

WHITE PAPER

Localizing Your Supply Chain

A Cost-Benefit Analysis





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Crises can reveal weaknesses and, as the coronavirus spread around the globe, it made clear the lack of visibility many businesses had into offshore suppliers and manufacturers and demonstrated the fragility of their supply chains. It was a sobering wakeup call 30 years after many companies expanded their supply chains abroad to take advantage of much lower costs.

In a May survey by the Institute for Supply Management, [97% of respondents](#) said the coronavirus impacted their supply chain and 36% dealt with disruptions. Yet, as of March, [44% of respondents](#) had no plan to overcome these disruptions. In other words, these companies could not maintain production at normal levels if, for example, they relied on a single supplier in China's Hubei province, where the virus first surfaced.

“Post-pandemic, there’s now a recognition that the cheap, \$3 shirt has the hidden cost of a six-month interruption in the supply chain if something like this happens again.”

Craig Harris, Industry Principal for Apparel and Footwear, Oracle NetSuite

The lost revenue that resulted sparked a reckoning to improve supply chain resilience—55% of supply chain leaders [told Gartner](#) they expect to have a highly resilient supply chain within two to three years, up from 21% that have such a supply chain today. Building resilience requires establishing relationships with multiple suppliers and manufacturers. It also requires complete visibility into the source of each component that goes into your goods, and the path those components take to your facility. That’s where traceability comes in: a company must be able to track a product as it evolves from raw material to manufactured good and is then shipped to a store or consumer.

This call for greater supply chain resilience and traceability has led many businesses to consider moving pieces of their supply chain to local regions—for U.S. companies, that means back to North America. “Onshoring” and local sourcing makes companies more nimble and therefore more resilient when the unexpected strikes, because a supply chain located closer to home is shorter, making full traceability easier. It also appeals to an increasing number of consumers who want to purchase products made locally.

Businesses onshoring (or reshoring if they previously had production locally) their supply chain is not an all-or-nothing proposition. A manufacturer could simply add secondary

Nearly two-thirds of American manufacturers are “likely” to bring production and sourcing back to their home continent, according to a Thomas survey.

suppliers domestically or start using a contract manufacturer, say in Mexico or the U.S., to mitigate the impact of another disruption while maintaining partners abroad. That’s more likely than companies uprooting a proven operation in Asia and replacing it with new suppliers, manufacturers and distributors in North America.

This paper will cover the benefits of localizing a supply chain—in this case, to North America—major costs to consider, potential barriers to relocation and the steps a business should take if it decides to onshore.



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North American Considerations

North America is a logical destination for supply and manufacturing partners in part because of the North American Free Trade Agreement (NAFTA). Signed in 1994, NAFTA knocked down many barriers that prevented American companies from doing business with Mexico and Canada, most notably by eliminating tariffs between the three countries. However, the 1,700-page agreement established a number of other rules, including environmental and labor protections. The United States-Mexico-Canada Agreement (USMCA) replaced NAFTA in 2020 and built on those protections.

The USMCA requires all countries to comply with International Labor Organization (ILO) standards, which, among other things, call for eliminating child labor, forced labor and discrimination and protecting the right to collectively bargain, earn a living wage and operate in a safe and healthy workplace. Accordingly, Mexico now allows workers to collectively bargain and extends labor rights to migrant workers. Any labor complaints from individuals or unions are now public. The USMCA also established a “rapid-response mechanism” that allows the U.S. or Mexico to ask for expedited review of any alleged violation of labor rights by an independent panel. If the panel confirms a violation, either country can remove preferential tariff treatment for that facility.

The USMCA also has an environment chapter that mandates each country follow its own environmental laws, not relax those standards to attract business and assess the impact of any projects that could be harmful to the environment. The environment chapter includes other initiatives to improve air quality, reduce marine litter and promote sustainable forestry. A side agreement of the USMCA called the Environmental Cooperation Agreement (ECA) retains an independent commission created under the North American Agreement on Environmental Cooperation (NAAEC) that investigates potential violations of environmental regulations.

Companies need to understand these requirements and calculate the cost of compliance as they think about onshoring. But in many ways it’s more feasible for U.S. businesses to set up in North America than before these agreements existed.

Trade between the United States, Mexico and Canada quadrupled and each saw major economic development in the 25 years after they signed NAFTA.

Running a Cost-Benefit Analysis

In the 1980s and early '90s, many American companies moved production to China. This movement gained momentum quickly and, within 10-15 years, it was rare to see products in many categories that were made in the U.S.—70% of apparel and 80% of footwear comes from China, for example.

But in recent years, there's been a reversal in that trend. Although the coronavirus drove onshoring up the list of priorities, there was already a movement afoot. China has become more expensive as it develops a thriving middle class, and that comes alongside historically broad tariffs and concern about intellectual property theft.

Six Benefits of Local Sourcing/Production

- **Lower transportation costs.** Most goods manufactured in China or Southeast Asia arrive in the U.S. by sea, often landing first on the West Coast. That inventory is then put on a train or truck—sometimes both—before it arrives at warehouses. Ocean freight costs about 25-40 cents per pound, and air freight (for rush shipments) is far more expensive at \$1.15-\$2.30 per pound. If the product is made in North America, a truck can usually take it straight from the factory to the warehouse, eliminating those additional freight expenses. These savings are more substantial than ever as ocean freight rates have spiked due to the coronavirus. Many imported goods travel on passenger planes, and the price of air freight shot up as airlines cancelled flights, increasing demand for ocean freight. Less distance between manufacturing and distribution has the added benefit of reducing your business' environmental footprint.
- **Avoid tariffs and extra taxes.** Perhaps the biggest driver of conversations about moving supply chains into USMCA territory before the coronavirus outbreak was the tariffs the U.S. government placed on Chinese imports beginning in July 2018. There have been multiple rounds of tariffs since, with frequent and unpredictable changes. The tariffs bring an additional tax of 7.5%-25% on about \$350 billion worth of imported goods. About \$170 billion of those imports fall into the 25% bracket, so it can have a substantial impact on the bottom line.
- **Labor and production costs (Mexico).** As China grew into “the world's factory,” its economy thrived and it became more expensive. The average hourly rate for a manufacturing employee in China is around \$5-\$6 per hour, compared to about \$3-\$4 per hour in Mexico. Other costs like land, real estate and machinery should be comparable to that of China. However, Mexico is still more expensive than emerging manufacturing hubs like Vietnam, where the average hourly wage for a manufacturing employee is \$2-\$3.
- **Shorter lead times deliver flexibility.** Companies were willing to sacrifice flexibility in exchange for significant cost savings when they moved offshore, but the long lead times make last-minute adjustments almost impossible. That set companies back during the coronavirus outbreak—businesses could not quickly repurpose shirt fabric into face masks or replace orders for dress shirts and khakis with sweatpants and T-shirts as more people worked from home, for example. A North American supply chain means much shorter lead times, and speed enables flexibility. An unexpected surge

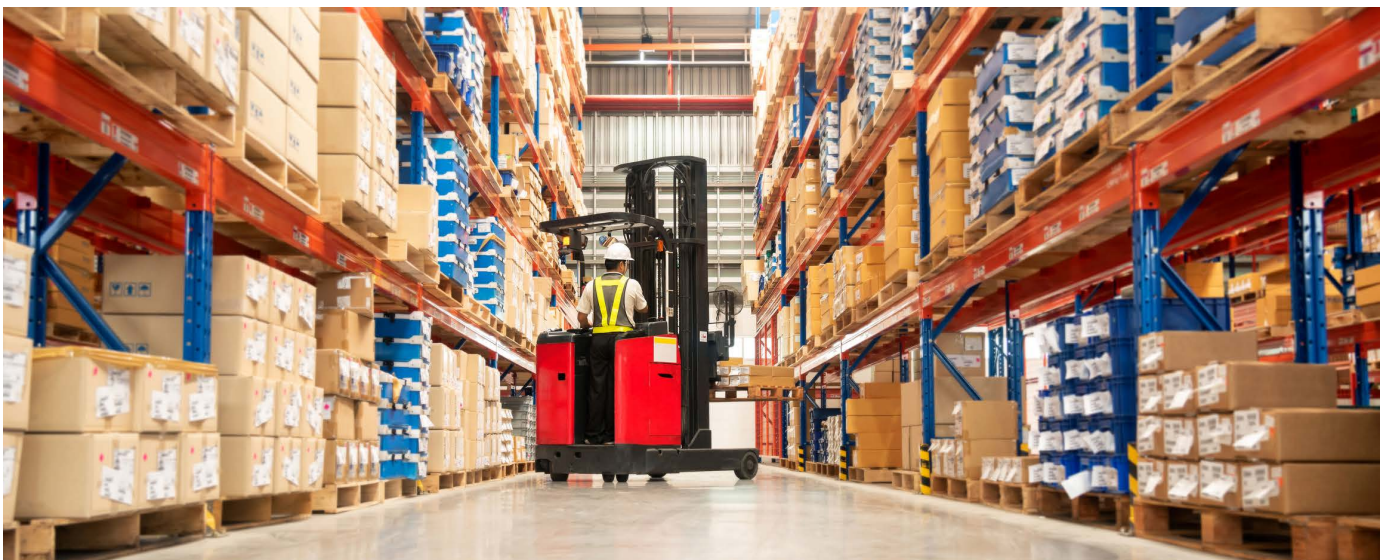
in demand (which some companies saw [during stay-at-home orders](#)) or a sooner-than-expected order from a retailer will not send staff scrambling or require an expensive air shipment. Demand planning becomes both less weighty and easier.

- **Greater control.** A supply chain closer to home offers companies greater control than the offshore alternative because they can more closely monitor their partners. It's more difficult for partners to operate in the shadows, and the USMCA helps limit fraud and counterfeiting. If a company sells organic cotton shirts, there is less concern about the factory using the cheaper alternative or farming out labor to a third party that doesn't offer fair working conditions when inspectors leave.
- **Greater transparency.** Full transparency is more feasible with a shorter supply chain. Such end-to-end tracking not only improves resilience but can also boost customer confidence about the source of a product. The environmental and labor standards mandated by NAFTA and USMCA address unfair working conditions and greenhouse gas emissions, as well. Keep in mind that although [81% of global consumers](#) say it's very or extremely important companies try to improve the environment, only 38% say they will pay more for goods that use sustainable materials.

Four Challenges of Local Sourcing/Production

There are of course new expenses and other challenges associated with moving parts of your supply chain to a new country. A company should conduct its due diligence and weigh these costs against the benefits to figure out if onshoring makes sense.

- **Capital costs.** Replacing supply or manufacturing operations you own across the Pacific with similar facilities in North America comes with big upfront costs. It requires purchasing new land and buildings, then outfitting those buildings with the proper equipment (selling facilities and equipment overseas could help cover this cost). For the most part, this is only relevant to those that already manufacture products and/or supply parts, as others are unlikely to jump into this side of the business after relocation. But it illustrates why onshoring needs to be part of the long-term vision, and not a knee-jerk reaction.
- **Finding qualified labor.** In many sectors, it's impossible to match the expertise and experience found in China. In apparel, for instance, entire Chinese towns may specialize in pants or shirts. However, Mexico is a promising alternative for many manufacturers, especially those in sectors



like aerospace, automotive, electronics, appliances and furniture. Yet, it will still take years to build up a labor pool with the right skillsets comparable to that of China. A business could partner with national and local governments or schools to develop education and training programs that will increase the pool of qualified talent.

- **Scaling the business.** No country can match the production capacity of China, the world's largest exporter by a wide margin. China exports totaled \$2.5 trillion in 2019, 50% more than the U.S., the next-biggest exporter. Mexico comes in at \$451 billion and Canada is right behind it at \$450 billion. Other countries may not be able to support the needs of many large businesses, especially in industries that went almost entirely offshore. Additionally, many factories in the U.S., Mexico and Canada specialize in one part of the production process—cutting fabric or sewing fabric, for instance—while in China one facility can handle everything from raw materials acquisition to packaging.
- **Labor and production costs (U.S. and Canada).** Unsurprisingly, workers in the U.S. and Canada are far more expensive than Mexico or offshore options. In the U.S., a manufacturing worker earns an average of \$22-\$23 per hour, while a Canadian worker takes home \$19-\$20 per hour. The price of real estate and machinery will certainly be higher in these countries as well.

A U.S.-Based Supply Chain: Pros and Cons

Among businesses looking to onshore, there is a subset interested in a U.S.-based supply chain. There are a few reasons a business might consider relocating to the states.

One is taking advantage of government incentives. In 2019, the government dropped the tax rate on U.S.-made goods and services exported to other countries from 21% to 13%. After the coronavirus revealed the pitfalls of international supply chains, the Trump

administration is reportedly mulling over a \$25 billion [reshoring fund](#) for businesses that make “essential goods” and move their production to America.

Another is to appeal to the increasing group of shoppers that want to buy local and support businesses that source and manufacture products domestically. Twenty-one percent of shoppers would pay 10% more for U.S.-made products, and another 26% would pay 5% more, [per a Reuters survey](#). This is why “Made in the U.S.A.” is a core piece of the marketing message for businesses with U.S. manufacturing.

Organizations that make essential products like pharmaceuticals, medical devices and construction materials have a stronger case for coming back to the U.S. because greater control over their supply chains is more of a need than a want.

These businesses are also more likely to earn government subsidies—like the reshoring fund—to help offset the higher costs.

However, there are clear obstacles to manufacturing in the U.S. The biggest barrier is the most obvious: price, led by the vast difference in wages noted earlier. This is especially relevant for companies in cost-competitive industries where customers are hesitant to open their wallets.

Additionally, the mass exodus of manufacturers from the U.S. decades ago drained the labor pool of workers with the necessary skillsets. The workforce developed more technical skills because jobs at a textile or appliance factory no longer existed. A company needs to give those issues serious thought before making such a momentous decision.

“It’s not just ‘Hey, I’ve got 100 people making widgets in a factory and I’m going to create the exact same factory in the U.S.’ I think that’s a shortsighted, reactionary result,” said Matt Wisner, Industry Principal for Manufacturing at NetSuite.

“If you can think about onshoring as a chance to modernize, build quality and automation into the process so that you can increase the quality and increase the flexibility of your manufacturing process to enable you to quickly change, it could make sense.”

Matt Wisner, Industry Principal for Manufacturing,
Oracle NetSuite

Companies looking to produce goods sourced and manufactured exclusively in the U.S. face an uphill battle. To start, a fully U.S.-based supply chain is not possible for certain businesses that rely on raw materials or subcomponents only found or made in other countries. For instance, it’s almost impossible for a large electronics manufacturer to have a U.S.-only supply chain, due to limited availability of the chips, processors and displays in those devices.

Furthermore, this approach would not substantially improve supply chain resilience. A company that has its entire supply chain in one country is still vulnerable if a natural disaster or other disruption strikes. That’s why it’s still best to have alternative suppliers and manufacturers spread across the globe, rather than just in America.



CHAPTER 3

How to Move Your Supply Chain Onshore

Since the cost of onshore suppliers and/or manufacturing will often be higher than what companies find offshore, they need to look for ways to trim expenses. Automation is one driver of savings. Conveyors, automatic storage/retrieval machines and robots have all gained popularity in recent years as the technology improves and the cost falls. The number of robots in use could double by 2025, and organizations across industries see automation as a way to offset the cost of relocation, [according to a report](#) from Bank of America Securities.

Automated material handling equipment can help many companies with packaging, sorting, packing and other labor-intensive tasks. But it's not a magical cure-all—it's expensive, and employees must have the right training to use and maintain it (it's especially challenging to find people who can do the latter). This equipment is also better suited for some industries than others. Apparel, for example, must be sewn by a human, while many hard goods can be assembled by robots.



Businesses that believe the benefits of onshoring outweigh the challenges need to take a number of steps to complete the transition. This could take anywhere from months to several years, depending on the size, complexity and nature of your operation. Do you own factories in Thailand or simply outsource manufacturing there? Does your operation require expensive machinery?

Since business goals for supply chain localization will vary, companies could be looking for any combination of suppliers, manufacturers and distributors in North America. With that in mind, here is the process for finding and building out each of those functions.

Suppliers

Let's start with the process of securing new suppliers in North America:

- First, ensure the material is available in North America and then identify potential suppliers. Figure out which locations make the most sense based on cost and location relative to the rest of your logistics network.
- If the new supplier will replace another one, make sure you understand your current contract. When does it end and what is the penalty for early termination?
- Request critical information like production capacity and typical lead times and communicate your current needs. If possible, tour the facility. Request quotes from all candidates.
- Use those quotes to calculate the cost of using these suppliers and compare it to your landed costs (including transportation, customs fees, tariffs, insurance, etc.) for offshore suppliers.
- After paring down the list of potential suppliers, request references. Request digital or physical samples from partners you're still interested in and inspect their quality.

- Negotiate and finalize pricing and contract terms. Set a clear date for when this partner will start sending materials to your factory.
- Create a phase in/phase out plan to replace the old component with the new one. There will likely be overlap to ensure quality and consistency with the new assembly.
- If phasing out the old supplier, provide the appropriate notice and come to an agreement on outstanding purchase orders.
- Set up the new SKU in your inventory and order management systems. Ensure you can differentiate the old SKU from the new SKU via lot tracking so you're able to monitor quality and production standards with the new component.

Manufacturers

A large majority of companies that already use contract manufacturers will continue to outsource this work if they onshore. Those companies can largely follow the same steps listed above for identifying a supplier to find a contract manufacturer.

However, if you already manufacture in-house and want to continue to do so in the USMCA zone, there are additional considerations:

- Research differences in labor laws and restrictions on the use of certain materials (like potentially hazardous ones). Ensure you understand the USMCA and how it would impact your operations.
- Identify potential sites in your desired region within a country (probably where labor and real estate are cheaper). Make sure the area has a labor pool with the required skills.
- Calculate the capital costs of setting up a new facility, including renovations, machinery and other supplies your production floor needs to run smoothly.
- Train new and—where possible—existing employees. Conduct alpha and beta testing and then gradually ramp up production.



- If this new plant will replace one abroad, begin the process of shutting down the old one. Give employees appropriate notice and keep them informed.
- Sell any facilities and machinery abroad, if necessary.

Warehousing and Distribution

Once a business lines up onshore suppliers and/or production, there's just one big piece of the supply chain puzzle left: warehousing and distribution. First, the business needs to decide whether it will set up in-house distribution or outsource it to a third party (using a 3PL).

These warehouses should be strategically placed near key markets as they're the final stop for goods before customers receive them. For many American companies, it makes sense to place warehouses in the U.S. Many businesses start in the Midwest, since it's centrally located and offers reasonable shipping

costs and speed to both coasts. Bigger companies may have four or five warehouses spread across the country to lower shipping costs and shorten delivery times.

Companies need to think about the location of warehouses relative to production sites. While onshoring drops transportation costs, the amount of savings will depend on the proximity of manufacturing and warehousing facilities. So this is another factor in the cost-benefit analysis.

Organizations that sell internationally may want to keep warehouses in other parts of the world, even after parts of their supply chain move to North America. You likely need a substantial customer base in other countries to justify the expense of warehouses in Europe or Asia, but it's something a larger company should think about when relocating its supply chain.

Mixed Models

There is no one model for reshoring or onshoring your supply chain that will work best for everyone. But there are a few approaches that could strengthen the case for U.S. companies to bring pieces of their supply chain back to North America.

One approach is tolling, where a business outsources manufacturing but handles the final steps of production onshore. It receives bulk shipments of the product at its warehouse in the U.S., Canada or Mexico, and employees there put it into the appropriate packaging and label it. This is a popular approach in the health and beauty vertical, which includes products like makeup and nutraceuticals.

Tolling decreases lead time, since a company can keep more product on hand and quickly ship orders to retailers or directly to consumers, while keeping costs reasonable. This hybrid onshore-offshore model relieves the problems caused by spikes in order volume and reduces the need to precisely map out demand months in advance.

Another model is a joint venture. If multiple companies are already vertical manufacturers and need the same materials or use similar manufacturing processes, they could join forces to stand up a factory or build out the capability to supply a certain material. Splitting up the capital costs and potential increase in the price of labor would make it more affordable for all parties involved. A joint venture would be particularly appealing to more risk-averse or midsize businesses.

Setting up supply or manufacturing operations in USMCA territory could even open up a new business opportunity. A company that starts its own factory may not need the full capacity of that operation, so it would make sense to fully capitalize on the space, labor and machinery by taking on work from others. But a company must first figure out if there's existing onshore demand for the material or services it could provide.

Onshoring Shows Real Potential

Experts agree a mass exodus of American companies from Asia is highly unlikely. In fact, many would fail if that happened due to the current lack of resources in the U.S., Mexico and Canada to support such a transition at scale.

But onshoring supply chains is no longer just a casual topic of debate in boardrooms. The coronavirus has been the final push for many American executives to seriously consider diversifying or rethinking their entirely offshore supply chains.

Change will likely be gradual but steady. Many businesses will start by looking to multi-source with USMCA-based suppliers, while certain verticalized manufacturers may build and staff new factories on their home continent. Relocating the supply chain will make perfect sense for some companies and little sense for others; even then, the transition will look different from one company to another. There are a number of outside factors that will impact how much traction onshoring gains, and a few enterprises with more capital may need to lead the way before others follow.

Even before the pandemic, half of North American companies said they planned to reshore parts of their supply chain, a Bank of America survey showed.

“Smaller businesses are going to need other pioneers to lay the groundwork, help build the expertise and then they can glom on toward the end of that reshoring process,” Harris said.

Offshoring is no longer the obvious choice for U.S. businesses. Many organizations will—and should—strengthen their supply chains after the pandemic uncovered their fragility. Part of that will happen through better visibility, which has the dual benefit of satisfying consumers who want to know the origin and details about the things they wear and use. The end result: North America’s free trade zone has renewed appeal.

