

Elevate every decision with intelligent supply chain operations

Fast-track to future-ready performance



Contents

All eyes are on supply chain leaders	04
What's standing in the way?	09
The future-ready supply chain: <i>How to get from here to there</i>	10
The choice to change	23
About the authors	26
Appendix	27



Elevate every decision with intelligent supply chain operations

The pandemic exposed just how much the supply chain can make or break a company's success. It has revealed hidden vulnerabilities.

And in the process, the crisis has moved Chief Supply Chain Officers (CSCOs) to the forefront of change. The days when their sole focus was on cost management are gone. And there is no turning back.

81% of supply chain leaders say that the pandemic has been their organization's greatest stress test.¹

From supporting new customer experiences to driving profitability, expectations that were taking shape prior to the pandemic quickly gained momentum during the crisis, taking on new urgency. In this environment, is it any surprise that nearly half of executives say that the CSCO is an enabler and driver of top-line growth?²

With the supply chain being the lifeline of the business, all eyes are on leaders to transform it.

Given that the supply chain is the lifeline of the business, all eyes are on its leaders to transform it to flex with fluctuating demand and redefine resiliency. Every decision must be grounded in customer needs and environmental and social responsibility—from sourcing to third-party logistics partners.

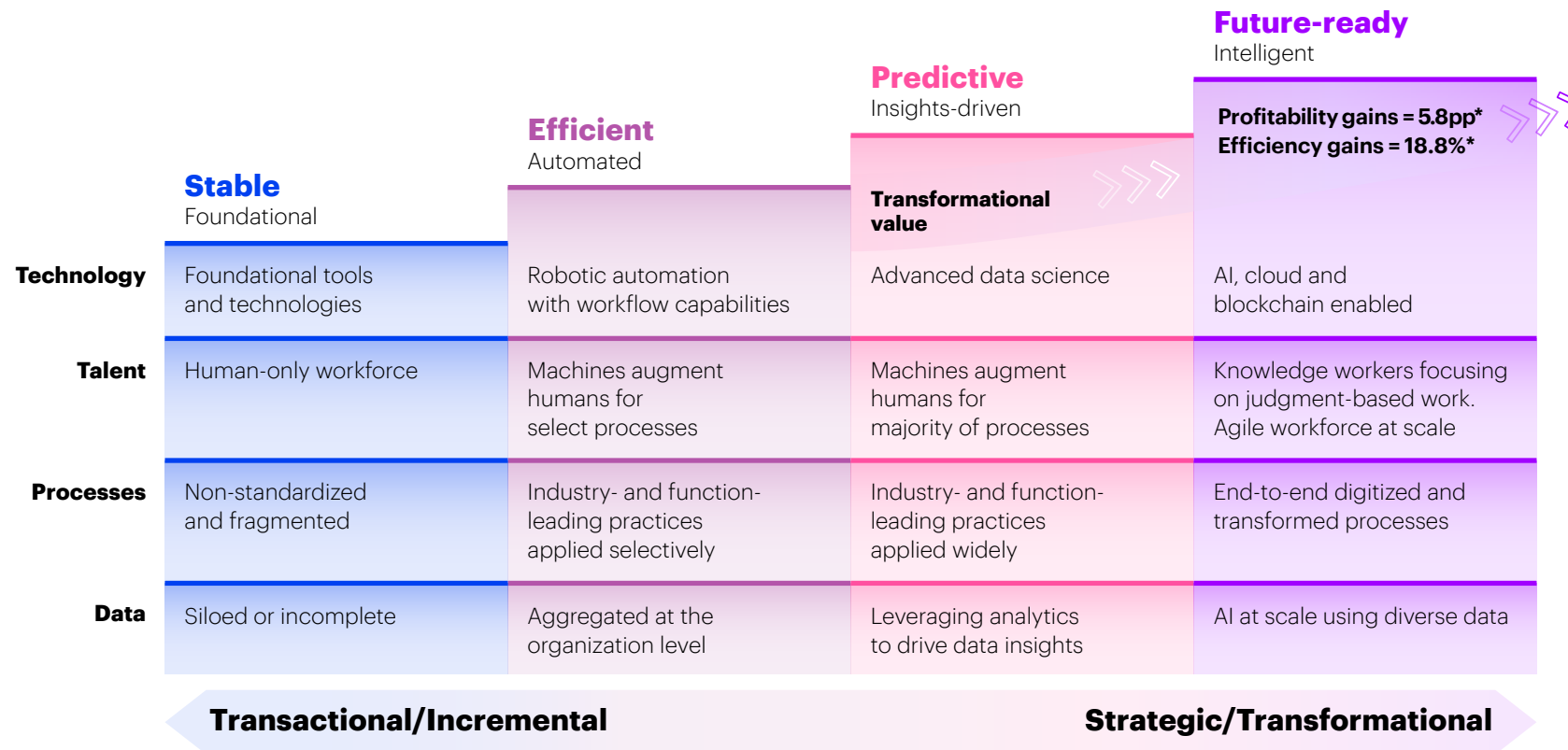
Relevancy, resiliency and responsibility are the new triple mandate for supply chain functions. In response, many are investing to avoid the pitfalls of 2020 and prepare for what's next. However, progress is hampered by a lack of visibility across the value chain as well as by significant resource, technology and funding limitations.

Supply chain leaders need a digital-powered, data-driven operating model

To move past these limitations and deliver on their new mandate, supply chain leaders need to focus on the maturity of their operations. But how mature are operations today? To find out, we conducted a global, cross-industry study of over 1,100 senior executives³—including 254 supply chain leaders. The research shows how respondents view their operations maturity and quantifies the link between business operations maturity and performance.

This research and our experience reveal four levels of operations maturity: **Stable**, **Efficient**, **Predictive** and **Future-ready**. Each level is grounded in and enabled by progressively more sophisticated technology, talent, processes and data insights (Figure 1).

Figure 1.
The four levels of operations maturity



*Accenture Research and Oxford Economics Intelligent Operations Survey, 2020

Accenture experience shows that additional productivity and efficiency gains up to 50% can be seen in organizations displaying future-ready characteristics.

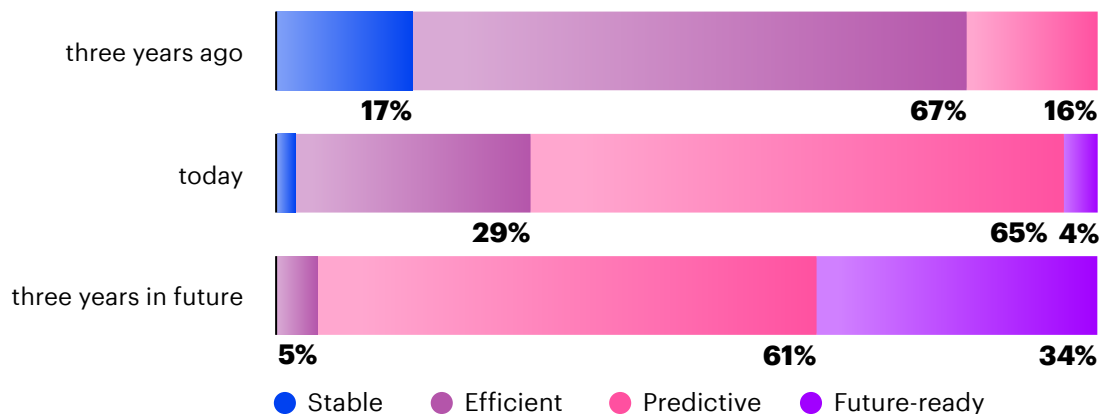
Achieving the highest level of maturity possible means organizations become “future-ready.” These organizations are well poised to deliver new value in the supply chain. And on average, organizations we found to be future-ready showed a 2.8x boost in corporate profitability and 1.7x higher efficiency than those at lower maturity levels.

How supply chain leaders see operations maturity

New expectations of the supply chain have expanded supply chain leaders’ visibility across the enterprise. This experience influences how these leaders perceive their organizations’ overall operations maturity. Three years ago, just 16% believed their organization had predictive operations. None had future-ready operations. Today, 4% call their operations future-ready while 65% see them as predictive. By 2023, 34% expect to be future-ready (Figure 2).

Figure 2. Supply chain leaders say that their organization’s operations maturity has improved, and they are optimistic about more progress in the next three years

Percent of **supply chain** leaders reporting each level of operational maturity



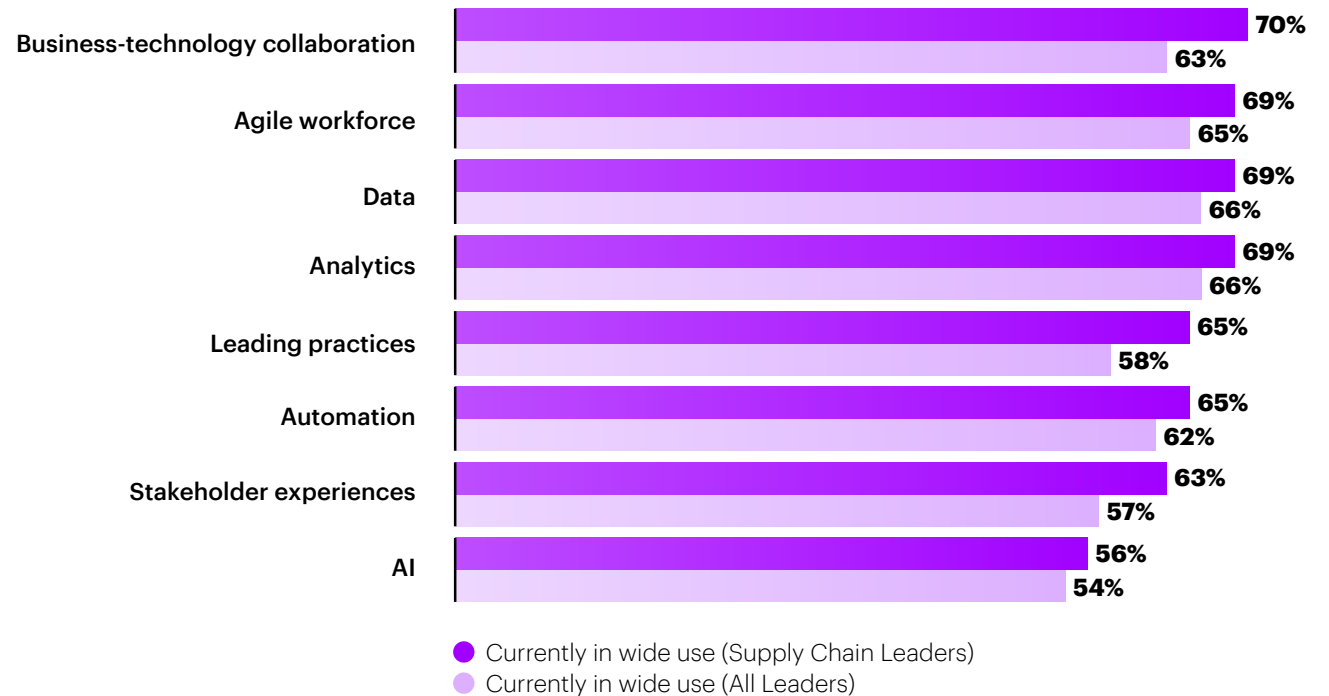
This evolution in thinking suggests that supply chain leaders are optimistic about the future. Yet jumping from 4% to 34% in just three years is an ambitious undertaking that requires significant transformation of both supply chain and enterprise operations.

Scale makes all the difference

To understand more about operations transformation, consider how we measure future-readiness. It reflects an organization's ability to scale eight characteristics of operating model maturity: analytics, automation, data, stakeholder experiences, artificial intelligence, business and technology collaboration, leading practices and workforce agility (see Appendix for definitions). Supply chain leaders are very confident that their organizations are widely using all eight characteristics today (Figure 3).

Figure 3.
Supply chain leaders are fairly confident in their organization's ability to widely use the characteristics of future-readiness

Operations characteristics in wide use



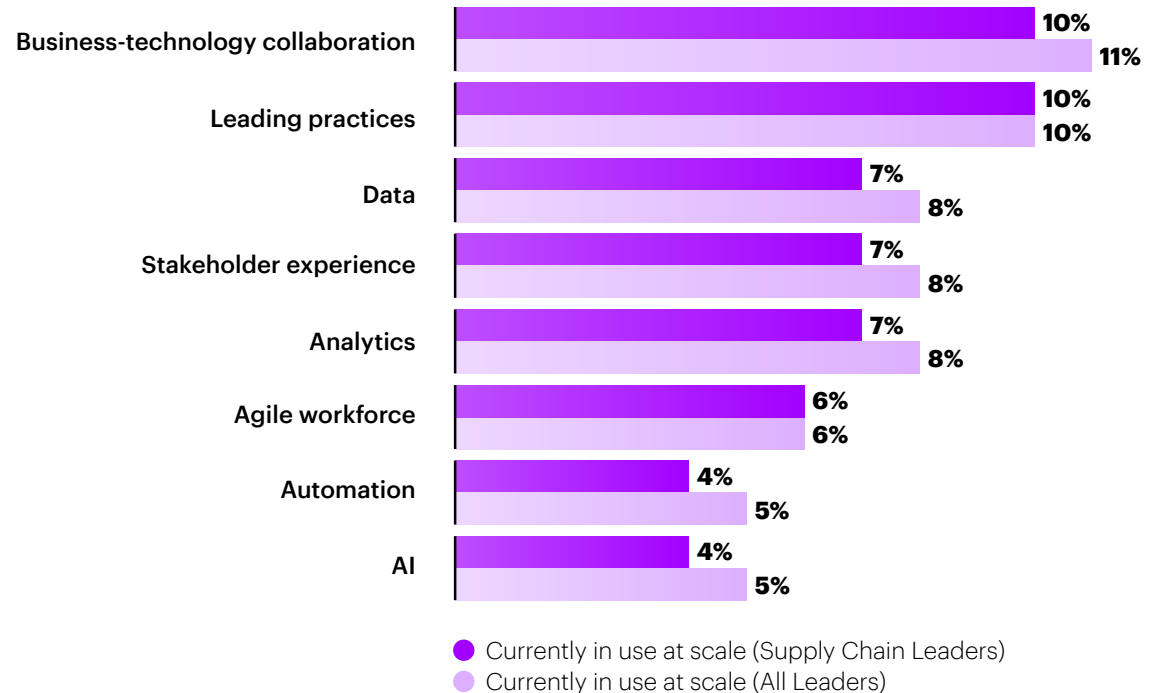
This begs a key question: if organizations are doing so well in all these areas, why do only 4% of supply chain leaders identify their enterprise as future-ready?

The answer comes down to scale.

Predictive organizations haven't yet reached scale in these eight characteristics, whereas future-ready organizations are already there. As Figure 4 shows, a much smaller group of supply chain leaders see this happening today.

Figure 4.
Supply chain leaders are most confident in their organization's ability to scale business and technology collaboration and leading practices

Operations characteristics at scale



What's standing in the way?

Getting to scale is non-negotiable for organizations that want to improve operations maturity and become future-ready.

When we asked supply chain leaders what the biggest barriers are to scaling the characteristics of operations maturity in their organization, they rated strategy and technology as the top challenges. This perception reflects the struggles many of these leaders are having in their own area. The supply chain function is notoriously siloed. This can impede leadership's ability to execute an integrated and centralized supply chain strategy that brings all parts of the value chain together around a shared set of business and customer outcomes.

Not surprisingly, technology is becoming increasingly important to the supply chain. The majority of supply chain leaders (81%) agree that they are facing technological change at unprecedented speed and scale. And 64% report that the pace of digital transformation for their organization is accelerating.⁴ Even so, many supply chain functions are constrained by aging legacy technology,

underinvestment in digital and a patchwork of point solutions for everything from demand planning to transportation management. They lack the data-driven insight to predict and monitor every action along the supply chain and reinvent how they source, plan, manufacture, distribute and recycle products.

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64%

report that the pace of digital transformation for their organization is accelerating.⁴

The future-ready supply chain: How to get from here to there.

Supply chain leaders can help the enterprise—and their own areas—move past these challenges and pursue future-readiness. But with so much changing so fast, they should act now. It's a good thing that they have the perspective and respect of the enterprise to act as champions of operations change.

To start the journey to becoming future-ready, our research reveals three things that CSCOs should know.

01

**Know the
ultimate goal**

02

**Know the
key steps**

03

**Know how to leapfrog
maturity levels**

01

Know the ultimate goal

Think big with strategy at the forefront

Collaborate across business and technology

To influence operations transformation, supply chain leaders need to move past what they identify as one of their biggest hurdles to progress—lack of a cohesive strategy. This is especially problematic in key areas for operating model maturity such as data, stakeholder experiences and leading practices.

As discussed previously, strategy is a challenge because of the siloed nature of most supply chain functions. The pandemic exposed what a liability these silos are. For example, the lack of an integrated planning capability made it difficult for many companies to meet new demand patterns as well as having the funds available to support supply chain disruptions.

Supply chain leaders can drive value at the “seams” and start to bridge silos by thinking holistically about strategy.

There is a clear opportunity to make the triple mandate of relevancy, resiliency and responsibility their North Star, and supply chain leaders can put some muscle behind this shift by investing holistically in these strategic objectives. In practical terms, this means they need to view every area of supply chain operations as a part of a greater whole dedicated to providing value beyond cost savings. It's value that benefits all stakeholders—the business, partners, customers and even society. By doing this within their own area, CSCOs can model the benefits to the rest of the C-suite, further elevating their role as growth drivers.

Collaborate across business and technology

Business and technology collaboration is an important step to realizing the value of strategy within the operating model. In fact, innovative companies make it a priority to break down silos between these departments. Case in point: 86% of all future-ready organizations expect business and technology to collaborate fully by 2023.

While supply chain leaders believe that their organizations are best equipped to scale business and technology collaboration compared to all the other characteristics, just 10% say this collaboration is happening at scale today. Half of supply chain leaders expect to see it at scale by 2023.

This is an ambitious jump. To make the leap, supply chain leaders need to improve their own technology quotient (TQ) and develop their CIO relationships. The more they make the business case for technology investments that address issues in real-time and improve the organization's ability to meet customer expectations, the more that business and technology interests can align around a shared agenda.



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Case study

Building the strategy around customers

With 17,000 items on promotion in 1,200 stores each week, a North American retailer's promotional business is worth US \$9 billion a year. Under-ordering means gaps on the shelves, while over-ordering creates excess inventory, both of which impacts customer experience and the bottom line. This is why the retailer took a strategic approach to transforming store promotions with customer-centricity as its North Star.

The retailer advanced its operations maturity with an intelligent supply chain operating model that orchestrates data, digital technologies and talent. This made it possible to predict the level of demand for items on promotion, ensuring that as many customers as possible could benefit. The new operating model is helping the retailer reduce inventory by **30%** and boost productivity by **33%**.

98%

in-store fill rate

02

Know the key steps

Automate at scale to augment human talent

Create a “digital data thread”

Scale cloud investments



Automation at scale is an important way to increase efficiency and ranks as the top critical factor for digitizing business processes. Supply chain leaders recognize the importance of automation and report that wide or full scale automation in their organization has increased more than 4x over the past three years. With 96% projecting this to be the case in 2023, they expect this momentum to continue at a rapid pace.

Most supply chain functions are using automation and bots to reduce manual tasks in areas like demand planning, logistics and aftersales service. This shift has allowed them to refocus the workforce on more value-added activities that support customer-centered products and experiences such as direct interface with customers, working with product development to design better products and redefining strategies based on real-time customer input.

As leaders invest further in automation, they will need to navigate the human side of the human + machine equation so that people can make the most of technology tools.

With the shortage of supply chain talent from the shop floor to the executive suite, supply chain leaders cannot solve this problem with automation alone. There is a divide to bridge.

38%

of supply chain leaders say that their organization's non-technical workforce is ready to leverage the technology tools that they are given.⁵

Commit to making insight-driven decisions—with better data access and AI

A data-driven operating model is key to making better business decisions within supply chain operations and across the enterprise. A full 61% of supply chain leaders say that their organizations' operating model is designed based on data rather than on experience and intuition. Supply chain leaders see progress in how the enterprise is using data.

76%

report widespread or full-scale data use today, "up more" than 2.5x from three years ago. And 98% expect to have data in wide use or at scale by 2023.

Thanks to digital technologies and powerful analytics, the capability exists today to access data on every supply chain transaction—from where the raw materials were sourced to when an order lands on a customer's front porch. This "digital data thread" creates new insights across the supply chain. Not only can organizations be more predictive, targeted and agile, they can also view every decision through the lens of relevancy, resiliency and responsibility.

As powerful as data is for transforming supply chain operations, most organizations have yet to fully exploit its power. Data is often trapped in silos or left untapped because organizations don't have the tools they need to extract insights from it. The right investments in AI can radically change this dynamic by providing supply chain leaders with real-time insights and intelligence to help them make more informed decisions across the supply chain—from design through service.

AI positions supply chain leaders to get exponential value out of data. Organizations can use AI to support real-time monitoring of manufacturing operations and digital twin technology, which can improve and speed product design. Imagine the possibilities of AI-driven "orderless ordering" that predicts when materials or products will need replenishing and automatically sends them to customers. Or consider the possibility of using AI for more predictive forecasting that isn't only tied to historical trends.

Scale cloud investments to support digital supply chains

Cloud is one of today's most popular and important technologies because it provides secure, flexible computing capabilities to help organizations operate at speed and scale while providing cost benefits. Supply chain leaders are well aware of this, and many are developing cloud-first strategies. So it's not a surprise that 80% think their organization has applied cloud at scale.

A cloud-first approach is a key tenet of digital supply chain transformation. The cloud provides massive computing power, with a simple, flexible, and affordable data and digital architecture that opens up myriad possibilities for the supply chain. This enables leaders to manage service levels and costs and build resiliency and responsibility into their operations. In fact, our research shows that the public cloud can drive significant carbon reduction in the form of a 5.9% decrease in total IT emissions or nearly 60 million tons of CO₂ globally per year.⁶

By fully embracing the cloud, leaders can create a supply chain that influences all its dimensions, i.e. product engineering, planning, procurement, manufacturing, fulfillment and service management.

A large graphic with a purple-to-pink gradient background. It features the text '5.9%' in a large, white, sans-serif font. Below the percentage, there is a line of white text: 'decrease in total IT emissions or nearly 60M tons of CO2 globally per year by using the public cloud.' followed by a superscripted '6'.

5.9%

decrease in total IT emissions or nearly 60M tons of CO₂ globally per year by using the public cloud.⁶



Case study

Automating to support innovation and growth

Following a period of extremely rapid organic growth, a leading semi-conductor company found its manual supply chain processes weren't keeping pace. To meet evolving customer expectations, the company needed to shorten lead times, especially for spare parts.

By moving to an intelligent supply chain operating model, that integrates data, digital technologies and talent, the company transformed its spare parts planning process—making planning more predictable while mitigating the risk of stockouts.

Now with

75%

of the repetitive spare parts planning processes automated, the company has added US \$3 million to the bottom line, increased efficiency and freed up teams to refocus on critical activities—creating innovative products.

03

Know how to leapfrog maturity levels

Build ecosystem relationships



Build ecosystem relationships

Ecosystem partners are crucial for organizations to break through barriers that supply chain leaders see to operations maturity—technology and access to talent. Half of supply chain leaders say that ecosystem partnerships have improved over the past three years, and 39% say the pandemic increased focus on them. These relationships can deliver strong rewards. Our analysis reveals that even a one-level improvement in operations maturity can lead to a projected 17% increase in global profits.⁷

Supply chain leaders are well-schooled in ecosystem relationships. Supply chains don't run well without them and they certainly never achieve leading capabilities at speed and scale. And in today's environment, ecosystem relationships are essential to establish trust, transparency and accountability. For example, multiparty systems that enable a shared data infrastructure between individuals and organizations are becoming increasingly more important in driving efficiency and building new business and revenue models. Sixty-two percent of supply chain leaders say they can only operate in the short term without multiparty systems, while 21% believe that they cannot operate without them at all.⁸

Ecosystem relationships make it possible for supply chain leaders to access a wider pool of technology. This enables them to support continuous innovation without massive investments of money and time. After all, digital technologies are changing so fast that investing in them can be a risky gambit—the investment is made today, and the technology is outdated tomorrow. Wisely choosing the right technology partners keeps supply chain functions innovating ahead of the competition and focusing on what they do best. They must also choose partners that maintain comparable standards of social and environmental responsibility.



62%

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in the short term without
multiparty systems.



Case study

Taking logistics operations to the next level

A global chemical industry manufacturer needed to transform its decentralized and fragmented logistics operations to help it fulfill over one million orders in more than 20 countries annually.

To save an estimated US \$93.8 million, the company is working with an ecosystem partner on a 5-year plan that revamps supply chain processes and leverages a new data-driven transport management system based on an intelligent operating model.

This new model is helping the company move faster and be more responsive to its customers' needs. Data and analytics are offering greater visibility into its transformation carriers' performance—allowing it to benchmark and renegotiate rates that minimize delivery costs and save time.



The choice to change

Elevate every decision with intelligent supply chain operations

Now is the time to make your move to intelligent operations

The supply chain is the lifeline of every organization and the customers it serves. The events of 2020 put this into sharp focus, pushing supply chain leaders into uncharted and unsettling territory. Moving forward, these leaders will continue to be challenged. But these challenges have a silver lining—the opportunity for a relevant, resilient and responsible supply chain that delivers for all stakeholders. It all hinges on an intelligent operating model.

Here's how:

- **Think** big and go beyond incremental change to capture value at the “seams” in siloed supply chain functions.
- **Enhance** intuition with the highest-quality, diverse data and integrate structured as well as unstructured data to drive superior supply chain outcomes.
- **Scale** automation and analytics, AI and integrated solutions with leading practices to drive the full benefits of obtaining and cleansing diverse supply chain data.
- **Foster** a specialized human + machine workforce to strike the optimal balance between people and technology in operating the supply chain.
- **Put** cloud infrastructure at the heart of the supply chain to drive cost efficiency, scalable capacity, and sustainability.
- **Build** complementary third-party and ecosystem relationships to continually innovate across the supply chain.

If you fast-track the journey, your operations can become a true catalyst for competitive advantage. And, along the way, you can elevate your business decisions to realize tangible, sustainable, transformational value and growth in a constantly changing world.

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We defined the four levels of operations maturity based on respondents' assessments of eight characteristics:

Analytics

Covering the discovery, interpretation and communication of meaningful patterns in data to provide superior insights for business decision-making. Analytics includes multiple levels from basic descriptive reporting to more predictive and prescriptive actions which can be applied to business processes.

Artificial intelligence

The ability of a machine to perform cognitive functions like sensing, comprehending, acting and learning. AI capabilities (for example, natural language processing, machine learning) enable computers to make decisions and identify patterns and insights for future decision making.

Automation

Sets of technologies that perform repetitive rule-based tasks. Robotic process automation (RPA), one of the most frequently used examples, increasingly includes multiple solutions such as workflows, platforms and software-as-a-service that further digitize the process.

Business-technology collaboration

Comprising IT and business functions with joint governance models, enabling integrated ecosystem partners and driving the organization's strategic road map.

Data

The quality, scope and depth of structured and unstructured data (for example, video, web content, voice memos, and so on) from diverse internal and external sources, including what is embedded in internal processes.

Functional and industry leading practices

Ways of doing business within a function, organization or industry that are recognized as enabling best-in-class performance.

Stakeholder experiences

The overall engagement experience across all stakeholders of an enterprise including customers, end clients, suppliers, partners and employees.

Workforce agility

Encompassing two key elements: on-demand, collaborative workforce strategy and a work environment where humans and digital machines work together to drive the best outcomes.

What we did

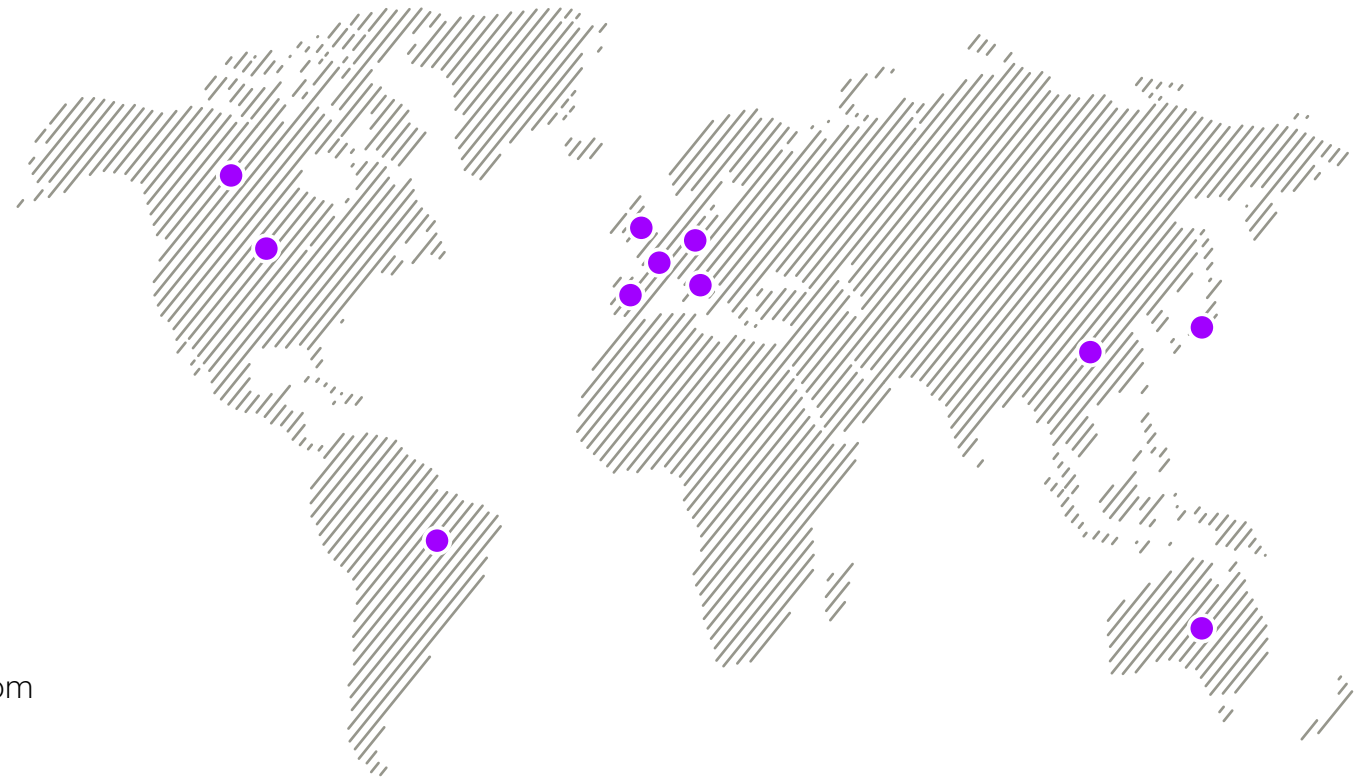
Primary research

Accenture Operations and Accenture Research undertook a 2020 survey, run by Oxford Economics, among 1,100 executives globally—44% of whom were C-level or equivalent—across 13 industries and 11 countries. Oxford Economics also conducted 12 in-depth, off-the-record interviews with executives across countries and industries.

11 countries

125 Australia	50 France	50 Spain
50 Brazil	50 Germany	125 United Kingdom
50 Canada	50 Italy	375 United States
50 China	125 Japan	

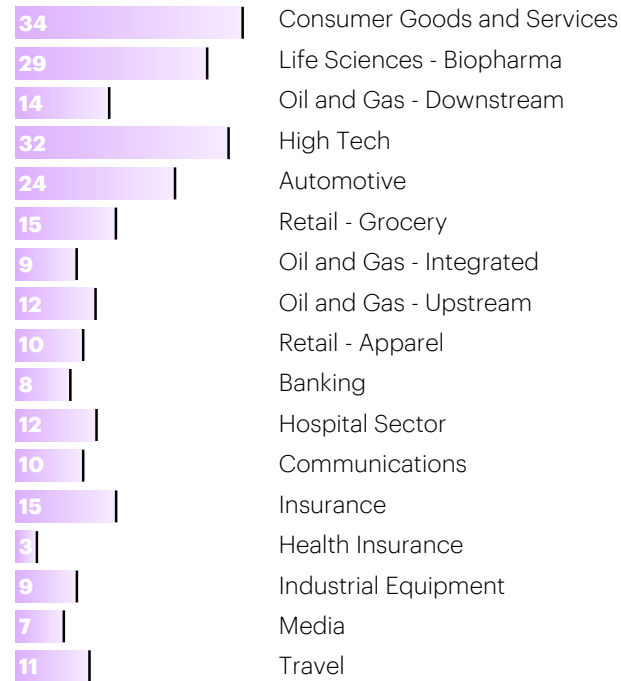
Figure 5.
Survey demographics Part 1



Source: Accenture Research and Oxford Economics Intelligent Operations Survey, 2020

Figure 5.
Survey demographics Part 2

Industry



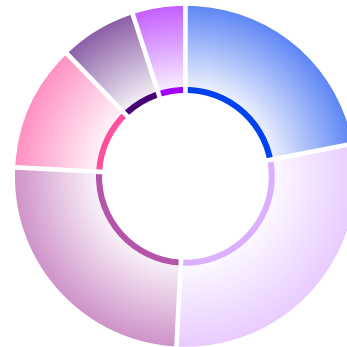
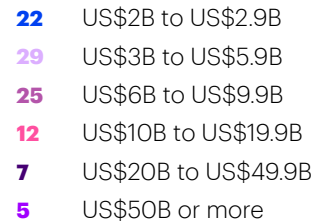
Country



Roles (to nearest equivalent)



Revenues



Economic modeling

Our modeling is based on data from the 2020 Accenture Research and Oxford Economics survey. Each participant was asked about their company characteristics (for example, industry, employment and revenues) and past, current and expected level of operating maturity. Financial data from 2017 to 2019 for each public company was matched from S&P Capital IQ including EBITDA, revenue growth and total shareholder return.

We identified a group of future-ready organizations based on their operating model maturity and analyzed the key underlying factors and operational maturity actions that differentiate these organizations from their peers. This involved developing and implementing econometric models of the relationship between organizational differences in operating maturity position (based on four categories: stable, efficient, predictive, and future-ready, which identify increasing levels of operational maturity) and key financial outcomes. See Figure 5.

The modeling framework also controls for background differences across firms such as geographic location, industry and size. Using our model, we were able to assess the nature and magnitude of the connections between operating maturity, business investments and business outcomes. For example, we found that companies that were just a single step higher up the ladder of operational maturity in 2019 exhibited, on average, better returns. Moreover, investments in leading practices AI and automation were most strongly linked with improved performance.

Scenarios: Using our model and secondary data from S&P Capital IQ, we assessed the implications of hypothetical scenarios of companies raising their maturity level. For example, if all companies were to take a one-step improvement (for example, from stable to efficient) then global profitability, captured by EBITDA, could rise by as much as US\$1.9T (17%). If they were all future-ready, then profits could be US\$5.4T higher (48%).

The report includes case studies and stories from our own experience of guiding 400 clients on the journey to intelligent operations—33% of Fortune 500 companies or 60% of Forbes G2000 companies.

We have helped organizations in 20 countries (Australia, Belgium, Brazil, Canada, China, France, Germany, Greater China, India, Ireland, Italy, Japan, Netherlands, Singapore, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom and United States) and 18 industries (Automotive, Banking, Capital Markets, Chemicals, Consumer Goods & Services, Communications & Media, Energy, Health, High Tech, Industrial, Insurance, Life Sciences, Natural Resources, Public Services, Retail, Software & Platforms, Travel and Utilities) to achieve intelligent operations.

Figure 6.
Measures of financial performance

The tables below describe the various financial metrics used in our modeling:

Financial metric

EBITDA, % of revenue

**Operational efficiency
(OPEX per dollar revenue)**

- Revenue growth
- Total return to shareholders
- Changes in market capitalization
- Productivity (revenue per employee)
- Return on invested capital, %
- Operating profit, % of revenues

Alternative variants of the financial metric

- Change (total and average) in metric since 2019 vs 2016
- Three-year average metric 2017 to 2019
- Metric in 2019
- Dummy variable identifying companies in the top percentile of revenue growth, profitability and efficiency

We were only able to find robust, statistically significant relationships for **profitability** and **operational efficiency**.

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