


Reshoring Initiative

Bringing Manufacturing Back Home

Accelerating Reshoring

To Offshore or Reshore?
How to Objectively Decide

MSSU
8/20/12

Harry Moser
President
Reshoring Initiative

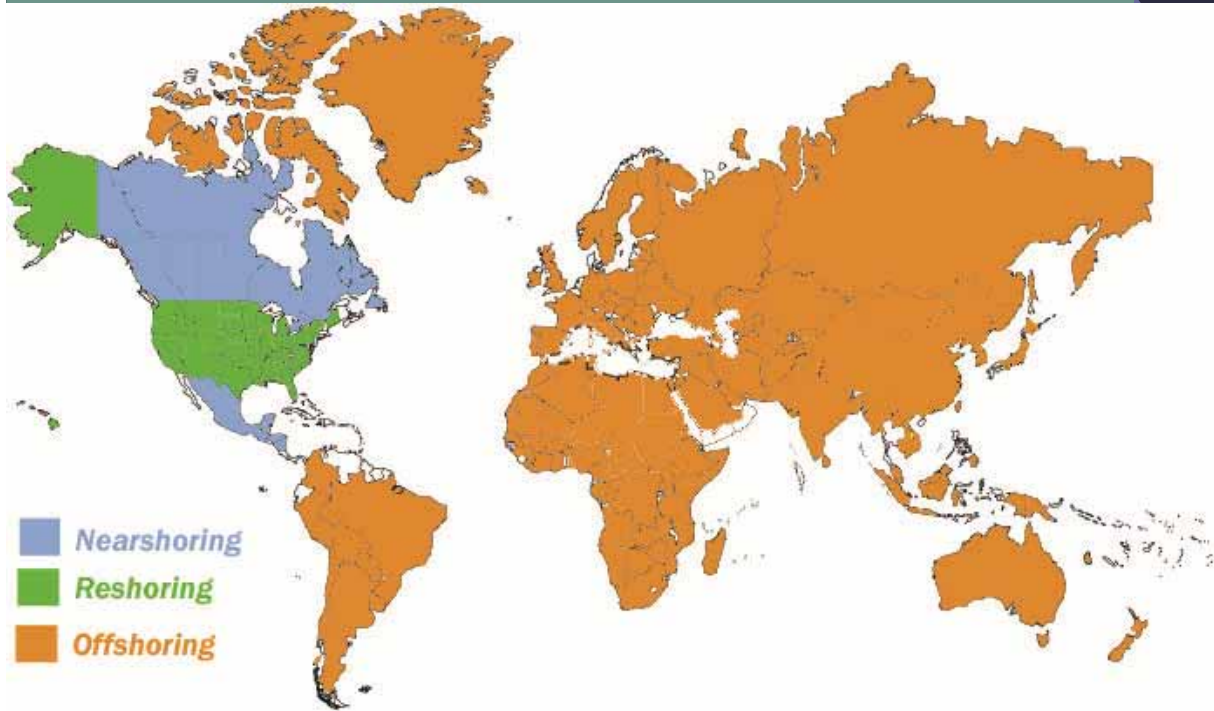
Agenda

- Overview 55 min
- Website:
TCO, Library, Case Studies 15
- Q&A 20
- Total 90 min

Definitions

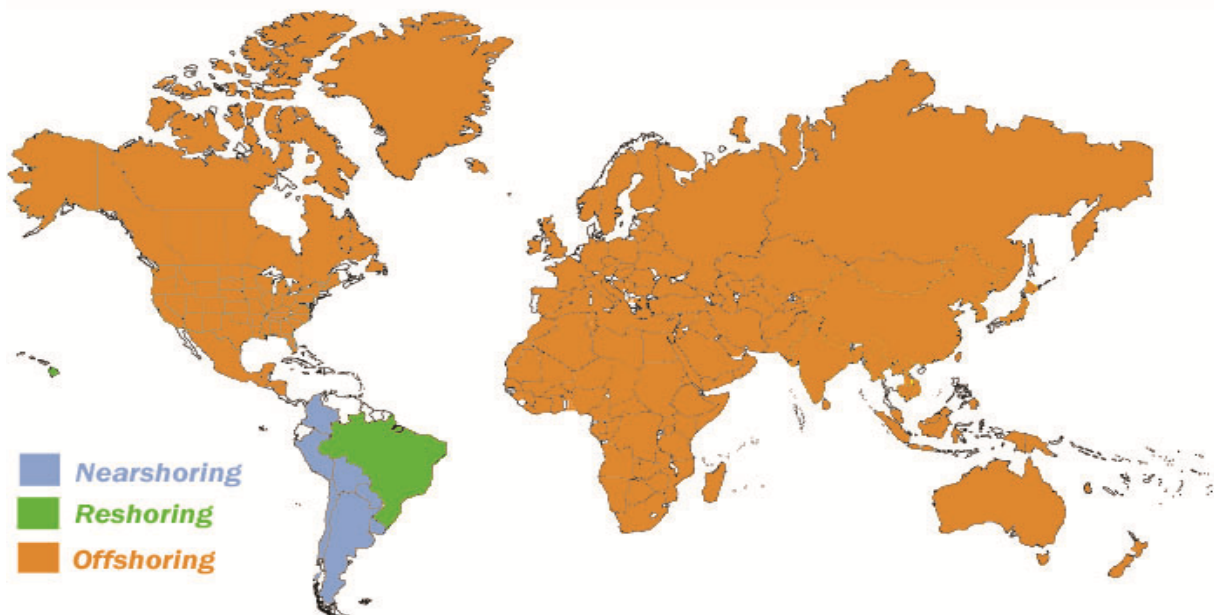
- Reshoring/Backshoring/Onshoring/Insourcing: Bringing back manufacture of products that will be sold or assembled here (antonym of offshoring)
- Outsourcing: Work done by another company, wherever located
- In-house: work done in the company's facilities, wherever located

Geographic sourcing alternatives



The concept also works in other countries

Reshoring: a Brazilian perspective



Offshoring: flawed company economic model

60% of manufacturers:

- Apply “rudimentary” total cost models
- Ignore 20% or more of the total cost of offshored products

Source: Archstone Consulting survey, American Machinist Mag., 7/16/09

“Manufacturing Is Expected to Return to America” “Renaissance in Manufacturing”

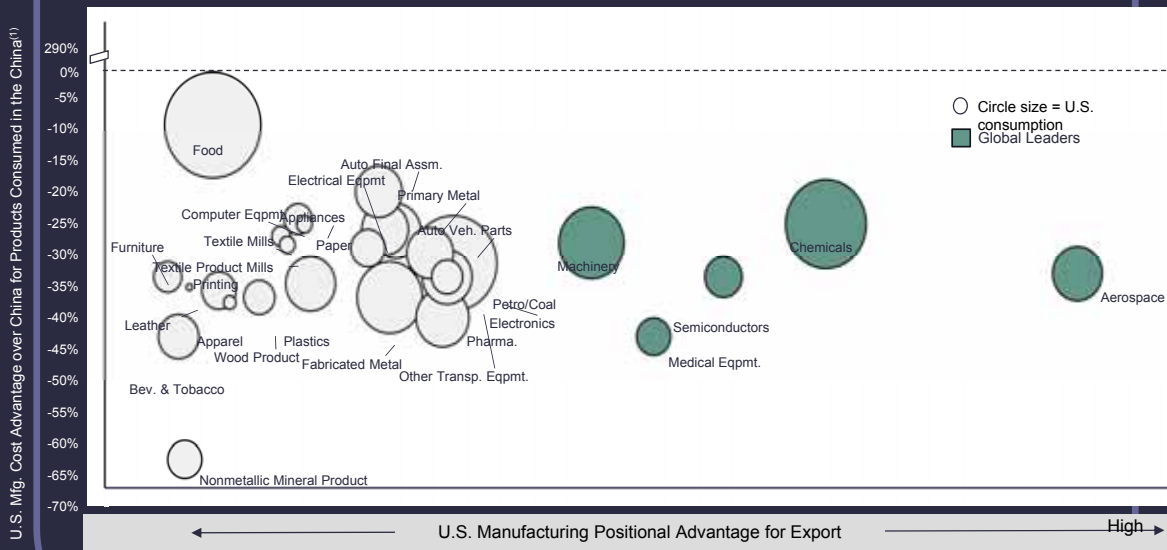
- “We expect net labor costs for manufacturing in China and the U.S. to converge by around 2015”
- “take a hard look at the total costs”

Source: Boston Consulting Group press release 5/11 & 4/12

Chinese no longer “just thankful not to go hungry”

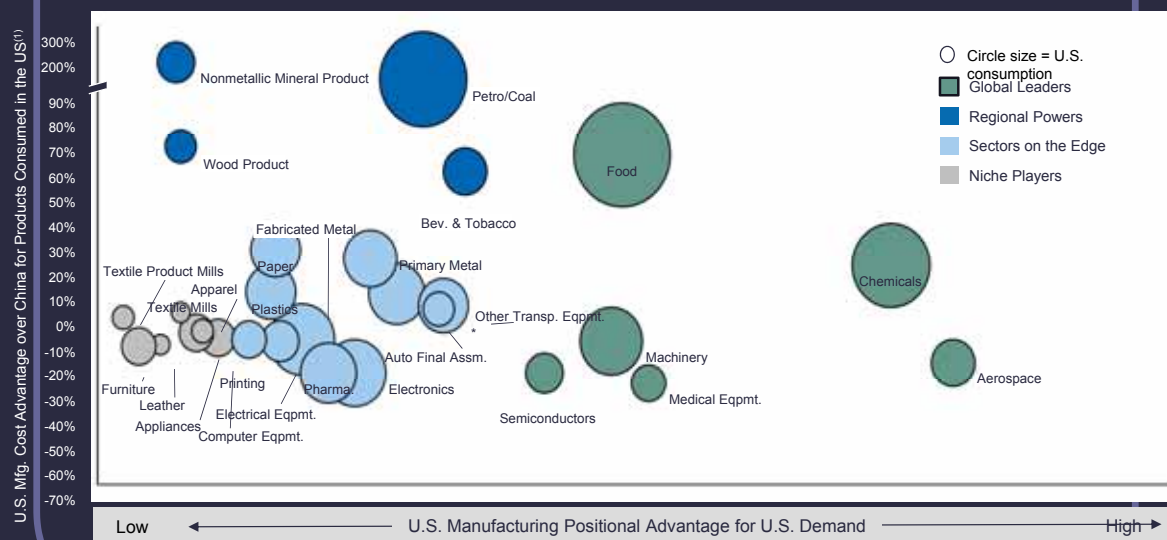
Source: Michelle D. Loyalka, 2/17/12 NYT

U.S. Manufacturing Competitiveness for Exports – Exhibit 4



1) The U.S. cost advantage represents the labor and logistics costs compared with those of Chinese manufacturers, for products consumed by people in China.
 Source: U.S. Census Bureau, Bureau of Labor Statistics, UBS Research, CapitalIQ, Energy Information Administration, World Bank, Eurostat, World Trade Organization, IRS Statistics, Tauber Institute for Global Operations, Booz & Company

U.S. Manufacturing Competitiveness in Domestic Markets – Exhibit 5



1) The U.S. cost advantage represents the labor and logistics costs compared with those of Chinese manufacturers, for products consumed by people in the United States.
 Source: U.S. Census Bureau, Bureau of Labor Statistics, UBS Research, CapitalIQ, Energy Information Administration, World Bank, Eurostat, World Trade Organization, IRS Statistics, Tauber Institute for Global Operations, Booz & Company

Survey says: reshoring is happening!

- 61% of larger companies surveyed “are considering bringing manufacturing back to the U.S.” (MIT forum for Supply Chain Innovation 1Q12)
- 40% of contract manufacturers have done reshoring work this year (MFG.com 4/12)
- % of U.S. consumers who view products Made in America very favorably: 78% (2012) up from 58% (2010) (3)

Reshoring is significant

- We calculate reshoring yielded:
 - About 50,000 manufacturing jobs*
 - ~ 100,000 total, including multiplier effect
 - ~ 10% of manufacturing job growth since the low of Jan. 2010

* Source: 14,870 at 35 companies mentioned in published articles in the Reshoring Library. Conservatively adjusted for 151 reshoring companies mentioned w/o hiring data and for outsourcing underreported.

The Industry-Led Initiative Provides

- Free Total Cost of Ownership (TCO) Software for companies and suppliers/unions
- Online Library of 290 reshoring articles
- Case Study template for posting cases
- Media coverage of the trend: WSJ, USATODAY, IW, CBS, CNBC, Fox Business, etc.
- ~100 presentations/yr nationwide
- Motivation for skilled manufacturing careers
- A solution to today's supply chain problems

TCO Estimator benefits

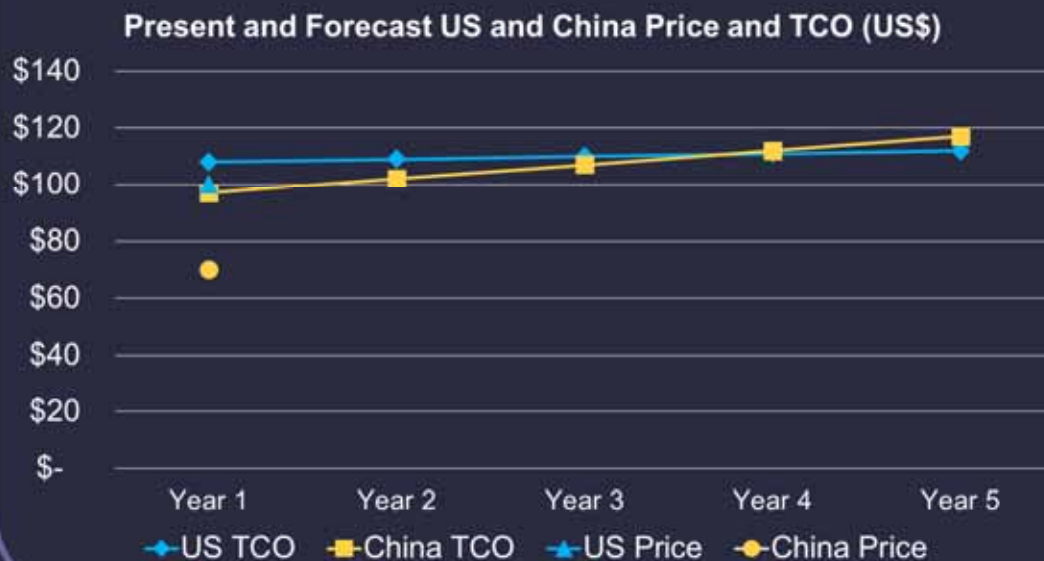
- Provides a single TCO for each source
- Flexible: values are 100% user selected.
- Broad:
 - 29 cost factors.
 - Via pull down menus you automatically insert:
 - Freight rates for 17 countries
 - Duty rates for parts or tools, e.g. molds
 - Current value and 5 year forecast of TCO.
- Easy to use:
 - Explanations and references to help select values.
 - Instruction Manual.
- Free

Example: some data for a part

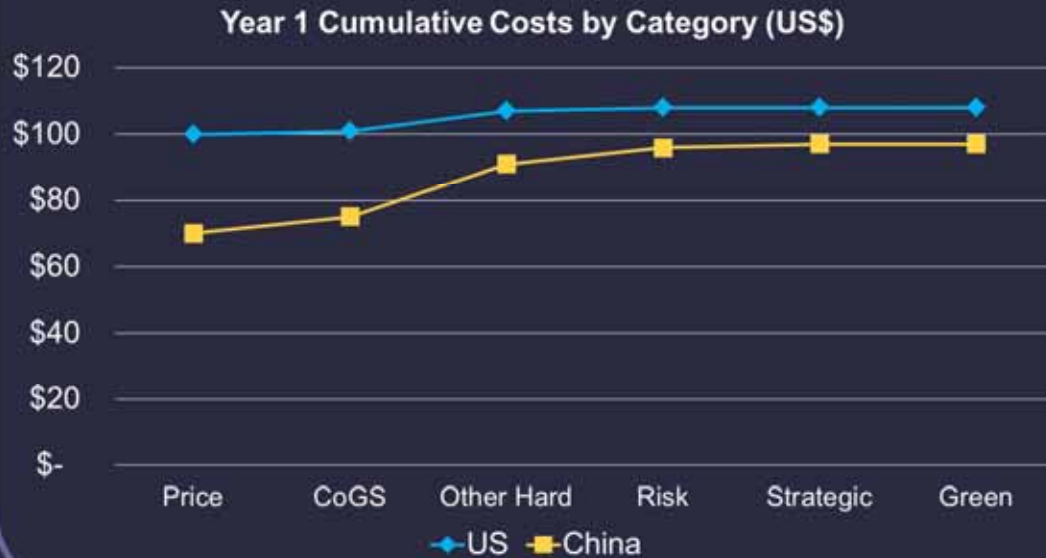
Chinese unit price	\$70	Product liability risk*	0.5%
U.S. unit price	\$100	IP risk*	1.9%
# units/year	12,000	Innovation*	0.5%
unit weight, lbs	2	Trips/yr	2
Shipments/year	6	Carrying cost, rate	22%
product life, yrs	5	Emergency air freight %*	5%
Packaging*	1%	Wage inflation, annual*	8%
Payment on shipment	Yes	Currency appreciation, annual*	5%
Quality*	2%		

* Chinese differential vs. U.S.

TCO Comparison Example: a Moderate Labor Content Part



Cumulative Cost by Category



Statistics from TCO database: 19 “real” 2012 cases, China vs. U.S.

Comparison Basis	Sample	U.S. % of China price or TCO, average	% of all cases where U.S. has the advantage
Price	100%	189%	5%
TCO	100%	100.4%	53%*
Difference	100%	N/A	48%**

* For the 53%, the average U.S. TCO was 36% below China

**Conservatively 25% might return

Source: Reshoring Initiative TCO database

Industry distribution of published cases.

Industry	Number
elec. Equip, appliances & components	37
miscellaneous	33
transportation equipment	27
machinery	18
furniture	11
computer and electronics	9
plastics and rubber	8
fabricated metal parts	6
clothing and textiles	3
food and beverage	3
Chemicals	1
primary metal	1
oil and gas	1

Source: Reshoring Library, July 2012

Some Reshorners





Water-heaters

Bringing Production back from China:

- Water-heater production
- Unionized facility in Louisville, KY
- 400 jobs, renovated facility
- Reasons:
 - Tax incentives
 - High-tech new model
 - Ease of design collaboration with workers: cut cost \$20
 - 2 tier contract
 - Chinese cost: -30% becomes +6% considering inventory and delivery problems
- Will move a “significant piece” of appliance production back

Bailey Hydropower Hydraulic cylinders

- Had 100,000 ft² in Chennai, India
- Reshored to Westknoxville, TN
- 60,000 sq. ft.
- Reasons:
 - Fast delivery vs. 5 wks on the water
 - Fewer supply chain problems
 - If a quality problem, no more bad units en-route

Source: Knoxvillebiz.com Ed Marcum 8/7/10

- From China and Vietnam
- Reasons:
 - Supports eco-consciousness and quality
 - “..the shift back to a 100% American manufacturing platform has enabled us to gain complete control over our products.”
 - There is no need to house inventory, translating into considerable overhead savings for retailers.

Source: *Young America moves all production to United*
Jenny Heinzen York -- Kids Today, 9/13/2009

Lincolnton Furniture re-start-up

- Lincolnton, NC
- Bruce Cochran, CEO
- Bedroom and dining room furniture
- 310,000 factory previously closed when work went to China
- Reasons can compete with China: transport cost, Chinese labor cost and availability

Other furniture reshored

Company	Location	Product
Stanley, Young American	Robinsville, NC	Cribs
Sauder Woodworking		
Carol Gregg	NC	



Wright Engineered Plastics injection molding

- China to Santa Rosa, CA
- Medical and Telecom customers
- 4+ customers reshored, including JDS Uniphase and ECO Funnel™
- Reasons:
 - Transport costs up
 - Wages up
 - Quality issues common and difficult to handle

Source: Design2Part mag, Yes, You Can Go Home Again, Say Some Manufacturers by Mark Shortt



OH and MI

- Hybrid transmission component from Japan
- Battery pack assembly from Mexico
- Steel forging from India
- Reason: be sure quality standards are followed

Source: Deseret News 8/4/10 Ford says UAW deals bring work back to its plants



Buttons

- China to Clarkesville, GA
- Reasons:
 - Salaries up
 - Expectations up
 - Rising Yuan
 - 20-25% of employees did not return from annual holiday



Circuit boards

- Woodridge, IL
- Supplies many AEM members
- Had quality issue with a Chinese component
- Found local IL source
- Result:
 - Quality problem fixed
 - Inventory cut by 94%



- 50% of Frisbees
- China back to CA and MI

Deming on Total Cost

- “End the practice of awarding business on the basis of price tag. Instead, minimize total cost.”

Source: “4th Key Principle for Management,”
Out of the Crisis, W. Edwards Deming

Offshoring multiplies Waste

<u>Toyota Wastes</u>	<u>Offshoring Contributes</u>
Overproduction	Large batch shipments, filling containers
Waiting	Uncertain delivery/Inconsistent quality, port, customs, shared “awake time” window for discussions
Transport	12,000 mi. inbound, 6,000 return (boat ½ full)
Overprocessing	More packing and unpacking, customs paperwork,
Inventory	In transit, cycle, safety stock, uncertain delivery and quality, less ability to see and count
Motion	Increased cost over time – repetitive motion injuries or additional labor to compensate
Defects	Much higher than local sources, extra inspection of materials and tolerances, customers unhappy longer

The fastest and most efficient way to strengthen the U.S. economy

- Reshoring breaks out of:
 - The economic zero-sum-game of tax/borrow and spend.
 - The increases in consumer prices of relying solely on currency changes.
 - The waiting-for-policy-decisions problem.
- Assures that the pie grows, to the advantage of all Americans.
- Grows the pie by taking back what we earlier lost.
- Focuses on the manufacturing sector which has suffered so many job losses for decades.
- More efficient than exporting, stimulus programs or even tax reductions.

Potential for reshored jobs is huge!

Consideration	Manufacturing Jobs*	Total Jobs*
Today: If all companies used TCO (Reshoring Initiative)	~500,000	1,000,000
By 2015: If Chinese wage trends continue (~BCG)	1,000,000	2,000,000
Better U.S. training, process improvement, automation, tax rates (~AMP)	2,000,000	4,000,000
End of offshore currency manipulation	3,000,000	6,000,000

* # of jobs is cumulative. "Total jobs" assumes a low 1.0 multiplier effect

Gaining support in DC

- Commerce Dept:
 - 2012 budget specifies TCO.
 - Links now:
 - www.manufacturing.gov
 - <http://nist.gov/mep/reshoring.cfm>
 - Major link on SelectUSA this fall
 - 3 rounds of MEP webinars
 - Testified at CJS Congressional hearing on 3/28/12
- SBA
- Calls from:
 - United States-China Economic and Security Review Commission
 - White House National Economic Council

1/11/12 Insourcing Forum



1/11/12 Insourcing Panel



Selling using TCO

- Focus on profit impact, risk management, strategic benefits
- Overcome mandates
- Many Supply Chain Managers believe
- Work with natural allies:
 - Lean, Green, compliance, quality, line management
- Match “Chinese” price or TCO?

What can companies do?

- Use the tools. Free at www.reshorennow.org
- Use our archived webinars to inform staff and customers
- Work with groups that are being trained on TCO:
 - Economic development agencies/Select USA
 - MEPs
- Post a link like <http://www.pres-flex.com/american-made/>
- Call on me to speak at: open houses, webinars, sales and supply chain training sessions
- Submit cases of reshoring for publication and posting using our template. IMTS will post cases.
- Sponsor

Glass Wall Curtain Manufacturer

- \$50MM Company to move to Mexico from the Bay area, 75 employees
- Manex employed TCO to show the total impact to the business.
 - Direct labor is significant but,
 - Indirect and secondary costs (Warranty, travel, logistics, transportation, 3rd party subcontracting fees, worker safety etc.)
- Company relocating to a newer and larger facility in the East Bay and through lean manufacturing will reduce costs.
 - Attractive real-estate pricing made the move a cost saver
 - Can now add second shift operations
 - Morale is up with the new location

Source: Bill Browne, Manex

Series of MEP reshoring webinars

Audience	Purpose	Dates
MEP center staff	Explain. Ask to invite SMEs.	7/19 and 8/2
SMEs	Explain. Ask to invite OEMs.	9/6
OEMs	Explain. Ask to use TCO.	?

Website and TCO

www.reshorenow.org

- Library
- Case Studies
- TCO Estimator

Special Relevance to Equipment and Process Investment and Econ Devel.

- By understanding the small TCO gap instead of the large price gap:
 - You can justify domestic process improvement, automation, training, etc.
 - You do not have to sacrifice quality, delivery, time-to-market to seek offshore price.

What can MS Mfg. Assoc., MS Econ. Dev. and Franklin Institute do?

- Have staff view archived webinars
- Have own webinars for members and their customers
- Promote the success of your companies/industry via Reshoring Cases
- Hold a purchasing fair to bring MS OEMs and suppliers together
- Be the U.S. leader in reshoring!

A non-profit with 41 sponsors, including

Platinum



Gold



Silver



A non-profit with 41 sponsors

Bronze



Steel



Iron



Obtain information, improve profitability and help slow the offshoring flood now!

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www.reshorenow.org



Recruiting trainees for the skilled manufacturing workforce:

<http://tinyurl.com/33vpz9k>