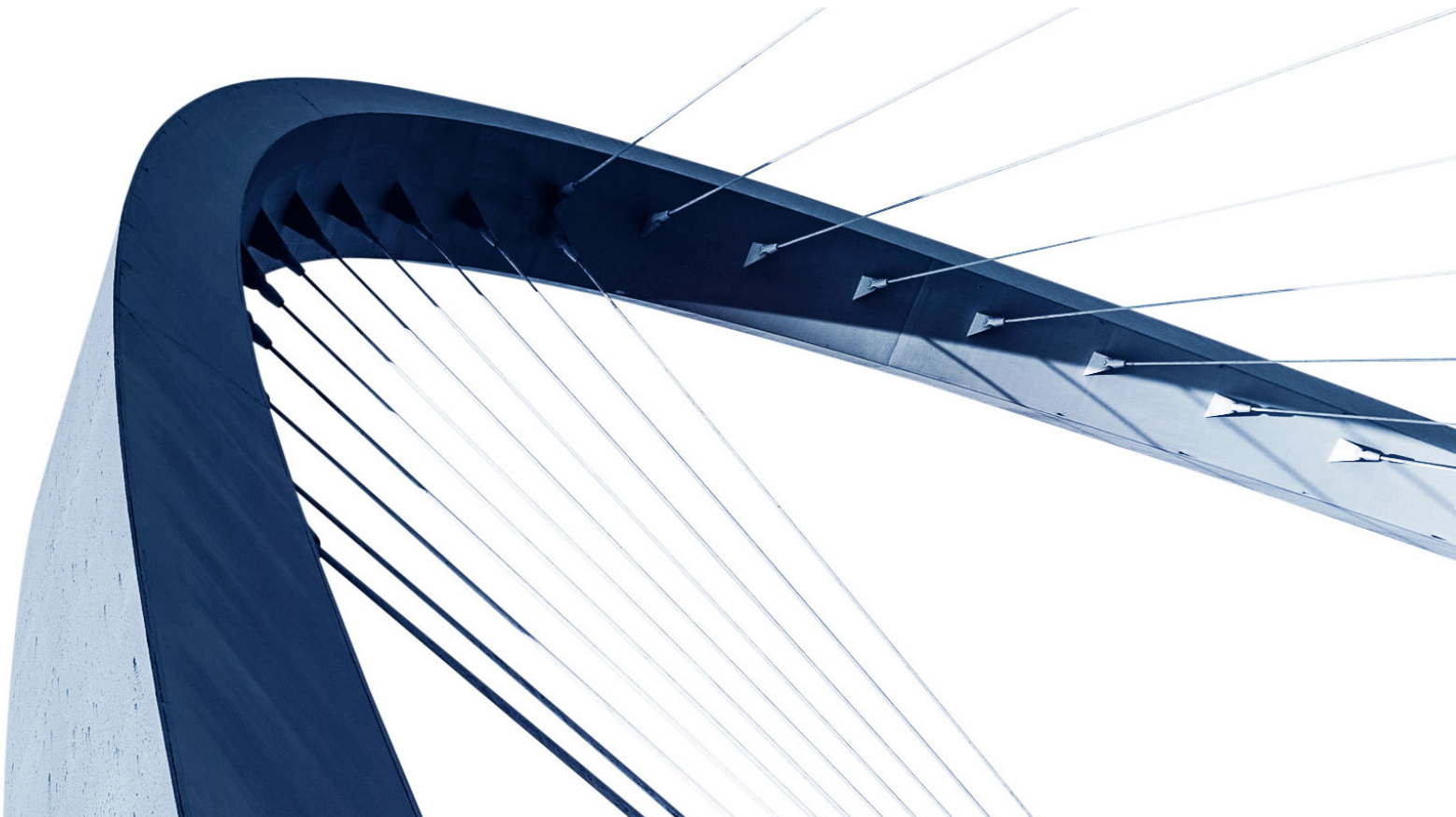


Operations Practice

# Building resilient operations

In the face of rising uncertainty, get ready for the unexpected. To build resilience, accelerate productivity improvement and operational flexibility.

*by Dominik Lelièvre, Philipp Radtke, Marta Rohr, and Rafael Westinner*



**Economic and business uncertainty** is rising across the world. After more than a decade of strong growth, expansion in many major economies has slowed significantly in recent months. Businesses are feeling the repercussions of political and economic tensions, from disputes over trade to questions over the growth trajectories of economies from China and India to the European Union and the United States.

At the market level, meanwhile, further forces are at work. From the rise of e-commerce in retail to the impact of alternative power trains, new mobility solutions, and autonomous driving in the automotive sector, few industries have been spared the impact of technological disruption. New digital technologies are also reshaping the way operations are done, with sophisticated automation powered by the Internet of Things (IoT), for example, or the use of advanced analytics and artificial intelligence technologies to support or augment human decision making.

These changes bring significant opportunities as well as risks. In response, companies in multiple sectors are already transforming their products, processes, and business models. Now they need to go even further, accelerating internal initiatives and pursuing new forms of collaboration with customers, suppliers, and partners. With so many variables in play, however, the challenge for many organizations will be to learn how to thrive in a world of continual turbulence.

The past provides a clue. Some companies have made structural, strategic, and operating decisions that dramatically improved their ability to perform in the face of volatility and uncertainty. In this article, we draw on proprietary research that shows how these resilient organizations succeeded. We explain why future challenges may require an even bolder approach, and why companies should strive to build greater flexibility into their end-to-end value chains.

## **Lessons from the past**

The most significant period of volatility in recent history was the global recession triggered by the financial crisis of 2007. Over the ensuing 18 months, global GDP fell by 1.9 percent, its steepest and most widespread contraction in the modern era. Industrial output, trade, and investment plummeted in most developed countries. The US unemployment rate doubled.

Some companies rode out the turbulence far more successfully than the majority of their peers, however. McKinsey analyzed the performance through the crisis of around 1,000 large, publicly traded companies from multiple industry sectors. That research identified a subgroup of resilient organizations that delivered a growth in total return to shareholders (TRS) that was structurally higher than the median in their sector. The performance of these companies dipped less overall during the recession, and improved faster during the ensuing economic recovery. By 2017, the cumulative TRS lead of the typical resilient had grown to more than 150 percent over their non-resilient counterparts.

That difference wasn't down to luck. Resilient companies were not insulated from the impact of the downturn: their revenues fell in line with their peers during its early stages. By 2009, however, the earnings (EBITDA) of resilient companies had risen by 10 percent, while industry peers had lost nearly 15 percent.

Our analysis suggests that these companies succeeded because they moved further and faster before, during, and after the crisis. In 2007, for example, resilient companies were cleaning up their balance sheets, reducing debt while most companies were accumulating it, and selling off underperforming businesses. They doubled down on operational effectiveness too. By the first quarter of 2008, resilient companies had cut their operating costs by 1 percent, while those of their peers continued to grow. That decisive action

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meant resilient organizations had access to more cash, and they used it wisely: maintaining their relationships with key customers through the recession and acquiring assets and companies from distressed rivals as the upturn began.

## **Tomorrow is not yesterday**

The experience of the past can inform companies' planning for future challenges, but it doesn't provide a blueprint for action. In part, that's because history is unlikely to repeat itself in the same way. While there were significant regional differences in the impact of the 2008 crisis, markets and supply chains are even more fragmented today. Then there's the digital difference. The large-scale adoption of new technologies, such as IoT, advanced analytics, and machine learning, is redefining the size of the opportunities available to companies, and the speed at which they can be captured.

Take the example of one global consumer packaged-goods company. It recently transformed a long-established plant in the Czech Republic using a portfolio of Industry 4.0 tools, including digital performance management, IoT-enabled automation, and widespread use of modelling and simulation to evaluate and improve its manufacturing operations. Together, those changes helped boost productivity by 160 percent, with reductions of more than 40 percent in both quality deviations and inventory.

Digitization can be a double-edged sword,

however, helping outsiders slice through barriers to entry even as incumbents slash performance constraints. The steady annual productivity improvements that have become the norm in many manufacturing plants may not be enough to keep a company ahead in a world where digital tools are delivering improvements ten times faster. Put simply, yesterday's bold moves may be too timid in the face of tomorrow's challenges.

## **The resilient value chain**

Companies can't avoid volatility and uncertainty, but they can, and should, take specific actions to build greater resilience into their value chains. We define resilience in this context as an organization's ability to keep generating economic profit through cyclical and structural changes in supply and demand.

In practice, resilience has a productivity component and a flexibility component. High, and continually rising, productivity helps a company protect its margins, allowing it to ride out smaller changes and giving it the financial firepower to respond to larger ones. The flexibility of a value chain, meanwhile, is determined by its ability to continue generating profit under different supply and demand conditions. Can a company bring its costs down as demand falls? Can it ramp up output to take advantage of market peaks? Can it adjust its procurement activities to benefit from fluctuations in input costs?

## **The need for new metrics**

Even companies that recognize the power of superior productivity and operational flexibility can lack effective tools to measure and evaluate them. Today, few organizations can claim to understand how flexible their value chains are compared to those of competitors, for example. Nor do they know where they should make changes in order gain the flexibility they want.

We believe that the development of effective ways to measure, develop, and manage value-chain flexibility will be critical for companies over the coming months and years. It will also be challenging. Value-chain flexibility is multidimensional and context-specific. Measuring it will require detailed, granular analysis. In logistics, for example, flexibility might be affected by the fraction of material purchased from local suppliers, as well as by the nature of contractual arrangements with logistics-service providers. In R&D, key factors might include the percentage of engineering hours that are outsourced, as well as the size and duration of major ongoing projects.

Companies grappling with this complexity need a better understanding of where to target their efforts to become more resilient. Research into the factors that matter most has led to the development of the McKinsey Operations Resilience Index, which helps pinpoint the parts of a company's cost base that are most rigid, and why. Some automotive players, for example, have committed significant resources to their future electric and autonomous vehicle programs,

potentially limiting their ability to cut costs in the event of a major fall in demand for today's models. Over time, the index provides organizations with a way of tracking their progress and benchmarking themselves even as standards for leadership in flexibility and productivity continue to evolve.

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The leaders of most organizations already understand the critical role that operations play in overall business performance. We believe the next frontier for many companies will be the development of operating models that embrace resilience: able to withstand shocks and capture emerging opportunities faster and more effectively than those of their competitors. Where should your organization focus its efforts? Your answers to the three questions below may provide a guide.

1. Which opportunities have been difficult to pursue due to a lack of resources or responsiveness in your organization?
2. What are the most inflexible points in your current operations, and what are the underlying reasons for the rigidity?
3. Where could the use of digital and analytics solutions achieve meaningful changes to the performance indicators that matter most to your organization?

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