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Exploring Reshoring:
INSIGHTS FOR
MANUFACTURERS





The world is at odds with the far-reaching implications of coronavirus (COVID-19), largely because the impact cannot yet be clearly defined. The overriding focus is public health — rightfully so — but there are damaging consequences rippling into commerce.

Industries, manufacturers, and businesses have been blindsided by the global pandemic. For many, trying to understand the repercussions is taking the form of process review and re-evaluation. Asking some questions in hindsight is the best way to mitigate future unanticipated risk.

For OEMs, what is coming to light in many cases is a reliance on overseas suppliers. Nearly half of suppliers report shipping and logistics disruptions, with 35% also registering incidents of offshore factory suspension and/or production restrictions.¹

In order to restore and eventually increase business, bringing manufacturing back to North America is a practical and necessary solution. Reshoring also gives OEMs more control over:

- Total cost of ownership (TCO)
- Delivery times
- Product quality, innovation, and differentiation
- Air shipment freight costs
- Labor and wage costs
- Responsiveness to customer needs
- Image/brand

- Intellectual property
- Overall productivity
- Inventory management

Total cost of ownership (TCO) tops the list because it's a key factor in making domestic manufacturing competitive. Companies often make the decision to offshore based on ex-works price or landed cost and ignore — or underappreciate — other cost factors that have a big impact on the bottom line.

This price bias may explain why A.T. Kearney Reshoring Index data reflects that as late as 2017 imports of manufactured goods from the 14 largest low-cost countries have increased by \$118 billion, or 19%, while U.S. manufacturing gross output has grown by only \$81 billion, or 1%.² It may also explain why OEMs typically miscalculate offshoring costs by anywhere from 20 to 30%.³ The decision-makers don't fully understand TCO.

TCO includes inventory carrying costs, travel costs to check on suppliers, intellectual property risks, and opportunity costs from product pipelines being too long. About 30 variables are used to calculate TCO.

When an accurate TCO is used, low-cost countries often look less attractive. In fact, for some companies, after running the calculation, staying in the U.S. is closer to a break-even situation (or may even be more profitable), compared to setting up shop overseas.

The takeaway is that when executive teams, supply chain managers, manufacturing managers, industrial engineers, and accountants fully understand TCO, they can make better source decisions that impact profitability and strategic objectives.



A Call to Action



It's already proven that reshoring works. Reshoring initiatives undertaken by 16 high-profile U.S. companies in 2018 brought back, added, or maintained 73,000 manufacturing jobs.⁴ Further, Reshoring Institute survey data reflects support for reshoring, as 97% of OEMs report they would consider using domestic suppliers for parts, provided quality and price were equivalent to overseas counterparts.⁵

Successful reshoring is rarely – if ever – unilateral. It depends on five key steps:

- Use TCO to identify weaknesses that can be eliminated through lean techniques and other quality initiatives, and add the necessary capital investments
- Shorten and strengthen the supply chain, using domestic suppliers whenever possible
- Proactively create a highly skilled regional workforce that will run reshored operations
- Embrace and support “Made in America” initiatives across the country
- Stay focused on continual improvement and commit to being a reshoring leader by sharing your knowledge and experience with other manufacturers and organizations

Step 1. Master Total Cost of Ownership



Use the [Reshoring Initiative's Total Cost of Ownership Estimator™](#) to:

- Identify gaps/weaknesses in your cost structures
- Incorporate a cross-functional team to conduct this analysis
- Develop a strategy to narrow or eliminate any gaps that are identified
- Undertake lean improvements to make all processes as efficient as possible
- Invest in any needed equipment, technology, or workforce training

Consult with experts from manufacturing extension partnerships and other organizations to be sure every part of the operation is being optimized. Don't be complacent. No process is truly lean until it has gone through lean at least six times. Although gains are progressively less as a process gets leaner, they still add up.

Consider how your company can utilize automation/robotics, which is increasingly essential for being cost-competitive in the global marketplace since it:

- Increases speed of operation
- Eliminates worker error
- Reduces labor costs and labor injury
- Improves quality, reduces waste and rework
- Enhances customer satisfaction
- Reduces overall operational costs

Also, automation doesn't necessarily mean workers will be laid off. In many cases, their skills can be better utilized in other positions as a result of automation. For example, Marlin Steel Wire Products in Baltimore invested \$3.5 million in new equipment and robotic

technology. "Robots make better-quality parts," explained Marlin Steel President Drew Greenblatt. "The robots are inside the cage, doing 'carpal-tunnel work.' This allows our employees to do safer, more challenging work."

Implementing automation generally improves workplace comfort and safety. This can be a huge factor in attracting and retaining employees — a very real need for OEMs since more than 500,000 skilled manufacturing jobs are currently vacant in the U.S.⁶

Matt Turpin, founder of Zentech Manufacturing, a contract manufacturer based in Baltimore, believes automation is a key factor in bringing manufacturing back to America.

"What used to be done in 50 parts is done with one part and the automation within the assembly area has grown by leaps and bounds," said Turpin. "It's light years ahead. So now, when you compare the U.S. to Asia, if your raw materials cost the same, if your cost to buy the automation equipment is the same, if your cost to finance the capital is the same, and your labor is down to 5 minutes or 10 minutes, well, then, you may as well manufacture here."

Step 2: Manage the Supply Chain



Supply chains, especially global ones, can be highly variable. The often inherent complexity makes supply chains sources of disruption, inefficiency, and higher costs.

Outsourcing failure ranks as a key factor in supply chain disruption, just behind telecommunication outages, cyber attacks, and loss of skilled staff.⁷ It all adds up to some eye-opening statistics. According to a recent Business Continuity Institute survey, after a supply chain disruption:

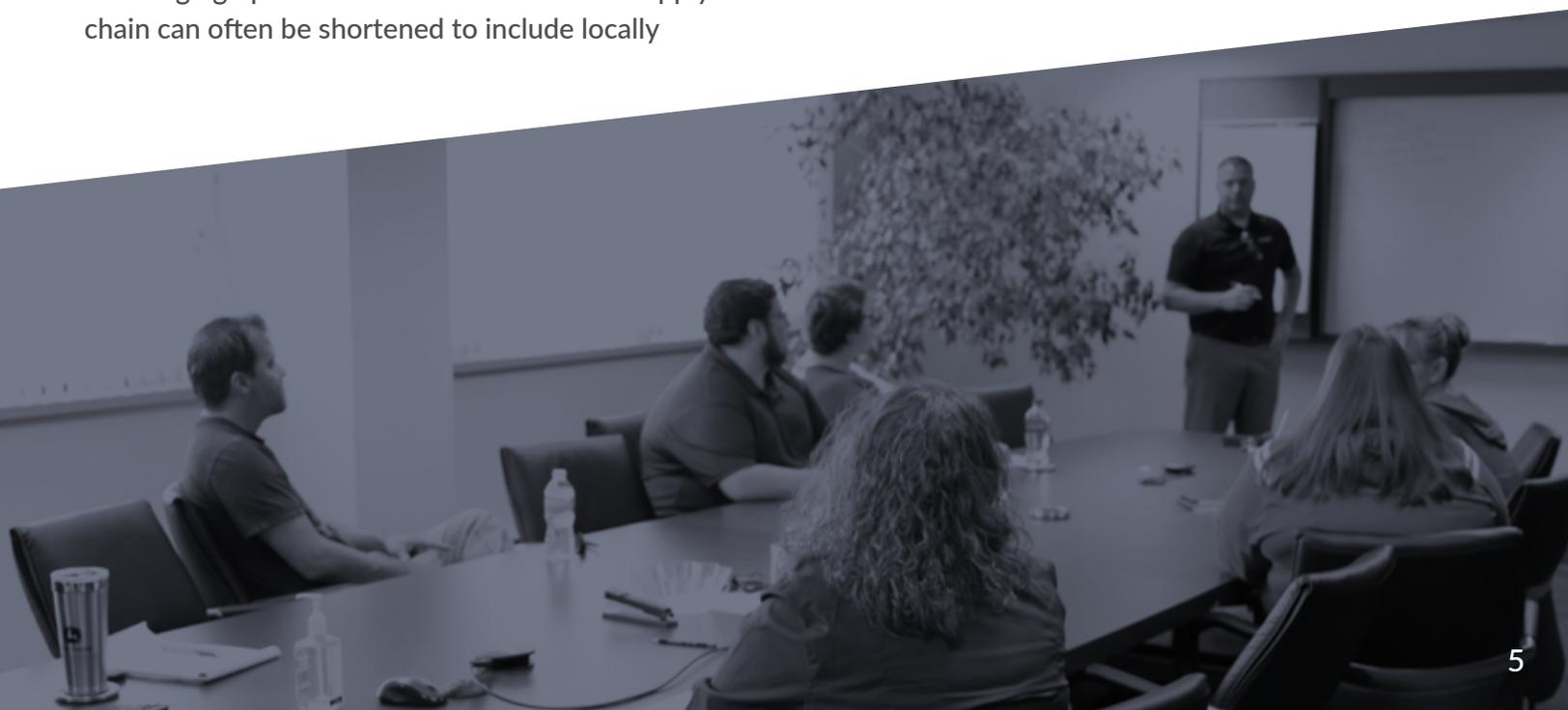
- 55% of companies reported productivity losses⁷
- 46% of companies searched for new suppliers, thus increasing labor costs⁷
- 43% of companies registered some type of customer dissatisfaction/complaint⁷

Stabilizing the supply chain is one of the best reasons for bringing operations back to the U.S. The supply chain can often be shortened to include locally

manufactured products and components. A package is available from the Reshoring Initiative and [Datamyne](#) that can assist companies in determining how much of their offshored work can be brought back.

Part of this process is asking the importing company to consider producing or sourcing locally. This may be met with resistance, since importers will cite lower offshore prices as a reason to not consider local sourcing, however the Total Cost of Ownership (TCO) Estimator will show OEMs how to re-evaluate offshoring versus reshoring costs. Chances are there will be no or a very slight difference in TCO when local sourcing is used.

Using domestic vendors makes it easier for manufacturers and their suppliers to communicate, collaborate, and evolve together as a team to meet market challenges – especially controlling costs and adapting quickly to changing market forces.



Step 3: Create a Highly Skilled Workforce

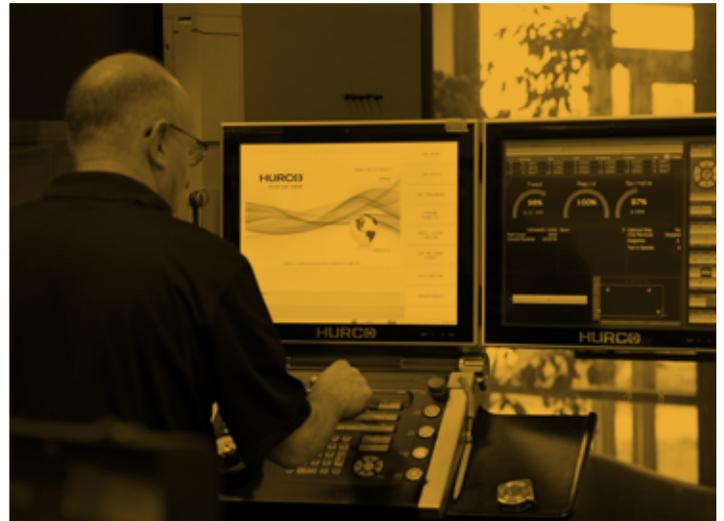


Based on TCO user data, the Reshoring Initiative concludes that about 25% of what is offshore would come back today if companies used the correct TCO.⁸ More work will also return as the gap between U.S. wages and China wages continues to narrow. However, what might drastically slow down this rate of return is not having enough skilled labor to take on the work. On top of the reported half-million skilled manufacturing jobs currently vacant in the U.S., the 10-year unfilled job projection estimates a whopping 2.4 million will remain unfilled.⁶

The bottleneck to expanding the skilled workforce is recruitment: fewer high school students are interested in Science/Technology/Engineering/Math (STEM) careers, especially in manufacturing. To improve this situation, the Reshoring Initiative recommends manufacturers take two high-impact steps:

1. COUNTER THE PERCEPTION THAT MANUFACTURING IS CONTINUING TO DECLINE AND THAT ALL WORK WILL EVENTUALLY GO OFFSHORE THROUGH:

- Promoting the success of reshoring to improve the attractiveness of manufacturing careers
- Working with the National Association of Manufacturing, National Tooling and Machining Association, Association for Manufacturing Excellence, extension partnerships, economic development groups, and community colleges to document and promote the visibility of local/regional reshoring cases
- Marketing the success of reshoring to attract new manufacturing recruits and to encourage high schools to provide necessary skills training



2. COUNTER THE PERCEPTION THAT MANUFACTURING JOBS ARE LOW PRESTIGE (as compared to university-degreed careers) BY:

- Eliminating the “vocation” and “trade” description
- Referring to skilled manufacturing occupations as “professions” and skilled workers as “professionals.” Both terms are increasingly appropriate as manufacturing employees take on more mental and less physical responsibilities
- Enlisting the cooperation and support of the K-12 educational system, community colleges, media, employers, and economic development organizations
- Documenting that training pays. Include Bureau of Labor Statistics (BLS) apprenticeship and training data as well as the incomes of workers who have passed apprenticeships or have strong, credentialed portfolios. Making this data available to guidance counselors and school administrators will likely attract higher-caliber recruits to the field of manufacturing

Step 4. Make It In America



Make every effort to let Americans know that purchasing products made in America is the best way to strengthen U.S. manufacturing and provide good-paying, rewarding careers for our younger generations.

A good example is the “Buy America” bills whereby states pledge to use American-made building materials in their construction projects. According to the Alliance for American Manufacturing (AAM), more than 30 states have introduced such legislation.⁹



Further, the AAM indicates that the American public’s interest in buying American-made products influences manufacturers’ sourcing and production decisions. States, and especially economic development organizations, tend to compete against each other for factories and jobs. A better approach is collaborating regionally as getting OEMs to outsource locally is just as important as getting OEMs to locate new facilities.

The Reshoring Initiative has also trained unions (IUE-CWA and AFL-CIO) to discuss TCO with employers, with the goal of creating conditions that make the North American market the most profitable place to manufacture without sacrificing worker wages. Unions are generally stronger and member jobs more secure if companies have strong domestic components sourcing and final assembly capabilities.



Step 5: Make It Happen

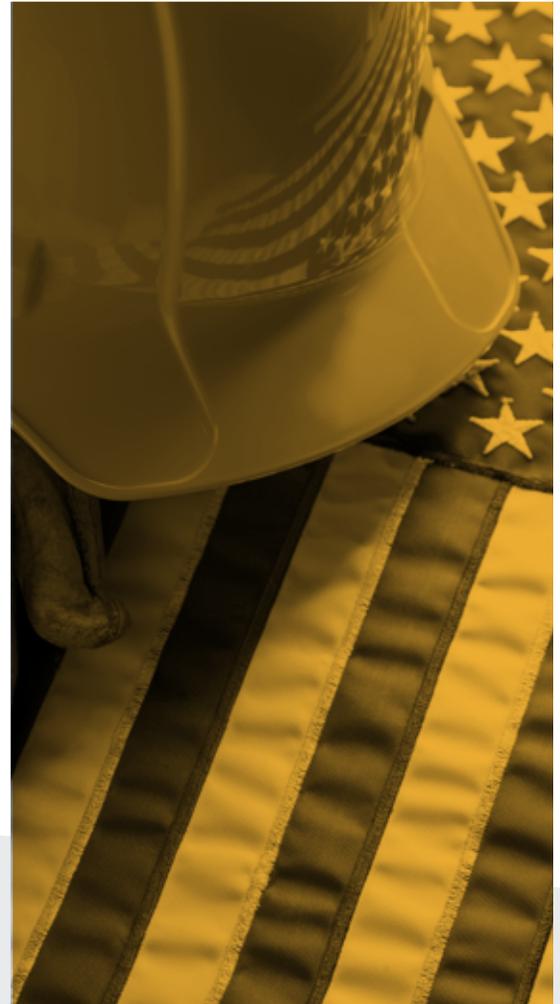


Every movement needs leaders. The Reshoring Initiative 2018 Data Report notes that 1,389 manufacturers have answered the call to bring back work to the U.S., hire workers, cultivate domestic supplier partnerships, and remain competitive.

Other manufacturers need to follow by doing their own TCO analyses, designing a plan of action, and implementing that plan to address cost issues and bottlenecks, including becoming as lean and efficient as possible. They must also be proactive and tenacious in supporting U.S. quality. In fact, this must become a cultural way of thinking – for every employee, all the time.

To become efficient enough to outperform China in cost by 5-10% or more, U.S. manufacturers need to partner with proven domestic suppliers for key core competencies. Kaysun is the trusted custom injection molder for complex applications in the medical, automotive, consumer and industrial, and defense and public safety industries.

Contact Kaysun to learn more about the injection molding and engineering services we offer and how we can support your reshoring efforts.



SOURCES

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