of its B2C business within only five years by building a new digital customer-centric B2C offering. From the beginning, targets included ambitious concrete milestones, such as the launch of a minimal viable product within five months and go-lives in two additional countries within one year, as well as operational key performance indicators (KPIs), such as one million website visitors within the first nine months.

Another example is Patrick Hylton, president and CEO of NCB Financial Group, the largest and oldest bank in Jamaica. Hylton oversaw the launch of Lynk, the bank's digital payments business.

[1] "2021 global report: The state of new-business building," McKinsey, December 6, 2021.
[2] Ibid.
[3] Shaun Collins, Ralf Dreischmeier, Ari Libarikian, and Upasana Unni, "Why business building is the new priority for growth," *McKinsey Quarterly*, December 10, 2020.
[4] Analysis of McKinsey business-building surveys over the past two years, covering 2,000 responses of CEOs and business leaders globally who have launched new businesses.
[5] "2021 global report," December 6, 2021.

CEO traits and behaviors that support a new business

There are several things CEOs can do to increase their impact on the process of developing new businesses.

Resolve issues quickly
Quickly address important open issues, particularly those stemming from internal conflicts. Letting them fester or assuming those within the business can resolve them leads to bigger problems down the line and decreases support for the new business. It's essential to have a governance process in place that gives the CEO clarity on issues and has mechanisms that allow new-business leadership to go directly to the CEO.

Have the courage to spend personal capital
The new business will inevitably run into setbacks that will lead to uncomfortable conversations with board members or analysts on earnings calls. CEOs will need to absorb criticism, push back thoughtfully, remind others of the governing thesis and fit with strategy, and serve as active guardians of the new business. Being close to the details and prepared with facts is essential.

Support diversity
Diversity delivers better outcomes. While only 14 percent of new-business leaders are women, our research finds that new businesses with leaders identifying as women were 12 percent more likely to meet or exceed expectations.[1]

Focus on results while practicing patience
CEOs should exercise sound judgment in achieving high aspirations on the one hand and a realistic glide path for purposeful execution within a given time frame on the other. Patience is important to give the new business time to flourish, but only when the CEO complements patience with a relentless focus on the accomplishment of predefined milestones.

Meaningfully commit time and energy
CEOs need to be generous with their time to support the new business. Effective CEOs take control of their calendars and block out time to focus explicitly on new businesses. NCB Financial Group's Patrick Hylton, for example, spends nine to ten hours a week on the new business, and he communicates almost daily with the head of the new business.

[1] "2021 global report: The state of new-business building," McKinsey, December 6, 2021.

He set targets for the new business to reach the 35–40 percent market share of individuals without bank accounts. "I have huge ambitions for Lynk, the digital payments business we've launched," he said. "I want it to rival and even surpass the incumbent."[6] This mindset aligns with broader patterns we have seen of successful CEOs being uniquely bold in their ambitions.[7]

Bold ambitions are particularly important when there is directional clarity in a business-building thesis and its value but there is not enough conviction in some parts of the business to invest in hiring a significant number of people or building out the technology assets needed to capture the opportunity. If the CEO does not step forward in these moments to act as a bridge by pushing forward decisions, actively building support, or driving toward specific deadlines, the initiative grinds to a halt or reverts to business as usual. An important part of a CEO's role, as we have learned in business transformations and other contexts, is to help organizations avoid these collective-action problems.

Inevitably, some new businesses will fail. CEOs must not get too attached to a single business but instead focus their energy on where the real value is: developing a serial business-building capability. Serial business builders generate an average of

[6] "One CEO's journey to becoming a business builder," McKinsey, August 9, 2022.
[7] Carolyn Dewar, Scott Keller, and Vikram Malhotra, *CEO Excellence: The Six Mindsets That Distinguish the Best Leaders from the Rest*, New York: Scribner, 2022.

40 percent greater revenue for each new business they build when compared with first-time new-business builders. For this reason, CEOs need to focus their energy on managing a portfolio of new businesses (for example, recalibrating strategies and reallocating resources) and strengthening the organization's institutional business-building muscle.

2. Protect the new business from business as usual

Our analysis makes it clear that allocating protected funding for the new business is one of the most important things a CEO can do. CEOs must invest sufficiently and then protect that money from the inevitable attempts from incumbent parts of the enterprise to take it back as issues arise.

In practice, securing promises of investment is often easier than securing and distributing the investment itself, because funding tends to follow a traditional (and inflexible) P&L-driven process that relies on annual budgeting cycles. The result is that funding can't be released when needed or funds are taken from other initiatives, which creates resentment in the existing business. To secure the new business's financial independence, the CEO needs to establish a dedicated and protected funding source as well as an agile budgeting approach based on venture-capital-style stage gates whereby funding tranches are unlocked when the new business hits certain milestones.

The CEO has to extend that protective posture to preserve the new business's broader independence. While it's tempting to use established tools and processes in IT, HR, and marketing, for example, hard lessons have shown that these come with significant bureaucratic strings attached that lead to cost overruns and significant delays.

In fact, business-as-usual protocols and processes can pose a significant danger to the new business and require the CEO's active intervention. The new entity needs new mechanisms for funding and expectations that don't tie to the quarterly P&L cycle of a company. The markers of success are different; it's crucial to provide clarity on KPIs that are meaningful to a new business—such as revenue growth, accomplishment of milestones, and customer experience—and to get leadership alignment on those KPIs. Existing compensation structures and hiring processes are often less appropriate when it comes to attracting talent, and they are hard to change because they require the CEO to work closely with the head of HR.

At a large regional bank, existing practices for onboarding new vendors were often time-consuming because of the risk-evaluation process. The CEO accepted the need for the checks but approached the head of procurement to make sure someone was dedicated to support the new business. As a result, onboarding a vendor for the new business went from three and a half months to three and a half weeks.

To ensure this operating model is practical and effective, the CEO needs to put in place a clear governance process. An ingoing precept is that more separation between the new business and the incumbent (except when it comes to strategic direction) is most effective. With that grounding, the CEO should work to mold a governance model that incorporates focused oversight aimed at enabling the new business, providing explicit authority for the new entity to make decisions (often through a venture board), and installing a funding mechanism in which the budget is released based on meeting specific KPIs.

3. Identify a leader who could one day be CEO and create the right talent blend

The success of a new business relies on finding the right balance between the independence of a start-up and the relevant advantages of the existing business. Where the CEO can have the greatest impact is in striking that balance, starting with hiring the leader for the new business. The CEO needs to find someone with not only the entrepreneurial and operational capabilities to run the business but also the softer influencing and collaboration skills to be able to work well with those in the incumbent

business—whether that means working with various functional leaders to access talent and assets or aligning strategies with the board.

Understanding the importance of working with the incumbent was one reason why Øyvind Eriksen, president and CEO of Norwegian-based energy company Aker ASA, had the CEO of Aker's new business spend extensive time learning about the parent business and its capabilities as soon as he was hired.[8]

Part of finding someone who can work with the incumbent is seeking a leader with stature. One leader told us that the new-business leader should be someone who could be CEO of the entire company someday. Putting the new-business leadership in a position to work as equals with leadership in the incumbent led the CEO of a consumer services company to assign two acknowledged top performers in the organization to lead its new business. This move demonstrated the importance of the new business to employees and ensured the new-business leaders had the credibility to work with incumbent executives.

Ensuring a productive relationship between the new business and the incumbent extends to ensuring the new business has a blend of new hires and strong performers from the existing company. Finding the optimal internal-external talent mix isn't an exact science, and it requires persistence from the CEO to understand where the blockers are and break through them when needed—convincing functional leaders to commit their best people to the new business, for example, or working with the chief human resources officer (CHRO) to put streamlined rotational and transfer policies in place.

In charting a path to the optimal internal-external blend of talent, CEOs should consider pursuing an acquisition, but only when it's measured and focused on scaling. Our research has shown that new businesses that made two acquisitions early in the scaling process were 25 percent more likely to significantly exceed expectations than those that made no acquisitions or made three or more of them.[9]

4. Give leaders in the incumbent a stake in the new business's success

Inevitably, there will be conflicts between the new business and the established one. For example, the needs of the new business might appear small to an IT function that has huge projects under way, so the chief information officer (CIO) may not be as responsive to the new business's needs. Or, as the new business grows and operates in different ways, the existing business can start to perceive it as a threat, leading to counterproductive dynamics and lost value.

In these cases, the CEO must be ready to personally work with the corresponding functional or business leaders to resolve the issue. One CEO told us he would sit down with a resistant business unit head and detail how the new business helped improve his P&L. Clear expectations and explicit agreements with deadlines and metrics are instrumental in providing objective reference points that the CEO can use to exert appropriate influence on incumbent leaders to follow through on commitments.

In navigating these organizational tensions, the CEO should structure a governance model that directly incorporates incentives for parent business leaders. One way to do that is to identify the senior gatekeepers of a needed asset or capability, such as data or intellectual property, and provide them with a leadership role in the new business. The role may be to participate on a venture board that helps direct the new business or to be part of a task force to help the new business meet a specific need. In this role, these executives would have accountability for the new business's success. Tying compensation and bonuses to specific KPIs for the new business has also proved to be effective in many contexts.

In providing these incentives, CEOs must remember to achieve a fine balance between involving incumbent leaders and protecting the new business's autonomy. That means limiting the

[8] "Know where you are going," McKinsey, February 18, 2020.
[9] "2021 global report," December 6, 2021.

incumbent leaders' ability to stall progress, for instance, by reducing their approval powers and keeping existing reporting structures from taking hold.

5. Communicate, and when you feel you've done enough, do some more

CEOs understand the importance of communication—much of their success is based on how well they do it. But in the context of supporting a new business, CEOs often underestimate how systematic and persistent communications need to be and how much they can affect the outcome of the new business. By communicating that a new business is part of a broader shift to become more of a digital, software, or tech-enabled company, for example, a CEO can help support new multiples for his or her public companies.

The art behind successful communications is being systematic and intentional in tailoring the message to the audience. Focusing on how the new business can help drive growth and build skills for the incumbent, for instance, can help convince those in the company who might be resistant to the new business. When speaking to a skeptical board, the CEO should highlight growth opportunities and potential disruptions based on marketplace dynamics.

Patrick Hylton has adopted a "sources of meaning" approach to his communications in building support for Lynk. He systematically identified the stakeholders and determined how to align the new business's activities with their interests. "With regulators, for example, I explained how our new digital payments business would be more inclusive by being able to reach more people from different socioeconomic backgrounds, would help reduce any exposure to pandemics, and would aid labor productivity. I showed through our analysis that customers really wanted digital financial services," he said.[10]

Building support is just the start. Communications is a continuous effort. One example of this is how the CEO and the CFO of Moody's announced to the Street that they would be investing in creating several new businesses to aid clients with their integrated risk-assessment and decision-making needs—for instance, in third-party risk management. They made clear that these were part of the overall strategy of the business and communicated why the investments would benefit the core business, for example, sharing "the goal here . . . is to have more comprehensive offerings, to be able to deepen customer penetration and to add new customers that allow us to grow faster." In every quarter during earnings calls, the CEO talked about the new businesses and focused on progress and linkages to the overall strategy.

This near-constant drumbeat of communication serves to reinforce conviction and goals. In our experience, the hallmarks of effective communications include reaffirming vision and rationale, highlighting meaningful external validation, setting ambitious but realistic expectations, being authentic (including when there are setbacks), celebrating progress, understanding the salient facts (such as progress against KPIs), and maintaining a cohesive message. This last point warrants emphasis. This communications program is best thought of as a CEO narrative, in which business building figures prominently and continuously in the overall strategy.

As CEOs drive their communications strategy, they should guard against communications stagnation over time. What they say needs to evolve as the new business changes—it is a story rather than a static set of talking points. Building excitement is important at the beginning, for example, but the message needs to shift and focus on operational progress as the new business matures.

Building new businesses cannot be a side project or an unguided experiment if companies want to grow their revenues, extend their market position, and

[10] "One CEO's journey to becoming a business builder," August 9, 2022.

stay ahead of industry disruptions. New-business building needs to become a core institutional and management capability to drive growth and boost resilience. That can only happen, however, when CEOs focus on tasks in which they have unique authority and leverage and when they commit their time, energy, and courage to them.

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Leap
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Building new businesses: How incumbents use their advantages to accelerate growth

For large companies, building new businesses is essential for growth and reinvention. The key to success? Combining the strengths of an incumbent with the agility of a start-up.

by Matt Banholzer, Markus Berger-de Leon, Ralf Dreischmeier, Ari Libarikian, and Erik Roth

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December 2019

With each passing day, established companies encounter valuable opportunities to grow and innovate—along with intense competition, which has made it harder than ever to stay on top. The companies listed on the S&P 500 index have an average age of 22 years, down from 61 years in 1958. One factor that sets winners apart is their ability to build successful new businesses repeatedly. According to our research, six of the world's ten largest companies might be called serial business builders, having launched at least five new businesses during the past 20 years, and two more of the ten have built sizable new businesses.

This isn't a coincidence. Established companies possess talent, funds, market insights, intellectual property, data, and other assets that can give their new businesses a decisive edge over stand-alone start-ups. Providing access to an existing customer base, for example, can lower the cost of acquiring customers and speed their uptake, thereby putting the new business on a faster growth trajectory. When established companies develop the ability to integrate their assets with tech-enabled business models, they can continually generate new businesses.

Doing so well requires four elements: strong CEO sponsorship, carefully structured relationships between the parent company and its ventures, the discipline to fund new businesses as they test and validate their ideas, and a skillful business-building team. In this article—based on our experience in leading more than 200 business builds in a range of sectors, including banking, insurance, oil and gas, retail, and telecommunications—we offer a look at how an incumbent can learn to build businesses that combine its strengths with a start-up's flexibility and pace.

Creating a business-building capability

Business building is no longer a choice: it is an essential discipline that lets incumbents counter disruptive challengers and sustain organic growth. New businesses can also serve as proving grounds for agile and design thinking, so an incumbent's executives can gain exposure to these practices before introducing them to core businesses. But for many incumbent companies, building new businesses—especially those with a business model substantially different from the parent organization's—will be an unfamiliar endeavor. In our experience, large companies develop their business-building capabilities most effectively by emphasizing four activities.

1. Voicing the business-building imperative: The crucial influence of the CEO

Many executives at long-standing companies have told us that building new businesses feels altogether unnatural and risky. They doubt that their organizations can progress beyond traditional operating models and ways of thinking. And the high failure rate for start-ups suggests to many executives that they would be wiser to seek less risky, more familiar places to invest in pursuit of growth.

Faced with arguments against building new businesses, CEOs at established companies must advocate strongly for business building. They bear the responsibility for articulating and reinforcing the need to create businesses that reach new customers in new ways and achieve high-margin growth. Investors constitute the most important audience for such messages. CEOs must convince them that the companies' investments in new businesses will yield better returns than investments in alternative growth opportunities.

To make an effective case for business building, CEOs should be up front about new businesses' capital requirements (which can approach or exceed $100 million per business) and time frames for achieving profitability (usually three to five years). As McKinsey research has shown, organic growth typically generates more value than acquisitions do but takes longer to lift revenues and profits.[1] For that reason, a CEO will normally find it helpful to update investors regularly on how the company's business-building efforts are progressing and to

[1] Marc Goedhart and Tim Koller, "The value premium of organic growth," January 2017, McKinsey.com.

remind them that such efforts take time to pay off. Internal stakeholders matter, too. To ensure that new businesses gain advantages from the parent company's assets, the CEO must keep business-unit and functional heads informed and involved.

For example, we know of one CEO who concluded that, to grow, his company should enter the burgeoning market for Internet of Things (IoT) products. He recognized that his company lacked the capacity to develop IoT products, so he resolved to build new businesses that could innovate quickly. The CEO made clear to business-unit and functional leaders that they should treat the business-building effort as a high priority. When the company launched the first of these IoT ventures, the CEO empowered its leadership team to call on executives in the core business for help—and promised to intervene if any executives were slow to accommodate the requests of the team. Backed by the CEO, the team quickly delivered a minimum viable product (MVP).

2. Powering up new businesses: Ample assets, minimal encumbrances

Unlike stand-alone ventures, new businesses built by incumbents can gain decisive advantages from the parent company's funding, customers, data, intellectual property, technology, and other assets. One bank, for example, allows its new businesses to market their offerings to existing bank customers with the assistance of the bank's frontline staff, thereby helping the new businesses gain traction. To maximize these advantages, large companies should allow their new businesses to determine which of their parent companies' assets will provide the greatest benefits to the new ventures and to draw on those assets with few, if any, conditions.

Creating this kind of relationship between a parent company and a new business can involve a delicate balancing act. Once employees from the parent company start supporting a new business, they often try to hold it to the larger organization's standard processes and ways of working. But these conventions can be antithetical to the working styles of new businesses, and even stifle their activities. In our experience, bureaucratic interference and insufficient use of the parent company's assets are common reasons why the business-building efforts of large companies may come up short.

Because of this, executives should avoid treating new businesses as parts of the legacy one. It's more effective to buffer them from the parent company's processes and requirements. One way incumbents

Unlike stand-alone ventures, new businesses built by incumbents can gain decisive advantages from the parent company's funding, customers, data, intellectual property, technology, and other assets.

do so is by setting up new businesses as self-contained, relatively autonomous entities, with their own leadership teams, governance mechanisms, management practices, and talent environments (including career paths and rewards). Another is by untethering new businesses from the parent company's planning and budgeting cycles. Rather than requiring new businesses to compete with core divisions for funding, incumbents can earmark capital to invest in new businesses and release allotments of money when they reach agreed-upon development targets, as we discuss below.

BP, the global energy company, followed this approach when it set up Launchpad, a "factory" that takes technological innovations created by BP's R&D department and builds new businesses that commercialize those innovations at scale. Working from Launchpad's separate office, the new businesses tap into the assets of BP by working with designated representatives of its functions, who use their relationships within the company to help its new businesses gain advantages (such as access to customers) from its scale.

3. Building to the limits of what's proved: How testing helps manage risk

Promising ideas don't always make for good businesses, as any seasoned venture investor will tell you. Yet an incumbent company or a new business's founding team can easily but wrongly convince itself that a business idea could succeed and then pour money into it. Venture investors counter the optimism of founders by challenging them to demonstrate that their ideas are viable. Similarly, incumbent companies should insist that the leaders of a new business unpack their assumptions about the business's prospects, identify the risks it will face, and validate their plans for managing those risks. That way, the company can fund continued development of the business only to the extent it has been validated.[2]

In our experience, founding teams often make significant assumptions about factors that will determine the revenues of the new business, such as the number of customers they expect to win, which is partly a function of the conversion rates a team expects to achieve at each stage of the sales process. Other crucial assumptions pertain to operating expenses, such as how much it will cost to acquire customers.

To test such assumptions, venture leaders often find it helpful to forecast "reverse" profit-and-loss statements (so called because executives forecast the profits of the business and work backward through its costs to its revenues) for the next five years. Then leaders tease out the assumptions behind each line of the statements, determine what risks might prevent these assumptions from coming true, and test the plans for addressing those risks. This process should compel the leaders either to confirm that their assumptions are sound or to adjust them to reflect the business environment better.

An example of how the test-and-learn approach helps dismantle faulty strategic assumptions comes from a large industrial-products company, which had formed a venture to create an open software platform supporting connected products in business settings. The executives leading the new venture expected installers of such products to see the software platform as a threat. Although these executives were confident in their outlook, they were also committed to validating their assumptions by talking with installers and other parties whose business would be affected by the platform. To the executives' surprise, the installers said they felt the platform would benefit them. They went on to advise the venture about features that customers would value, and some signed on as partners when the platform came to market.

New businesses also control product-related risks by showing their offerings to potential customers at an early stage, collecting feedback, changing the offerings accordingly, and continuing to test and tweak products often. This approach helps new businesses validate the features and other attributes they've selected and quickly create an MVP that many customers will pay for. Established

[2] This approach has its foundations in the ideas of customer development and discovery-driven planning. For more, see Steve Blank, "Why the lean start-up changes everything," *Harvard Business Review*, May 2013, hbr.org; and Amy Gallo, "A refresher on discovery-driven planning," *Harvard Business Review*, February 13, 2017, hbr.org.

companies also test new products, of course, but few do so as early and often as start-ups. A corporate venture we know tested product mock-ups with customers just six days after a product was conceived—a major departure from the parent company's practice of testing prototypes after six months or more of development.

4. Sustaining momentum: Creating a business-building team

It's one thing for an established company to sponsor relatively low-risk growth efforts, such as extending product lines or introducing products to new markets. Building new businesses—which is riskier but more rewarding—calls for a different approach, supported by different organizational structures. In particular, repeatedly building new businesses requires a team dedicated to evaluating business ideas, choosing which ones to support, securing leaders for the new businesses, and overseeing their development. These responsibilities include making sure that the founders of new ventures test their assumptions (as described above) and discontinuing ventures that are exposed to unmanageable risks.

The strongest business-building teams we've seen include entrepreneurs hired from outside the parent company, who bring valuable experience in leading and building start-ups; executives from the parent company, who help new businesses gain advantages from the parent company's assets; and a pool of specialists in design thinking, software development, and other business-building disciplines, who lend their expertise until new businesses are large enough to bring in their own specialists. Successful incumbents also endow their business-building teams with enough authority to scale up new businesses as they see fit, provided that they validate their assumptions and honor the parent company's strategic objectives.

At the industrial-products company mentioned above, executives chose to bring in a new leadership team for the connected-product-platform business when they realized that the several dozen software engineers developing the software platform lacked direction and organizational support. Senior management assembled a team of seasoned entrepreneurs, recruited externally, and executives from related divisions of the industrial company (such as finance, operations, and IT), selected for their ability to foster collaboration between the new business and its parent. By carving the business out as a separate legal entity, the industrial company gave the new leadership team more flexibility, which allowed it to define the new business's market in a way the company hadn't thought about, to sharpen the product concept, and to accelerate product development.

How to begin your business-building transformation

Companies cannot afford to delay building new businesses: opportunities to achieve breakthrough growth are too precious to pass up, and the pressure to defeat innovative competitors is mounting. CEOs and senior executives can initiate their business-building efforts by exploring the following issues:

— *Aspirations and opportunities.* To draw up a portfolio of new businesses, executives must decide where they want to take their company and how business building can help it advance in that direction. Several questions can help focus the executives' thinking. What should our company look like in five to ten years? What organic-growth opportunities must we exploit to achieve our targets? Which new business ideas would let us seize those opportunities? Why haven't we pursued those ideas yet? Which of our assets could give new businesses a greater chance of succeeding?

— *Experience and environment.* Generating meaningful growth by building businesses requires more than a single push; it calls for a lasting effort. Management teams should ask themselves a few hard questions. Do we have enough knowledge and talent to sustain such an effort and whatever more we need to develop a business-building capability? What have

we learned from our previous and ongoing efforts to grow organically? What allowed us to succeed, and what kept us from succeeding? Who are our most creative, entrepreneurial executives and managers? Which of them have displayed an eagerness to work on big, ambitious growth projects?

— *Resources.* No matter what parent-company assets might be available, new businesses can't start without two basic ingredients: funding and people. Executives must decide how much capital they can set aside for business building. For companies in mature or shrinking markets with few growth opportunities, the amount might be large. For those in growing markets, it might be smaller. As for staffing, our experience has taught us that strong business-building teams count for more than business ideas. A strong team will kill a bad idea quickly and turn a great idea into a successful business, whereas a mediocre team will squander time and money on bad ideas and fail to commercialize good ones. Executives should ask themselves if they know where and how to recruit supporting talent (such as data scientists, designers, developers, and ecosystem architects) and whether they can provide such employees with incentives and career paths that support testing and learning and tolerate failures.

It's increasingly clear that established companies that haven't developed the ability to start scalable new businesses repeatedly are at risk of falling behind their competitors. Business building is no longer an optional way to generate organic growth: it has become essential. Fortunately, incumbents can use their assets to give new businesses advantages over independent ventures. Executives who combine those assets with advanced technologies and a start-up's culture and ways of working can create a business-building capability that powers continual organic growth.

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Leap by McKinsey

How to build a unicorn: Lessons from venture capitalists and start-ups

New data highlights five things incumbent businesses could learn from venture capitalists and unicorns.

by Markus Berger-de León, Jerome Königsfeld, Leo Leypoldt, and Kai Vollhardt

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A mythology often grows up around unicorns—start-ups with valuations of $1 billion or more—that burst onto the scene, with stories of bold action, "crazy" bets, quirky personalities, and luck. While these myths may make for great storytelling, underneath them lies a set of facts that helps to explain unicorns' success. Understanding these facts and how they can be applied to other enterprises is particularly important for CEOs of large businesses looking to build new revenue, bolster resiliency, and court venture capitalists (VCs).

To help incumbents launch new businesses, we at Leap by McKinsey interviewed ten successful VCs and angel investors and analyzed 100 unicorns to distill what really matters in developing start-ups. This analysis revealed five things that help start-ups morph into unicorns.

Five Ts for finding unicorns

VCs looking for companies that have unicorn potential ask five key questions as they evaluate prospective investments. Executives at companies seeking VC support for their new businesses should ask them, too.

1. Teams: Do they have sufficient experience and networks?

A common mantra among VCs, particularly about early-stage funding, is "Invest in people, not in businesses." But what kinds of people and in what kind of teams? Our analysis yielded four facts (Exhibit 1):

— *Mavericks are the exception*. The vast majority of successful scale-ups (around 75 percent) were started by two or more people.

— *Diverse founding teams are best*. Top founding teams bring complementary skill sets to the table. Their backgrounds include a mix of expertise in technology (around 40 percent of founders), natural science (around 25 percent), and business (around 25 percent).

— *University education still matters—a lot.* A large majority of founders of the top 100 unicorns have completed an academic degree (more than 95 percent), and more than 70 percent have advanced degrees such as a master's, an MBA, or a PhD. Interestingly, where the degrees came from mattered less. While about 25 percent of founders got their degrees from top US schools such as Stanford, Harvard, Yale, Wharton, or MIT, the rest came from other institutions. With education come important networks. More than 70 percent of cofounders went to the same university prior to building their unicorn.

— *Track records and experience are essential.* It is unlikely that founders will build a top 100 scale-up on their first attempt. More than 80 percent of founders gained work experience prior to building their successful venture, and more than half had founded start-ups before.

While these patterns broadly hold true globally, there are some regional differences. Founders of Asian scale-ups, for instance, commonly have less work experience prior to starting their venture. Top European scale-ups also have a significantly higher share of female founders (16 percent versus 12 percent globally).

Leap by McKinsey

Leap by McKinsey works with established organizations to imagine, build, and scale new businesses—and develop the capabilities needed to do it again and again. We bring together a global network of experts to build dynamic, innovative businesses that can reinvigorate entire organizations.

Learn more about Leap by McKinsey on McKinsey.com.

Exhibit 1

VCs look for founder teams with diverse backgrounds and skills.

Team setup, education, and work experience of unicorn founders, %

2. Total addressable market (TAM): Is it big enough to be worth it?
When deciding whether to fund a new business, the VC investor wants to know if the investment can become big enough to be worth it. Assessing the potential comes down to two things:

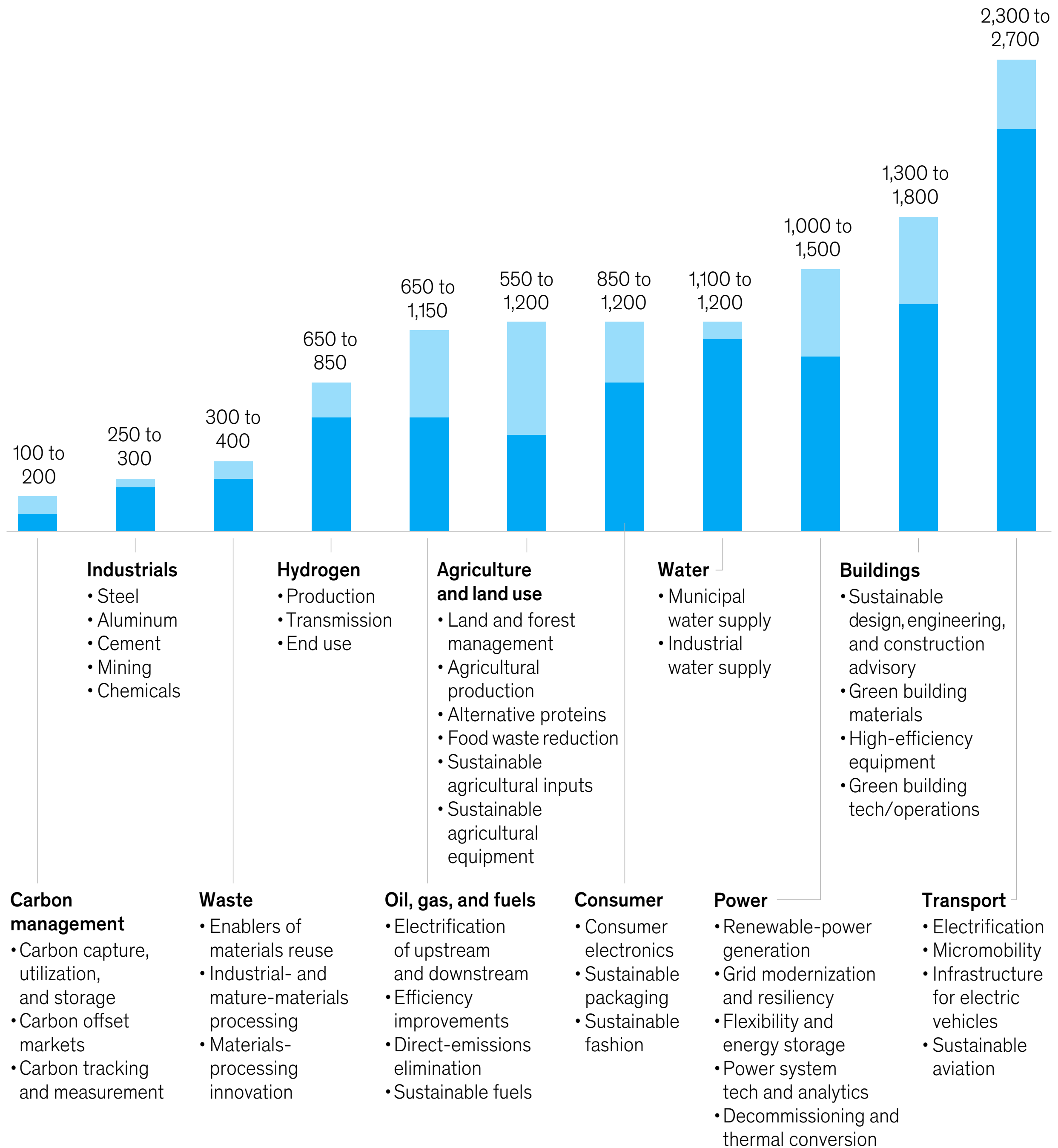
— *Size matters.* The biggest sectors have the greatest number of successful scale-ups. Three sectors with annual revenues greater than $5 trillion—technology, media, and telecommunications; industrials; and healthcare—account for almost a third of the top 100 unicorns. Playing in a large enough market, therefore, improves a venture's chances of hitting it big. Similarly, significant trends have an impact on TAM volumes and, in some cases, even open up a "blue ocean"—entirely new, large market spaces. One such trend is sustainability, in which governments and companies are expected to invest nearly $10 trillion per year for the next 30 years. With 11 investment areas, ranging from green transportation to decarbonization, we expect the climate economy to see the launch of hundreds of new unicorns (Exhibit 2).

Smaller markets or sectors can also be the homes of successful start-ups as long as the potential for market disruption is significant. While AI and big data, for example, are relatively small fields today, accounting for less than 5 percent of total value creation across all segments, they include 16 of the top 100 unicorns.

— *There's a clear market opportunity.* A large enough market is table stakes. It is essential that the market also offers significant growth potential for new entrants. To determine whether a market is "crackable," VCs typically assess whether there is an opportunity for a product or service to take advantage of a market weakness. Strong fragmentation is one example of such a weakness: if a market has many players and no clear leaders, it is often easier for a new entrant to disrupt it and build up significant market share. A young market without dominant companies and with relatively low barriers to entry also can offer an attractive opportunity.

Exhibit 2

There are eleven high-potential value pools in the climate economy.



Note: Preliminary, not exhaustive.
Source: Michael Birshan and Anna Moore, "Four front-foot strategies to help create value in the net-zero transition," McKinsey, September 2, 2022

3. Timing: Too late, too early, or just right?
In comedy, they say timing is everything. That's equally true of investing in start-ups:

— *Leaders recognize trends first and benefit from early moves.* Correctly identifying new trends and their impact early on allows first movers to enter uncontested spaces and build a strong position—which typically results in higher margins and faster growth. For this reason, ventures at the forefront of trends benefit from greater capital availability and more-attractive valuations. As first movers in the climate market, for example, sustainable brands and net-zero-focused products exhibit faster growth and significantly higher price premiums—for example, we expect a green premium for steel of $200 to $350 a metric ton by the middle of this decade.[1] Furthermore, we see two to five times the uplift in valuation multiples for companies with a strong climate focus.

— *The start-up operates in a two-to-three-year window.* VCs look for that "Goldilocks" spot where a business isn't so far ahead of the market that it will die before it has enough customers or so far behind that its market opportunity is lost to competitors. They look to invest in start-ups where the product or service not only works but also has early indicators of market interest. The expectation among VCs is that start-ups travel significantly along this innovation curve within two to three years. In line with this view, the maximum amount of capital that is generally raised supports a run rate of about two and a half years.

4. Technology: Does it work at scale?
VCs evaluate whether a business can go from selling and supporting a hundred products to a million without breaking. Technology is often at the heart of a company's ability to scale:

— *Software drives the scale.* When assessing the potential for scale, VC investors typically want to confirm a company's ability to operate efficiently and stably with millions of customers and thousands of employees, often while growing at a rapid pace. For this reason, they favor software over hardware, which has complex logistics, maintenance, and development profiles. Software, in contrast, can scale almost instantaneously, if it is well built and supported.

This logic drove Enpal, a leading European green-tech player valued at more than $1 billion, for example, to invest in a fully online purchase model and develop an operating system and app that allows customers to manage solar panels, heat pumps, and other products all in one.[2] Similarly, Infarm, the world's largest urban vertical-farming network, started with a strong focus on hardware but has shifted its focus to software.[3]

— *Tech foundations can support scale*. Some VCs have dedicated technology teams to review and assess a start-up's tech profile to ensure it is scalable. They are on the lookout, for example, for high degrees of automation so costs don't escalate as revenues grow. Having a tech foundation that's ready to scale requires developing a modular tech stack built around microservices and APIs that create simple and well-defined interfaces to data, algorithms, and processes. In the same way, partnering with the right hyperscaler to take advantage of platform as a service (PaaS) and infrastructure as a service (IaaS) enables scale.

5. Traction: Is there a clear path to profit?
The start-up needs time to grow, but VCs want evidence that it's on the right track:

— *The business is uniquely positioned to solve a real need.* Too often, founders start with an idea or a product and then try to find a market for it. This typically does not lead to success. Instead, successful ventures provide unique solutions (for example, intellectual property that's hard to replicate) that change an unacceptable status quo. While it is common for successful start-ups to develop completely new technologies, they can also develop a novel combination of existing technologies, market existing technologies with

[1] Michael Birshan and Anna Moore, "Four front-foot strategies to help create value in the net-zero transition," McKinsey, September 2, 2022.
[2] "From vision to green-tech unicorn: Lessons from Enpal," McKinsey, July 8, 2022.
[3] "Inventing and scaling the world's largest urban vertical farming network," McKinsey, June 8, 2021.

new ones, radically improve user experiences, or simply operate far more efficiently than competitors.

— *Revenues indicate traction in the market.* VC investors expect revenues of new businesses to grow rapidly. One European VC leader expects new ventures to follow the 3-3-2-2-2 pattern to demonstrate good traction—revenues should roughly triple each year in the first two years after founding and then double for at least three years after that (Exhibit 3). Our analysis broadly corroborates this rule of thumb: successful start-ups at least doubled their revenues every year for eight years. More important than total revenue is the *type* of revenue. VCs favor annual recurring revenues (ARR) over one-off sales and look for customers who buy more than one product and whether per-customer revenue increases over time.

— *The path to profit is clear.* While it is typical for start-ups to show significant net losses in early years, a clear path to profit is essential. VC investors generally look at customer acquisition costs (CAC) and customer lifetime value (CLV) as key indicators. While the CAC are often steep for new businesses, trend lines should clearly show improvement. Historically, VC investors have considered a CLV:CAC ratio of three times at scale a good indicator of strong traction.

Implications for incumbents

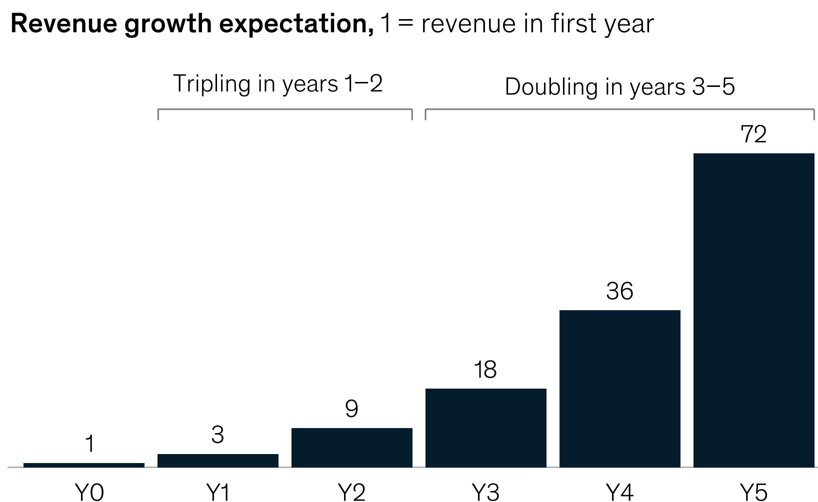
What can incumbents learn from unicorns and VCs? Two elements stand out.

Set up an innovation board with a mix of experience

An innovation board prioritizes investments in new ventures based on a business's strategic growth agenda. These are active organizations that go well beyond basic reviews and approvals. They are most effective when acting as true coaches who can bring to bear the breadth of their experience. For example, they bring on people with the specific skill sets that the new business needs, set challenges for the business—

Exhibit 3

Consistent revenue growth over several years indicates a company has traction and a clear path to profitability.



in one case, they asked the start-up team to come back with two signed letters of intent from committed customers to prove the willingness to pay—and identify potential M&A targets.

The innovation board needs representatives from three separate interests and areas of expertise:

— The incumbent/business unit representative, who can best judge if the company has unique advantages to offer to the new business and provides the new business with access to them

— The VC, who brings an unbiased perspective in evaluating the start-up and provides access to capital, talent, and experience

— Experts that the incumbent lacks. One agriculture company, for example, needed technologists, while an engineering firm needed marketers and go-to-market experts to help it reach thousands of customers.

Understand what VCs are looking for as part of a joint venture

VCs can provide significant advantages to an incumbent. But for any kind of collaboration to work, VCs will insist on an important set of requirements. For one thing, they want to be involved from the start so they can ensure, for example, that the run rate stays within reason. They will also insist that the founders have equity in the new business. In most cases, incumbents reward and incentivize their start-up people with bonuses, but VCs know that you will get the best talent only if you offer them shares. On the flip side, the VC will also look to ensure that no single investor has a dominant share in the new business and could potentially block it later for whatever reason.

Beyond the initial phase, VCs have a clear eye on future growth and, while most incumbents only think about incentivizing the initial founders, will eventually want to see a stock-option pool for key hires and will look for an explicit willingness from the incumbent to potentially bring in other investors after two to three years. VCs are looking to protect and maximize the chances for a large payout from their investment, and unless incumbents can adapt to this reality, they will not collaborate effectively with VCs.

Two industrial companies with a strong focus on manufacturing and manufacturing technology decided to work together on building a new business. They also brought in early a financial VC with experience working with large companies. This VC had a network of other VCs and crucial knowledge, such as investment structures and equity allocation models. The venture was able to secure eight-digit seed funding.

A unicorn is, by definition, unique and hard to build. But by understanding what success factors to look for and how VCs think and operate, incumbents launching new businesses can increase their chances of hitting it big.

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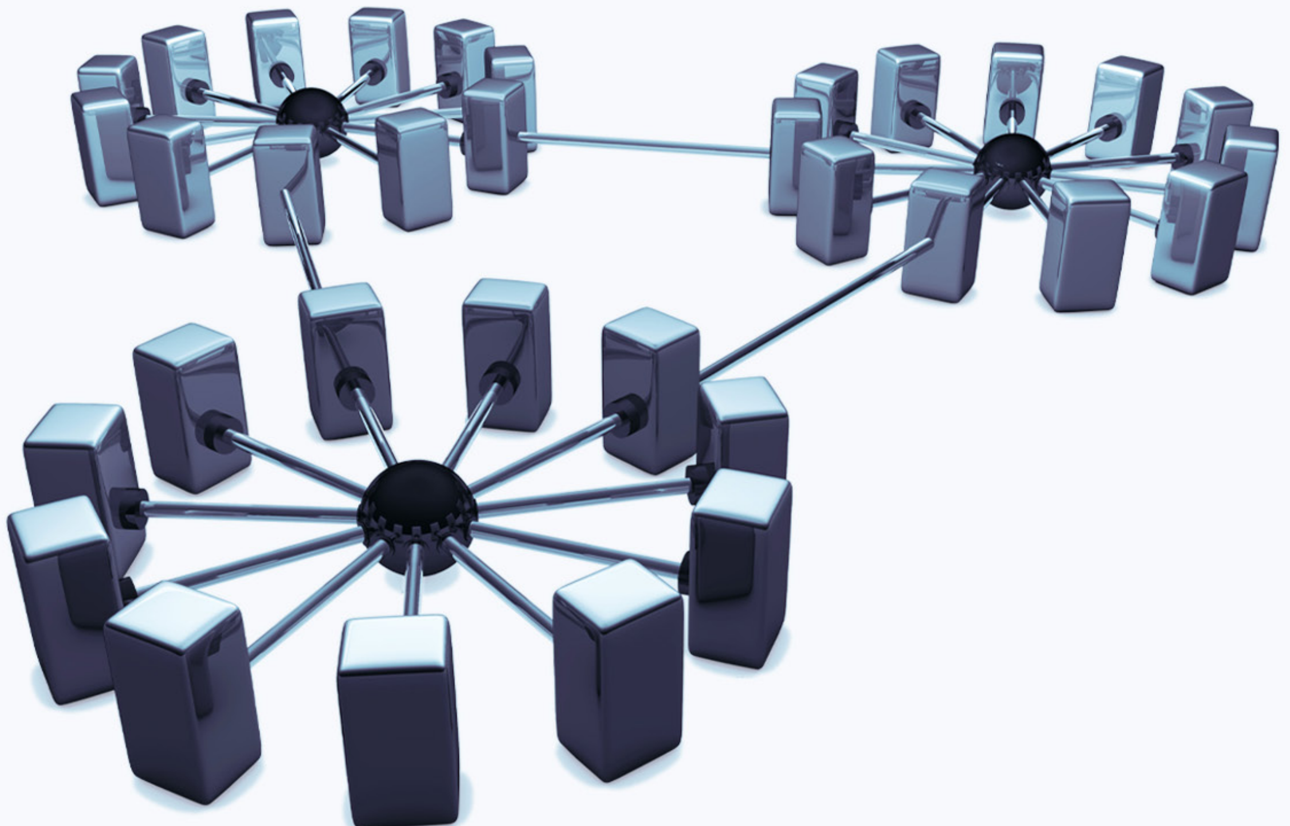
Three new mandates for capturing a digital transformation's full value

Most organizations achieve less than one-third of the impact they expected from recent digital investments. What can companies learn from the best performers about how to beat the odds today?



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June 2022

Success with digital transformations, and transformations in general, has always been hard to come by.[1] The challenge has only become more acute over the past two years, when companies' adoption—and the strategic importance—of digital technologies accelerated dramatically. Now, organizations are under even more stress to make consequential business decisions not only at a faster pace but also in business areas that may have no previous experience with or knowledge of digital tech or transformations.[2]

While some of the obstacles to digital-transformation success are well known, our newest McKinsey Global Survey on digital strategy and investments asked business leaders about the evolution of these challenges, digital tech's role in their businesses, and companies' strategic responses.[3] Nine in ten C-level and senior leaders say their organizations have pursued at least one large-scale digital transformation in the past two years.[4] And while many respondents say their companies haven't seen the impact on revenue or costs that they expected, those working at "top economic performers"[5] are much more likely than their peers to report value from these efforts.

We looked closely at what the top-performing companies are doing differently from the rest. While many of the traditional challenges to digital transformation remain, three new factors have emerged as critical to capturing value from them today—and going forward:

— the use of digital tech to achieve strategic differentiation on customer engagement and innovation rather than cost efficiencies—and bolder digital strategies that are more likely to be successful than more incremental ones

— the development of proprietary assets, such as AI, data, and software, rather than a reliance on off-the-shelf tools

— a focus on attracting and developing tech-savvy executives and on better overall integration of tech talent into the organization rather than just getting new tech talent in the door

The value at stake from digital transformations

While organizations have made massive tech-driven changes over the past two years, the survey results suggest that they have captured much less of the value than respondents initially expected (Exhibit 1). But top economic performers do significantly better than their peers do. At top performers, respondents report capturing a median of 50 percent of the full revenue benefits that their recent transformations could have achieved, compared with a median of 31 percent across all respondents—and 40 percent of the maximum cost benefit, compared with 25 percent across all respondents.

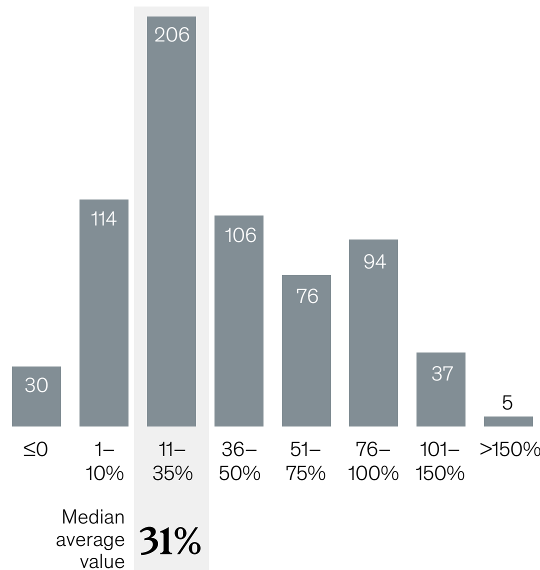
We see the same disparity when it comes to sustaining a digital transformation's benefits. While few respondents overall say their companies have sustained the financial and operational benefits

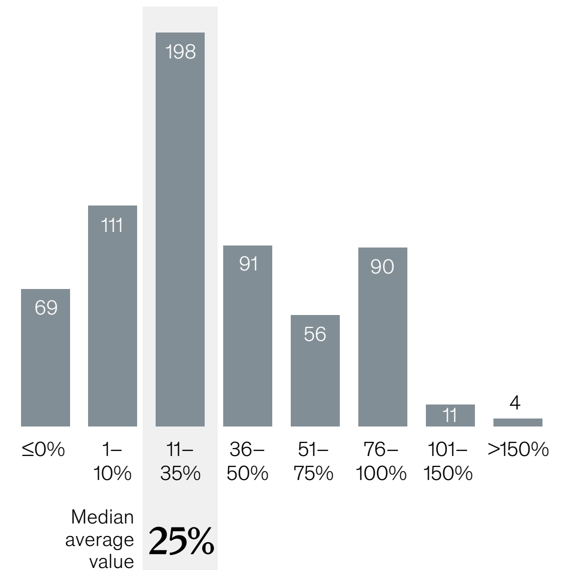
[1] "Five moves to make during a digital transformation," McKinsey, April 24, 2019.
[2] Jacques Bughin, Tanguy Catlin, Martin Hirt, and Paul Willmott, "Why digital strategies fail," *McKinsey Quarterly*, January 25, 2018.
[3] The online survey was in the field from January 25 to February 4, 2022, and garnered responses from 1,331 C-level executives, senior managers, and business unit, department, or division heads representing the full range of regions, industries, company sizes, and functional specialties.
[4] The survey asked about three types of digital transformations or investments: making technology-based changes that enable the core business's future competitiveness (for example, digital-ready architectures and platforms, cloud enablement, and open interfaces), making tech-based changes to the core business (for example, embedding AI into the current business's operations, increasing digital interactions with customers, and building proprietary software) to differentiate the company from competitors strategically, and building a new digital business that is separate from the core business.
[5] We define "top economic performers" as companies where respondents report increases of at least 15 percent in their organizations' revenue and in EBIT over the past three years.

Exhibit 1

Organizations capture less than one-third of the value that respondents expected to see from recent digital transformations and initiatives.

Reported share of realized and sustained best-case financial benefits from digital transformations, number of respondents[1]





[1]Respondents who answered "don't know/not applicable" for each measure—revenue increase and cost reduction—not shown. Best-case financial benefits" defined as maximum benefit that digital transformations could have achieved.
Source: McKinsey Global Survey on digital investments and transformations, January 25–February 4, 2022, of 1,331 business leaders

over time, the top economic performers fare much better than the others (Exhibit 2). This is true for all three types of digital transformations that we asked about: building new digital businesses, strategically transforming the core business with digital tech, and updating the core business's tech to ensure future competitiveness. Of the three, new-business building is most difficult: 70 percent of respondents whose companies built a new business say they didn't successfully sustain their financial and operational targets, a finding that is consistent with our earlier research on business building.[6]

Yet the survey results suggest that many companies are building new digital businesses for reasons other than strictly financial ones, which could explain why a new business is less likely than a core business to hit its targets. For example, only one-third of respondents say their companies are building new digital businesses to provide new sources of revenue. A nearly equal share say they are doing so to build a presence in strategically important markets or industries, and one in five respondents report that their companies are doing so to incubate new digital capabilities for the organization.

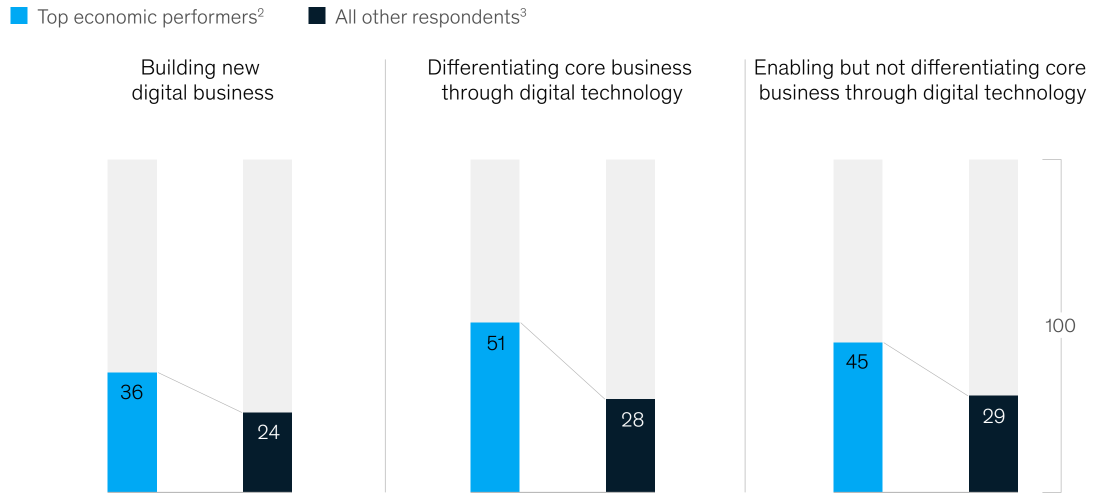
The results also suggest that companies with higher aspirations for digital tech tend to see better outcomes than other companies do.[7] They are more likely than their peers to say they have successfully

[6] "2021 global report: The state of new-business building," McKinsey, December 6, 2021.
[7] We define companies with "higher aspirations" as those where respondents believe that, over the next two years, digital tech will either be a significant differentiator or be most or all of the solution (for example, a new software business or app) in helping their organizations achieve their strategic aspirations; n = 480. The other answer choices offered were "no significant role in strategic aspirations," "a minor enabler," or "a significant enabler."

Exhibit 2

While few companies have sustained the benefits of a digital transformation over time, the top economic performers fare much better.

Success rate for sustaining digital transformation's targets, % of respondents[1]



[1]Includes respondents who said their organizations were "completely successful" or "very successful" in sustaining the achieved financial and operational targets. Respondents answered only for digital transformations that their organizations have pursued in past 2 years.
[2]Companies with respondents who reported increases of ≥15% in their organizations' revenue and EBIT over past 3 years; n = 162. For "building new digital business," n = 33; for "differentiating core business," n = 81; and for "enabling but not differentiating core business," n = 114.
[3]For "building new digital business," n = 255; for "differentiating core business," n = 603; and for "enabling but not differentiating core business," n = 945.
Source: McKinsey Global Survey on digital investments and transformations, January 25–February 4, 2022, of 1,331 business leaders

sustained the benefits from their digital investments and nearly twice as likely to say so when revamping their core business with digital technology. That is in line with our experience that digital strategies that involve incremental changes or lack ambition don't deliver the economic success that bolder digital strategies do.

How top economic performers are beating the odds

The survey results show that the best-performing organizations set themselves apart from their peers both in economic terms and when it comes to achieving and sustaining success from digital transformations. But what exactly are top economic performers doing differently that enables them to beat the odds?

Setting ambitious customer engagement and innovation strategies

When we asked respondents how their companies plan to differentiate their overall business strategies from competitors' over the next two years, we found that the top economic performers are focusing on customer engagement and innovation strategies. Additionally, they are less likely than peers to focus on operational efficiency.

We see a similar focus on customer engagement and innovation among organizations that are looking to tech to create strategic distance from competitors, and related results suggest that doing so is becoming a more common goal. In our past research,[8] the share of companies doing so was small (outside of the high-tech industry).[9] Now, more than one-third of all

[8] "How digital reinventors are pulling away from the pack," McKinsey, October 27, 2017.
[9] "Unlocking success in digital transformations," McKinsey, October 29, 2018.

respondents say tech will be a key differentiator of their companies' strategies.

Compared with others, respondents at top-performing companies also report bolder strategic aspirations and bigger bets on tech (Exhibit 3). For example, they plan to spend twice as much of their overall digital and tech budgets on building new digital businesses than peers do.

Building proprietary assets
If a company wants to differentiate itself through better customer engagement and innovation, it needs to have several core tech capabilities in place—and the survey results show that the top-performing companies are more likely to have invested in such capabilities (Exhibit 4). For example, top performers are more aggressive than their peers in adopting automated processes to test and deploy new tech, as well as agile and DevOps practices that enable faster innovation and execution while keeping costs down. Top performers are also significantly ahead of their peers in their adoption of the public cloud, which helps them become more agile, more efficient, and better able to maximize the value they get from other digital investments.

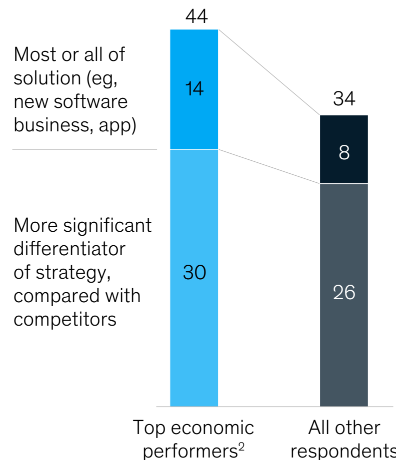
Perhaps more surprising than top performers' stronger capabilities is the degree to which they are disproportionately building—and, in some cases, monetizing—proprietary assets, such as software, AI, and data. While nearly two-thirds of respondents say their companies have invested in software as a service or modern commercial software, the top

Exhibit 3

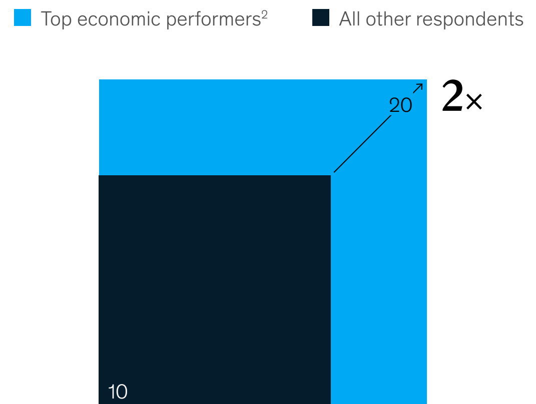
Compared with peers, the top economic performers report bolder strategic aspirations and bigger investments in new digital businesses.

Expectations for organization's digital technology, next 2 years, % of respondents

Role that digital tech will play in achieving strategic aspirations[1]



Share of digital-tech spending that will be allocated to building new digital businesses[3]



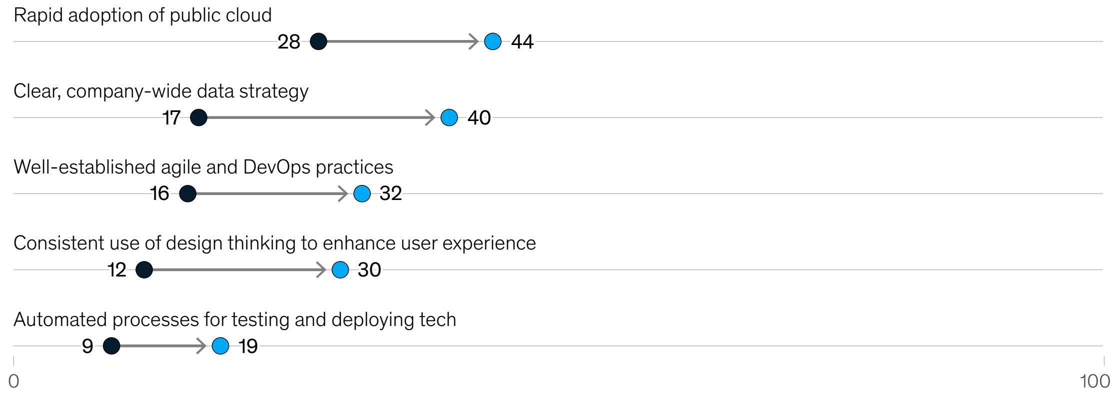
[1]Respondents who answered "no significant role," "a minor enabler," "a significant enabler," or "don't know/not applicable" not shown. For top economic performers, n = 162; for all other respondents, n = 913.
[2]Companies with respondents who reported increases of ≥15% in their organizations' revenue and EBIT over past 3 years.
[3]Respondents who answered "don't know/not applicable" not shown. For top economic performers, n = 113; for all other respondents, n = 614.
Source: McKinsey Global Survey on digital strategy investments and transformations, January 25–February 4, 2022, of 1,331 business leaders

Exhibit 4

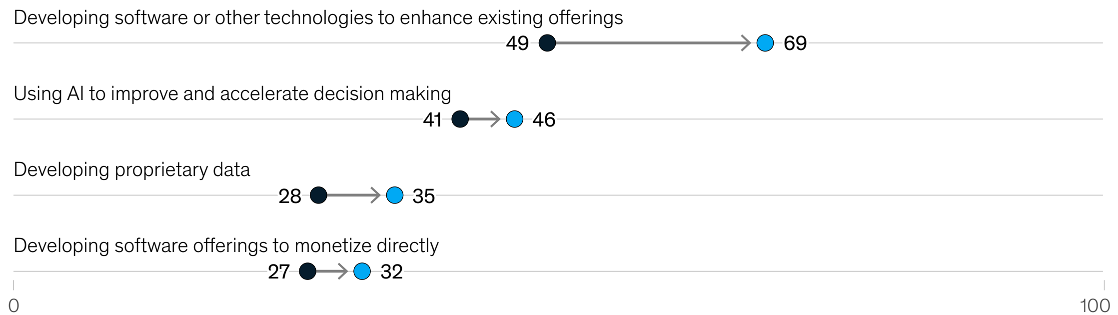
Top economic performers are already investing disproportionately in key technology capabilities and their own tech assets.

Top economic performers[1] | All other respondents | Gap

Digital-technology capabilities in which organization has invested, % of respondents[2]



How organizations will achieve their strategic aspiration through differentiated digital tech, next 2 years, % of respondents[3]



[1]Companies with respondents who reported increases of ≥15% in their organizations' revenue and EBIT over past 3 years.
[2]For top performers, n = 162; for all other respondents, n = 913.
[3]Question was asked only of respondents who said digital technology would be a significant differentiator or most/all of the solution in helping their organizations achieve their strategic aspirations for next 2 years. For top economic performers, n = 71; for all other respondents, n = 314.
Source: McKinsey Global Survey on digital investments and transformations, January 25–February 4, 2022, of 1,331 business leaders

performers are doing much more. Respondents at those companies are more likely than others to say they are developing their own high-performing software, and they build common components into their software that is shared across an internal platform. What's more, nearly 70 percent of the top economic performers, compared with just half of their peers, plan to use their own software to differentiate.

Closing the talent gap for tech-savvy leaders

Failing to find the right frontline tech talent is a perennial obstacle to improving companies' digital performance. Yet the survey results suggest that it's not just about frontline talent: tech-savvy executives play an equally, if not more, important role in today's tech-driven business environment.

When we asked respondents about their organizations' biggest challenges with in-house tech talent, their responses indicate that it's harder to attract and reskill tech-savvy executives than it is frontline technical talent—and that it's equally hard to integrate each group into the organization (Exhibit 5). The top economic performers, though, are more effective than their peers in managing executive talent (Exhibit 6), consistent with our earlier findings that top economic performers are more likely than their peers to have a tech-savvy C-suite.[10]

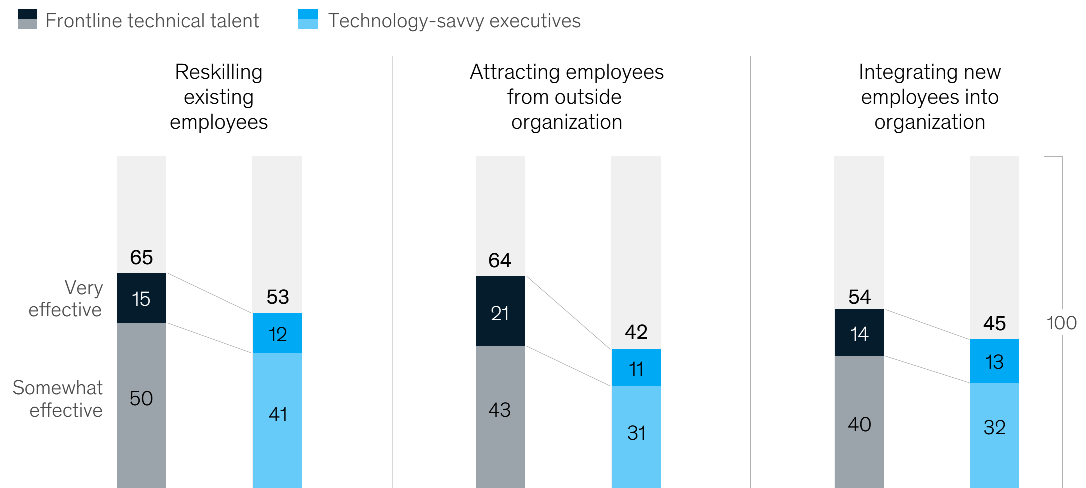
What's more, top performers are better than others at integrating (and retaining) new hires in tech roles—a critical advantage, as tech talent has only become scarcer in the past two years. And while there is significant debate about whether organizations should bring all of their tech talent in house or partner with others to access top talent, we see top-performing companies doing both. Another practice that seems to make a big difference: top performers are more likely than other companies to integrate new hires in digital roles directly into the business rather than the IT function.

Besides executives, there is another group that even the top-performing companies struggle to attract and retain: high-quality product managers. That role is key to strengthening a company's capabilities for developing software—an important differentiator between the top performers and others, as we mentioned earlier—so a focus on

Exhibit 5

According to survey respondents, it's harder to attract, reskill, and integrate technology-savvy executives than frontline technical talent.

Organizations' effectiveness at talent-management actions for digital tech roles, past 2 years, % of respondents[1]



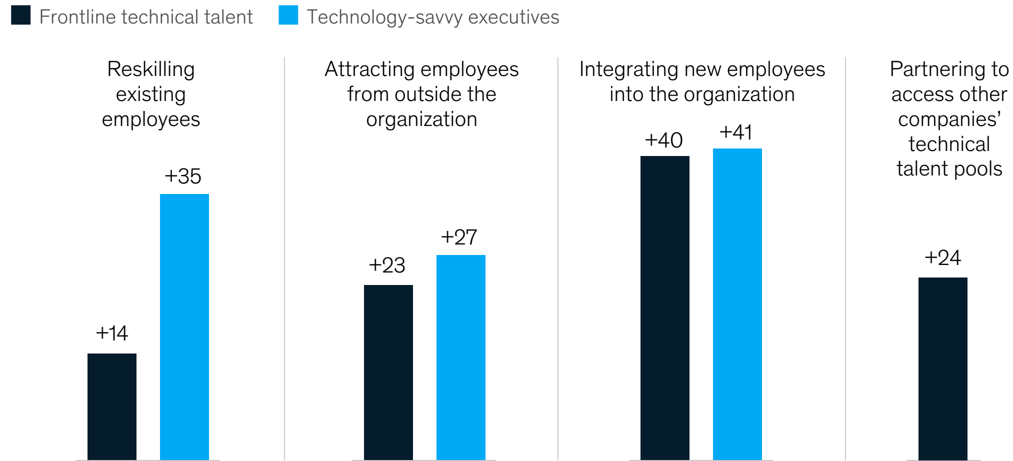
[1]Respondents who answered "neutral," "somewhat effective," "very ineffective," or "don't know" not shown. Respondents were asked to rate their organizations' effectiveness only for actions that they reported organizations were using to source talent for digital and technology roles. For "reskilling existing employees," n = 1,250; for "attracting employees from outside organization," n = 1,233; and for "integrating new employees into organization," n = 585.
Source: McKinsey Global Survey on digital investments and transformations, January 25–February 4, 2022, of 1,331 business leaders

[10]"The new digital edge: Rethinking strategy for the postpandemic era," McKinsey, May 26, 2021.

Exhibit 6

Top economic performers are better than their peers at talent management for digital and technology roles, especially for technology-savvy executives.

Organizations' effectiveness at talent-management actions for digital tech roles, past 2 years, % difference of top economic performers over all other respondents[1]



[1]Includes "very effective" or "somewhat effective" responses; respondents who answered "neutral," "somewhat effective," "very ineffective," or "don't know" not shown. Respondents were asked to rate effectiveness only for actions that their organizations were using to source digital and technology talent. "Top economic performers" defined as those with respondents who reported increases of ≥15% in their organizations' revenue and EBIT over past 3 years.
Source: McKinsey Global Survey on digital investments and transformations, January 25–February 4, 2022, of 1,331 business leaders

finding and retaining talented product managers will be essential for all companies.

As organizations continue to navigate an era of massive uncertainty and disruption, digital tech is an increasingly critical differentiator of both strategy and performance. The actions of today's best-performing companies reflect that fact. For all other companies, three lessons emerge: use digital tech to achieve strategic differentiation on customer engagement and innovation; build proprietary assets, such as software, data, and AI, and combine them with a scalable, cloud-based architecture to create a strategic advantage; and focus the quest for digital talent on C-suite and other executives, given the talent integration challenges that many companies continue to face.

The contributors to the development and analysis of this survey include **Laura LaBerge,** a director of capabilities for digital strategy in McKinsey's Stamford, Connecticut, office; **Kate Smaje,** a senior partner in the London office; and **Rodney Zemmel,** a senior partner in the New York office.

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A devilish duality: How CEOs can square resilience with net-zero promises

Amid turbulence on the path to net zero, leaders will have to be much nimbler to balance resilience with an energy future that is secure, affordable, and clean. Five actions can help.

by Bob Sternfels, Anna Moore, Daniel Pacthod, and Humayun Tai

What a difference a year makes. In November 2021, business leaders showed up in force in Glasgow at the UN Climate Change Conference (COP26), pledging to take on the challenge of reaching net-zero greenhouse-gas-emission goals by 2050. While no one believed that the path to net zero would suddenly become easy, commitments made to target nearly 90 percent of CO_2 emissions for reduction signaled that the private sector was truly engaged. Then major new headwinds began swirling: surging inflation, war in Europe, energy insecurity, and a potential global recession. Still, governments pressed ahead, passing major climate legislation packages in Europe and the United States. More than 3,000 companies have made commitments on net-zero pathways.

At the time of COP26, McKinsey released a perspective on the requirements needed to secure a net-zero carbon emission transition.[1] It was clear, given the challenges to deploying capital at scale, managing economic dislocations, and scaling up supply chains and infrastructure, that the path would not be linear and would include slowdowns and backstepping. Ultimately, sustainable systems are more value creating than traditional ones. But countries and companies must balance trade-offs among net-zero commitments, affordability for citizens, and security of energy and materials supply.

As disruptions have intensified, the moment confronts CEOs—an organization's ultimate integrator—with a devilish duality. As net zero has become an organizing principle for business, executives are on the spot to lay out credibly how they will deliver a transition to net zero while building and reinforcing resilience against the certain volatility of ongoing economic and political shocks. The zigs and zags of present conditions will tempt some

[1] "Solving the net-zero equation: Nine requirements for a more orderly transition," McKinsey, October 27, 2021.

leaders with exclusive choices—doubling down on fossil fuels, for example, at the expense of new and emerging renewable technologies. Leaders will face multiple calls on their attention, as well as concerns about how quickly to drive a sustainability agenda forward.

We believe that the right response to such challenges has always been a matter of "and," not "or"—that is, maintaining focus on the long term while adjusting in the face of present conditions rather than opting for one or the other. A resilient stance, being prepared to withstand shocks and poised to accelerate into a changed reality, permits companies to weather not just the current moment but also the future storms that are likely to come their way in a world of rising risks.

The task is neither simple nor easy.[2] Yet as leaders prepare to gather in Egypt for the 2022 UN Climate Change Conference (COP27), there is also good news: today's reality is that sustainability, economic competitiveness, affordability, and national security dovetail as never before. To make the most of the situation, CEOs can shape strategy around resilience now to tap value-creating businesses tomorrow as the world continues to head toward net zero in the long run. In this article, we present five core actions to help meet the dual imperatives at the heart of a new sustainability strategy.

Stormy weather

The path to net zero was always going to be fraught with complexities. Recently, several "weather fronts" have emerged, posing significant challenges to leaders across both the private and public sectors.

Energy availability and security
The Russian invasion of Ukraine and the resulting energy crisis in Europe are reminders that, fundamentally, disruption in energy markets can wreak havoc on the global economy. In response, countries are boosting the use of fossil fuels, including coal and gas, and extending the life of conventional energy infrastructure, which is under growing pressure.

Physical risks are proliferating. Europe saw a record-breaking heat wave this summer. Floods devastated Pakistan this autumn, and tropical storms raged across Japan, the Koreas, and China. In the United States, Texas saw an unprecedented grid failure in 2021, with a near miss in California this year. There are important choices to be made, some of which entail trade-offs between climate mitigation and climate adaptation—for example, rebuilding versus relocating and investing in cooling versus keeping energy consumption down—all of which occur within a limited envelope of infrastructure funding.

Affordability
Prices are rising across the globe, driven by the energy crisis in Europe, the growing food crisis resulting from the invasion of Ukraine, and a recovery from the COVID-19 pandemic that has been faster than expected, and, though welcome, has put pressure on supply chains. The outlook is ominously recessionary.

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[2] "The net-zero transition: What it would cost, what it could bring," joint report from McKinsey, McKinsey Global Institute, and McKinsey Sustainability, January 2022.

There is a growing perception that net zero comes at the expense of affordability, with a zero-sum trade-off. The universal problems of supply chain and talent shortages complicate the equation, particularly as deployment for the new assets and infrastructure needed for the net-zero transition pick up. This, in turn, could result in price spikes for the key inputs needed for the net-zero transition. Companies also face growing challenges in securing the parts, labor, and specialized skills they need to execute on net-zero commitments. From heat pumps to recycled textiles and insulation installers to carbon management data scientists, companies are struggling to match supply to customer demand.

Governance and regulation
A key tenet of any orderly transition to meeting net-zero goals is demonstrating ongoing governance and cooperation among public- and private-sector institutions, meeting commitments, and maintaining public support for progress toward cutting greenhouse gases. The war in Ukraine has already reduced the potential for such cooperation. Also, the United States is seeing growing backlash against standardized environmental, social, and governance (ESG) reporting requirements and skepticism of ESG funds that some criticize as punishing fossil-fuel producers and hurting local economies. The outlook for aligned standards, requirements, and public support is becoming murkier.

Shaping a resilient sustainability strategy

There is an increasingly popular view that leaders will need to navigate a zero-sum trade-off between addressing climate action headwinds and sticking to their commitments for achieving an orderly net-zero transition. However, while the path to net zero will not be a straight line, and some regions will step back commitments for the short term, the long-term trajectory remains intact.

More important, these discontinuities also create opportunities—and imperatives. We believe that the potential is great to shape a resilient sustainability strategy that creates a virtuous cycle of managing short-term shocks; bolstering prospects for an affordable, clean, and secure energy future; and improving the long-term competitiveness and value creation of companies. In part, this is because competitors may be tempted to pause during this period of turbulence. That creates a chance for those who stay the course to gain strategic distance:

- *Energy independence via accelerated use of renewables and clean power and capture of the full potential of energy efficiency and distributed electricity.* Diversifying the energy supply with renewables, green hydrogen, and green power promotes national energy security and economic competitiveness. In Europe, the invasion of Ukraine and the effort to develop a future free of dependence on Russian gas has prompted Europe to raise its commitment to renewables (alongside imported natural gas in the medium term and possibly nuclear power in the longer term). Of course, energy market resiliency must be built in tandem—for example, by rewarding the firming of capacity in power markets as the share of intermittent power generation grows. Even prior to the invasion of Ukraine, industrial policy across the larger European economies was focusing on clean-energy tech as a source of national competitiveness. Examples include European clean-tech export policies, support for

rare-earth minerals needed for new climate tech, and national funding to drive local new-energy industrial growth (such as the US Infrastructure Investment and Jobs Act). Companies that operate in this space or serve those in it have clear long-term growth prospects.

- *New value from existing systems.* It is becoming increasingly apparent that it may be possible to repurpose existing methods of carbon-intensive production with additional enabling technologies to future proof them for a sustainable future. Numerous examples—such as retrofitting existing industrial production facilities for carbon capture, use, and storage (CCUS); using hydrogen blends in methane carriers; and employing direct air capture (DAC)—are emerging to lower carbon intensity and transform existing systems into cleaner alternatives. Owners and operators of this infrastructure that invest in future proofing through CCUS, DAC, or other tech stand to make significant gains. Repurposing rather than stranding these assets will not just enable affordability and system resiliency but also provide incumbents with greater confidence that decarbonizing their legacy assets is feasible.

- *Sustainable materials transition.* The energy transition requires a materials transition. Projected electric-vehicle demand, for example, will raise demand for cobalt, copper, lithium, nickel, and rare-earth minerals, putting further upward pressure on pricing across these commodity classes. Commitments to decarbonize automotive, consumer goods, packaging, and other sectors are also already driving supply–demand shortages in aluminum, plastics, and steel. We expect, for example, a 50 to 60 percent shortage of same-cycled plastics compared with demand in 2030, driving significant green premiums. If supply eventually meets demand, early movers will most stand to gain. With the current commodity cycle at a peak, cash can be reinvested in nascent materials opportunities that will be in clear demand in the longer term.

- *New sources of capital.* Investors and incumbents have started a new wave of capital deployment toward net zero, including investments in new materials, new climate tech, and more adaptive supply chains. These investments are increasingly following a “private equity plus” model, with heavily involved investors helping build new green challengers from the outset. Countries and regions with hard-to-abate sectors are also increasingly important sources of climate tech and transition capital as they seek to decarbonize while preserving economic growth. These ventures are in their early stages as voluntary and policy-driven demand materializes and grows. But they demonstrate that while there is some ESG-related backlash, a broader set of clean investments are continuing to grow.

- *Voluntary carbon market (VCM) development.* A critical pillar of enabling net zero and financing asset decarbonization is the ability to value carbon with liquidity. VCM will be critical. Although the situation is unsettled now, we see expanded dialogue and more concrete actions toward establishing VCM at the country and private-financing levels. For example, several Southeast Asian governments are shaping national voluntary carbon exchanges, and company commitments to voluntary carbon have grown.

- *Reshaped value chains and reindustrialized nations.* In some developed economies, game-changing policies are supporting new net-zero value chain plays. The US Inflation Reduction Act commits $370 billion in climate spending, targeting the creation of new

sustainable industries across the country and accelerating clean tech, such as green hydrogen. Another US legislative measure, the Bipartisan Infrastructure Law, is poised to prompt reindustrialization, replacing value chains based on internal-combustion engines with electric- and battery-based alternatives. In the European Union, the Fit for 55 and REPowerEU packages will create new winners across industries and reshape value chains in a way that brings affordability to the fore. New forms of public–private partnerships will therefore also need to take shape. Instilling more control within regions and individual countries will enable them to protect against price shocks for citizens.

Done well, pursuing these opportunities should create a virtuous cycle for economies among affordability, decarbonization, energy security, job creation, and resilience. Renewable energy is one obvious example with the potential to promote energy security, create high-quality jobs, and reduce emissions in tandem. New sources of capital and VCM could make sustainable investments more affordable, bringing them to market sooner, and successful delivery of these projects would in turn boost returns and attract further capital. Sustainable materials could facilitate the energy transition while creating new value from existing systems and infrastructure. And so on. These examples illustrate the power and possibility of the "and"—a flywheel-like effect that enables meeting security, socioeconomic, and sustainability goals in parallel.

Across these opportunities, incumbents are positioned to succeed more often than not. Every incumbent player, especially in hard-to-abate sectors, has two sets of opportunities: decarbonizing while extending fossil-fuel-based core business (potentially earning green premiums as a result, as early movers in sustainable materials already are) *and* building new sustainable businesses. Incumbents can use existing cash flows and strong balance sheets to fund new sustainable businesses that lay the foundation for future growth. They can afford to invest for the long haul and place bets across multiple new clean technologies—another advantage when the end point is clear but the precise path to get there is not.

Resilience today and value tomorrow: Five actions for CEOs

The pressure to demonstrate real progress on and create true value through sustainability is growing. The world has, however, entered an era that is increasingly challenging for CEOs and business leaders to navigate. There is a new strategic paradigm—one with reasonable certainty of where the world needs to be in the medium and long term and tremendous volatility in terms of how and when it will get there.

Leaders must build resilience to today's shocks to build tomorrow's champions. Some approaches will be easier than others and offer a good starting point.

Accelerate capital deployment with a private-equity mindset
Leading with resilience while navigating toward net zero means participating early in the materials transition and green-business-building wave to secure exposure to promising innovations (exhibit). Earlier-cycle investments have higher risk but also higher returns because they benefit from early policy funding, greater willingness for counterparties to

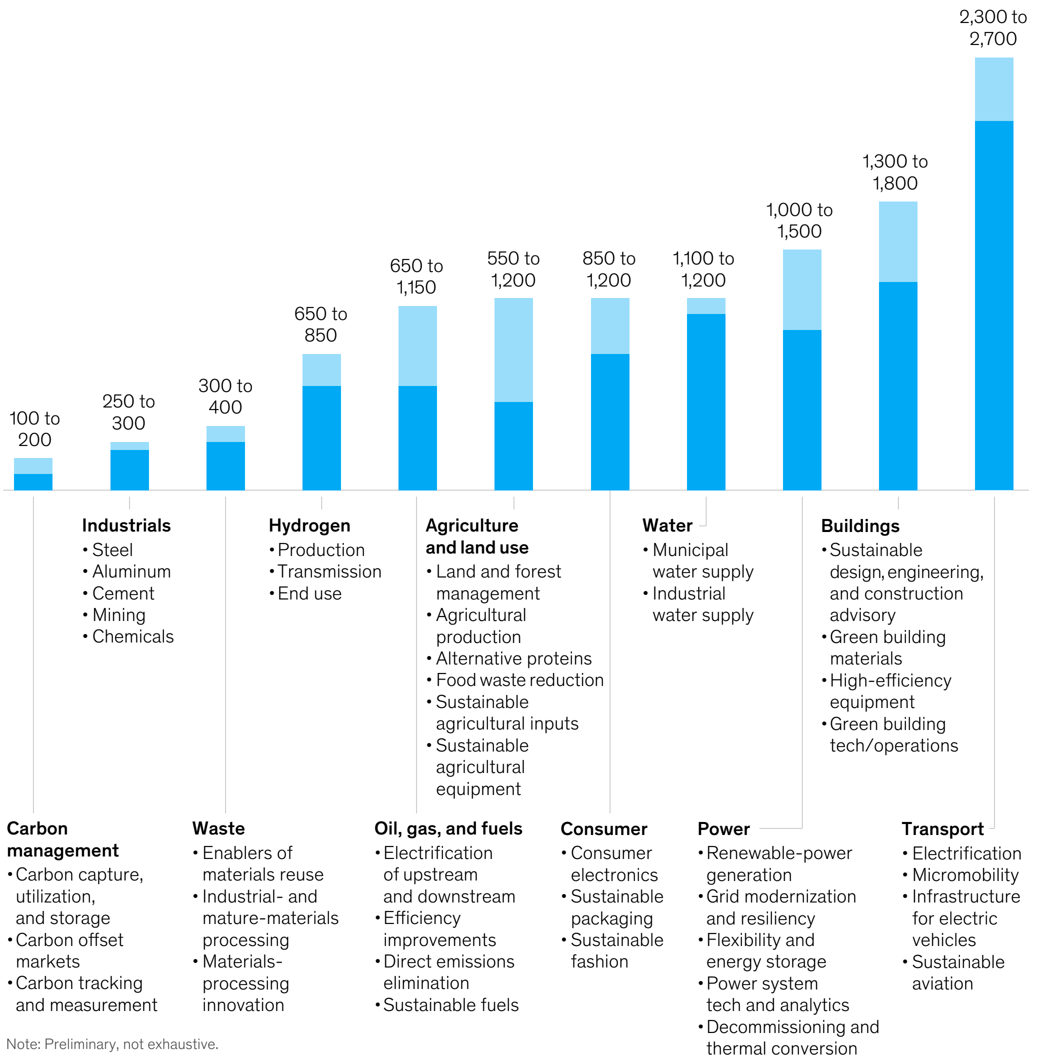
participate (for example, through sustainable aviation fuel contracts, which guarantee demand from airlines that allows investment in supply), new talent, and the opportunity to gain first-mover advantage in nascent and emerging value chains.

In many industries, there will be multiple sustainability winners. For example, we expect both hydrogen-fueled and electric vehicles to be part of the 2050 ground transport system. This is another reason to consider an investor mindset—spreading bets across multiple potential investments earlier. Companies can further manage their transition risk by aggressively pursuing operational decarbonization measures that already pay for themselves (for example, through energy efficiency) while making longer-term

Exhibit

Eleven high-potential value pools could be worth more than $12 trillion of yearly revenues by 2030 as the net-zero transition advances.

Addressable market size in 2030, selected categories, $ billion



Note: Preliminary, not exhaustive.

investments in sustainable infrastructure and building new businesses. Pursuing energy efficiency and rapidly scaling distributed clean heating (for example, via heat pumps) will become a critical lever in Europe to manage the energy crisis.

Play offense through a sustainable value creation strategy

Two objectives should be paramount: to extend and decarbonize the core business and to build new sustainable businesses in reshaped value chains. This would represent an "*Apollo 11* moment" in many industries—a moon shot requiring not just incremental improvements but wholesale rethinking of how to build, operate, and maintain every sector of the economy. Leaders need to make quantum leaps to meet the moment, by getting smart on climate tech fast, engaging with the innovation ecosystem, and leveraging their engineering and business-building talent. Similarly, a focus on sustainability—and ESG measures, more broadly—is defensible, pragmatic, and needed. CEOs can articulate their approach to ESG topics proactively by focusing on resilience and value creation, not simply as part of "right to play" and risk mitigation.

Go beyond net zero

CEOs should also look to make their companies net nature positive. Actions include moving ahead in the game on biodiversity, demonstrating stewardship of shared water and air resources, ensuring a responsible supply chain, and contributing to a just transition, among other steps. Adaptation investments to address physical risks will also be critical. Companies able to weather the storm, literally, will have a material advantage.

In some instances, sustainability aims come into conflict—for example, lithium brine operations are less carbon intensive than hard-rock extraction but consume far more water. CEOs will need to weigh current trade-offs carefully and invest in innovation that meets multiple aims, "squaring the circle" in an increasingly complex ecosystem. The bar is rising on sustainability; companies need to have a plan on these and other factors.

Build the partnership and ecosystem muscle

CEOs should realize that the challenge of maintaining resiliency while driving toward net zero is too great to go it alone. New public–private partnerships will be needed because many of the emerging energy and materials value chains will require full ecosystem development. Consider, for example, clean-fuel consortiums, such as those developing around hydrogen hubs, and shared CCUS networks. There are also opportunities to partner with competitors on shared tech road maps to mitigate tech risk and to better direct innovation funding.

Aggressively reskill leadership teams, boards, and frontline workers

As companies embrace a sustainable future, they will need new skills. Sustainable fashion, for example, requires fully rethinking design, manufacturing, procurement, marketing, and waste management processes while also better tracking carbon emissions and circularity. Talent across the organizations will need to reskill to meet these new demands. Companies need to identify the skills needed for their more sustainable business models and work toward acquiring them *and* building them internally.

Navigating the current turbulent period for the net-zero agenda may require temporary responses that, in some cases, may look like setbacks. They need not be. CEOs who understand the virtues of strategic resilience know that addressing immediate hardship and building a sustainable future can—and should—be pursued at the same time. By maintaining vision, moving nimbly, playing offense, and embracing opportunity instead of recoiling from risk, leaders can improve the future of their businesses and the planet. Q

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The net-zero transition in the wake of the war in Ukraine: A detour, a derailment, or a different path?

The invasion of Ukraine will, at least initially, complicate the transition path to a net-zero economy, but this tragic development could still prove to be a turning point in accelerating progress in the medium run.

by Hamid Samandari, Dickon Pinner, Harry Bowcott, and Olivia White

The Russian invasion of Ukraine[1] has ushered in a humanitarian crisis of a scale not seen on European soil since the Second World War, a level of geopolitical tension not experienced since the Cuban Missile Crisis, and a set of rapidly evolving political, economic, and societal responses and counterresponses whose ramifications can scarcely be estimated at this point. Nor are there signs of an imminent resolution on the horizon.

As Russia is one of the world's largest producers of oil, gas, and commodities, one can naturally expect that the massive and universal effort required to address the world's looming climate crisis would also be swept up in the maelstrom. This raises the question of whether the war and its aftermath will prove to be a limited detour from the previous path of net-zero transition, or a true fork in the road and a far more consequential redirection.

It seems clear at this point the war will complicate the transition's path in the short term. In the longer term, however, the logic of energy security and economics could converge to kick net-zero transition efforts into higher gear. Bold moves would be needed at unprecedented speed to boost energy-efficiency measures and adopt renewable-energy alternatives to fossil fuels. If adopted, such actions could drive net-zero technologies down their respective cost curves and build a pathway to faster decarbonization in other regions.

[1] Russia's invasion of Ukraine in February 2022 is having deep human, social, and economic impact across countries and sectors. The implications of the invasion are rapidly evolving and are inherently uncertain. As a result, this article, and the data and analysis it sets out, should be treated as a best-efforts perspective at a specific point in time, which seeks to help inform discussion and decisions taken by leaders of relevant organizations. This article does not set out economic or geopolitical forecasts and should not be treated as doing so. It also does not provide legal analysis, including but not limited to legal advice on sanctions or export control issues.

Such outcomes would not be surprising in light of history; conflict has often accelerated energy transitions. The 19th century's naval wars accelerated a shift from wind- to coal-powered vessels. World War I brought about a shift from coal to oil. World War II introduced nuclear energy as a major power source. In each of these cases, wartime innovations flowed directly to the civilian economy and ushered in a new era.[2] The war in Ukraine is different in that it is not prompting the energy innovation itself but making the need for it clearer. Still, the potential impact could be equally transformative.

In this article we attempt to offer a more granular view of what might be in store. We examine the possible effects of the war and its ramifications on the key requirements for a more orderly net-zero transition. We explore the war's potential effect on key sectors and how shifts in energy and finance markets could play out in the aggregate, both globally and within major regional blocs. Finally, we suggest steps that stakeholders could take as they navigate this turbulent period while continuing to drive toward as orderly a transition as possible. To do so, we start by considering the net-zero context at the time the conflict began.

A precarious moment

The invasion of Ukraine came at a time already marked by insufficient progress toward the net-zero transition. Challenging economic conditions threatened its acceleration, and accumulating physical risks made its necessity even more evident.

Even before the invasion, despite the rising tide of public- and private-sector commitments made in 2021, the world was not on a path to achieve net-zero greenhouse-gas emissions by 2050. Indeed, if all existing commitments were achieved, the world would still fail to stabilize global warming temperatures at 1.5°C.[3] Moreover, most of these commitments were not yet backed by the required financial resources and execution plans.

As for the world economy, it was already suffering from several preexisting conditions. A once-in-a-century, multistage global pandemic has caused an estimated 25 million deaths,[4] increased global public debt by 28 percent to 256 percent of GDP,[5] shrunk global GDP by 3.3 percent,[6] and given rise to rapidly increasing inflation across the globe.[7] Supply chains were under significant strain, energy markets were already tight, and global commodity prices had risen to ten-year highs.[8] The war in Ukraine has exacerbated all these trends, affecting lives and livelihoods both locally and globally and threatening the most vulnerable with the potential for a marked decline in energy and food security and affordability.

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[2] Vaclav Smil, *Energy and Civilization: A History*, Cambridge, MA; MIT Press, 2018; Alex Roland, *War and Technology: A Very Short Introduction*, New York, NY; Oxford University Press, 2016.

[3] Rebecca Burdon et al., "Realization of Paris Agreement pledges may limit warming just below 2°C," *Nature*, April 13, 2022.

[4] As measured by excess mortality; Sondre Ulvund Solstad, "The pandemic's true death toll," *Economist*, accessed April 2022.

[5] Vitor Gaspar, Paulo Medas, and Roberto Perrelli, "Global debt reaches a record $226 trillion," International Monetary Fund, December 15, 2021.

[6] "GDP growth (annual %)," World Bank Group, accessed April 2022.

[7] "Inflation (CPI)," OECD, accessed April 2022.

[8] "Global price index of all commodities," St. Louis Fed, accessed April 2022.

At the same time, the manifestations of climate change—among them unprecedented heat waves in India and worsening drought in the American West—continued to multiply. In that context, the *Sixth assessment report*,[9] published by the United Nation's Intergovernmental Panel on Climate Change, issued a few days after the invasion provided a stark warning that climate change was already exerting substantial effects on human and natural systems, that these effects would scale in nonlinear fashion in the face of continued warming, and that the window for avoiding the most catastrophic effects of climate change was fast closing. As we examine the potential impact of the current conflict on climate action, it may also be worth noting that the absence of climate action could well increase by itself the risks of future conflicts, within and across nations, as a result of contention over scarcer resources such as food and water.

The war's impact on the key requirements for the net-zero transition

In earlier research we described the nine key requirements that we believe must be met to bring about the net-zero transition. These fall into three broad categories: necessary physical building blocks; economic and societal adjustments; and governance, institutions, and commitments, including public support for progress toward cutting greenhouse gases. Understanding the war's potential impact on each of these could help leaders better assess the prospects for the net-zero transition.

In the near term, the availability of necessary physical building blocks could be reduced in the aggregate

The transition requires three main physical building blocks: technology innovation, the creation of the supply chains that enable the deployment of new technologies, and the availability of the key natural resources needed. These three factors are subject to developments such as the interruption of production centers in Ukraine, economic sanctions against Russia, and reduced economic cooperation between nations. In the near term, technological innovation would likely speed up as stakeholders affected by rising energy or commodity inputs look for more economical substitutes or further see the importance of compensating measures such as carbon capture and sequestration. Indeed, since the war began a substantial influx of capital into renewable energy funds has taken place, reversing a multimonth downward trend.[10] On the other hand, while in the short-term desire to expand net-zero infrastructure may increase, its execution may be challenged by the logistical stresses of market reorganization (due to sanctions) and rising energy prices, which could stress the often complex, multinational (and therefore transport-intensive) supply chains for net-zero technology.

In our view, however, the dominant near-term impact on the physical building blocks would be negative and come from reduced access to key natural resources. For example, Russia's strong position in natural resources, including key minerals such as copper, and comma: nickel, and silicon,[11] has already delivered a significant supply-side shock (Exhibit 1). These materials are essential inputs to four of the most important net-zero

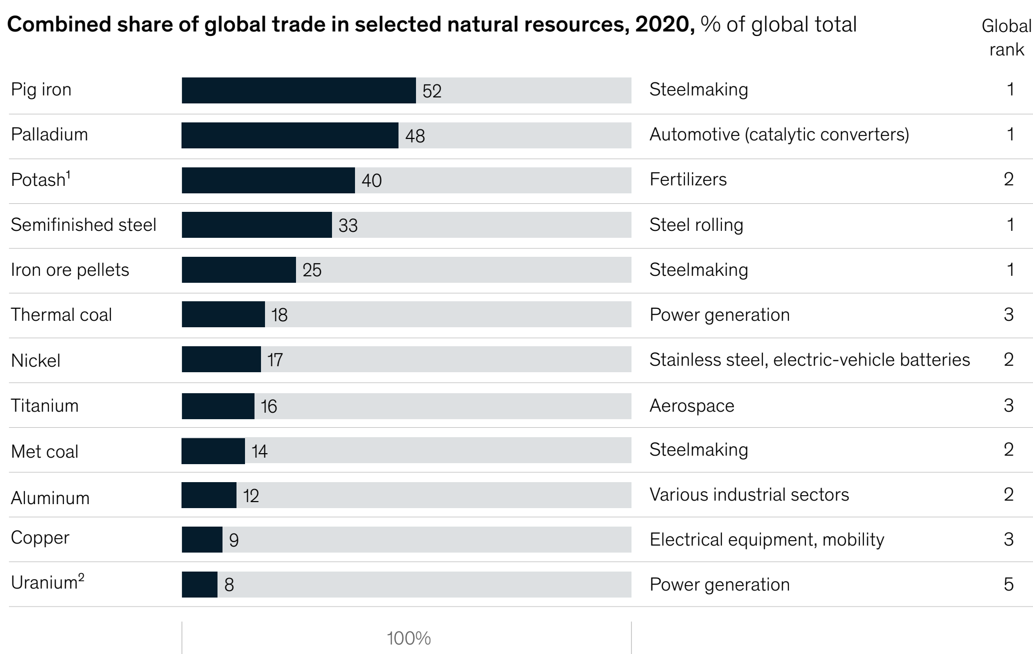
[9] *Sixth assessment report*, Intergovernmental Panel on Climate Change, updated April 4, 2022.

[10] Pippa Stevens, "Investors are plowing money into clean energy funds as Ukraine war puts energy needs in spotlight," CNBC, April 3, 2022.

[11] Russian Federation Minerals Exports by Country in US$ Thousand 2019 Database, World Integrated Trade Solution, accessed April 2022.

Exhibit 1

Ukraine and Russia have significant share of global trade in many commodities.



[1]Potash share includes Belarus data.
[2]Uranium lacks trade data; production share/ranking shown here.
Source: AME Group; EUPipeFlow; International Energy Agency; LNGFlow; MineSpans; *Resources and Energy Quarterly*; Spire; McKinsey analysis

technologies: onshore and offshore wind turbines, solar panels, electric vehicles, and battery storage. Shortages driven by the war in Ukraine would overlay an already stressed renewables supply chain, which drove long-term contracts for wind and solar generation up 19 and 12 percent, respectively, over the past year.[12]

That said, the impact of shortages on the attractiveness of net-zero technologies is not straightforward. For example, renewable-generation assets require one-time capital expenditures but minimal operating costs. As a result, input cost increases may impact the power sector less than sustained increases in fossil-fuel prices. Resource supply shocks may be felt less in Europe (which is more susceptible to sustained fossil-fuel price increases) than in the United States, where energy prices would provide less of a counterbalance to input costs. Furthermore, some large net-zero technology-producing countries are not participating in sanctions against Russia and could retain access to supplies, potentially leading to uncertainty in cost impacts for their trading partners. Likewise, the prospect of the ongoing shortages is already spurring a wave of prospecting for alternative sources, which would likely have a positive impact in the medium term.

Finally, it is important to note the near-term impact on a critical but often overlooked natural resource for the net-zero transition: land. In addition to their role in exporting a wide range of minerals, Ukraine and Russia are important producers of key agricultural

[12] Katherine Blunt and Jennifer Hiller, "Ukraine war drives up cost of wind, solar power," *Wall Street Journal*, March 27, 2022.

commodities. Shortages resulting from sanctions and destruction of Ukrainian production centers are likely to reduce the availability of key agricultural commodities including wheat and fertilizer. Additionally, climate forecasts for 2022 indicate it could be a below-average period for breadbaskets globally,[13] resulting in an additional reduction in supply. Supply shortages and price increases in agricultural markets could lead to conversion of additional land to agricultural production across the globe, which would increase deforestation rates and agricultural emissions.

In the near term, the impact on effective economic and societal adjustments would vary across geographies

The economic and social adjustments needed to reach net zero in a more orderly manner depend on management of demand shifts and unit costs, compensating mechanisms to address the socioeconomic impacts of transition, and effective capital allocation and financing structures. In the near term, management of demand shifts and unit costs could be positively affected, as increased energy costs move forward the break-even point for decarbonization solutions for many hard-to-abate industries, and commodity shortages boost movement toward increased recycling. However, the war in Ukraine has introduced new domestic priorities in many countries—including increasing defense spending, blunting the regressive impacts of rising energy prices—and providing humanitarian aid. This could negatively affect compensating mechanisms, particularly with respect to the flow of capital from the Global North to Global South. Even before the war, the flow of capital to developing nations was already almost 20 percent below the developed nations' pledge of $100 billion in annual aid by 2020.[14]

Overall, we believe that the dominant near-term impact on economic and social adjustments would be a shift in capital allocation and financing structures toward increased fossil-fuel production in response to rising prices.

In Europe, rising energy prices would drive an increase in short-term capital allocation to fossil-fuel production and consumption, particularly from existing or recently decommissioned assets. This is not because renewable alternatives are not economical or available or cannot be deployed. Rather, these alternatives would take time to deploy, and the rise in energy prices poses an immediate economic and political crisis that must be addressed. Furthermore, a move to diversify sources of fossil-fuel imports is likely, in the interest of both price and energy security, although diversifying away from Russian gas would require time to overcome logistical hurdles, contract negotiation, pipeline-capacity restrictions, and import-facility development, as demonstrated by Europe's purchase of more than $46 billion in Russian gas since the invasion of Ukraine.[15] Finally, where lowering price is not possible via increased domestic production or source diversification, a shift back toward cheaper but more emissive fuels, such as coal, is likely, and already being observed in, for example, Germany.[16] As for parallel investments in accelerating the deployment of net-zero technologies, there may be a contention for resources with other immediate needs such as defense, mitigation of the most regressive impacts of energy price increases, and humanitarian action.

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[13] Jeff Tollefson, "What the war in Ukraine means for energy, climate and food," *Nature*, April 5, 2022.

[14] Jocelyn Timperley, "The broken $100-billion promise of climate finance—and how to fix it," *Nature*, October 20, 2021.

[15] Jack Guy, "Europe has bought $46 billion worth of Russian energy since the Ukraine war began," CNN, April 29, 2022.

[16] Nikolaus J. Kurmayer, "Germany reactivates coal power plants amid Russian gas supply threats," Euractiv, March 10, 2022.

In the United States, the near-term trend is also likely toward increasing fossil-fuel production to address domestic price rises and to support the diversification of European supply. The medium- to long-term trend is less certain. Given abundant domestic fossil-fuel reserves, the United States is less susceptible to energy price increases, but equally exposed to shortages of key net-zero materials. The economics of transition may not improve as much in the United States as they could in Europe, nor would the concerns about energy security be as severe. One potential impact on the medium-term energy landscape in the United States could be an acceleration of the displacement of more expensive and more carbon-intensive oil on the global market with Permian oil from the US Southwest, which is a key step for a successful net-zero transition, given that some level of oil demand will remain through to the late stages of the transition. We would also note that the United States also faces a unique opportunity to reduce its fossil-fuel consumption through the implementation of broad energy-efficiency policy, discussed in more detail below, which could lower costs for consumers, improve energy security, and make progress toward its climate goals.

Finally, in Asia there is a risk of a shift back to coal in the near term. If sanctions reduce access to the pipelines Russia primarily uses to transport oil and gas to Europe, it will take time for Russia to build alternative pipelines to tap the Asian market. With the market for natural gas likely to tighten substantially, the resulting price rise could push less economically robust consumers in Asia out of the market and back toward coal, which is abundant, cheap, and more lightly regulated.

Governance, institutions, and commitments could weaken at the international level but strengthen in regional and private spheres in the near term

The success of governance, institutions, and commitments depends on three conditions: having the necessary standards, market mechanisms, and effective institutions in place; commitment by and collaboration among public-, private-, and social-sector leaders; and support from citizens and consumers. In the near-term, the invasion of Ukraine could weaken all these requirements globally, but also strengthen a subset of them in regional and private spheres.

The war could negatively affect international cooperation and jeopardize the creation of the international standards, agreements, and institutions that a more orderly transition requires. Furthermore, the introduction of competing priorities at all levels could deprioritize decarbonization and transition for decision makers. For example, survey data support a short-term weakening of attention on climate across the public.[17]

While a move toward increased national rivalries and the introduction of competing priorities could negatively affect international cooperation on many fronts, many major economies, including China, have entrenched incentives to continue to support global action on the net-zero transition, given their large and continued investment in producing green technologies and components. For example, China produces a third of global wind

[17] IPSOS polls of approximately 20,000 people across 30 countries between August and September 2021, and February and March 2022, showed climate falling from the fifth-most pressing issue (ranked behind cost of living, COVID-19, poverty, and the healthcare system in 2021) to the eighth-most pressing issue in 2022, where it was overtaken by war (the second-highest concern globally), crime, and education prospects; “Earth Day 2022: Global attitudes to climate change,” Ipsos, April 18, 2022; *Obs’COP 2021: Presentation of the findings of the International Climate and Public Opinion Observatory*, EDF and Ipsos, December 2021.

turbines, 70 percent of global solar photovoltaics, and is home to three-fourths of the world's global capacity for lithium-ion battery manufacturing.[18] Importantly, commitment by and among private- and social-sector leaders could also be strengthened in response to diminished international cooperation. Most corporate and social-sector entities are multinational, benefit from coordination, and thus have incentives to maintain strong international ties.

A short-term detour or a long-term deviation?

Considering these new forces and differing effects, we believe that the war would overall have a negative impact on the key requirements in the short term and cause a detour on the path of a more orderly transition. The long-term impact, however, could still prove a positive turning point if leaders act with farsightedness and courage and if they are supported by a growing popular mandate in doing so.

This future hinges on two things. The first is that the scope of the war in Ukraine remains contained and does not widen. The net-zero transition would very likely be derailed by an expanding conflict, and a derailed transition could in turn multiply, by orders of magnitude, its catastrophic impact. The second is that an acceleration of the transition postconflict would only be possible given sufficient commitment from public-, private-, and social-sector leaders to recognize that investments in renewables, energy efficiency, and decarbonization are not causes of energy price increases and insecurity but solutions to those problems. Forward-looking leadership will require leveraging the awareness of the moment to seek a broad public mandate and to leverage that mandate to make substantial, thoughtful, near-term investments in these solutions and their supporting supply chains.

For example, while commodity shortages and price increase may exhibit a negative impact on the transition in the near term, supply chain chokepoints, like lithium production in battery components, have long been identified as limiting factors to transition speed.[19] The present supply shock highlights a clear need and opportunity to make investments in expanding and securing supply of key minerals, which will not only have benefits for future transition speed, but also for lowering the costs of other common consumer goods, particularly electronics, that require the same inputs.

While near-term energy price rises could result in an increase in fossil-fuel production and a revival of recently decommissioned generation assets, in the long term, energy-security concerns could drive investment into energy efficiency and renewable energy as a key tool for energy independence and price management. For example, the latest proposed RePowerEU plan put forth by the EU Commission on May 18 includes plans to almost double European biomethane production and triple capacity of green hydrogen via production increases and imports by 2030, a massive deployment of 510 gigawatts of installed wind and 600 gigawatts of installed solar photovoltaic power by 2030, the

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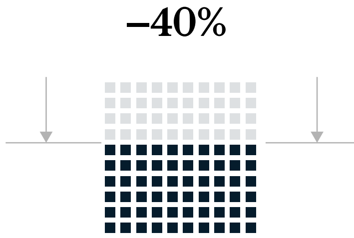
[18] Sarah Ladislaw and Nilos Tsafos, "Beijing is winning the clean energy race, " *Foreign Policy*, October 2, 2020.

[19] Neil Winton, "Lithium shortage may stall electric car revolution and embed China's lead: Report," *Forbes*, November 14, 2021.

Exhibit 2

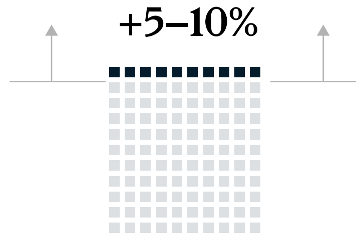
Energy efficiency is imperative to tame total production costs that rose by 50 percent in recent months.

Potential energy reduction



Heavy industry planned to reduce 50% of their energy and CO_2 footprint by 2030. Current utility prices make most of these business cases attractive much more quickly. Pulling forward high-impact cases could secure up to **40% energy-cost reduction** over the next 2–3 years.

Potential EBITDA[1] advantage



Companies taking bold action and performing at speed could make energy efficiency and supply a competitive advantage worth **5–10% EBITDA margin** over sales, while abating their CO_2 footprint by more than 40%.

[1]Earnings before interest, taxes, depreciation, and amortization.

installation of about 30 million heat pumps, the enhancement of domestic manufacturing capability, and a substantial simplification of approval and permitting processes for renewable generation and infrastructure development projects, all over the next eight years. Such policies could be further accelerated by the fact that despite input price rises, construction of net-new solar and wind capacity remains faster and more economical than coal or natural gas.[20]

Energy-efficiency measures have long been economically viable,[21] but have often failed to attract sufficient public mandate for deployment.[22] Survey data now suggest 80 percent of European citizens support government subsidies for improving home energy efficiency. Similar levels of support are also seen in the United States, where 89 percent of respondents to a March 2022 Gallup poll demonstrated support for tax credits for home renewable-energy systems, 71 percent setting fuel-efficiency standards for cars, trucks, and buses, and 61 percent tax incentives for the purchase of electric vehicles, among other policies.[23] Some of these tax incentive splits show majority bipartisan support.

In addition to driving the uptake of renewable energy and energy efficiency, current utility prices could make the business case for hard-to-abate industry decarbonization more attractive. Putting forward high-impact, ready-to-deploy cases could secure up to 40 percent energy-cost reductions and deliver significant additional earnings (Exhibit 2).

Finally, the current situation further underscores the importance and urgency of adaptation. Even a short-term detour is still a detour and a further accumulation of

[20] *Leveled cost of energy, levelized cost of storage, and levelized cost of hydrogen*, Lazard, October 28, 2021.

[21] "Net zero or bust: Beating the abatement cost curve for growth," McKinsey, April 13, 2021.

[22] Jeffrey M. Jones, "Climate change proposals favored by solid majorities in U.S.," Gallup, April 11, 2022.

[23] Ibid.

physical risk. Actions and investments in adaptation were already inadequate before the war and are even more so at this juncture.

Navigating the moment, driving toward transition

Our earlier research catalogued the actions that key stakeholders could take with respect to the net-zero transition. We will not reiterate them here but focus on the key actions that we believe have become more timely and critical in light of the conflict.

Governments can't accomplish the net-zero transition alone. Private-sector leaders have an opportunity to assume more prominent roles in advancing this critical goal. Success, however, requires visionary and forward-looking leadership at both individual and institutional levels. In that connection, companies could consider three actions:

- *Strengthen the risk identification and response muscle.* One consequence of the war is a clear increase in global volatility. Now more than ever, it is important to develop a robust capability for managing under uncertainty. A key requirement is to be able to identify and respond in real-time to rapidly evolving circumstances, whether they be related to supply chain function or acceleration of transition risks. The need is certainly not new, but its intensity and the magnitude of the effort required even for the most mature corporations are.

- *Accelerate decarbonization of core operations.* Companies would benefit from focusing on levers most directly under their control (such as their production process) or those that provide strategic advantage by hedging against energy price volatility or future transition risk. This would be particularly true for commodity firms experiencing cash windfalls with high prices. This also means building a strong green procurement muscle, with respect to both raw materials and components, reflecting new risks and realities. Industry associations and public–private collaboration would likely also be required to address supply constraints.

- *Support multinational cooperation.* International sustainability agreements, commitments, standards, and practices can also be championed and driven by industry associations and ecosystems. Corporations could and should endeavor to increase the momentum through their commitments and actions at this juncture. This means taking a leadership role at the company level, at the industry level, and within ecosystems as users can help influence providers and their practices. This leadership could indeed prove a critical factor in determining the impact of the war on the prospects of the net-zero transition.

For *government leaders*, a more active role in energy markets seems natural in light of conflict. The rise in energy and commodity prices, as well as in concerns about energy security, gives leaders an unprecedented opportunity to accelerate the deployment of net-zero technology. Governments could consider three sets of actions in particular:

- *Develop an integrated economic and national resource strategy.* This could include working closely across departments and with industries to develop a roadmap

identifying and coordinating the policy, innovation, infrastructure, and financial inputs necessary to achieve decarbonization and energy security commitments. This would also include developing plans for facilitating the retirement, and minimizing the impact, of stranded assets (and very carefully optimizing and guiding the deployment of the new high-emissions assets that may be required in the short term in certain geographies). Finally, this would mean accelerating efforts to project future mineral resource requirements under various scenarios and defining as resilient and diversified an approach as possible to securing those resources.

- *Establish clear demand signals*. This could entail putting in place or enhancing a range of incentives and requirements for the deployment of key net-zero transition technologies, accelerating emissions-reduction (and therefore energy security) commitment timelines, and deploying regulation to price or phase out emissive assets over time. However, it is critical that demand signals be coordinated with a supply strategy in the spirit of the previous two points. And all of this is of course in the context of managing the short-term risks that energy systems face.

- *Deploy (further) financial incentives/guarantees and enhance guardrails*. This could mean deploying public funds and creating financial incentives to accelerate deployment of proven net-zero technology, particularly across energy efficiency and renewable generation. This would also mean reforming permit and approval processes to deploy net-zero technologies and infrastructure faster, for example the installation of wind and solar farms. In parallel, this could mean tightening the permit and approval processes for the development of emissive assets that would be "stranded on arrival."

Finally, the role of *finance* will continue to be critical. Financial institutions would benefit from three sets of actions:

- *Develop a more robust approach to reducing financed emissions*. In a world where emissions could well increase in the short term, strategies that were designed to see a linear and constant decrease in financed emissions are likely to be untenable. Financial institutions need to think through—at least initially—more complex decarbonization paths for companies and provide the right support and incentives to companies on these paths.[24] They also should continue to refine their ability to understand their financed emissions and work closely with clients on an orderly and gradual path of decarbonization.

- *Build capability to identify and capitalize on new decarbonization opportunities*. As fossil-fuel prices rise and renewable prices continue to fall, new decarbonization solutions along the marginal-abatement cost curve become economical. Financial institutions could build at greater scale the capability to identify and capitalize on the opportunity to finance these emerging opportunities.

- *Develop and scale new financial products and structures to help companies wind down legacy assets*. Solutions could include special-purpose vehicles that would

[24] The standard emerging approach for improving financed emissions sophistication is the application of portfolio alignment tools. For more information, see the guidance published recently by the Financial Stability Board's Task Force on Climate-Related Financial Disclosures and the COP26 Private Finance Hub: *Measuring portfolio alignment: Technical considerations*.

enable companies to ring-fence legacy-emitting assets and retire them in line with a science-based, net-zero pathway; financing structures such as long-term purchase agreements from renewables plants (with lower total life-cycle costs) to replace coal-generation assets; and new financial instruments (for example, for negative emissions or for nature-based solutions).

The war in Ukraine has not only unleashed a humanitarian tragedy but has also dealt the effort to achieve net-zero greenhouse-gas emissions a powerful supply-side shock. Yet for public- and private-sector leaders willing to take the necessary bold steps, the new logic of energy security and economics holds the promise of making this a turning point in seizing the opportunity to address the globe's unfolding climate crisis. Q

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People & Organizational Performance Practice

The office of the future: A whole new (floor) plan

Revisiting your talent strategy for a hybrid world? Think hard about the purpose and design of your office space.

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July 2022

In this episode of the *McKinsey Talks Talent* podcast, McKinsey talent leaders Bryan Hancock and Bill Schaninger speak with senior expert Phil Kirschner about the office space of the future: what workers want, what employers need, and how workplaces will need to change accordingly. An edited version of their conversation follows.

McKinsey Talks Talent is hosted by Lucia Rahilly.

The new balancing act

Lucia Rahilly: We've seen a lot of media coverage on the return to the office, including some CEOs coming out forcefully, essentially mandating return. At the same time, other leaders seem to be walking back previous recommendations about whether and how often they expect folks to come in. Phil, any sense of whether employees are actually responding to the call to return to the office?

Phil Kirschner: Generally speaking, they're not. It's important to go back to the pre-COVID-19 times and understand that we weren't in the office 100 percent of the time. Almost anyone I ever talked to, any client I ever served, wanted one or two days' more flexibility than they officially had.

Now we have a choice to be there. And because it wasn't that great to be in the office before, we find ourselves at this impasse where employers feel they have to order folks in. But that's new all around, to go back to something that they didn't really like prior to COVID-19.

Lucia Rahilly: Bryan, you're talking to business leaders every day. What do your clients think is at stake as they grapple with the challenge of bringing people back to the office?

Bryan Hancock: They're seeing two things at stake: one, they're trying to figure out "How do I get the people I need to execute on the mission?" And two, as they're coming up with the strategy, they're trying to figure out "OK, am I going to lose somebody if I have too stringent a policy?" Or on the flip side "Can I attract somebody if I open up my availability for talent anywhere in the country?"

We're recognizing that some work can absolutely be done anywhere. Individual contributor work and going through your emails doesn't require you to be in the office. But there is some work—in particular, coaching, mentoring, some of the creative interactions that happen together—that does require people to be together somewhat regularly. That balance does require some degree of flexibility but also some degree of in-person interaction.

Lucia Rahilly: I want to go back to this question of attracting talent. But before we do, Bill, we talked on this podcast recently about what at least appears to be a rise in worker power, given the tight labor market right now. Do you actually think this recent spate of mandates will jolt folks back into the office?

Bill Schaninger: Probably not. I'm surprised we've had this run of mandates. People have gotten a taste now of not all work needing to be done in a cube. You don't have to drive 90 minutes to get on a Zoom. I wish the resources we put into working capital, cost cutting, and new sales approaches would be reallocated to support the work that needs to be done together.

If there are enough meaningful kick-off meetings for projects, you might need two weeks together to say, "Let's define it. Let's scope it. Let's lay it out." Then, once you have the workstreams running with good governance, why not let the work drive the decision of whether to be together?

Some work needs to be done together, but not a spurious mandate—not a "We're back in charge now" orientation. I think that's a fool's errand and will continue to destroy your value proposition.

What workers want—and don't

Lucia Rahilly: How do you think the design and the configuration of the office dovetail with the design of an organization's tasks, its roles, and its culture?

Bill Schaninger: There's a cool science behind it. But also, this is a lot about power. We should let Phil tell us where we're at because we've had this weird interruption for two years in what we were doing with office space.

Phil Kirschner: You've reminded me of my very first pilot of any workplace mobility program, which means when we come to the office, we share things—all of us. At the end of that very first pilot, one of the senior managers who had been in an office forever and was used to seeing the same set of people working outside his office forever realized, and said on camera, something you'd think we'd paid him to say.

He said, "I feel like I have lost my office through this transition, but I've gained a floor. I have all this diversity and access not just to meet different people but to use different typologies of spaces and technologies and signals and feeling and design throughout my day to best serve my needs and the needs of my team."

That's been happening in the decade leading up to COVID-19—a real emphasis on the fact that space can signal what it's good for. And if you untether people from the desk, and most important, train managers to rethink what it means to know that someone is or isn't being productive, they can truly lean into a wider variety of spaces.

Especially now in the post-COVID-19 world, we're seeing an explosion of supply—available work spaces of even more shapes, sizes, feeling, and locations than any one employer could ever provide. Giving employees access to that total ecosystem of spaces can provide empirically a higher perception of performance or workplace satisfaction than one location, one office could ever give them.

Lucia Rahilly: Back to Bryan's point about attracting talent, all of us would prefer to go into a nicer office versus a shoddier office. We all like good coffee. We all like high-quality snacks. But that doesn't necessarily compensate, for example, for suddenly needing to resume a commute, especially with the rising price of gas. How does this new office you're invoking have a role in helping to attract workers back to in-person work?

> **'We're recognizing that some work can absolutely be done anywhere. But there is some work that does require people to be together somewhat regularly.'**
>
> –Bryan Hancock

Bryan Hancock: There's some great research by Steelcase, the office furniture manufacturer. They did some great research on individual workers to determine what kind of spaces were going to be most attractive or most needed, and therefore, what the future office would look like.

The researchers saw that there would be a rise in the need for individual spaces, not open-floor access but individual places where there's quiet to get work done. They're seeing a number of workers, in particular younger workers, saying they need a place to go to do that individual work, or place to go to do that individual work, or at least a subset would like to have that option available some of the time.

There's also a rise in the need for real team space—not just the occasional conference room but actually the time to get together as a team, to have the right space together, to have the right access to the tools they need to collaborate, and the right access for snacks and other pieces. Do you have a convenient team space with the right setup? Or is it an old conference room that's been converted? The needs might be a little bit different, but are we thinking about the right team space?

It really is thinking through the individual need, the team need, and the need for compelling broader space, and are we meeting all of those needs? And I think if they are, then it makes it an even more attractive workplace for the workers. Phil, I'd love your thoughts.

Phil Kirschner: I'm really glad you brought up the point about younger workers, because there is definitely a statistical correlation between the quality of the environment you have at home and your likelihood to want to overcome the friction of going to the office. The younger workers are more likely to have three roommates and two cats, sitting at the dining room table, versus all of us who are sitting within an enclosed space with a door, which we're fortunate to have, either at an office or at our home.

Bill Schaninger: The office was the bully pulpit, you know, with leadership striding down the main hallway. Think about movies and TV shows where the centrality of the ecosystem was the office in terms of the power dynamics. It's not surprising to me that the people who've been in charge are still anchored on that construct, because it's what they've known and how they've been trained. I think when you saw libraries become less central because everything is accessible digitally, you saw a massive movement out of the physical space of libraries.

We've had a generation now entering the workforce who is used to accessing everything, all the time, anywhere, except for project work, as a solo endeavor. A huge portion of what we're doing at work is not a solo endeavor. It requires working with others.

There is a pretty significant collide here in terms of the nature of the work changing and their experience on both ends: the folks who are in charge and the folks coming into the workforce. They're not experienced with the sort of fluidity that Phil's describing. It's a massive mismatch.

Bryan Hancock: An interesting thing that I've seen about people entering the workforce was a survey done of college graduates and very, very few wanted to work remotely five days a week. There was an interest in having flexibility of when and where they work, but they wanted to come in sometimes because they wanted the connectivity to where they're working, and they specifically wanted connectivity and mentorship with the generations above them.

In some cases, the need is not to get the young kids in; it's making sure the people who can mentor, who are just happy to be remote in their vacation house in Aspen or in the Hamptons, to come in. Because that mentorship is something that is important to the new joiners and also important for the overall development and health of the organization.

Phil Kirschner: I find myself telling executives a lot these days, "Congratulations. You are the new amenity." It used to be the gym, the cafeteria, being able to bring puppies to work, whatever it is, but the executives are the new amenity.

I spoke to the head of real estate for a large bank that's just done a major headquarters relocation during COVID—beautiful building. She said, "Yeah, people have been really excited to come in." And I said, "What is it that is bringing people in?" And knowing this is a European bank, they've got a beer garden in the building, like, everything you could ever conceive of is an amenity. She said, "The other people," which is a really hard thing to admit for the head of facilities. But it's true.

The perks (and perils!) of proximity

Lucia Rahilly: How do you make the transition from colocation to collaboration? A lot of young people might say, "Well, I can collaborate virtually just as well as I can sitting in a silent, open-plan office."

Phil Kirschner: I used to work at WeWork. I got a common question from executives who visited our headquarters building, not a traditional member building but a building full of WeWork employees and leadership. They'd step off the elevator, be within eyeshot of the elevator, coats still in hand, and ask, "Why does it feel this way? What energy am I feeling?"

I would say this is a carefully curated combination of design, technology, people, community managers, baristas, whomever it is. This is a hospitality context brought to an office. And you're feeling something wherein it is incredibly open, and it's very dense from the perspective of how it's built.

But the people that you see all around are quite comfortable being quite close to each other as all of us are in the hot, new restaurant, sitting shoulder to shoulder with other people who are not related to us at all, but it's OK because it's a vibe. It's an experience.

And in most offices where they may be beautifully designed but are not activated for that kind of connection and ongoing experience, it's scary. We feel exposed. Somebody sneezes, and everybody pops their head up, and goes, "What was that?" And that was before COVID-19, so now it's even worse.

Lucia Rahilly: I think it's interesting that you raise the point of sitting so close together.

Phil Kirschner: Proximity is a difficult word these days, but it's very important for deliberate experience.

Lucia Rahilly: Given how closely configured people have been in open-office plans recently, is it really such a negative if fewer folks are in the office on any given day?

Phil Kirschner: At most, in financial services, trading environments, the highest numbers you would ever see would be maybe 85 percent of an expected population. The explosion of transactional, flexible service spaces all around us—both in coworking facilities that were designed to be workplaces but also at every coffee shop, hotel lobby, gym, bar, bank branch, you name it—is where work can and will be done by someone who's carrying a laptop and likes a latte and is willing to get their head down in the crowd.

‘We’re out of the habit of the workplace being central. And we’ve had two recruiting seasons of the place not being central. So what’s the reboot?’

–Bill Schaninger

Bryan Hancock: What struck me, Phil, about what you said earlier was the hospitality context, the software on top of the hardware. I think that is a powerful concept. I was wondering if you could expand on that a little bit for people who are listening or, like, “Oh, that’s interesting. I want to have more of a hospitality vibe to my office. I want to improve the software.” Where would you recommend they start?

Phil Kirschner: The short version is experiences of labor of opex, operational expense, not capex, which is, like, building the thing. That’s a very simple example in shifting from a “We own this” mentality to “We all share this environment.” A very simple example is office supplies. Who buys the markers for that whiteboard over there that used to be *my* whiteboard but is now *our* whiteboard?

And you just layer on from there to, ultimately, the thing that workers most appreciate about coworking environments is the presence of a community manager, who is there not only to connect people—find employees of same or different companies with like interests or needs—but to resolve issues of the environment. To try an event, you do Taco Tuesday, nobody shows up for that, so next week it’s Cupcake Tuesday, or it’s cold out and we can bring a sense of surprise and delight, and just say, “We, the community team, have gone and bought hot chocolate for everybody because it’s freezing today.”

When that’s happening on a regular basis, both physically and then spilling into the virtual environment for inclusion of remote colleagues, it’s really magnetic. We love being in places like that. And that I think is going to lead to an explosion of this sort of activation-related staff. And technology helps, certainly, like having booking systems and employee-experience applications. But we like to feel taken care of.

Bryan Hancock: It feels a lot different when at 4:30 p.m., you’re walking into the kitchen and there’s a fresh, hot pizza there for people who have been working all day, versus the leftovers from the noon lunch that have been sitting out and you’re, like, “Hmm, do I risk it or not? What is it?”

Purpose versus buzz

Bill Schaninger: I think we’re out of the habit of the workplace being central. And we’ve had two recruiting seasons of the place not being central. So it’s, like, what’s the reboot? Is it bringing those two classes back? Is it re-onboarding them? Is it to onboard them with the classes you’re hiring right now? Is it to demand that the midlevel execs actually show the hell up, to provide some mentorship and some coaching?

It feels to me, and I'm curious, Bryan, to your thoughts, and yours, Phil, that we need an intervention in a way of, if you want to have any chance at all of rebooting the culture, where the community means something, you actually need to act like the community means something.

Phil Kirschner: And that intervention is purpose. When asked, "Why aren't my people coming back? Why are we struggling to do this hot-desking program? How do we design the office for the future?;" my most common question to clients now is, "For what purpose?" We have to go back to basic principles. It's something your employees will not sniff out as just jargon or that you're placating them.

If you ask any company, "If all of your offices were all to evaporate, which ones would you build back and why?," retailers or even bank branches know exactly why a location is where it is. And they scrutinize, with incredible intensity and frequency, how well that decision is going; foot traffic sales, customer engagement.

But we've never applied that to the places we ask our workers to go to, which, again, does not have to be our office, so to speak. I don't think necessarily that innovation is a default reason for saying, "Oh, we have to come in." Even just saying, "We think the role of this office is for accelerating sales," or for someone who might have gone to work for a life sciences firm because they have a medical background or feel passionate about care, to tell them, "This place exists because we are accelerating clinical speed," that speaks to them.

Some other company might just say, "We're doing it to increase productivity, collaborate more, help our clients." That's not specific enough. If you have an organizational purpose that aligns around being good to the planet, being good to the community, increasing diversity efforts, that's OK. How does your office or the places where your employees go speak to that mission?

Bryan Hancock: So, Phil, I have a question for you on how important it is to have a buzzworthy office. Or is it what's happening there that is more important than the buzzworthy environment itself?

Phil Kirschner: It's the latter, and does it align to what I want to be doing or contributing to? And that, in and of itself, can be a huge magnet without being Instagram worthy per se.

How to reconfigure your office space

Lucia Rahilly: Phil, I want to talk a little bit about some concrete examples of what the office of the future might look like. What is an example of the way that the physical workspace can have a role in accelerating learning that's different from virtual learning that you might engage in?

Phil Kirschner: One is shifting training rooms from the windowless basement, awful experience that they had in the past, and to really inspiring and pervasive nooks and alcoves in the environment that almost are magnetic.

Two is moving from thinking of your building as a vertical silo for just us into asking, "What is the role of the campus and the community around us in bringing new ideas and new people into our building or encouraging our people to meet and interact with new ideas?" So opening the door a little bit.

Third, shifting from reservation-only spaces to real, open, activated, so-called centers of gravity, natural places where the energy in the building will pool, and accelerates the likelihood that you're going to meet or interact with other people.

And finally, making it feel a little bit more like home so it's not just like every day is the same, but that no two days in that place are the same and everything that's happening over and above the built design is kind of forcing you to meet new people, see new things with a level of autonomy that you'd expect at home and not traditionally from the office.

Lucia Rahilly: Office experiences can lead to that social and emotional connection you mentioned, but they can also be expensive. Realistically, how can you sell this idea—economically?

Phil Kirschner: The usual average is something like $10,000 to $15,000 per seat per year, the average carrying cost of having an office. And while you've still got that office now, the idea of spending more on experience, like, "We're going to engage with such-and-such a business school, or we're going to take everybody away and do this big event," is terrifying because you've still got this other expense. And if the real-estate portfolio load gets reduced, I think executives will very quickly fill the gap, using some of those savings to deliver a better experience overall.

There has to be an executive level head of what it feels like to work here, where they may not have direct accountability over training and real-estate budget, but they can break the tie and say, "We should actually get rid of that office that nobody really likes, take all of that money we've saved, and solve the learning issue we know we've struggled with for years, or retention, or anything else, and connect across the lines."

Bill Schaninger: I am wondering if we have lost the era of the prestige address because the youngsters don't care. What do you think?

Bryan Hancock: I think it's the new prestige address. So if I think about our Atlanta office, it was at 133 Peachtree Street, right in downtown, an iconic office building, beautiful view of the surrounding area. That was the old iconic. We've moved to 725 Ponce, right on the Beltline, right next to Ponce City Market, which, 20 years ago, no one would have envisioned this neighborhood being anything like what it is today.

But it is the most convenient to walk to, to bike to, to have an apartment near. So it may be trading the traditional to the environment where people want to live. In New York, it might be instead of living in Midtown, are we opening something in Brooklyn?

Making the return matter

Bill Schaninger: The office or the idea of the office is back in the mix as part of the norm. I'm trying to get my head around how do we re-normalize, without a mandate, and just create some draw, because people go, "Oh, I get to see the boss there. Oh, I get a little face time. Oh, we're going to go out after work for drinks." The idea that we start building some momentum and it becomes re-habitualized.

'If you untether people from the desk and train managers to rethink what it means to know that someone is or isn't being productive, they can truly lean into a wider variety of spaces.'

–Phil Kirschner

Phil Kirschner: That's absolutely right. For me, the key is choice. There are thousands of permutations of reasons why we might or might not go in, from the weather and transit to "Who do I think is going to be there?" It's hard, and it's easier for us to just stay put.

In order to implement the choice architecture that we need, you have to make it not hard for us to make the right decision. You first have to identify, as you said, those moments that matter, at the organizational level, the unit level, all the way down to someone who might need some coaching or a colleague because they're having a rough week.

Once you can identify the moments that matter, ideally through measuring outcomes—like giving people, teams, and leaders together the data to decide, like, what was a good or bad outcome for sales, engagement, training, strategy meeting innovation—to then use the technology you have at your disposal to suggest the next best action, which could be to get rid of a meeting because it's not so great.

And then, test and learn, because then you can condition everybody back to a state where we are seeking time together, whether or not it's in the office traditionally. But it will re-normalize our use of space to do something that is objectively good, both for the company and for our own personal success and well-being. I agree with you that the choice will gravitate toward one to three days in the office.

Lucia Rahilly: Phil, you mentioned test and learn. Is there a test-and-learn equivalent to experimenting with workplace design for leaders who want to get started but maybe can't invest massively in a major transformation?

Phil Kirschner: The two simplest tools that are out there that most people and companies simply don't think of as transactional—serviced, flexible, coworking, whatever you want to call it, workspace on demand—are in any larger metropolitan area now in pretty significant and growing supply.

It's a really easy way to not spend very much money and to try something. If you're willing to communicate to your employees, "This is a test. It's not going to look the way we want to make it. It's not going to necessarily be in the place we want to put it. But we have a chance to try putting two groups together or a different configuration of furniture. We can try it in a way that's not as scary as taking the lease that might go bad for ten years."

And on the furniture point, furniture can be rented. That was not a common practice before. But furniture as a service is also becoming more common. So if you're willing to message that we're going to try something out, which is a phrase—again—that would give almost any traditional facility manager a heart attack. If leaders can support them and say, "We're willing to try, and make mistakes, and own the mistakes. We built a room like this. Nobody liked it. We're not going to do that again." Just that level of authenticity I think is incredibly engaging.

Lucia Rahilly: Thanks, all. Great discussion.

Phil Kirschner: Thank you, guys.

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Real Estate Practice

Workplace real estate in the COVID-19 era: From cost center to competitive advantage

Companies today should build workplaces that help them realize their strategies. Here's why and how.

by Daniele Chiarella, Federico Marafante, and Robert Palter

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The COVID-19 pandemic has led companies around the world to reassess their real estate—how much of it to have, how to use it, and how much to spend on it. Fortune 50 companies alone occupy 2.6 billion square feet of real estate,[1] and some of it sat mostly empty for long stretches during the pandemic. At times in the prolonged work-from-home experiment, the media, employees, and even company leaders wondered whether large numbers of offices were necessary at all.

We maintain that strategically located workplaces that are built for purpose and integrated into corporate strategies, cultures, and operating models are more important than ever. We also strongly believe that companies should cease viewing real estate as a mere cost center and instead approach and configure it as a source of competitive advantage.

The right approach to real estate can help companies not only to grapple with the universal challenges arising in the pandemic's wake but also to achieve their corporate goals. Marrying strategy to real estate requires a deep analysis of a company's needs, as well as data to inform decisions. These decisions are best managed by top strategic thinkers guided by the CEO—a departure from the way companies have traditionally made real-estate choices.

We examined three companies that aligned their approaches to real estate with their corporate strategies and addressed common themes ensuing from the pandemic. These organizations are now positioning themselves for success by using their physical footprint as a competitive edge. We also identified three steps companies can take to transition their real estate from a cost center to a source of support for their larger goals. Companies that act now to rethink their approaches will position themselves most successfully for the future.

Using real estate to create competitive advantage

The following examples showcase companies that leveraged real estate to compete more effectively. Each company thought deeply about some common questions: the purpose of the workplace in the hybrid era, as well as the right balance between freedom and flexibility, on the one hand, and connection and collaboration on the other. They aspired to create workplaces and policies that would help attract and retain talent—for example, more sustainable commutes, amenities to support the well-being and engagement of employees, and designs that would encourage group work and contentment.

Each company started from a different point of departure: one picked a new location to build a central office from scratch, another repurposed existing offices it leased before the pandemic, and a third redesigned an existing headquarters and upgraded the technology linking it to satellite locations. This variety demonstrates the range of options for reinvention, even in cases where long-term leases may appear to be a constraint.

A European digital firm: Designing a studio to compete for talent and client work

IncepTech, a Budapest-based digital firm founded in 2014, specializes in building digital products for clients. It had a clear strategy: in a tight labor market for software engineers, the firm wanted to attract the kind of talent that could easily get jobs at the world's top technology firms.

IncepTech also wanted a space that would help it move away from competing for client work through traditional written project proposals. Instead, it hoped clients would come to the office, discuss their needs, and immediately get help solving problems. In the spring of 2020—just as the pandemic was unfolding—the company began designing a fit-for-purpose software-engineering studio, adorned by

[1] Custom data provided by CoStar.

plentiful green foliage, with large-pane windows for abundant natural light.

By the end of 2020, IncepTech Studio had been completed. It was located in a newly hip area of Budepest, on the banks of the Danube, a location that provides beautiful views and walkability to restaurants, services, and other companies. Minimalist white or light-colored furniture and transparent room partitions create a sense of openness. The space is designed so that engineers can stare into the distance and think clearly, surrounded by light and greenery. Meeting rooms are suitable for hybrid work, with smart cameras, digital whiteboards, and glass walls for better visibility.

The studio was intended to show employees that offices can be enriching environments. A soundproofed music room—stocked with an electric drum set, a keyboard, guitars, microphones, and a computer to produce electronic music—is open to employees for spontaneous jam sessions. The company hosts get-togethers with staff and external professionals once a month and is planning yoga and meditation events for employees.

IncepTech reports that its offices have been crucial in building its team to roughly 75 full-time employees in a hot market for tech talent. Although a small firm, it has competed effectively against large global software companies and integrators. (In February 2022, McKinsey acquired the company.)

Employees are not required to come to the office. Teams come in when necessary, particularly for intensive brainstorming sessions or last-mile project sprints. The studio has also helped bring in client work, company executives say: the space provides an attraction point that makes clients want to work from it, and the meeting rooms make it easy to include off-site collaborators.

A technology company: 'Virtual first' with a real-estate solution to bolster teamwork

Before the COVID-19-pandemic, roughly 2,700 employees of the technology company Dropbox worked full-time out of one of its offices primarily in San Francisco, Seattle, Austin, New York, or Dublin. When the pandemic began, the company implemented remote work, leaving those spaces empty.

Dropbox quickly realized that many employees were both highly productive and satisfied with remote work, and in the fall of 2020 declared itself a "virtual first" company. The challenge was to give employees the flexibility they craved while preserving a sense of human connection, sustaining the company's long-term health and mission, and retaining a learning mindset.

Dropbox tailored its real-estate solution to these goals. Instead of abandoning all of its office space, it converted some of its former offices into Dropbox Studios used for collaborative work, team events, and training. It optimized the existing spaces for collaboration by removing most desks and creating conference rooms with flexible wall systems and movable furniture so that spaces can increase or shrink depending on need. In some cases, Dropbox cut the amount of square footage it leases. In Dublin, it moved to a new location built from the ground up for collaborative experiences. The new space includes a café, where employees can connect and recharge over free espressos and cappuccinos, and immersive technology for videoconferencing, intended to level the playing field between on-site and remote participants.

Dropbox Studios opened its doors to employees in mid-March 2022, so the concept is largely untested. The company is committed to adjusting the game plan, depending on how its needs as a virtual-first firm evolve. "Human connection is a foundational part of our strategy, and studios play an important role in facilitating that," said Terry Wiener, head of virtual first for engineering, product, and design at Dropbox. "We're excited about what we'll learn in the months and years ahead."

A biotechnology giant: Real estate that enables fast breakthroughs and ongoing innovation

Gilead Sciences, a global leader in biopharma, began to think deeply about a modernized real-

Strategically located workplaces that are built for purpose and integrated into corporate strategies, cultures, and operating models are more important than ever.

estate plan before the COVID-19 pandemic. Its Foster City, California, headquarters—the central node of its master plan—had seen the company through decades of pioneering science. However, many competitors were moving to a different model: the discovery, research, development, and manufacturing of a single drug routinely happen in different parts of the world. Against a growing drumbeat of remote work, Gilead needed a real-estate strategy to increase connection and collaboration, speed up the transfer of technology, and attract the best scientists. But how best to position one of the world's largest research-anchored HQ campuses?

After a series of analytical workshops, Gilead decided to buck the trend and double down on its HQ. Instead of selling or leasing off parts of it, the company invested in a redesign. The campus vision called for the labs and buildings to "follow the molecule," so the discovery, research, development, scaling up, and manufacturing teams work in spaces that flow from one to the next. To promote a sense of organic connection, Gilead created inspirational spaces, including a state-of-the-art, 65,000-square-foot well-being center with a gym, meditation areas, and mental- and physical-health resources. The company also added a cutting-edge laboratory and research infrastructure and accelerated its digital-engineering transformation by adding process data systems that let labs connect with one another seamlessly.

Every HQ space is being digitally enabled so that employees can instantly videoconference with collaborators elsewhere. Immersion rooms have multiple high-definition screens and one-touch teleconferencing technology, so users feel as though their colleagues were in the same physical environment. Labs at headquarters and around the world are adding remote systems to help scientists monitor experiments from anywhere, as well as augmented-reality glasses and screens so that remotely located participants feel as if they were standing in the lab.

Focusing Gilead's real-estate strategy on scientific efficiency rather than operational economics served the company well during the pandemic. When COVID-19 hit, Joydeep Ganguly, senior vice president of corporate operations, and his team engineered and delivered a Biosafety Level 3 (BSL-3) laboratory on the main campus in only four weeks, so Gilead's scientists could work with the virus safely. Amid unprecedented urgency to create drugs, the innovative campus and laboratory systems played an important role in attracting crucial talent to the company.

"Too many operations strategies focus solely on near-term cost imperatives," said Ganguly. "While this is important, there is far greater value to having the operations-footprint vision serve a greater role by catalyzing innovation, engaging and attracting talent, and enabling corporate ambitions." The company will continue to invest in its headquarters, to evolve the "flash lab" design, and to invest in next-level collaboration technology. "At Gilead, we continue to believe our master plan will catalyze the collective brilliance of our colleagues and serve as a magnet for top scientific minds," Ganguly said.

From cost center to competitive advantage: Three steps

The first step in developing real estate as a competitive advantage is for leaders to determine the corporate metrics and objectives they want to achieve. Next, they must identify the moments that matter for employees, suppliers, and customers to achieve those metrics and objectives. Real estate should be a multidisciplinary issue linked directly to corporate strategy, so the third step is to set up a steering committee to assess the current real-estate footprint and ensure that it aligns with corporate objectives and the moments that matter.

Determine corporate objectives and metrics

Before the pandemic, the most common objective of real-estate policy was simply to reduce absolute costs or costs per employee. After COVID-19, if the goal of a company remains to reduce the cost of its real estate, it can simply have its staff work from home, where many employees are quite happy. However, for some companies, a fully remote workforce may not always yield the best productivity, connectivity, diversity and inclusion, innovation, loyalty, or apprenticeship results.[2]

Real estate can address many objectives. They include accelerating innovation, upskilling the workforce, advancing digital and technological transformations, stimulating collaboration, creating an optimal hybrid model, diversifying talent, and getting closer to customers. An organization's real estate should result from its strategy and operating model.

To set a baseline, organizations can start by identifying and measuring the most important metrics across different types of real estate. To determine how much office space a company needs, for example, key metrics could include how employees feel about their company, sales per salesperson, throughput, errors and omissions, and greenhouse-gas emissions. Then companies can experiment with different alternatives, run pilots, and choose optimal solutions based on the metrics.

Identify the moments that matter

In a world where many employees can work remotely, the riddle that companies must solve is which moments of togetherness with other employees, suppliers, or customers actually improve outcomes. The moments that matter rely on having the right people working on the right things at the right times—and in the right places.

But few organizations know which moments matter most. They could include onboarding new hires, apprenticeship relationships, brainstorming meetings, challenging conversations, experiences that foster social cohesion, resolving customer complaints, selling to customers, or unplanned collaboration. The location, size, and design of the workplace should all support the most urgent requirements for togetherness.

Set up a steering committee

Traditionally, real-estate choices have been made by a real-estate team that typically reports to a chief procurement or operations officer. The most important decisions are escalated to the CFO.

But today's real-estate team has new responsibilities, namely: making the current

[2] Art Markman, "Why you may actually want to go back to the office," *Harvard Business Review*, July 1, 2021.

footprint consistent with corporate objectives and the moments that matter. This calls for a different set of decision makers. The CEO can set the real-estate agenda, supported by the chief human-resources officer (CHRO), the CIO, the CFO, and the head of real estate. Experts from all these domains can help make real estate a source of competitive advantage.

In the wake of the pandemic, historical precedent or cultural or industry norms should not shape real-estate decisions. Today, a company's larger goals must serve as the guide. CEOs and executive teams know what makes companies successful and are best positioned to create a physical environment to match. Merging a company's approach to real estate with its strategy is a change in the way things have been done and a new responsibility. It's also a once-in-a-generation opportunity to act boldly and emerge from the pandemic stronger and more competitive than ever.

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