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Insights

Nearshoring:
Seizing the Current Supply Chain Opportunity

Applied Value Knowledge

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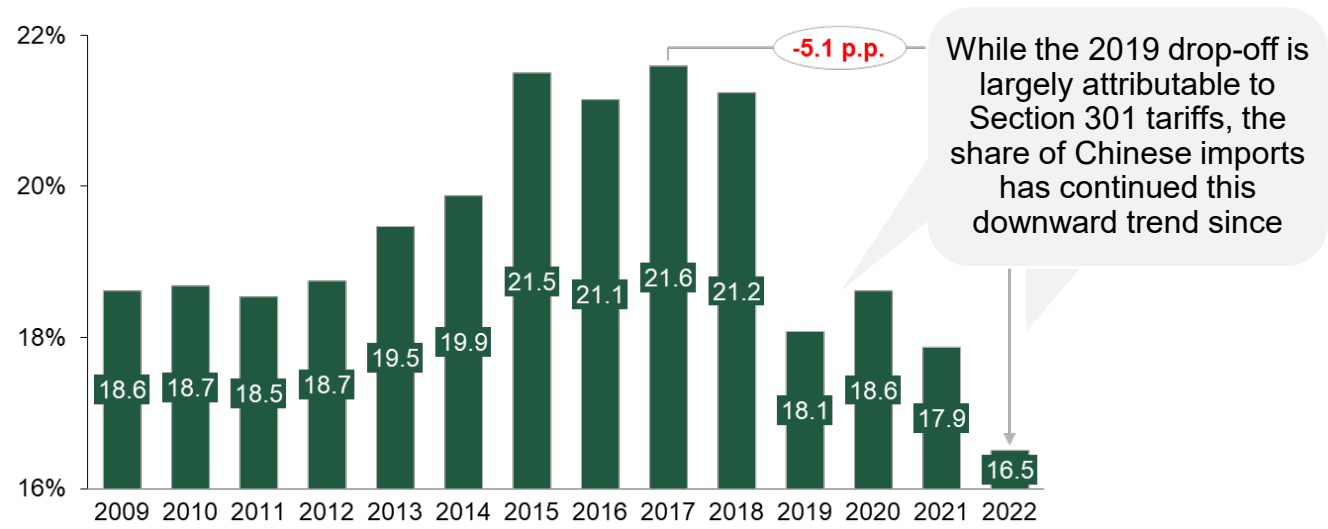
1. Introduction

In recent years, the predominant supply chain trend of the last half century – ever expanding globalization of manufacturing operations – has begun to go into reverse. Between 1980 and 2018, many of the world's largest companies transformed their footprints, attracted abroad by compounding incentives such as offshoring's labor arbitrage benefits, low barriers to managing a highly outsourced supply chain, and increasingly integrated trade networks. Nowhere was this so evident as in China, where the shift of production led it to become the world's dominant manufacturing hub. It attracted multi-national corporations from across industries and geographies to take advantage of its unrivalled combination of a cheap and seemingly endless labor supply, business-friendly regulatory environment, and fixed currency.

However, faced with a substantial set of both push and pull factors, companies have increasingly been reassessing and changing their long-term supply chain strategies, as evidenced by the drop-off in China's share of US imports since 2019 (Fig. 1). The combination of these factors has increased the attractiveness of an often under-explored opportunity: that of nearshoring portions of a manufacturing footprint closer to primary markets. The goal of this paper is to outline those key factors contributing to the rise in nearshoring, introduce a framework for assessing nearshoring opportunities, and outline a path for companies seeking to maximize efficiency and impact in assessing and pursuing such opportunities. Through this approach, Applied Value has found that **nearshoring can save companies 10%-25% on a total-landed-cost basis,** while also **de-risking their supply chains** from future disruptions**.**

Figure 1: Share of Chinese Imports of Total US Imports, %



Sources: United States Census Bureau via Panjiva; Applied Value Analysis

2. The Shift Away from China and towards Nearshoring

As companies rethink their supply chain and manufacturing strategies, many are evaluating the potential of nearshoring portions of their supply base and manufacturing operations while diversifying from China. We identify the emergence of the following factors as primary drivers:

1. Geopolitical Risk
2. Labor Costs
3. Environmental Impact
4. IP Theft and Business Transparency
5. Speed to Market
6. Supply Chain Agility: Lead Time, Inventory Levels, Logistics Costs

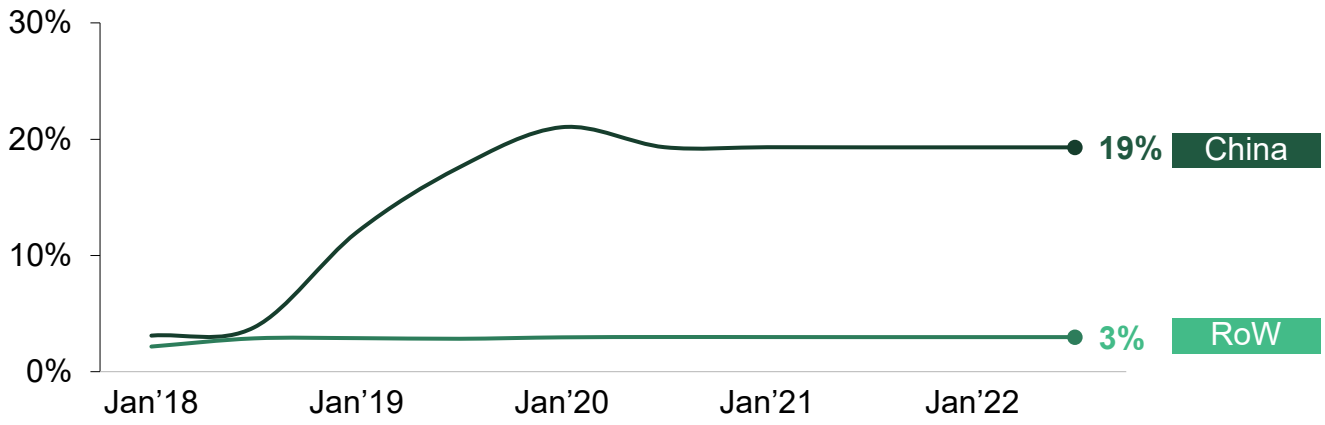
1 Geopolitical Risk

Geopolitical risk is a major driver pushing companies to nearshore operations, particularly for those highly concentrated in China. These risks span policy, political and economic ideology, conflict, and public opinion. Tensions in relations between China and the West have intensified, and U.S. industrial and trade policy, such as the 2021 CHIPS Act, have increased exposure and uncertainty.

Meanwhile, worries about China's relationship with Russia after the invasion of Ukraine and longer-term positioning towards Taiwan give foreign investors further pause. These uncertainties are compounded by the risk of fallout in public opinion and associated buying power in primary markets. Another leading factor fueling geopolitical instability and company incentives to reorient manufacturing bases to U.S. trade partners are tariffs, most notably the Section 301 tariffs imposed on China in 2018 under the Trump Administration and sustained under the Biden Administration.

While there are ways to subvert tariffs without shifting near-shore, e.g., by moving production to other APAC countries or importing through Mexico, they provided a clear impetus for companies to reassess supply chains and manufacturing footprints. **With tariffs sometimes representing as much as 22% of total-landed-cost for manufacturers, they weigh heavily on such supply chain decisions.**

Figure 2: US Import Tariffs from China vs Rest of the World, *% (weighted average product-level tariffs)*



Sources: Peterson Institute of International Economics; Applied Value Analysis.

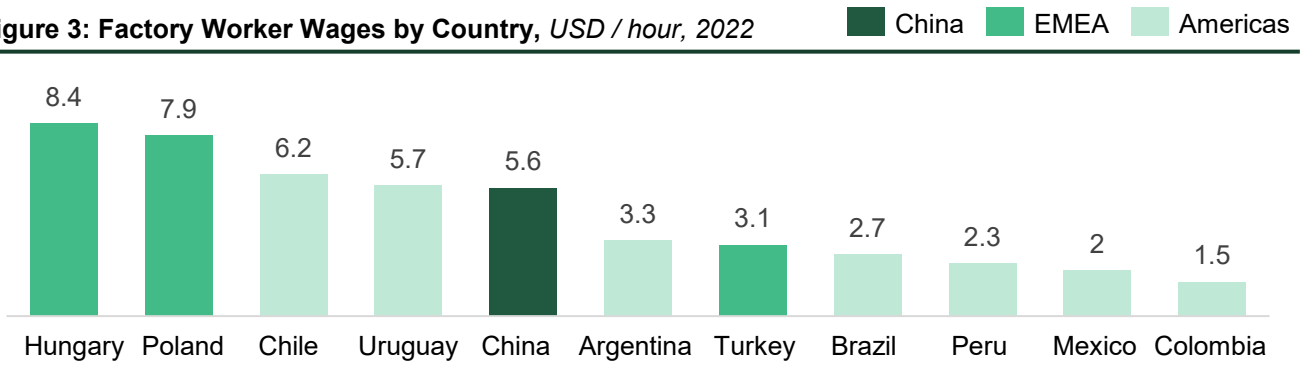
Finally, China's approach to fight the COVID-19 pandemic demonstrated a business deterrent that extends beyond its Zero-COVID policies. The extreme measures – implementing a multi-year, strict strategy of mass lockdowns and restricted travel – destabilized the business environment and provided a short-term push to seek alternative source countries. And while China recently overturned this stance, companies operating there face near-term disruptions during the transition and **heightened concern about the inherent risk** this has highlighted: **significant over-exposure to and lack of influence over Chinese industrial policies**.

2 Labor Cost

Labor arbitrage – specifically, access to China's vast, low-wage workforce – was among the greatest draws for companies offshoring manufacturing. Over the last decade, this dynamic has shifted, with growth in China's average manufacturing wage outpacing productivity gains. Meanwhile, government policies such as the Made in China 2025 plan target a higher overall wage trajectory and provide incentives for this trend to continue.

So, while wages are still competitive relative to many of its global peers, **China should no longer be considered a traditional low-cost country (Fig. 3). Meanwhile, some near-shore countries now offer lower labor cost profiles,** though country-specific dynamics such as workforce size and preparedness undercut a purely financial comparison and should be taken into consideration.

Figure 3: Factory Worker Wages by Country, *USD / hour, 2022*



Sources: Euromonitor; Applied Value Analysis

3 Environmental Impact

As the environmental impact of companies is increasingly scrutinized by governments, investors, customers, and employees, companies are focusing on baselining their carbon emissions and implementing strategies to reduce them. **Nearshoring can have many supply chain sustainability benefits, chief among them being the ability to significantly reduce transportation emissions.** Decreasing the distance between final manufacturing and the customer can reduce per product emissions by up to fifty percent. Furthermore, nearshoring can lead to lower energy use due to the increased availability of renewables and more sustainable production practices in nearby countries. Overall, nearshoring can be an effective way for companies to reduce their carbon footprint and contribute to a more sustainable future.

4 Intellectual Property Theft and Business Transparency

While not a new or unique concern, **Intellectual Property (IP) theft in China remains a critical threat to corporate profitability,** pushing companies to reassess their exposure to it. As far back as 2017, one initiative estimated the annual cost of China's IP theft to be between $255 billion to $600 billion(1) and, in 2021, cybersecurity firm Cybereason attributed Chinese state actor-led cyber operations to have cost trillions in intellectual property theft to 30 multinational companies(2). Companies' hesitation to bring new products to market or invest in manufacturing processes in China has been increasing due to this risk of intellectual property theft. **Rebalancing supply chains to near-shore R&D efforts is one option for reducing such risk**, though increased IP protection depends significantly on supplier selection.

5 Speed to Market

During the pandemic, businesses increasingly realized the growing value of shortened supply chains in a world where consumer demand is driving shorter product cycles. **Speed-to-market is a critical factor in meeting constantly changing customer preferences, enabled by shorter design and test cycles and quicker response times.** Executives have cited significant challenges in product nimbleness when collaborating far offshore due to the considerable travel distance, as well as time-zone, language, and cultural differences. Long shipment times and recent disruptions in both vessel and trucking transportation in China also increase the attractiveness of considering near-shore options to improve speed-to-market.

Sources: (1) Commission on the Theft of American Intellectual Property Report, (2) 2021 Cybereason report

6 Supply Chain Agility: Lead Times, Inventory Levels, and Logistics Costs

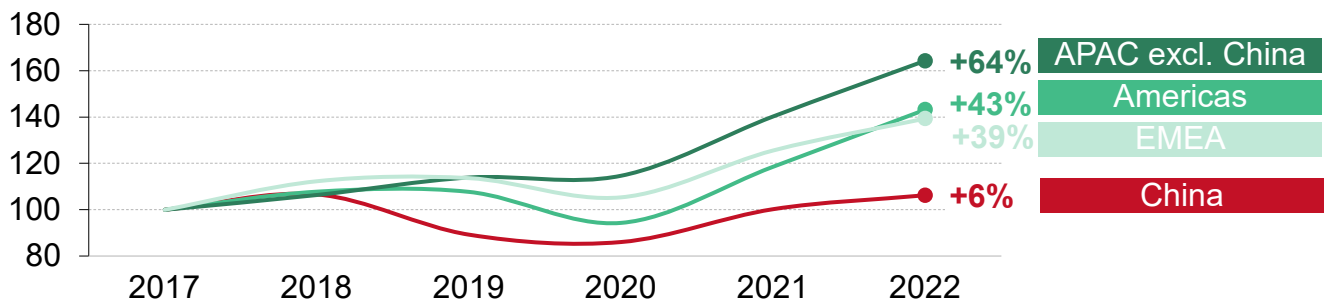
Delivery lead times and costs became a top concern for MNCs during COVID-19, as early shutdowns in China effectively halted world supply chains. Extreme transportation lead times and costs, coupled with increased demand, required companies to carry higher levels of inventory, incurring further cost overruns and creating working capital problems for many businesses. **Recent economic slow-downs and significant recession risks have kept the pressure on to maintain flexibility and minimize overhead costs post-pandemic.**

Logistics cost also increased substantially during COVID-19. FBX01, which tracks shipment costs from China / East Asia to North America's West Coast, increased more than 10x at the height of the pandemic compared to pre-pandemic levels. Similarly, FBX03, which tracks shipment costs from China / East Asia to North America's East Coast, increased by more than 7x over the same period. This trend priced many companies out of regular shipping plans, pushing them to raise inventory levels or lose sales, and further pressuring working capital needs. Since then, shipping costs have reverted to pre-pandemic levels, but the volatility of the past years remains a concern and impetus for shortening supply chains. For a recent client, Applied Value identified that **logistics could comprise 14%-32% of total-landed-cost;** for them, nearshoring became an effective hedge against this volatility's impact.

3. Finding Alternative Sources of Supply

As China's share of total US imports continues to decrease driven by many factors as outlined above, other regions are emerging as alternative sourcing destinations. **Imports from other APAC countries and the Americas, as well as EMEA, have significantly increased, reflecting the shifting balance of supply chains and influence of positive 'pull' factors.**

Figure 5: Indexed US Imports by Exporting Region



Sources: United States Census Bureau via Panjiva; Applied Value Analysis

Companies with global footprints that are looking for alternative sources of supply will benefit from a structured approach to defining the next frontier of their supply chain. While labor cost competitiveness has often been at the forefront of manufacturing footprint decisions, we recommend companies adopt a more holistic framework to evaluate total cost of ownership and true business impact for key factors across their supply chains, such as:

Financial Factors	Strategic Factors
• Manufacturing wages • Logistics costs & lead times • Tariffs, trade duties, and incentives • Capital expenditures • Material and inventory constraints • Other non-labor costs (e.g., utilities)	• Geopolitical risks • Continuity of supply • Ease of finding skilled labor • Sustainability • Brand image • Ease of doing business

While many companies are considering such factors at some level, most do not use a robust model to analyze supply chain decisions across them due to several reasons, such as time pressure, inability to find and integrate various datasets, or not having enough employee bandwidth to conduct the analysis in-house. Compounding these deterrents, siloed operational information often prevents executives from comparing sites consistently across all dimensions. Unfortunately, companies that use limited information to make important footprint decisions and measure performance tend to miss significant side-effects. **Even with complex product and customer considerations, reasoned decisions can and should be made.**

Figure 6: Sample comparison of country performance across multiple factors

		Americas								EMEA					APAC						
Category	Sub-category	Chile	Canada	US	Mexico	Colombia	Peru	Brazil	Uruguay	Argentina	Hungary	Czech Republic	Poland	Romania	Turkey	China	Malaysia	Thailand	Indonesia	Philippines	Vietnam	India
Geopolitical	Ease of doing business	73	80	84	72	70	69	59	62	59	73	76	76	73	77	78	81	80	70	63	70	71
	National competitiveness	71	80	84	65	63	62	61	64	57	65	71	69	64	62	74	75	68	65	62	62	61
	Economic freedom	74	77	72	64	65	67	53	70	50	67	74	69	67	57	48	68	63	64	61	61	54
Economic	Manufacturing wages	$7	$23	$30	$3	$2	$4	$3	$5	$3	$9	$10	$8	$7	$4	$7	$5	$3	$1	$2	$2	$1
	Ease of finding labor	64	65	72	53	55	44	40	52	53	33	38	52	38	49	60	68	50	59	67	49	53
	Exchange rates against USD	-5%	-2%	n.a.	-4%	-7%	-3%	-9%	-5%	-26%	-5%	-2%	-3%	-3%	-19%	0%	-1%	-4%	-3%	-2%	-2%	-4%
	GDP CAGR%, 2010-2020	2%	0%	3%	0%	-1%	3%	-4%	3%	-1%	3%	2%	2%	4%	-1%	9%	3%	2%	3%	6%	9%	5%
	FDI CAGR %, 2010-2020	-6%	-1%	-6%	0%	1%	-22%	-7%	-15%	-8%	91%	-2%	-1%	1%	-1%	0%	-9%	-12%	2%	20%	7%	9%
Trade	FTA with the US	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
	Number of RTAs	31	15	14	23	15	21	9	8	8	46	46	46	46	24	16	16	14	13	11	15	17
	Customs quality	65	72	76	55	52	51	48	50	48	67	66	65	52	54	66	58	63	53	51	59	59
	International shipment quality	65	68	70	62	64	57	58	55	58	64	75	74	64	61	71	67	69	65	66	63	64
Infrastructure and Logistics	Infrastructure performance	36	78	82	20	25	19	26	n.a.	26	51	59	41	36	35	71	51	40	27	24	n.a.	35
	Logistics performance	63	78	77	60	57	48	62	54	56	64	74	72	61	61	72	66	68	62	56	68	63
Sustainability	Environmental performance	47	50	51	46	42	40	44	37	41	55	60	51	56	26	28	35	38	28	29	20	19
	Sustainable Competitiveness	50	51	52	45	49	50	49	51	49	51	53	51	52	46	51	47	45	46	42	42	41
	Natural Resource Management	58	57	55	43	69	62	64	61	58	46	41	46	55	41	38	53	40	44	34	40	34
Final Score		**64**	**62**	**61**	**62**	**61**	**60**	**43**	**41**	**39**	**54**	**53**	**51**	**51**	**40**	**48**	**48**	**46**	**44**	**44**	**42**	**42**

Companies must recognize that **nearshoring decisions involve trade-offs**, and alternatives may have nuanced drawbacks. Country performance varies across factors and the weighting of these factors depends on company priorities; thus, the same data may lead companies to different decisions for their manufacturing footprint. For example, the following arguments could apply based on different weightings of the sample analysis pictured in Figure 6 above:

- **Prioritizing cost savings and predictability**: Mexico, Brazil, Colombia, and Peru are top candidates due to relatively low manufacturing wages and logistics costs, and US FTAs
- **Prioritizing sustainability, European customer base**: Poland, Czech Republic, Romania are top candidates with the highest sustainability scores among potential nearby countries
- **Prioritizing sustainability, North American customer base**: Canada, Chile, & the US are top candidates, with European sustainability strengths offset by logistics impacts (Scope 3)

Broadly, near-shore countries show up as highly attractive across many factors except for labor costs, where APAC dominates. As illustrated, such an analysis should be tailored to a company's production, distribution, and sales strategy to optimize decision-making. Too often, sourcing decisions are being driven not by cross-functionally empowered teams using hard data, but rather by specific functional owners that may end up sub-optimizing outcomes due to lack of data or contextual objectives. **A focus on relevant data** (financial, customer, operational, etc.) **and shared goals helps organizations make better decisions**.

4. Nearshoring Benefits for a Business

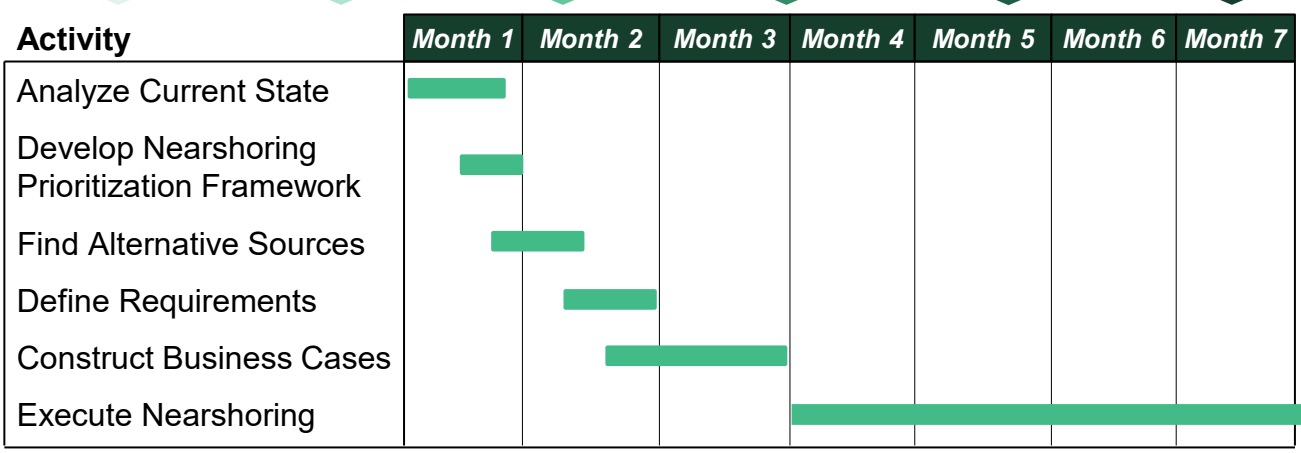
In terms of financial ROI, **nearshoring currently generates significant savings primarily through tariffs, logistics, and inventory holding costs**, which often account for as much as 35-40%(1) of total landed cost. In Applied Value analyses, we have **identified savings of 10%-25% of total-landed-cost for US-based companies nearshoring portions of their supply base to LATAM(2).** Currently, there are also some substantial incentives available.

Potential benefits can extend beyond the purely financial; their combination can provide both a business and value case that is increasingly attractive to companies diversifying their supply chains and manufacturing footprint. The following table summarizes some of those benefits:

Total Landed Cost	✓ Decreased freight and logistics costs ✓ Decreased tariff costs ✓ Potentially decreased labor costs (depending on the destination)
Working Capital	✓ Decreased lead times ✓ Reduced inventory levels and improved working capital
Product Life Cycle	✓ Improved speed-to-market ✓ Quicker reactions to customer needs
Sustainability & ESG	✓ Reduced carbon footprint due to shortened logistics routes ✓ Improved brand perception and ESG impact by partnering with US allies and trading partners and building on local sustainability efforts
People	✓ Shared time zones and languages ✓ Shorter flight times for executives ✓ Closer cultural norms
Geopolitical	✓ Accessing US trade incentives ✓ Hedging against risk of: • China's invading Taiwan or providing military support to Russia • Trade war between China and the US continuing / intensifying

5. Developing and Executing a Nearshoring Strategy *(illustrative timeframes)*

2-3 Weeks	*1-2 weeks*	*2-3 weeks*	*2-3 weeks*	*5-6 weeks*	*4-12 months*
Analyze Current State	**Develop Nearshoring Prioritization Framework**	**Find Alternative Sources**	**Define Requirement**	**Construct Business Cases**	**Execute**



Source: (1) Analysis of multiple Fortune 500 companies. Total contribution has significant variation by industry.
(2) Analysis across multiple Applied Value client engagements.

- **Analyze the Current State** *(2-3 weeks)*

The first step in effectively evaluating a nearshoring strategy is the consolidation and categorization of the current spend by supplier, origin, site, project, category, commodity, etc. to obtain a complete view of the current state of sourcing. A key aspect of this is mapping spend by Tier 1, Tier 2, and Tier 3 suppliers including point of origins for Tier 2 and Tier 3 suppliers. Historically, this has typically been done by conducting a detailed RFI process and integrating available internal and external information sources and databases. More recently, new startups have begun to offer global supply chain mapping. This step is key to determining the relative complexity and impact of nearshoring a given portion of a company's footprint. For companies that have their own manufacturing operations in China, it is particularly important in assessing the health of the existing footprint from a financial, risk, and strategic standpoint.

- **Develop Nearshoring Prioritization Framework** *(1-2 weeks)*

Once there is clarity on the current state, one can begin developing a holistic nearshoring prioritization framework to focus the effort strategically. The goal is to apply a framework to optimize for several factors such as total landed cost, lead times, criticality of the product, feasibility of moving away from the current suppliers, etc., based on the top priorities for the initiative. This will lead to identifying top at-risk products and initial targets for evaluation.

- **Find Alternative Sources** *(2-3 weeks)*

The next step is to assess the options and considerations to find alternative sources of supply. Countries should be evaluated to provide a complete picture of the strategic and financial implications of various scenarios. It's important be mindful to account for the likelihood of factors that tend to change over time, differentiating destinations with short-term appeal from those with greater long-term prospects. Finally, an assessment of alternative sources of supply should take into consideration the company's existing partner network and capabilities, particularly as an increasing number of suppliers are operating in multiple countries.

- **Define Requirements** (Manufacturing Capability Assessment Creation) *(2-3 weeks)*

Creating a detailed and inclusive Manufacturing Capability Assessment framework should be the next step. Each company will have a different set of criteria and prioritization depending on their strategy, but ideally the assessment should include various inputs from general facility information such as location and production site area to tooling, certifications, quality control measures, etc. Adopting a framework streamlines the supplier evaluation process and informs decision-making, providing a basis for effective, objective tradeoffs between alternatives.

- **Construct Business Cases** *(5-6 weeks)*

The next stage is evaluating suppliers and individual manufacturing sites. First, a search should be performed in the alternative countries selected. We then recommend conducting site visits to assess manufacturing processes and core capabilities directly. In addition to providing qualitative insights into alternative sites, these visits typically provide the opportunity to gather additional data and inputs for a comparative business case. Compiled across sites and suppliers, a detailed business case at a total-landed-cost basis should be used to fully gauge the potential financial impact of the move. Business cases should be accompanied by scenario analysis models allowing executives to consider "what-if" scenarios and understand impact across sites. Scenario modeling can then be conducted to evaluate potential cost reduction opportunities driven by changes in material, labor, and logistics at the different sites, as well as impact on revenue drivers such as delivery lead times and service levels.

Based on analysis of these manufacturing capability assessments and business cases, a preferred list by core capability and product category can be defined and targets selected.

➢ **Execute** *(4-12 months)*

The final steps are negotiations and strategy execution. A roadmap should be constructed with prioritized products, suppliers, and manufacturing sites. Some of the factors that could influence the roadmap length are contract terms with existing suppliers, layers of final approvals internally, the need to negotiation new contracts or renegotiate existing contracts with suppliers, and consideration of having dual sourcing during a transition phase.

6. Conclusion

As we think about the coming decade and significant pressures to hedge risks and shift global supply chains toward more regionalized, streamlined, and automated operations, there is a clear mandate for executives to re-evaluate their supply chain and manufacturing strategy on a continuous basis. Increasing technological advances will bring a new wave of opportunities to improve operational efficiencies, both within and across sites. **This paper focused on the specific opportunities and advantages of nearshoring portions of a company's supply chain as part of a holistic footprint assessment.** But just as essential as establishing a strategic manufacturing footprint based on current market forces is the ability to maintain and utilize relevant data to support consistent, ongoing analysis and decision-making.

Many supply chain leaders today still lack the right tools and information to drive a meaningful conversation**. Those who take the present opportunity to comprehensively map out, prioritize, and establish their supply chain strategy will have a strong foundation for dynamic decision-making into the future.** In many ways, the future of the global supply chain will depend on how successful companies are in establishing this competency. In doing so, there is a strong impetus to evaluate and benefit from the advantages nearshoring provides as part of redesigned, optimized supply chains and manufacturing footprints.

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