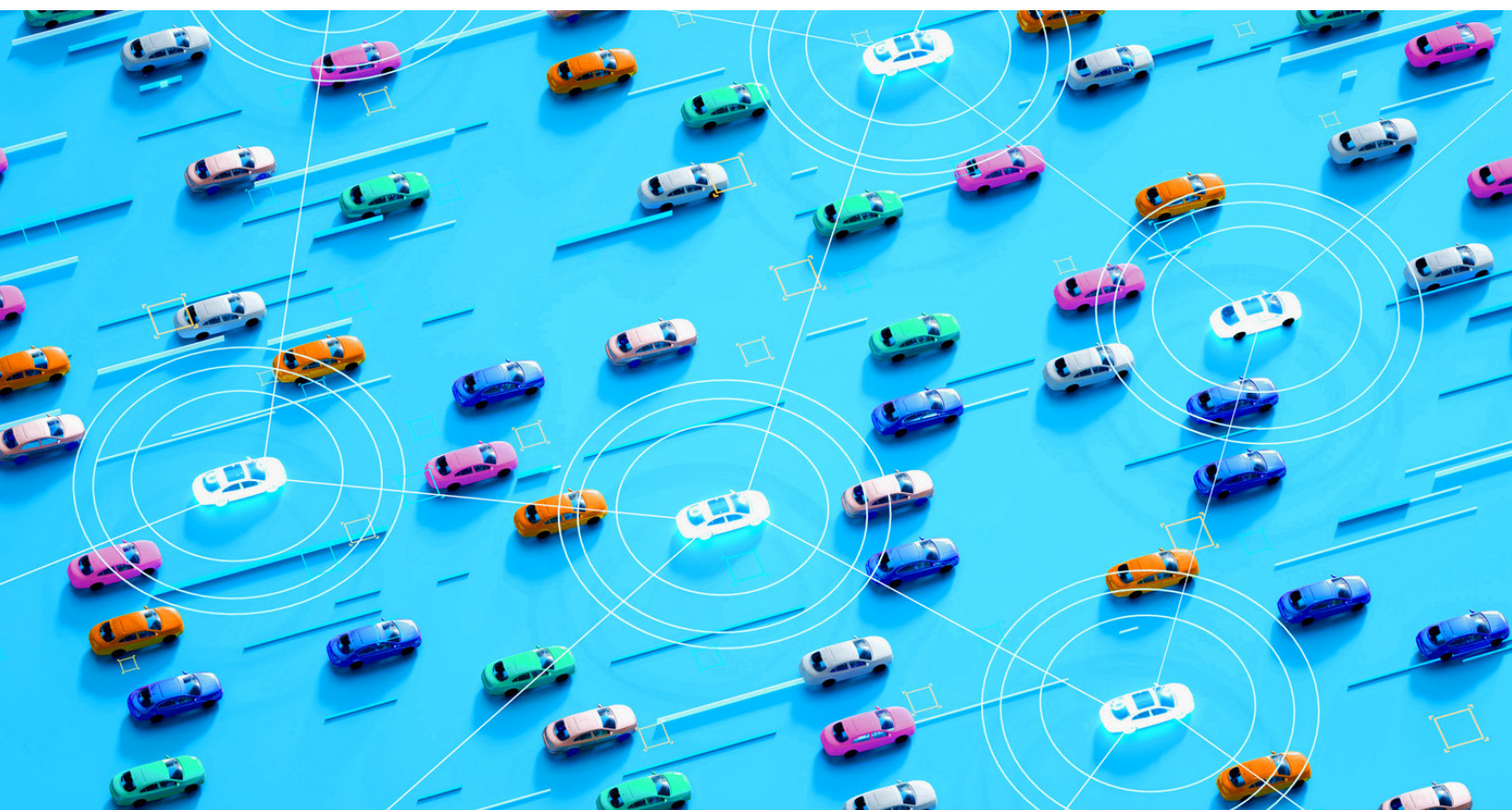


Risk & Resilience Practice

From crisis management to strategic resilience: Lessons from the auto industry

When strategic resilience is embedded in risk management, disruption can become a means for growth.

by Dorothee Herring, Manuel Altmeier, and Thomas Poppensieker



The global automotive industry is at a crossroads. Traditional risk management strategies aren't enough in an era of rapid technological advancements, geopolitical tensions, and supply chain upheavals. Carmakers saw abrupt changes in consumer demand during and after the COVID-19 pandemic and continue to grapple with persistent supply chain bottlenecks and transformative technological trends like electrification and autonomous driving. Geopolitics, with its trade barriers and potential to limit companies' access to critical materials, is making things even tougher. For automakers, the stakes couldn't be higher. It's time to rethink the road map.

Industry players will need to make substantial capital investments even as they face higher risks. Spending on electric vehicle (EV) batteries alone is expected to rise by [27 percent annually, reaching \\$400 billion by 2030](#). Similarly, the development of autonomous-driving technology will demand significant investment. Meanwhile, shifts in demand mean the value chain will need to evolve from a more resilient supply chain and sourcing strategy toward a more flexible and trade-resilient production and distribution network—all tied to long-term capital commitments. How quickly these changes are materializing is evident in China's vehicle exports, which, according to data from the China Association of Automobile Manufacturers, were five times higher last year compared with 2020, while exports from the United States and Japan fell.¹ Brand perceptions are changing, too, as evidenced by the declining demand for foreign cars in China.²

These challenges have forced industry leaders to rethink their strategies and ask difficult questions: How can we be better prepared for future uncertainties and anticipate disruptions earlier? More important, how do we adjust our approach to reducing risks while staying competitive?

To address these questions, business leaders should adopt an assertive, agile, and strategic approach to risk management, with scenario plans for a wide range of disruptions. Forward-thinking automakers are embedding resilience into every aspect of their business strategy, from investments to supply chain planning. In doing so, they are paving the way toward growth (see sidebar “Perspectives on the importance of resilience in the automotive industry”). They are also providing comfort to their boards by ensuring that their strategic risk profiles are well articulated, well understood, and commensurate with the company's capabilities and resources. In this article, we explain what they're doing and how others can start doing the same.

¹ Makiko Yamazaki, “Japan's exports fall for first time in 10 months on China, US slowdown,” Reuters, October 16, 2024.

² Hanna Ziady, “The ‘glory days’ for global automakers in China are over,” CNN, September 3, 2024.

Perspectives on the importance of resilience in the automotive industry

Risk leaders at Volkswagen Group and Porsche Group explain how resilience can help automakers turn disruption into opportunity.

Resilience has become the watchword for automakers facing a range of disruptions—some technological, some involving changing customer expectations, and others associated with shifting global dynamics. Here, Volkswagen Group risk leader Torben Oeder and Porsche Group risk leader Steffen Spreiter explain why resilience and risk management must go hand in hand and how both can help shape the future of the mobility industry.

Questions for Torben Oeder:

How important is resilience in the automotive industry?

“It’s critical for staying competitive. Disruptive changes like AI, autonomous driving, and the shift to electric vehicles mean we must prepare for uncertainties and turn them into opportunities.”

What effect can autonomous driving have on an organization’s resilience?

“It can change the future of mobility, but it comes with risks. Failures in AI, like missing obstacles, or delays in regulations could hurt customer trust. Ensuring safety and reliability while pushing innovation is key to gaining consumer confidence and staying competitive.”

What’s the link between resilience and competitive advantage?

“Rising geopolitical tensions and trade barriers force us to rethink and make supply chains more flexible. On top of finding alternatives for materials and production, we also risk losing the cost advantages of large-scale operations. Striking the right balance between building local resilience and keeping scale efficiency is key to staying competitive.”

What capabilities do automakers need to build resilience?

“Resilience management must become an explicit aspect of strategy decisions, and corresponding skills for systematic analysis—monitoring and decision support, for example, through scenario analyses—become necessary. At the same time, there must be a much closer exchange between the risk, strategy, and finance teams.”

Questions for Steffen Spreiter:

What’s involved in the strategic risk decision-making process?

“On the one hand, it is very important that the departments and people involved carry out analyses and measures openly and without bias. Of course, those responsible can get the impression that they haven’t done the right thing or done enough. This can lead to defensiveness and rejection. On the other hand, decisions have to be made at the right time. Experience has shown that since these are fundamental and far-reaching decisions, they may run the risk of their timelines being extended.”

How should leaders think about capability building in risk functions?

“It is important that risk management, which has traditionally focused on operational processes, evolves further toward strategic risk management to address the relevant risk issues at the senior management level. This requires new skills in risk areas, from strategically thinking employees who can constructively participate in strategy projects and bring in planning processes right through to new analytical tool sets for strategic risk analysis and monitoring.”

Embedding resilience into strategic planning

Embedding resilience within strategic planning means understanding where and how uncertainties evolve, across which dimensions or areas a company can strengthen its resilience, and then dynamically linking the two in an agile strategic-planning approach.

Identify the broad, long-term trends that often produce short-term disruptions

Disruptions are hard to predict, but business leaders can identify the areas from which they are likely to emerge. The World Economic Forum's 2024 risk report³ highlights trends in technology, the environment, geopolitics, and socioeconomics that can lead to risks. In our view, the automotive industry faces 25 to 30 core strategic risks in these areas. Leaders can assess each of these risks for its impact, likelihood, and ways to limit the fallout. For instance, geopolitical risks affect market access, supply chains, and long-term production stability. Government policies can also affect access to technology, which is part of the growing trend of political protectionism and bargaining. Other risks include demographic shifts, energy transition policies, and changes in economic growth that influence demand for cars and EVs.

Mapping how these strategic risks could affect the organization's strategy can help leaders focus on the most urgent scenarios or those tied to critical strategic decisions. Typically, this analysis should highlight three to four high-priority scenarios each quarter to guide strategic decisions around major investments or changes to existing plans. Forward-thinking automakers, for example, monitor geopolitical developments, such as trade restrictions or tariffs, and establish relevant markers designating when to adjust production so they can access markets and maintain supply chains. They also explore flexible production models to adapt to shifting demand. This is a break from the past when automakers planned sales volume and priced cars according to available production capacity.

Define the company's highest-priority resilience dimensions

Specific risks do not affect just one aspect of an automaker's operations. For example, trade restrictions don't just challenge companies to think differently about production networks; such restrictions force a broader strategic response, touching everything from finances to operations to reputation management.

Most organizations view resilience through six main categories: *financial*, *operational*, *digital/technological*, *organizational*, *business*, and *reputational*. Each has its own subset of risk dimensions ranging from operational stability to strategic competitiveness. For instance, if leaders are considering the operational resilience of their supply chains, the focus might be on keeping specific parts and components flowing. But strategically, they will also need to consider how to design supply chains that can adapt to today's volatile environment—be it geopolitical tensions, trade restrictions, conflicts, or climate-related disasters. In the past, the focus may have been on minimizing supply chain costs in a global free-trade environment. Today, the focus for supply chain leaders must be on planning for flexibility, additional redundancies (backup resources), and strategic sourcing options for rare materials, components, and technology. Each dimension of resilience offers short- and long-term opportunities for targeted improvements and greater organizational preparedness (Exhibit 1).

³ *Global Risks Report 2024*, World Economic Forum, January 10, 2024.

Exhibit 1

Each dimension of this resilience framework offers opportunities for targeted improvements and greater organizational preparedness.

Resilient growth dimensions



¹Environmental, social, and governance.

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Through systematic reviews of these resilience dimensions, senior leaders can spot potential opportunities and vulnerabilities. One example in the automotive industry involves the rapid evolution of the software being developed for cars. In this case, two cultures are coming together—the more iterative and error-tolerant software engineering culture and the safety-oriented engineering culture associated with traditional car manufacturing. Given the constant upgrades to automotive technologies, carmakers will need to understand how to combine and integrate new technological skill sets and business models into their organizations—factors that managers often underestimate—and balance them against the economic reputational risks associated with potential technology failures.

Link uncertainties to structural resilience factors to further define priorities

Investing in resilience is costly, so prioritizing these investments is essential. Leaders will need to align their resilience initiatives with current and emerging risks. In this way, they can shape their quarterly agendas to include discussions about strategy and portfolio risks.

Consider the regulation of new technologies: For carmakers, managing new regulations and legal precedents on product liability will be critical for realizing advances in autonomous driving and AI. Automakers should weigh the potential benefits of being first movers against the potential legal and reputational risks of early adoption. Similarly, changes to environmental laws will influence the energy transition and its pace. Companies can take three actions to effectively link these and other uncertainties with structural resilience factors.

First, they could imagine the future, going beyond basic sensitivity analyses to consider a wider range of realistic possibilities. These may include low-probability but high-impact events, such as bans on combustion engines. By monitoring regulatory changes, consumer trends, and geopolitical developments, leaders can more easily identify when a scenario is becoming more likely and generate more informed responses more quickly.

Second, automakers could evaluate potential opportunities in these scenarios, applying the following tests to guide their preparedness:

- *Minimum preparedness.* Is the scenario realistic enough that it will be hard to argue afterward that the company did not prepare to a minimum level? Are there low-cost investments that make sense based on the minimum probability of occurrence?
- *Derisking strategy.* Is there a way to invest that focuses on reducing risk, even if it doesn't maximize profit? For instance, is it better to partner with a technology company or others in the auto industry rather than build a technology end to end alone—even if it means sharing profits or reducing product distinctiveness?
- *Time value.* Can decisions be delayed at minimal cost to maintain risk safeguards or investment opportunities?
- *Competitive view.* How do our choices compare with those of our competitors, and can we justify our approach? Are we in a class of one with our decisions?

Forward-thinking automakers, for example, benchmark their risk exposure using KPIs across impact and likelihood categories. Supply chain risks might be assessed by country exposure (both direct and indirect, including tier-one and tier-three suppliers) and dependence on single sources. For each significant risk, leaders set targets, establish tracking mechanisms, and define their appetite for risk. In the case of supply chain risks, the targets might include the maximum time an assembly line can remain idle, or the minimum long-term production capacity needed.

Third, it's important to look back after a crisis. When uncertainties unfold, companies should reassess their strategic positions and question whether their original assumptions still hold. A company could adjust strategies in response to structural changes, such as shifts in the energy transition, the rise of remote work, and consumer trends following crises (like the pandemic and the Ukraine conflict).

Building a resilience muscle

Incorporating resilience into strategic planning is just the beginning (see sidebar “Getting started: How to get on the road to strategic resilience”). Companies, especially in the automotive industry, need to build a resilience muscle—that is, they need to develop flexible and strong processes and systems that go beyond traditional static approaches to strategy planning and risk management. What's more, they should be open to challenging past assumptions about their strategies and their own capabilities.

Getting started: How to get on the road to strategic resilience

Shifting to a more integrated approach for strategic risk and resilience starts at the top. In a recent McKinsey survey of advanced-industry players, two-thirds of companies in both Europe and North America said that managing strategic risk and resilience should be the responsibility of the CEO and executive team. While 80 percent claimed to have some form of resilience assessment, only about 30 percent felt well prepared for today's disruptions and uncertainties. Most still focus more on financial and operational risks, rather than technological, business, or organizational risks.

The organization, middle management, and existing governance structures can become overwhelmed if changes are made too quickly. The pace of the transition needs to fit the situation. Some companies may have more time to adapt; but in fast-changing sectors such as automotive, teams may need to move fast. Here are some practical ways to help find the right starting point and pace for expanding strategic risk and resilience management:

- *Find the right starting point.* There are three good ways to kick off conversations about strategic risk. The first is to use a framework to guide discussions with teams across functions and markets about how to improve structural resilience. By including competitor comparisons in these discussions, teams can further highlight areas for improvement. The second approach is to have candid (usually protected and confidential) conversations with senior management about their biggest worries—for instance, issues that aren't being addressed currently or that are going unspoken. This could include discussions about future disruptions that could overburden the organization, such as escalating trade conflicts across critical markets like China, the United States, or Europe. In these conversations, organizations must be willing to review and address strategic decisions from the past that may involve sunk costs but are no longer valid. The third and most effective approach is to integrate strategic risk discussions directly into an ongoing strategy process. This involves assessing the company's initiatives against different scenarios, identifying risk mitigation strategies, and spotting competitive opportunities. This approach, which engages senior management in immediate, relevant questions and helps to build momentum for resilience and growth, is also the most aspirational of the three.
- *Take a step-by-step approach.* Organizations should consider ways to gradually expand the strategic risk agenda. This could include setting up a quarterly review of strategic risks alongside regular performance meetings, launching specific initiatives to address identified risks, investing in resilience measures, and bringing in more external perspectives. Keeping strategy and planning processes flexible can help ensure that resource allocation and performance reviews can adapt as risks change.
- *Sync strategic priorities with capability building.* As organizations explore more risk scenarios and questions, they can expand the central risk analysis platform to include additional risk factors, data from various functions, and longer time horizons. It's also crucial to build new capabilities within the risk and strategy teams by adding skills that help address these expanded needs. This capability building can be done at a relatively low cost and can have a big impact: It can help to reassure senior management that their decision-making has been thorough and well considered. Usually, it takes about 18 to 24 months to mature these capabilities and align them with the company's evolving strategy and planning processes.

Regularly review strategy and investments against risk

Companies should develop a view of strategic risk on a quarterly or semiannual basis. This risk report should outline the organization's resilience profile and include updates to strategic risk questions. It should present a clear view of risks, prioritized by impact and timeline, and include updated scenario analyses. In this way, the board can ensure that the company's risk profile aligns with its risk appetite and that management can make informed decisions.

The report should test strategic initiatives against a range of different scenarios, not just the usual base, upside, and downside cases. Scenarios that are unlikely but still possible should be included to avoid surprises—for instance, a potential increase in the prevalence of ride-sharing and robo-taxis may mean that fewer customers want to own a car.

Amid the risks, companies should regularly review their resilience capabilities and compare them with those of their competitors. The auto industry regularly contends with issues such as production volume dependency, cost flexibility, and access to materials and technology. Setting specific targets against these factors, tracking them with clear metrics, and benchmarking themselves against others can help automakers manage these risks effectively.

In today's environment, traditional three- to five-year plans often become outdated in a matter of months. By contrast, quarterly reviews and updates allow companies to respond quickly to external developments as well as internal experiences and challenges. When a new scenario emerges, companies will have a set of options in place and action plans ready. Financial planning is a particularly critical area—one that warrants more frequent reviews by automakers, allowing for staged investment decisions and detailed resource allocation.

Track progress with the right tools

Companies' resilience needs to be regularly tracked with KPIs and key risk indicators (KRIs). Some automakers, for instance, rigorously monitor potential supply chain risks created by their reliance on single suppliers or exposures in certain countries. They track key metrics associated with these risks, update senior management, and intervene if there are significant changes. Indeed, these KPIs and KRIs should be linked to the company's costs and the probability of disruption.

Today's finance models and planning tools enable detailed budgeting and resource allocation. However, they often overlook how strategic risks can affect the organization. A strategy-oriented planning model for risk and resilience should consider important risk factors across the organization—from the supply chain to procurement to production and sales. These are typically expanded models, built in collaboration with the finance team, and they can help leaders assess risk scenarios and make informed decisions. For instance, learning from past disruptions, some carmakers have adopted 24- or 48-hour timelines as a benchmark to respond to disruption. During this time, they can assess the impact from, say, a sudden loss in sales or supply chain shortages caused by geopolitical events.

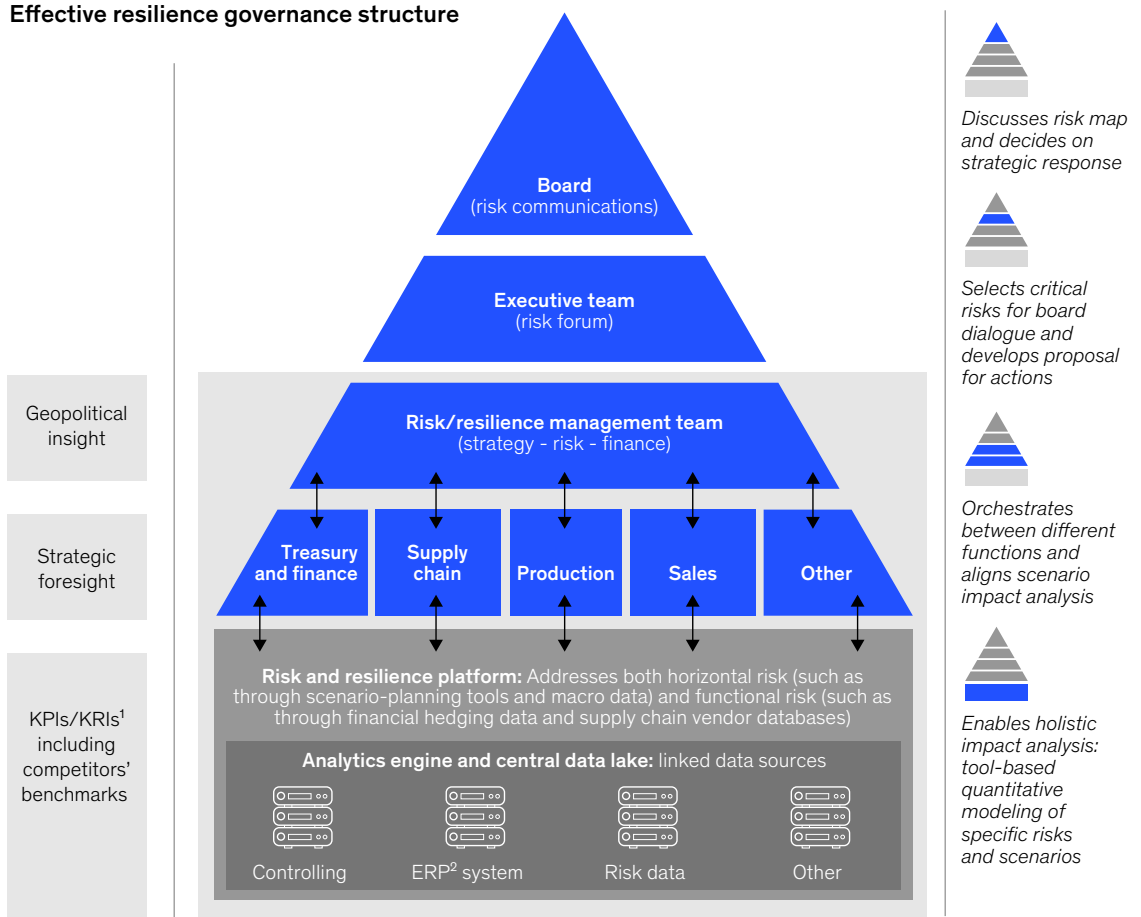
Lead with resilience and get everyone on board

The quest to build a resilience muscle starts in the executive suite and boardroom (Exhibit 2). Leaders should question long-held assumptions, encourage critical and challenging discussions, and allow for regular review and adjustment. The ability to adjust and quickly correct strategic decisions is arguably the most important factor in building organizational resilience.

Exhibit 2

The ability to adjust and quickly correct strategic decisions is arguably the most important factor in building organizational resilience.

Effective resilience governance structure



¹Key risk indicators.

²Enterprise resource planning.

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It's equally important to ensure that middle managers understand the shift from fixed strategy and execution cycles [to a more agile approach](#). They, alongside senior leaders, should encourage regular communication and constructive feedback with employees across the organization. Disruptions and the need to make strategic adjustments will only become more frequent, given higher market volatility and changes to the structure of the industry—such as the shift from gas-powered vehicles to EVs. Automakers should ensure that their employees are aware of these shifts and prepared to respond quickly. Training programs and frequent communication about the need for resilience can help everyone understand why changes are necessary and how they contribute to helping the company stay competitive.

While senior leaders may have some of these practices in place, relying on traditional approaches isn't enough to build a resilient automaker—or any company operating at global or international scale today. The stakes are higher and uncertainty is growing, yet resources and management capacity remain limited. Temporary task forces can help handle immediate disruptions, but they can also exhaust the organization over time. Even the most capable leaders will find it harder to stay competitive without a more systematic approach.

In the long run, resilience will be the key factor that distinguishes industry leaders from those that fall behind. To grasp the necessity of resilience, leaders need only look at past disruptions, such as the financial crisis. As changes become more frequent and wide ranging, developing a robust resilience strategy will become even more critical for achieving success.

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