Record Level Reshoring Made Possible by Knowledge-Based Software

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While reshoring United States' manufacturing has been trending since 2018, an emergency such as COVID-19 has escalated this effort in all manufacturing sectors. Bringing the physical production process back home may present numerous challenges but documenting the process and transferring knowledge to new workers is absolutely critical for success. This article will discuss the current state of reshoring, the challenges presented by reshoring, and how knowledge-based software tools can ensure reshoring success.

The global manufacturing sector is going through an unprecedented, fundamental transformation with manufacturing supply chains in the United States thoroughly disrupted due to trade tariffs, governmental pressures to "Bring Jobs Back Home," and the COVID-19 flu pandemic that shut down as much as 40% of world economic output in a matter of weeks. The breaks in the Global Supply Chain today have escalated these reshoring efforts for many essential and non-essential product manufacturing.

Industries far and wide had their supply chain put to the test, and as a result, have impacted products built or sold in the US. With American manufacturing being halted for many products due to the breakage in Chinese supply chains, companies here in the states are strongly re-gearing how they get the necessary supplies they need to continue building the products we need. The answer for many US manufacturers is the use of reshoring to bring the production of manufacturing of goods back to America.

Associated with this change is a myriad of logistical challenges. One specific challenge presents itself in transferring undocumented or under-documented manufacturing processes to a production facility somewhere else in the world that may not even speak the same language.

What is Reshoring?

Reshoring, also referred to as onshoring, inshoring, or backshoring is the process of reverting production and manufacturing of goods to a company's original country. In the past, companies have been able to take advantage of globalization to source specific parts from many countries to save tremendously on the total cost of production. Sometimes this savings occurs by reduced labor cost; however, moves to offshoring can also be attributed to access to markets or access to skilled labor.

As a result of recent, global economic events, numerous US companies have been forced to reassess their total cost of offshoring, and to consider shifting their offshore supply chain, back to a more local one to reduce the total cost of ownership, not to mention, obtain the necessary parts needed to continue producing their goods and services.

Why Reshoring Manufacturing?

A recent report by the Deloitte-Manufacturing Institute cites that almost 50% of companies are considering reshoring some of their manufacturing operations by 2020. Not only have the perceived cheaper wages in the low labor cost countries increased significantly over the past decade, but companies also add to the total cost of ownership by increasing the complexity of their supply chain. When the proximity between R&D, product development, and manufacturing are reduced, time to market, and subsequently costs due to supply chain complexity decrease, making reshoring of factories a highly attractive option. Reshoring US manufacturing brings with it the added bonus of greater control over production processes, which in turn equates to higher quality products for consumers. In times of urgency, being able to control your manufacturing to deliver products to your customers has become a critical need.

Preparing for Reshoring

As US manufacturers race to fill newly created gaps in their supply chains, reshoring is intensifying rapidly and is poised for enormous adoption over the next 18 months. Many companies, caught entirely off-guard by unforeseen international events, are scrambling to gain more control over their supply chain and ensure its continuity. No matter what your reasons for reshoring are, the process presents numerous unique challenges. Companies preparing for reshoring are often faced with the following obstacles that you should also plan to overcome.

Avoiding Cost Overruns

Manufacturers reshoring to the US market must analyze their supply chain management and the cost of breaking with existing suppliers in their production location and forge new relationships closer to production. While reshoring companies can quickly achieve lower transportation costs and decreased lead times, poorly optimized production costs can eat away at these earnings. With a well-documented manufacturing process, OEMs are better equipped to negotiate discounted pricing with local suppliers.

Locating Skilled Labor

One of the main reasons for offshoring is accessing pools of skilled labor. When reshoring, finding skilled labor can be difficult. Today's manufacturing facilities are becoming increasingly digitized and automated. New technologies in manufacturing require workers to possess knowledge of utilizing new technologies and software, as well as analysis and interpretation of data. By investing in hands-on-training, knowledge management software, and apprenticeship programs, companies can overcome finding skilled labor and ensure the valuable transfer of knowledge.

Knowledge Transfer

The crux of reshoring is knowledge transfer/knowledge management and how to convey detailed work instructions from the offshore location back home. Reshoring is especially tricky for companies without a comprehensive, centralized, and well-maintained archive of manufacturing documentation. Manufacturing companies planning on reshoring should take steps to make the company-wide knowledge base easily accessible and well organized. Furthermore, engaging your workforces and encouraging employees to share knowledge is of equal importance.

Production Managers and Executives responsible for reshoring preparation should focus on facilitating the use of knowledge management tools and platforms, as well as discovering ways to both measure knowledge contribution and reward active users.

The Dilemma

Companies that are able to integrate automation and train an advanced workforce stand to benefit from reshoring. Still, this raises the question of how to quickly train and teach an entirely new production team to make complex assemblies when production is moved.

Many operations with little to no automation have the added burden of training on individual tasks that may be complex or have ongoing options that may change. More companies today realize that instructions for workers are critical to the reshoring process but also maintaining consistent product quality. Ineffective training and instructions contribute to errors that often produce:

- Increased scrap and rework
- Delays in order shipments
- Increased production costs and reduced margins

Knowledge Management Software

Companies interested in reshoring turn to Sequence Software for their electronic knowledge management and work instruction software needs. With our enterprise network solutions, your manufacturing operations can easily document your processes with step by step work instructions for training and knowledge retention.

By effortlessly creating, compiling, and centrally storing manufacturing work instructions, organizations in all production industries, from pharmaceuticals to defense, can avoid pain caused my reshoring back to the US.

Sequence Software has served the digital work instruction software needs of manufacturing groups for almost 20 years. These companies rely on our knowledge management tools to rapidly and efficiently deal with a growing and changing workforce.

Sequence Software offers a well-documented technology advantage for manufacturing companies needing to quickly and painlessly create work instructions.

If you are in the reshoring process, considering moving operations, or simply need to improve your process documentation and training, Sequence Software can assist you with a ‘right size’ solution for your business.