Reshoring Initiative®
2022 Q3 Data Report

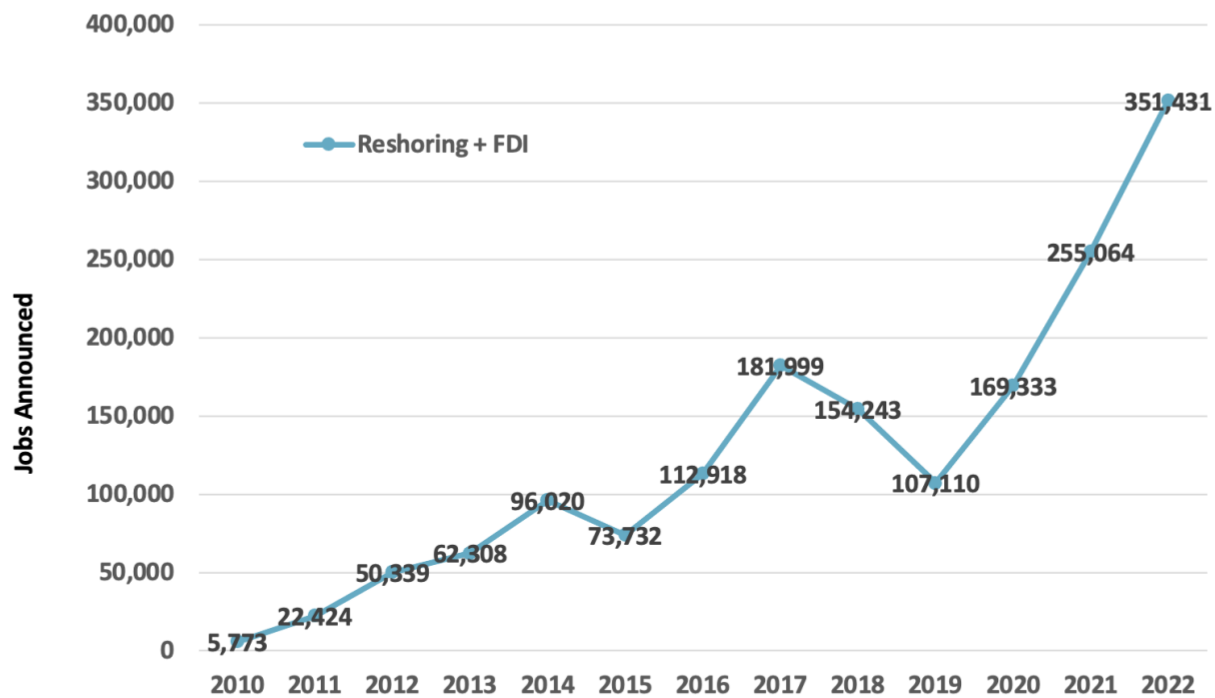
Reshoring and FDI on Track for Another Record-Breaking Year: 350K Jobs

Shifting Forces Continue to Drive Reshoring Higher

Executive Summary

Q3 2022reshoring + FDI job announcements were ***at the highest rate ever recorded, about 15% above Q1 2022, the previous record*.** 4Q 2022 looks strong enough to reach a 2022 total of 350,000+ jobs.

Exhibit 1a | **Job Announcements per Year, Reshoring + FDI, 2010 thru 2022-Projected**



Report Index

This Report contains data[1] and analysis on trends in U.S. reshoring announcements by U.S. headquartered companies and FDI by foreign companies that are shifting production or sourcing from offshore to the U.S.

1. 2022 Projected Manufacturing Job Announcements
2. Top Industries, and the Products Driving Them
3. Trends and Projections

1. 2022 Projected Job Announcements

[1] The data for all reports comes from the Reshoring Initiative's Reshoring Library of over 8,000 published articles, privately submitted Reshoring Case Studies, and some other privately documented cases. Reshoring and FDI are both motivated by the same logic: the financial advantages the company achieves by producing near the customer.
Cases must refer to a specific company, product and location to be included. Job numbers are assigned to the year in which the numbers are first announced and can include current hiring, recent prior years 'hiring and future hiring. We estimate that actual hiring lags, on average, 12 to 24 months behind the announcements, i.e. occurs one to two calendar years later.
We include work brought to an OEM's assembly plant and work newly outsourced to the domestic supply chain. The supply chain often receives more jobs than the assembly plant.
Job and company numbers are first tabulated and then adjusted for under-reporting, especially in the domestic supply chain. More information on our calculation process is available on request. Total job and company count varies from chart to chart since we do not have data for all chart topics from all cases.

The current 2022 projection of jobs announced is a record breaking **350,000 -** up from 255,000 in 2021. This will bring the total **jobs announced since 2010 to over 1.6 million.** New investments in U.S. manufacturing by domestic and foreign companies briefly slowed their historic pace in the second quarter, perhaps in reaction to steep inflation, but quickly regained ground in Q3 after President Biden's **Inflation Reduction Act** and **Chips and Science Act** were passed.

Government incentives have always topped the list for reasons mentioned by reshoring companies, so it comes as no surprise that the $393B expenditure in the Inflation Reduction Act would boost new investments. Historically, incentives have primarily come from cities and states and are enough to influence the U.S. factory site selected but not enough to overcome cost differences vs. low labor cost countries. These federal grants are enough to overcome those differences, at least in the short term. The products and industries that have been most affected will be discussed in the next chapter.

Filling supply chain gaps and thus achieving greater self-sufficiency are the driving forces behind Biden's bills. The bills are not an industrial policy, rather isolated industrial action, though they are as close as we have come to one for a long time. Destabilizing geopolitical and climate forces have brought to light our vulnerabilities and the need to address them. The possibility of China decoupling, including due to a Taiwan-China conflict, is focusing those concerns.

If the current trajectory continues, the U.S. will reduce the trade deficit, add jobs, and become safer, more self-reliant and resilient. But, to be sustainable, the trajectory will require a much broader industrial policy.

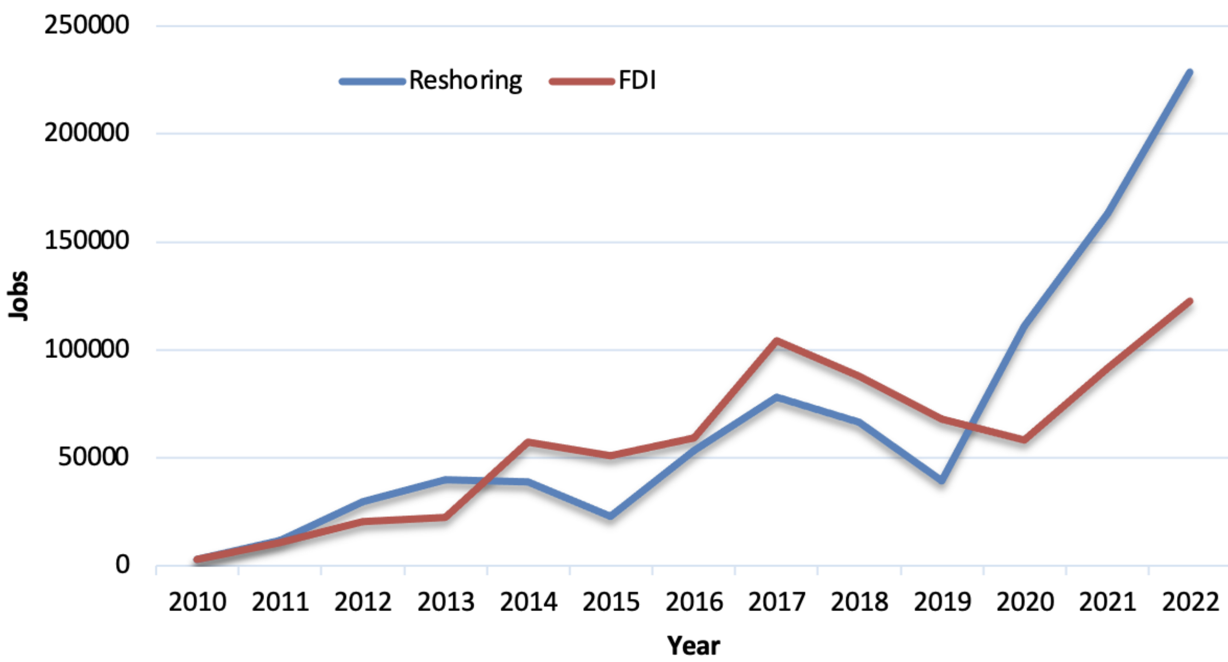
Reshoring vs. FDI

For the third year in a row, reshoring is outpacing foreign direct investment (FDI). There are many cases of joint ventures between domestic and foreign companies. In such cases, jobs are distributed 50/50 between reshoring and FDI. The high rate of reshoring vs. FDI is in part due to the peaking of globalization and to U.S. incentives for reshoring. In addition, it also indicates that U.S. headquartered companies are understanding the benefits to localized production that many foreign companies have understood for decades.

Exhibit 1b | **Reshoring vs. FDI 2022 Projected**		
	Jobs announced	**% of total**
Reshoring	228,723	65%
FDI	122,708	35%
Reshoring + FDI	351,431	100%

Globalization has two major forms. Single source: produce in one location, and supply the world. For the last 20 years, that single source was China. Localization: produce in each country or region for that market. Due to the localization trend, accelerated by geopolitical tensions, global trade has peaked or will peak soon. Localization is driving large cases of FDI in the U.S., primarily for two additional reasons: first, the U.S. remains the biggest market in the world with a healthy economy and stable business climate relative to other countries, and second, the incentives associated with the infrastructure and IRA bills will apply only to products that fit the bills' Made in N. America provisions.

Exhibit 1c | **Job Announcements/Year, Reshoring vs. FDI, 2010 thru 2022 Projected**



Reshoring is exceeding FDI in job creation for the third year in a row.

2. Top Industries, and the Products Driving Them

Essential product industries continue to dominate reshoring and the manufacturing economy. In Q3 Electrical Equipment driven by EV battery investment, remained the top industry. Computers and Electronics (including semiconductors and chips) moved to 2^{nd}, bumping Transportation to 4^{th} place. Chemicals moved up to third place, driven by pharmaceuticals and materials contained in EV batteries.

Historically, the most active reshoring is by those industries that left because of companies not doing the math correctly, including machinery, transportation equipment and appliances. More recently, activity has shifted to include essential products which the U.S. government should have recognized as too essential to rely so heavily on imports, including electric vehicle batteries, semiconductors, PPE, pharmaceuticals and rare earths.

So far, electric vehicle batteries are the most active product to be reshored/FDI'd in 2022. Since they were categorized with the NAICS code of Electrical Equipment, that category has taken the number one ranking from Transportation Equipment, even though it still applies to the transportation industry. Transportation Equipment (mainly cars) was previously driven by FDI and has slowed with FDI since the pandemic and chip shortages. The investment in batteries is booming, in the attempt to obtain needed supply and not be dependent on Asian, especially Chinese, imports. Electrical Equipment's share of jobs announced went from 3% in

2019 to 44% in 2022. So far in 2022 there are 146 battery related cases that account for 105,000 jobs announced, including the supply chain.

The second largest industry in 2022 is Computer and Electronic Products. It continues to grow, pushed in recent years by solar panels, robotics, drones and most recently, semiconductors. Semiconductors in particular are going to require much larger domestic markets in order to succeed over the long run. In the short-term we expect chip investment and jobs to continue to grow. In 2022 there have been 61 cases of semiconductor/chips, with 28,800 jobs announced - most late in the 3rd (and 4th) quarters, following the announcement of the Chips Act.

In third place is Chemicals, driven by pharmaceuticals, specifically vaccines and COVID-19 treatments, renewable fuels like Hydrogen, and rare earth-based chemicals required for batteries.

High prices and shortages of natural gas in Europe and other regions is driving petrochemical refining to the U.S. This trend will also strengthen plastic processors such as injection molders.

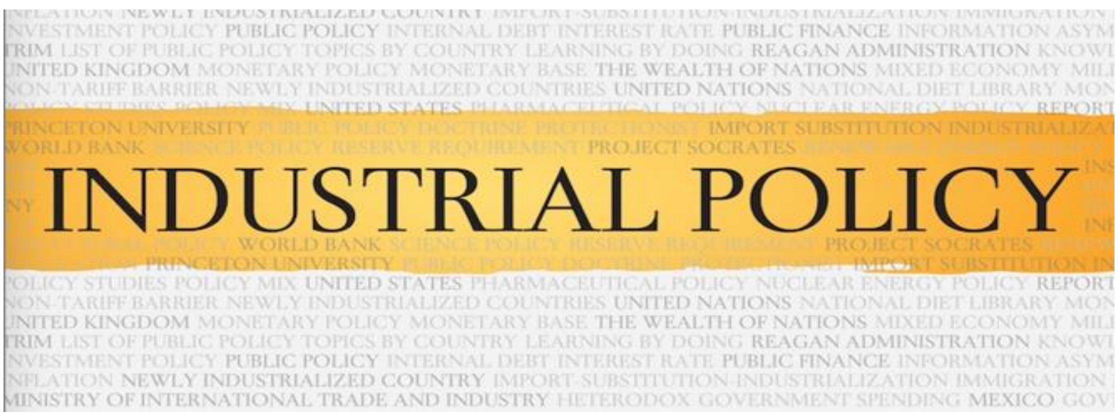
Exhibit 2a | **Top 5 Industries for 2022, Projected**

	Reshoring			FDI			Reshoring + FDI		
Rank	**Industry**	**Jobs**	**Companies**	**Industry**	**Jobs**	**Companies**	**Industry**	**Jobs**	**Companies**
1	Electrical Equipment, Appliances & Components	76,399	151	Electrical Equipment, Appliances & Components	43,041	71	Electrical Equipment, Appliances & Components	119,440	222
2	Computer & Electronic Products	37,967	167	Transportation Equipment	16,763	81	Computer & Electronic Products	47,560	205
3	Chemicals	19,262	165	Computer & Electronic Products	9,593	38	Chemicals	27,270	238
4	Medical Equipment & Supplies	13,921	68	Chemicals	8 ,009	74	Transportation Equipment	19,395	100

5	Fabricated Metal Products	6,467	32	Plastic & Rubber Products	2,828	30	Medical Equipment & Supplies	14,451	78

Exhibit 2b| **Essential Products Driving the Top Industries, Reshoring + FDI, 2022 Projected**			
Industry	**Essential products drivers**	**% of total Jobs**	**% of total Companies**
Electrical Equipment, Appliances & Components	EV Batteries, charging stations	44%	17%
Computer & Electronic Products	Semiconductors, chips, Solar panels	18%	16%
Chemicals	Pharmaceuticals, hydrogen fuel, chemicals for batteries	10%	19%
Transportation Equipment	FDI EV’s and aerospace	7%	8%
Medical Equipment & Supplies	PPE and medical devices	5%	6%

3. Trends and Projections



Newest developments

Inflation Reduction Act of 2022

The Inflation Reduction Act (IRA) will have the largest impact on reshoring and FDI, primarily on EVs and EV batteries both of which were previously heavily import dependent, especially batteries from China. $11,500 in tax credits per eligible vehicle is about 30% of manufacturing cost making N. American sourcing the only viable solution for U.S. sales.

Bipartisan Infrastructure Bill

Much of the $550 billion in the Bill is probably needed. However, we believe that investing in our industrial infrastructure, factories, machines, robots, etc. would have a larger impact on U.S. cost competitiveness and thus on reshoring and the economy. U.S. goods' transportation cost is lower than their manufacturing cost so the impact is smaller. Transportation efficiency also helps reduce the total cost of imports, making the U.S. less competitive.

CHIPS Act

Ideally, industries and companies should not need to be subsidized to reshore. A well-designed, permanent, industrial policy would level the playing field enough that the companies would decide to reshore in their own self-interest. In the short-term it is necessary to select and subsidize specific critical industries such as chips. In the longer-run the subsidized industries will fail if their manufacturing costs are not competitive and they do not find a growing domestic market. Already, many chip categories are in excess supply. In a few years there will be a much greater oversupply of chips since so many foundries have been announced worldwide. The U.S. is at risk of going from being dependent on China and Taiwan for chips to being dependent on China to buy our overpriced chips to assemble into infotainment systems, medical devices and servers to ship to us. The solution is to level the broad industrial playing field, to have a tide that lifts all, or most, U.S. industries, as outlined in the Conclusion.

Uyghur Forced Labor Prevention Act

Previous law required companies to take reasonable care to avoid products produced with forced labor. This Act requires companies to prove that products from Xinjiang province were not produced with forced labor.

More attention to near-shoring, right-shoring, friend-shoring, allied-shoring

Reshoring should always be the country's first choice if the U.S. is sufficiently competitive. For some products, the components and skills are not available here or labor costs are not able to be overcome by automation. Near, right, friend and allied shoring are all better alternatives to work being done far away or by adversaries. Choice of shores should be based primarily on U.S. economic self-interest and not be a means of country building or advancing democracy.

Exports from Mexico to the U.S. have 40% U.S. content whereas exports from China have only 5% U.S. content. Transportation equipment and appliances nearshore the most. More companies nearshore to Mexico than to Canada due to greater cost advantage.

Shift in Wall Street
Wall Street's focus on short-term profits was a major force driving offshoring for the last 40 years. Major banks, financial institutions and private equity companies are now sensing the rewards of reshoring. The Initiative is working with several firms to help them identify companies with opportunities for outsize gains by selling or buying smarter and filling supply chain gaps.

ESG and General Public and Corporate Awareness
The environmental, social and governance (ESG) trend should be a driving force behind reshoring. Rating agencies and companies have not done a good job of realizing that reshoring is the easiest way to achieve ESG goals. Questions on ESG rating forms should include: Where are your products produced? Where are they sold? Producing in Asia, especially China, for sale in the U.S. would earn negative points. Companies are increasingly aware that they should reduce offshore dependence. They are slow to understand that they can often do so profitably.

General Summary

There are many reasons to be optimistic. Covid's lesson about the country's lack of self-sufficiency will continue to spur growth in local sourcing. Survey results consistently show a surge in reshoring plans in 2022. Training a skilled workforce to fill the new positions will remain a challenge and barrier to further growth. To meet this challenge, companies, trade associations and states have been ramping up training programs.

While the upward trend is sustaining momentum now, at some point companies will become more focused on fulfilling the giant commitments already made before announcing more.

Below are some factors that will impact Q3 2022 and 2023 relative to 2021.

Forces likely to slow reshoring and FDI:

1. **Continued workforce shortages –** Companies won't be able to fulfil their job announcements if there is no skilled labor force to hire.
2. **Continued increase in industrial capabilities in SE Asia and Mexico -** Attracting work that would otherwise come back to the U.S.
3. Lack of sufficient investment in U.S. automation to offset high wages and improve delivery. U.S. ranks 7th in number of robots/10,000 industrial workers, 73% behind S. Korea and 15% behind China.
4. **U.S. inflation rate higher than in most other countries** - Further reducing competitiveness. The higher interest rates from the Fed's effort to reduce inflation reduce the ROI on needed automation.
5. **Higher USD** - Reducing competitiveness. Fortunately the USD has come down about 6% from its September 21, 2022 high.
6. **Possible Section 301 tariff reduction** – The 25% tariff makes most Chinese imports uncompetitive. Reduction seems unlikely now.


Forces likely to help reshoring and FDI:

1. **Government actions to reduce national dependence on imports of key products** - This effort is starting aggressively with medical products, chips, rare

earth minerals, EV batteries, etc. to fill current supply chain gaps. President Biden is highly prioritizing reshoring, applying different methods than President Trump.

2. **Risk of aggressive "decoupling" by China.** As tensions grow over Taiwan the probability of an abrupt termination of shipments of a broad range of products increases. Many companies are shifting work out of China to avoid this risk. A slightly higher total cost now is inexpensive insurance to avoid the existential risk of being completely cut off from components and products.
3. **Russian/Ukrainian war.** Nickel, argon and neon are a few of the materials whose supply is severely disrupted by the war. Equally important, companies can now better appreciate the possible impact of geo-politics.
4. **Other disrupted supply chains -** Demonstrates the advantage of local sourcing.
5. **Massive publicity about reshoring.** AT Kearney's March 2022 survey showed that "Eighty-one percent of manufacturing executives say they might be influenced by seeing other American companies reshore or nearshore." The Reshoring Initiative is the largest source of reshoring publicity
6. **Continued growth in efforts by MEPs (Manufacturing Extension Partnerships), EDOs (economic development organizations) and states to enable reshoring** - The Reshoring Initiative has key tools for such efforts.
7. **Environmental, Social and Governance (ESG) trend:**
   a. **Corporate social responsibility expands --** The Business Roundtable's August 2019 Statement on the Purpose of a Corporation expanded the definition of stakeholders from just shareholders to now include employees, suppliers and community. We anticipate companies will recognize that reshoring is the most effective and least expensive way to fulfill their commitments. Companies can strengthen the three new stakeholder constituencies while increasing the return to shareholders if they do the math correctly.
   b. **Climate crisis and increasing environmental consciousness** - Domestic supply chains are more transparent than offshore and less polluting, cutting the world's environmental impact by up to 25%, depending on the product. Sustainability practices will continue to increase as a corporate strategy and will help drive reshoring and FDI.
8. **Continued increases in usage of TCO (Total Cost of Ownership)** instead of price in making sourcing decisions. Universal TCO usage, alone, would reshore about 1.5 million jobs.
9. **Continued improvement in skilled workforce programs** The biggest challenge will be bolstering our skilled workforce, which is not adequate to support a much higher rate of reshoring. There are signs of positive change. Awareness of the problem is growing, Perceptions of manufacturing jobs are improving, more companies and governments are adding programs.

Ambiguous:

1. **Higher interest rates** - Has raised the value of the USD and the financing cost of automation (headwinds) but will surely increase the carrying cost of inventory (tailwind), which is increased by offshoring.
2. **Oil prices and environmental regulations -** Higher oil prices increase freight costs and tend to make U.S. shale gas more of an advantage for making plastics and for having competitive electricity rates.
3. **Biden administration policy -** Has placed a high priority on reshoring. Tends to apply tourniquets and Band-Aids to high profile problems, rather than systematically attacking the underlying problem: lack of cost/price competitiveness, which could be more directly dealt with by massive skilled workforce investment, 25% lower USD and adding a VAT.

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Conclusion

The primary tools should be a dramatic increase in skilled workforce recruitment and training, a 25% lower USD and competitive corporate tax policy, including maintaining immediate expensing of capital equipment.

The rate of reshoring plus FDI job announcements in ytd 3Q 2022 was up 31% from 2021 and almost 6000% from the 2010 rate. The resulting cumulative 992,000 incremental hires represent over 7% of U.S. manufacturing employment. The acceleration of jobs coming back combined with the decline in the rate of offshoring has resulted in a 12-year steady uptrend in U.S. manufacturing jobs. The COVID crisis has revealed the U.S.' over-dependence on imports. The Ukraine/Russian war and geo-political tension with China will drive ongoing supply chain shifts, further accelerating reshoring and nearshoring.

This Data Report should motivate companies to further reevaluate their sourcing and siting decisions by considering all of the cost, risk and strategic impacts flowing from those decisions.

Reshoring's success has occurred despite uncompetitive U.S. manufacturing costs. Presently, shifting forces are creating more incentives and opportunities for companies to produce at home. The Reshoring Initiative can help government policy makers project the impact of applying industrial policy to bring millions more jobs back. Continuation of the trend depends on companies reevaluating their offshoring. Acceleration of the trend depends on the government leveling the playing field, making the United States more price competitive. The primary tools should be a dramatic increase in skilled workforce recruitment and training, a 25% lower USD and competitive corporate tax policy, including maintaining immediate expensing of capital equipment. The Reshoring Initiative offers many tools and resources, which are listed below. Please contact us for help driving reshoring for your company, your region and our country.

RESHORING INITIATIVE RESOURCES

Total Cost of Ownership Estimator® - Free online tool that helps companies account for all relevant factors — overhead, balance sheet, risks, corporate strategy, green and other external and internal business considerations — to determine the true total cost of ownership. It can be used by companies to make smarter sourcing decisions and to sell against imports. Analysis of TCO Estimator user data shows that 20 to 30% of imported products can be made here more profitably. Call on the Reshoring Initiative for help using this and other tools.

Import Substitution Program (ISP) - Manufacturers select the products at which they excel. ISP identifies and qualifies the major relevant importers of those products. The manufacturers then use TCO to convince the importers to reshore. Offered directly to manufacturers and thru MEPs, EDOs (economic development organizations), trade associations and equipment sellers.

Supply Chain Gap Program - Identifies U.S. supply chain gaps. Helps U.S. manufacturers fill the gaps. Helps EDOs find foreign firms to fill the gaps.

Competitiveness Toolkit - Designed to quantify and select the optimal national policy changes to bring back a desired number of jobs.

Reshoring Library – You can use Advanced Search to identify companies that have reshored or done FDI in relevant industries or regions. Search for potential customers.

Reshoring Initiative Data Report – Annual reports track the drivers, impact and momentum of the trend.

Data refinement is ongoing

1. Companies, industry associations, states, EDOs and others are encouraged to send us information on reshoring and FDI cases. Send us links to articles and announcements.
2. To see a full list of companies in the database click here.
3. If your company is listed, email us to request your company's data to review, edit and return. Please include your company name and detailed contact info.

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About Us

Reshoring is gaining momentum throughout the country. Many companies have already repatriated some of their manufacturing efforts, and the Reshoring Initiative is continuing to spread the "return-manufacturing-home" message to help other manufacturers realize America is an advantageous place to produce goods.

The Reshoring Initiative, founded in early 2010, takes action by helping manufacturers realize that local production, in some cases, reduces their total cost of ownership of purchased parts and tooling. The Initiative also trains suppliers how to effectively meet the needs of their local customers, giving the suppliers the tools to sell against lower priced offshore competitors.

Reshoring Initiative®

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