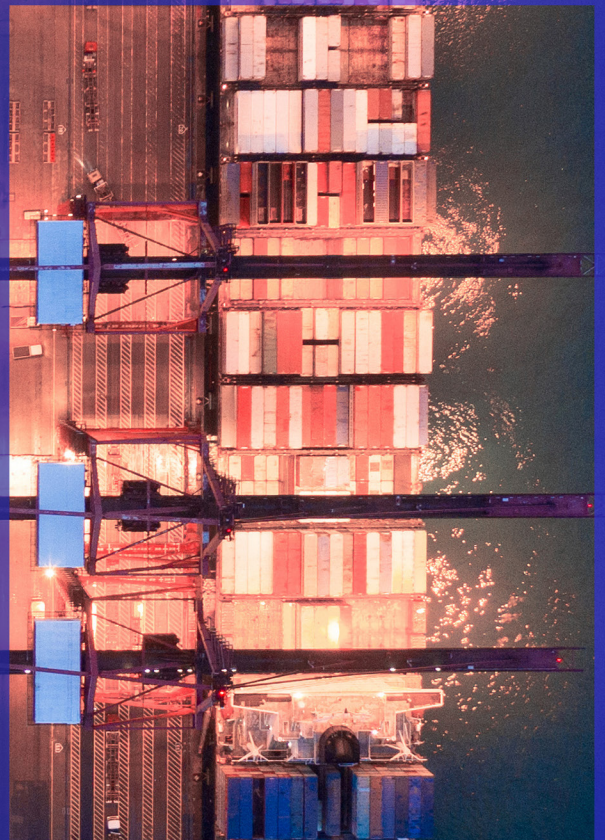




Getting rightshoring right

Rethinking production
footprints for a volatile world

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When the COVID-19 pandemic hit in 2020, it cut off the smooth global flow of material, components, and finished goods. Manufacturers quickly saw the vulnerability of the intricate networks of offshore facilities and suppliers they had woven together to balance labor costs, manage lead times, inventory, and production systems. More than 90 percent of Fortune 1,000 corporations experienced supply chain disruptions because of COVID-19.¹

Nearly three years later, business is still not back to normal. Global supply chains are constrained, and companies face shortages and surging costs, exacerbated by global drought and the Russia-Ukraine war. Whether they need mustard seeds, natural gas, wine bottles, or semiconductor chips, makers of everything from condiments to cars are facing shortages that threaten to limit sales. In a recent KPMG survey, nearly 40 percent of companies said they had experienced more than three significant supply chain disruptions in the past three years.²

Even before COVID-19, there was talk of a “great decoupling”—a reversal of the decades of globalization that enabled

companies to source, build, and sell products around the world. A variety of forces—both political and economic—began to undermine support for globalization and international trade and global investment volumes began to shrink.³ Manufacturers began to look at “nearshoring” and “onshoring” to gain the flexibility they needed for shorter product cycles and rising customer demand for customization. In the latest KPMG Manufacturing Outlook, two-thirds of global manufacturing CEOs say they are focused on making their supply chains more resilient.⁴

A full-scale retreat from offshoring is not the answer, however. Manufacturers will always need low-cost offshore sources for low value-added commodity products that can be stockpiled. However, for many products, labor cost now is less critical than speed, responsiveness, and flexibility.

In this paper we show how companies can “rightshore” facilities and supply chains, using a combination of offshore, nearshore, and onshore sources that are selected to meet the requirements of specific parts and products. We believe rightshoring can help spread risks, enable redundancy, and boost flexibility.

¹ Source: Erik Sherman, “94% of the Fortune 1000 are seeing coronavirus supply chain disruptions: Report,” *Fortune*, February 21, 2020

² Source: “[Supply chain disruption on the rise – how to prepare?](#),” KPMG Norway, May 31, 2022

³ Source: Alina Bobasu, Simona Man and Lucia Quablietti, “What is behind the decoupling of global activity and trade?” *European Central Bank Economic Bulletin*, May 2019

⁴ Source: “[Global Manufacturing Prospects 2022](#),” KPMG International, January 25, 2022



Why offshoring is no longer the default option

Starting in the 1980s, manufacturing shifted from North America and Europe to Asia (particularly China) and other low-cost countries. Manufacturers got access to lower-cost labor and materials, as well as entry into fast-growing local markets. As China built an elaborate supply and manufacturing ecosystem, major companies outsourced more complex products. Startups could ramp up production overnight without ever building a factory. By 2021, China claimed that it accounted for 30 percent of global manufacturing output.⁵

But the factors that made offshoring the default option for manufacturers have shifted. Labor costs have risen in China and in other Asian manufacturing locations, such as Vietnam, while advances in automation have reduced the labor content of many products. Long lead times, high transportation costs, and current supply chain disruptions have also altered the calculus of offshoring.



Labor arbitrage

In many of the world's fastest-growing economies, workers are now enjoying impressive wage gains. As these nations grow wealthier, the difference between high-wage and low-wage markets is shrinking. China, for instance, may be just a year away from being declared a high-income nation by the World Bank.⁶ While wages have risen dramatically in China, India, and Vietnam, workers in manufacturing hubs such as Mexico have seen more modest increases.



Automation

Meanwhile, rapid advances in technology including robotics, additive manufacturing, and artificial intelligence—and the declining cost of these technologies—have reduced the need for unskilled and semi-skilled labor. A new cluster of technologies connecting manufacturing and digital environment (Industry 4.0) are changing the way products are designed, manufactured, and sold. Companies integrating Industry 4.0 across the enterprise will create significant new levels of value. Factories can run with relatively fewer line workers and a small cadre of skilled employees to program and maintain the equipment.



Changing customer requirements

Customers are demanding more variation and customization, shortening product life cycles, and placing additional importance on the need for flexible manufacturing. In this environment, manufacturers currently focused on producing large numbers of limited set of products have had to rethink their place in the manufacturing ecosystem.



Transportation risks

Waiting weeks or months for ocean-going freight from Asia was once an acceptable trade-off for the cost advantages of offshore manufacturing. But as shipping costs grow more volatile and logistics disruptions (including port tie-ups) more common, the calculation is often much less favorable now.



A fractured free-trade consensus

Offshoring thrived because of a political and regulatory consensus on free trade—the fewer the restrictions on trade, the faster the global economy would grow. Developing economies could lift millions of citizens out of poverty and advanced economies would benefit from cheaper goods and low inflation. Although much of that happened, the free-trade consensus has fractured in recent years. In its place are rising economic nationalism and new restrictions on the cross-border movement of goods and services. Since January 2020, the U.S. has had an effective tariff of 19.3 percent on two-thirds of all Chinese imports.⁷



Flocks of black swans

The past two and a half years have shown that manufacturers were not prepared for massively disruptive events, such as the COVID-19 pandemic or Russia's decision to invade Ukraine. In the *KPMG Third Party Risk Management Outlook 2020*, 50 percent of the businesses surveyed indicated they did not have sufficient capabilities in-house to manage all the third-party risks they face.⁸ The lesson that manufacturers are beginning to learn is that just as they have to plan for shorter product life cycles, they now need to anticipate more disruptions. They can't predict where the next political upheaval will break out, when the next deadly virus will arise, or when the changing climate will churn a storm into a deadly hurricane, but it is prudent to assume that disruptions will keep on coming.

⁵ Source: Official: China accounts for 30% of global manufacturing output," State Council, Peoples Republic of China, June 14, 2022

⁶ Source: Justin Yifu Lin, "When will China become a high-income country?" Asia Times, March 22, 2022

⁷ Source: "US-China Trade War Tariffs: An Up-to-Date Chart," Peterson Institute for International Economics April 22, 2022




⁸ Source: "[Third Party Risk Management Outlook 2020](#)," "KPMG China, April 7, 2021

The solution: rightshoring

In reaction to supply-chain disruptions, many companies are adopting a “just-in-case” approach (Exhibit 1) by creating redundancies and building buffer stocks to eliminate single points of failure that could disrupt production. But those measures are costly, resulting in inefficient operations, more working capital, and higher costs.

This might be enough to survive in this new era, but it won’t be enough to win. To master the new dynamics of sourcing, companies will need to identify a set of key variables that replace their old pre-COVID calculus, a new set of supply chains that align supply, demand, and production.

Exhibit 1. Why rightshoring fits today’s needs better than just-in-time or just-in-case

Just in time 	Just in case 	Rightshoring 
<p>Globalization has benefited both developed nations and emerging markets</p> <ul style="list-style-type: none">• Strategy of ordering parts, components, or products from suppliers to meet immediate customer and fulfillment demands• Strong focus and emphasis on the immediate “piece price”• More and cheaper goods in developed nations (demand-side)• Focus on participating in global economy for emerging markets (supply-side)	<p>Companies focus on meeting customer demands by focusing on building redundancy</p> <ul style="list-style-type: none">• Investing in supply chain redundancies and other buffers through backup capacity• Adjusting footprint by “on-shoring” to protect against political and other risks▪ Entering into longer-term commitments and contracts with suppliers and moving away from short-term nonbinding arrangements for supply contracts	<ul style="list-style-type: none">• Move beyond reflexive offshoring to includes a mix of offshoring, near-shoring, or reshoring• Align supply chains to market growth and service strategies• Take an end-to-end view of supply chain & operations to develop ability to flex and couple/decouple across the various links• Cost benefit of pre-approving alternate BOMs to enhance supply chain stability

What a resilient supply chain looks like



End-to-end view of supply chain and operations.

Companies should take an end-to-end view across the network including their manufacturing operations and understand who the suppliers are a few tiers down to identify “choke” points that might arise and identify ways to flex by having the ability to couple/decouple across the links.



Product platform and manufacturing technology/process harmonization

Define flexible product architecture with interchangeable parts and identify opportunities to standardize components across multiple products. Harmonizing manufacturing technology enables products to move seamlessly across the network as well.



Flexible manufacturing

Large scale production will dominate some segments of the value chain but advances in technology will drive establishment of distributed, small-scale local manufacturing ecosystems with focus on flexibility and rapid changeovers to align with market demands. At the same time, companies should look at agile manufacturing. Manufacturing, in collaboration with product development, should understand the degree of product and manufacturing process changes needed, and limit large inflexible investments in favor of more flexible solutions.



Supplier pre-qualification

Develop sources of supply closer to point of use/consumption to reduce supply chain costs, risks, and complexities. Companies have to research the availability, quality and price and identify new suppliers.



Alternate bill of materials

Define and pre-approve alternate bill of materials for supply chain stability. Cross functional teams from engineering and procurement have to proactively review the bill of materials on an ongoing basis to ensure raw material, component availability and alternate parts are identified to mitigate risk in manufacturing.

Implementing a rightshoring approach

To determine where products should be sourced and built, companies should start with a series of questions (Exhibit 2).

Exhibit 2. Defining what rightshoring means to your organization

Dimension	Key strategic questions
Business Strategy 	<ul style="list-style-type: none"> What is the strategic importance of the product in the portfolio? What is the outlook for relevant market segments, industry trends, dynamics, and competitive positioning of products? What are the profit profiles of the markets, customers, and products?
Customer & Market 	<ul style="list-style-type: none"> How is the customer demand evolving? What is the current and future forecast for the product(s)? What are the key attributes of the customers, channels, and markets for the product?
Product 	<ul style="list-style-type: none"> What is the degree of product complexity? Is the product architecture flexible to handle other parts? Can elements of product architecture can be decoupled for manufacturing, add-ons by third parties, delayed customization closer to customer/point-of-sale? How is the company thinking of its product platform strategy? Is there a platform centric model that can enable rapid customization?
Manufacturing 	<ul style="list-style-type: none"> Are advances in manufacturing technology and Industry 4.0 shifting our sector from a predominantly scale-driven operation to a sector characterized by smaller and flexible production models. Are there opportunities to increase productivity and efficiency by implementing lean techniques and assess options to minimize the requirements for direct labor through use of advanced manufacturing techniques.
Dynamic Supply Chain 	<ul style="list-style-type: none"> What is the total supply chain cost of ownership/cost to serve? How can we optimally execute against differentiated production and service strategies? Is the supply chain synchronized and agile to respond to shifts in the market? Does the supply chain have adequate stability and redundancy to insulate global operations from regional disruptions?
ESG 	<ul style="list-style-type: none"> How can we reduce environmental footprint, while increasing social responsibility and finding new ways to build shareholder value? Have we considered the most important aspects of corporate governance, including code of business, environmental factors, labor exploitation matters, etc.?

How KPMG can help

The KPMG Industrial Manufacturing practice helps manufacturers transform customer-facing activities and operating models, using intelligent automation and advanced data analytics to align back offices, shop floors, and supply chains. Our IM professionals help clients make better decisions today to create the greatest impact tomorrow.

The supply chain disruptions that companies have been grappling with are forcing a reevaluation of their manufacturing footprint. To help clients develop the right manufacturing footprint for their businesses today, we offer a wide-ranging assessment and strategic planning services (Exhibit 3). KPMG has the global reach and experience to define a solution that balances multiple objectives and tradeoffs in a way that drives the greatest risk-adjusted value.

Exhibit 3. Crafting and implementing a rightshoring strategy

Review capabilities and assets

- Determine core competencies and conduct a broad portfolio review of products and assets across geographies
- Categorize assets to understand strategic fit and competitive position
- Identify intrinsic (strategic and technological) factors and extrinsic (market and economic) decision factors for each product
- Understand the drivers of performance and value creation

Identify products to offshore

- Evaluate product and technology roadmap including product platform strategy and architecture
- Determine “decoupling points” based on product architecture and supply chain flow
- Segment products and supply chain based on strategic fit, product variants, predictability in demand, network flows, etc.
- Understand manufacturing shifts in relation to the broader rightshoring ecosystem, taking into account relevant factors

Prepare: Develop the foundation

- Develop robust financial model for evaluation along with service levels and metrics
- Identify and implement operations excellence initiatives as part of the rightshoring strategy
- Define deal structure for rightshoring manufacturing operations
- Develop governance and appropriate controls with tight links between product development, sourcing with manufacturing
- Define the factors for agility and flexibility across all elements of the supply chain

Transition and optimize

- Develop an implementation roadmap with a broad view of optimization. Include product design/re-design, manufacturing, logistics and ESG factors
- Complete detailed plans for quality & regulatory certifications including coordination of changes across suppliers
- Define and institute clear quality requirements with YoY continuous improvement focus
- Institute process improvement and cost reduction programs with joint incentives



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Eric has 20 years of experience working in the Industrial Manufacturing sector. Prior to joining KPMG, he worked for a Fortune 500 manufacturer of components for the aerospace and oil and gas sectors, serving as a P&L leader for multiple international subsidiary companies. In his consulting experience, Eric has led projects that focus on supply chain optimization, manufacturing strategy, and operational effectiveness for aerospace and industrial clients.



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