

- This file contains over 300 slides on company cases of Reshoring, FDI (foreign direct investment) and Kept From Offshoring. Slides are listed alphabetically by company.
- You are welcome to use our slides in your own presentations, but we would appreciate acknowledgment.
- Additional case studies can be found in our [Case Study](#) feature and in the searchable [Reshoring Library](#) at [reshorenow.org](http://reshorenow.org).
- As of Feb 20, 2015, there are over 800 documented cases of companies that have chosen to manufacture in the U.S. instead of offshore.
- Slide data is mainly based on published articles. Please email [info@reshorenow.org](mailto:info@reshorenow.org):
  - If any data should be corrected
  - To add new cases



- Griffin, GA
- 35 jobs
- At a 17% price premium at Walmart, selling 35% better than imports
- Reasons:
  - Automation/technology
  - Re-design
  - Shipping costs
  - Walmart



- China, Canada to Booneville, MS
- \$1.6 million investment in call center
- 162 call center jobs
- Previous investments: \$55 million and 300 jobs at distribution center

Source: "Acco Brands investing \$1.6 million, adding 162 workers." April 23, 2014. AP.  
Michael Sheffield. "ACCO Brands bringing 162 jobs to Mississippi." Memphis Business Journal, April 22, 2014.

- China, Europe to Avon, MA
- Workforce has doubled in last decade
- \$5 million in recent investments
- Reasons:
  - Delivery
  - Freight cost
  - IP risk
  - Rising wages
  - Labor concessions
  - U.S. energy prices
- Customers reshoring





- From Hungary and China to Torrance, CA
- Added 80 jobs in the US and looking to hire more
- Reasons:
  - Quality control issues overseas
  - Customers willing to pay more for high precision quality



# Wire Grids, Wire Products (Kept from Offshoring)



- Contract manufacturer in Mystic, CT
- Reasons:
  - Lead time/time to market
  - “Made in USA bug”

Source: Harriet Jones, “Reshoring Reaches Connecticut Manufacturers.” WNPR. April 28, 2014.

# A320 assembly (Foreign Direct Investment)



- Transplant
- Mobile, AL
- \$600 million
- 1,000 jobs by plant completion in 2015
- Reasons:
  - Infrastructure
  - Availability of skilled workforce
  - Cooperation between all government levels to sell Alabama to Airbus

Source: Allan McArtor, Chairman, Airbus Americas. "Why Airbus chose Alabama for A320 assembly line." CNBC. July 15, 2013. <http://www.cnbc.com/id/100887295>.





- Mexico and China to Mississippi and Florida
- Looking to double domestic plant sizes in future
- Reasons:
  - Lead time; Freight cost; Inventory
  - “We needed to move rapidly and come out with new products.”
- Still looking for more government incentives

Source: Ted Carter, Mississippi Business. “AirGuide is a reshoring win for Clarksdale.” August 23, 2013. <http://msbusiness.com/blog/2013/08/23/airguide-reshoring-win-clarksdale/>





# Steel Pipes for Oil, Gas Industries (Foreign Direct Investment)



- Dubai-based start-up Alita USA Holdings plans to open factory in Buffalo, NY
- 172 jobs
- \$102 million factory
- Reasons:
  - Government incentives
  - Proximity to raw material suppliers
  - Skilled workforce availability



# All-Clad Cookware (Kept from Offshoring)



- Hand-crafted in Canonsburg, PA since 1971
- American-made steel
- Kept from offshoring because of cost-benefit analysis of overseas vs. domestic manufacturing
- Reason:
  - Shorter supply chain means cheaper production

# Men's Dress Shoes (Kept from Offshoring)



- Kept production in Port Washington, WI after 2008 restructuring, \$10 million investment
- Through 2012, over 200 jobs added, number of manufacturing jobs at WI location doubled
- Sales: +25% 2011, +20% 2012
- Reasons:
  - Total cost
  - Flexibility and responsiveness
  - Time to market
  - Image/brand, tradition
  - Quality
- Sold to private equity firm in 2013: “commitment to company’s current growth strategy...similar corporate culture”

Sources: Eric Wilson, New York Times. “At their feet, crafted by hand.” April 20, 2011.

Paul Gores, Milwaukee Journal Sentinel. “Allen Edmonds ‘recrafts its business model.’” September 29, 2012.

Paul Grangaard, CEO Allen Edmonds, BizTimes. “A stitch above.” September 13, 2013.

Patrick Kennedy, Star Tribune. “Wisconsin shoemaker has plans afoot for China.” December 5, 2011.

Paul Gores, The Journal Sentinel. “Allen Edmonds sold; headquarters to stay in Port Washington.” November 4, 2013

# Greek Yogurt with Granola Topping (Foreign Direct Investment)



- South America to Batavia, NY
- 50 jobs
- \$20 million investment
- Reasons:
  - Synergies
  - Availability of raw material (dairy)



- Reshored sourcing and production from India to Gaffney, SC, 2012-2013
- Spun yarn source: Parkdale Mills, Gaffney, SC (mill reopened in 2010)
- Fabric source: Carolina Cotton Works
- Reasons:
  - Freight cost
  - Lead time/time to market
  - Rising wages
  - Communication
  - Quality
  - Automation/technology

Source:

Stephanie Clifford. The New York Times. "U.S. Textile plants return, with floors largely empty of people." September 19, 2013.

<http://www.nytimes.com/2013/09/20/business/us-textile-factories-return.html?pagewanted=all&r=1&>



- China and Mexico to Portland, OR
- 30 new employees
- Reasons:
  - Delivery
  - Re-design
  - Quality
  - Productivity
  - Lean techniques
  - Total Cost



- Reshored to WI
- 12 jobs
- \$2 million investment
- Reason:
  - Walmart

Sources: “More jobs announced from Walmart restoring effort.” The City Wire. October 31, 2013.

[http://www.thecitywire.com/node/30313#.UoaDcGQ\\_-D6](http://www.thecitywire.com/node/30313#.UoaDcGQ_-D6).

Walter Loeb. “How Walmart plans to bring manufacturing back to the United States.” Forbes. November 12, 2013. <http://www.forbes.com/sites/walterloeb/2013/11/12/walmart-taking-steps-to-bring-manufacturing-back-to-the-united-states/>.



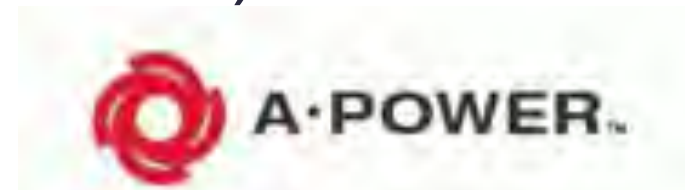
# Aviator Sunglasses



- China to Southbridge, MA
- 15 jobs
- Reasons:
  - MassDev assistance/government incentives
  - Skilled workforce
  - Image/brand
  - Delivery

Source: Jeremy Shulkin, "An American Icon Returns to Southbridge." Worcester Telegram, April 20, 2014.  
Marty Jones, "Why reshoring is the coming thing." The Telegram. April 8, 2014.

# Wind Turbine Assembly (Foreign Direct Investment)



- China to Henderson, NV
- 1000 jobs
- “Multi-million” dollar investment
- Reasons:
  - Lower real-estate cost
  - Skilled workforce
- "We are committed to clean energy development ...A-Power highly values the opportunities in renewable energy in America."

# Hardwood Flooring (Foreign Direct Investment)



- Québec company opens production facility in North Troy, Vermont
- 40 jobs
- 26,000 sq. ft.
- Reason:
  - \$1.2 million in “financial aid” from the state

# The New Mac Pro



- \$100 million
- 200 jobs
- Assembled in TX
- Some components made in FL, IL
- Some equipment build in KY, MI
- Reasons:
  - Rising wages
  - Lower energy costs

Sources: “Here’s How Many Jobs Apple Will Bring to the US to Make Macs.” Jay Yarow, Business Insider. February 13, 2013 “Has U.S. Manufacturing’s Comeback Stalled?” Pamela M. Prah, Pew Charitable Trust Stateline. July 30, 2013. “Google, Apple, other gadget makers chant ‘U-S-A! U-S-A!’” Patrick Seitz, Investor’s Business Daily. August 1, 2013



# Kitchenware (Kept from Offshoring)



- Delray Beach, FL
- 9 jobs
- Reasons:
  - Green considerations

Sources: Heesun Wee. "Made in the USA: More consumers buying American." CNBC. March 6, 2013. <http://www.cnbc.com/id/100519468>.



- Reshoring from China to Lancaster, PA, to begin in 2014
- 57 jobs
- \$41 million factory investment
- Reasons:
  - Competitive cost structure
  - Lead time
  - Improved customer service
  - Government incentives



# Heavy Furniture Components, Upholstery (Kept from Offshoring)



- Decided not to expand offshore as a result of TCO
- Invested \$6 million in plant in Whitehall, WI, 2012
- Invested \$80 million to build new 3.3 million sq. ft. plant in NC, 2012
- Will employ 500
- Reasons:
  - Time to market, lead time
  - Rising wages
  - Quality
  - Freight cost
  - Achieved higher productivity with Toyota's "kaizen" continuous-improvement method
- Opening a retail showroom in Shanghai

#### Sources:

Bill Esler, Woodworking Network. "Wood Industry Sees Return of 'Made in America.'" June 7, 2012. <http://www.woodworkingnetwork.com/articles/archives/WWP-wood-products-magazine/Wood-Industry-Sees-Return-of-Made-in-America-157795515.html?view=all#sthash.CgFIS4DU.dpbs>.

Rana Foroohar and Bill Saporito. Time. "Made in the U.S.A." April 22, 2013. <http://business.time.com/made-in-the-u-s-a/#photos>.





- Reshored to Birmingham, AL
- 360 jobs

Source: Eric Stavriotis. "Many Factors Drive U.S. Firms to Buck Outsourcing Trend, Consider Onshoring." Facilities Net, March 1, 2009.



# Plastic Processing Machinery (Foreign Direct Investment)



- China to Chicago, IL
- Reasons:
  - Total cost

Sources: Rebecca Kanthor, "Granulator maker Avian opening US factory in Chicago." *Plastics News*. March 14, 2014.



Hydropower

- Had 100,000 ft<sup>2</sup> 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



- Asia to Allentown, PA
- Reasons:
  - Communications
  - Delivery
  - Freight cost
  - Lead time
  - Total cost
  - Automation/technology
  - Government incentives
  - Skilled workforce
  - Buy American Act



- Hillsboro, OR
- Reasons:
  - Shipping
  - Travel cost
  - Shop expertise
  - Skilled workforce
- Customer reshored full-run production to Bob's Design Engineering, where previously the shop had only produced prototypes



- French company chose Newark, NJ to build North American headquarters over Boston, New York
- Early-stage drug studies for European clients who need clinical trials in U.S.
- 60+ permanent jobs
- Additional hundreds of construction jobs
- Reasons:
  - “Proximity to superior research and medical facilities and to a major transportation center”
  - \$689,850 Business Employment Incentive Program grant, potential to increase up to \$1.2 million over 10 years

# Biodiesel

## (Foreign Direct Investment)



- New production facility, Bayonne, NJ
- Transplant from Ontario, Can.
- 35 full-time jobs, 200 temporary construction jobs
- 100 million liter/year production capacity
- Reasons:
  - “Company’ s strategy of building biodiesel production facilities near existing large-scale petroleum storage and diesel distribution infrastructure”
  - Minimize transportation costs



- China to St. Charles, IL
- 10 jobs
- Reasons:
  - Rising wages
  - Freight cost
  - Automation/technology
  - Supply chain interruption risk
  - Quality
  - U.S. price of natural gas, etc.
  - Higher productivity
  - Re-design

# 777X Final Assembly and Wing Fabrication (Kept from Offshoring)



- 777X assembly in Puget Sound, WA
- 20,000 direct and indirect jobs
- Wing production moved from Japan to WA
- Reasons:
  - Skilled Workforce, Labor negotiations
  - Automation
  - Government incentives: \$8.7 billion in tax breaks
  - Existing Boeing manufacturing infrastructure



## BOSCA

ESTD 1911

- Canada, China, and Italy to Springfield, OH
- 2 jobs
- Reasons:
  - Lead time
  - Loss of control
  - Travel cost/time
  - “Difficult to manage”

Source: “Alabama is sweet home for foreign companies, investment.” Made in Alabama. March 1, 2013.

Dawn Kent. “German auto supplier Boysen to build \$34 million, 100-job plant in Tuscaloosa County.” AL.com. September 6, 2012.

# Exhaust Systems (Foreign Direct Investment)



- Germany to Tuscaloosa County, AL
- 100 jobs
- \$34 million investment
- Reasons:
  - Skilled workforce
  - Government incentives
  - Supplier to Mercedes

Source: "Alabama is sweet home for foreign companies, investment." Made in Alabama. March 1, 2013.

Dawn Kent. "German auto supplier Boysen to build \$34 million, 100-job plant in Tuscaloosa County." AL.com. September 6, 2012.



# Pharmaceutical Development and Investment (Foreign Direct Investment)



- Brazilian pharmaceutical investment company opened U.S. headquarters in Montgomery County, Maryland
- \$200 million planned investment in MD and US
- Reasons:
  - Skilled and educated workforce
  - Proximity to federal labs
  - “Access to one of the U.S.’ s top life sciences communities”
  - Infrastructure, synergies
  - Late-stage clinical development of pharmaceuticals with potential for near-term commercialization
  - R&D investment to help complete clinical trials and win FDA approval



- Bought plant in Haverhill, MA, in 2008
- Reshored 70% of suits, as well as dress shirts, overcoats, pants from offshore locations
- Employment in MA plant increased from 300 to 475
- Reasons:
  - Rising wages
  - Quality
  - Lead time
  - US made goods are luxury items abroad

Source: Paul Davidson. "Some apparel manufacturing 'reshoring' to USA." USAToday. July 5, 2013. <http://www.usatoday.com/story/money/business/2013/07/04/some-apparel-manufacturing-returns-to-us/2454075/>.

# Sound-Dampening Office Furniture (Foreign Direct Investment)

• **BUZZI  
SPACE**

- Netherlands to High Point, NC
- 100 jobs
- \$1.4 million investment
- Reasons:
  - Government incentives
  - Skilled workforce availability
  - Training programs
  - Lead and shipping time: 6 weeks instead of 10 weeks
  - Shipping and energy costs



- Reshored from China to Union City, CA
- Hiring 20
- Reasons:
  - Improved quality
  - Customers said they wanted the USA brand
  - Promotes ability to react quickly and provide just-in-time manufacturing

# Complex Springs (Kept from Offshoring)



- Contract manufacturer in Oklahoma City, OK
- Reasons:
  - Complexity of materials and process
  - Innovation
  - “Manufacturers can get generic springs from China but for the complex stuff they have to rely on an innovative company.”
  - Skilled workforce

# Lobster Processing and Storage (Attempted Transplant/ F.D.I.)



- Canadian business wanted to open lobster processing in Rockland, ME
- Would have hired 40 people
- Close to existing lobster dealer, close to US market
- Ultimately plant sold to Maine processor
- Part of growth of Maine processing of Maine lobsters

Sources: Stephen Betts. "Canadian man plans Rockland lobster processing plant in old newspaper building." Bangor Daily News. September 6, 2012.

Don Carrigan. "Governor wants Maine lobster independent of Canadian processors." WCSH6. August 1, 2013.



# Chinese Chests

Carol Gregg



red egg

- Highpoint, NC
- Transport cost: Oil prices



- Will triple domestic production to supply N. America
- Shift from IL and Japan to Victoria, TX
- New plant
  - 600,000 sq. ft.
  - 500 employees
- Akashi, Japan still supplies Asia



- Japan to Bogart, GA
- 1,400 production jobs
- Reasons:
  - Freight cost
  - U.S. energy price

- Production moved from China to Mexico to Vietnam to Glen Burnie, MD
- \$5 million capital investment in Maryland
- Reasons:
  - Rising labor costs
  - Shipping and freight cost
  - Time to market
  - Inventory
  - Technology
  - Customer demand for Made in USA



# Exotic Firearms (Foreign Direct Investment)



- Italy to Dayton, OH
- 16 jobs
- Reasons:
  - Proximity to market



# Greek Yogurt (Kept from Offshoring)



- Twin Falls, ID
  - 1000 jobs
  - \$450 million investment
  - Reason:
    - Walmart initiative
- South Edmeston, NY
  - 1000 employees
  - \$700 million worth of greek yogurt
  - Reason:
    - Synergies



- Customer reshored from China to Cicero, IL
- Reasons:
  - Quality
  - Lean or other business process improvements

# Shale Investment (Foreign Direct Investment)



- Chinese company buys 33% interest in Niobrara (CO, WY) play
- \$570 million payment plus up to \$697 million in drilling costs

# 16-qt. Plastic Coolers



- China to Wichita, KS
- Reason:
  - “Rising costs for transpacific shipping and manufacturing”

Source: Michael Shari, Global Finance. “Manufacturing’s New Lease on Life.” December, 2013.

# Roof Heaters

- Reshored from China to Glenwood Springs, CO, in 2011
- 3 employees
- Reason:
  - Total cost: found domestic in-house manufacturing was 25% cheaper than importing from China



## Colorado Flexible Heaters



- St. Louis, MO-area
- Contract manufacturing
- Reshored some jobs
- Relocated manufacturing (TN to MO)
- Hired 35 full-time employees



- Cotton diapers
- Egypt to Denver, CO
- Reasons:
  - Cut in half the time it takes to get product to market
  - Product development time
  - Long communication and expensive overseas trips
  - Quality and the ability to fix problems faster

## **Creative Things Inc.**

- Asia to Lowell, AR
- 64 jobs added, 40 more to be added
- Reasons:
  - Delivery
  - Freight cost
  - Political instability
  - Customs uncertainty
  - Government incentives
  - Image/ Brand
  - Lean
  - Walmart



# Guitar Strings and Straps (Reshoring, Kept from Offshoring)



- China to Long Island, NY
- Reasons:
  - Lean/other business process improvements
  - Freight cost
  - IP risk
  - Rising wages
  - Total cost
  - Travel cost/time
  - Quality
  - Automation
  - Image/brand
  - Vertical integration

Source: "Family-Owned Since the 1600s?" MarketWatch. <http://www.marketwatch.com/story/family-owned-since-the-1600s-2013-12-18-7107117> . "Guitar String Maker Saves Jobs." CNNMoney. [http://money.cnn.com/video/smallbusiness/2009/12/01/smb\\_ta\\_guitar\\_strings\\_daddario\\_lean.cnnmoney/](http://money.cnn.com/video/smallbusiness/2009/12/01/smb_ta_guitar_strings_daddario_lean.cnnmoney/)

- 60% of production was outsourced to China
- 20% of business sold overseas
- Hidden costs, or reasons to reshore:
  - Larger inventories
  - Communication issues
  - Noncompliant parts, deteriorating quality
  - Lead time
  - Price increases
  - Domestic manufacturers more efficient, advanced, cost effective
- Reshored several component processes
- Brought back 90% of offshored parts



**Diagnostic Devices, Inc.**

- China and Taiwan to Charlotte, NC
- 20 jobs
- Reasons:
  - Automation/technology
  - Lower shipping costs
  - Loss of control and IP risk
  - Inventory
- Reduced production budget by 40%



- Contract manufacturer in Surrey, BC
- Customers reshoring
- “A little of our business that was sourced overseas has come back”
- Reasons:
  - Skilled workforce
  - Niche market
  - Diversification



# Aluminum Pipes, Tubes, Hoses for Auto Industry (Foreign Direct Investment)

***DENSO***

- Japan to Hopkinsville, KY
- 105 jobs
- \$4.2 million investment
- Reason:
  - Government incentives
- Third North American plant



- Reshored to Charlotte, NC
- 250 jobs
- \$218 million investment
- Reasons:
  - Image/brand: consumer preference for American-made
  - Job creation

- Bringing Production back from China
- Blow and injection molding, cleaning fluids, packaging, assembly from contractors in Chicago & Midwest
- Several dozen jobs (estimated)
- Reasons:
  - Much shorter lead times
  - Good marketing
  - Low MOQ' s and flexibility in creating various versions of our products





# Parasite Testing Kit (Foreign Direct Investment)



- Sao Paulo, Brazil-based biotech opening facility in Frederick, MD
- \$1 million investment
- 20 new employees over next two years
- Reasons:
  - “Goal to become an export company to NAFTA’ s market”
  - Skilled workforce, synergies





- Restarting plant in St. Charles, LA
- Constructing plant in Freeport, TX
- Moving production from Saudi Arabia
- Could create 35,000 jobs
- Lower-cost and abundant natural gas

Sources: Rana Faroohar and Bill Saporito. "Made in the U.S.A." Time Business. April 22, 2013.

Hugh Welsh. "Why manufacturing jobs are returning to America for the first time in decades." Business Insider. February 27, 2013.

The Washington Post/Charleston Daily Mail. "Shale gas boom rejuvenating US industry." November 16, 2012.



- Reshored manufacturing from China to San Diego, CA
- Reasons:
  - Quality
  - Proximity to customers



- China to Clinton, MA
- 12 jobs
- Reasons:
  - MassDev assistance
  - Lower operating costs
  - Better customer service
  - Better sales and profit margins

Source: Marty Jones, "Why reshoring is the coming thing." Worcester Telegram. April 8, 2014.



- Vermillion, SD
- Outsourcing to India “doesn’t work,” according to Eagle Creek founder
- Up to 200 new jobs by May 2014
- IT Consultant Academy: partnership between Eagle Creek and University of South Dakota
- Encouraged Vermillion Area Chamber & Development Company to invest \$7 million in nearby housing development, along with city, state, university, and independent investors

- China to Hazelhurst, GA
- \$25 million total combined investment
- 150 jobs, potentially up to 250
- Reasons:
  - Walmart pledge
  - Automation
  - Rising wages and fuel costs
  - Tariffs



# Kitchen Appliances (Foreign Direct Investment)



- New plant in Memphis, TN in 2012
  - Sears' manufacturing partner
  - 1200 jobs
- Expanded U.S. operations in Charlotte, NC in 2011
  - 500+ new jobs

Sources: "Made in America: Global Companies expand in U.S. Towns." David Muir, ABC News. April 30, 2012. <http://abcnews.go.com/Business/made-america-semiconductor-company-brings-jobs-training-ny/story?id=16231330#.UaOGKZW9UUY>

"Made in America? How to know which flag-waving products are true red, white, and blue." Consumer Reports Magazine. February 2013. <http://www.consumerreports.org/cro/magazine/2013/02/made-in-america/index.htm>



- Assembling TVs in Detroit since January 2012
- China to Winnsboro, SC in 2013
  - \$7.5 million investment
  - 500 jobs over five years
- Reasons:
  - Customer responsiveness improvement
  - Patriotism
  - Lower tariffs
  - Production cost equivalency/improvement
  - Freight cost
  - Image/ Brand
- “Only American-owned and American-assembled” TV company



# Shale Investment (Foreign Direct Investment)



- Canadian company, drilling in Denver-Julesburg Basin
- Up to \$300 million investment to run 4-6 rigs
- Each rig creates 100 direct and indirect jobs
- Investing up to \$350 million in San Juan Basin, NM, to run 2-4 rigs
- Investing up to \$150 million in Tuscaloosa Marine Shale to run 1-3 rigs





- India to Cambridge, MA
- Reasons:
  - Freight cost
  - Inventory
  - Rising wages
  - Tariffs
  - Higher productivity
  - Proximity to customers

Source: Marty Jones, "Why reshoring is the coming thing." Worcester Telegram. April 8, 2014.



- Ernie Green Industries subsidiary
- Medical, aerospace, consumer products
- New complex in Columbus, OH
- Goal: bring outsourced work back from China
- Consolidate operations, R&D proximity

Source: Dan Eaton, Business First. "Manufacturer's new digs gives new path to growth." January 4, 2013. <http://www.bizjournals.com/columbus/print-edition/2013/01/04/new-digs-new-path-to-growth.html>



- Reshored manufacturing from China to San Jose, CA, in 2010
- Reasons:
  - Inventory
  - Freight cost and time
  - Distance between manufacturing and design
  - Quality
  - Total Cost

Source: The Economist. "Coming home." January 19, 2013.

<http://www.economist.com/news/special-report/21569570-growing-number-american-companies-are-moving-their-manufacturing-back-united>.

# Kitchenware (Expansion)



- Expanding Monaca, PA facility
- \$1.8 million investment to expand factory, establish new “Made in USA” product line
- 2 new manufacturing jobs
- Reasons:
  - Walmart pledge



- 3-D printing is technological advance that can enable and convince manufacturers to reshore
- ExOne is manufacturing 3-D printers in Pittsburgh, PA
- 3-D is new industry, creating new factory jobs
  - Though fewer overall jobs, require higher-level skills
- Reasons to use 3-D printing:
  - Better quality
  - More innovative design
  - More rapid production
  - Lower cost for high-tech fabricated metal parts than conventional and overseas production

# 3D Printing



- Pittsburgh, PA
- New industry, new factory jobs
  - Though fewer overall jobs, require higher-level skills
- Better quality, more innovative design, more rapid production, lower cost for high-tech fabricated metal parts than conventional and overseas production

# Aircraft (Foreign Direct Investment)



- Germany to Montrose, CO
- 200 jobs



- China to Haleyville, AL
- 20 jobs
- 33% production increase
- Reasons:
  - Tariffs
  - Skilled workforce

Source: Mark Shortt, "Yes, You Can Go Home Again, Say Some Manufacturers." Design2Part Magazine. January 1, 2010.  
"Exxel Outdoors expanding Haleyville, Alabama, production after tariff law expires." Area Development, December 28, 2010.



# Greek Yogurt (Foreign Direct Investment)



- Athens, Greece to Johnstown, NY in 2005
- Initial \$27 million investment, \$200 million total
- Initially employed 60 workers; currently employs 250 and expects to hire additional 150
- Reasons:
  - Government incentives
  - Proximity to market
  - Proximity to raw materials (milk)
- Largest of FAGE's production facilities
- Since opening in 2008, plant's production has increased more than tenfold

- Reshored from China to Houston, TX
- Hiring 1200
- Reasons:
  - Increased control over manufacturing inventory and distribution
  - Better quality and better image
  - Spent too much money fighting counterfeits
  - Texas supplier of plastic parts initially charged four times the cost of the Chinese supplier, but cut the price to near parity once it became clear that orders would be large and steady



# Automotive Parts for Nissan (Foreign Direct Investment)



- France to Madison, MS
- 180,000 sq. ft.

Source: Harold L. Sirkin, “Made in the USA—and China.” Bloomberg. August 5, 2011.



# Photo and Digital Imaging Paper (Foreign Direct Investment)



- Germany to Pulaski, NY
- 290 jobs
- Reasons:
  - Government incentives
  - Infrastructure
  - Skilled workforce

Source: Adrienne Selko, "Specialty Paper Company Brings Manufacturing Jobs Back to U.S. Facility." Industry Week. <http://www.industryweek.com/expansion-management/specialty-paper-company-brings-manufacturing-jobs-back-us-facility>. April 15, 2014.

# Silicon Metal (Foreign Direct Investment)



- Spain to Québec
- CAD 375 million investment
- 300+ jobs, plus indirect construction-related jobs
- Reasons
  - Government incentives
  - Access to raw materials, potential for vertical integration
  - “Québec [has] all the necessary ingredients for the construction of a competitive plant.”

Source: “Spanish company to build silicon metal plant in Québec: 300 new jobs.” Relation internationales, Francophonie et Commerce extérieur. January 22, 2014.

“FerroAtlántica Chooses Québec for Its New Silicon Metal Plant: 300 High-Quality Jobs to Be Created.” Investissement Québec. January 22, 2014.



- Asia and India to Grand Rapids, MI
- 115 new employees initially, 100 more over the next year
- Reasons:
  - City and state government incentives, tax breaks
  - “We weren’t as competitive as we used to be...now we’re bringing [the jobs] back and enabling the local economy to grow.”

- For Google/Motorola Moto X: 2,000 jobs in Fort Worth, TX
- Solar panels with SunPower Corp. in Milpitas, CA
- 100 jobs
- Apple's Mac Pro in Austin, TX: 1,700 jobs
- Reason:
  - Government incentives

# Fluortubing USA: Plastic Tubing (Foreign Direct Investment)



- Netherlands to Campbellsville, KY
- 10 jobs
- \$800k investment
- Reasons:
  - Shipping costs
  - Government incentives





- Hybrid transmission component from Japan
- Battery pack assembly from Mexico
- Reshored to OH and MI
- Steel forging from India
- Reason:
  - To be sure quality standards are followed



- Flatrock, MI
- Mexico plant was at capacity so reshored expansion
- \$550 million investment
- Part of 2011 deal with UAW to add/retain 12,000 domestic jobs by 2015 and insource from Mexico, China, and Japan
- Recession restructuring made Ford leaner, more productive, and more efficient

Source: Jane C. Timm. "With Fusion plant, Ford's Detroit homecoming." MSNBC. August 29, 2013. <http://tv.msnbc.com/2013/08/29/with-fusion-plant-fords-homecoming/>.



- Mexico to Avon Lake, OH
- \$168 million investment
- Reasons:
  - Quality
  - Labor concessions

# 2.0-liter EcoBoost Engine



- Spain to Brook Park, OH
- 450 jobs
- \$200 million investment

# High Quality Apparel (Kept from Offshoring)

- Cleveland, OJ
- 4 jobs
- Reasons:
  - Control
  - Quality



Forma  
Apparel  
Manufacturing



# Ethylene and Polyethylene (Foreign Direct Investment)



- China and Taiwan to Port Comfort, TX
- \$3.7 billion capital investment
- Reasons:
  - U.S. price of natural gas
  - Environmental regulations
  - Natural resources



# Cables and Connectors (Foreign Direct Investment)



- Taiwan and China to Harrisburg, PA
- \$30 million capital investment
- Will create 500 skilled labor jobs
- Reasons:
  - Synergies
  - Skilled workforce availability
  - Customer preference for domestically made products
  - Committing additional \$10 million to Carnegie Mellon University for robotics R&D

Sources: Agence France Presse, Business Insider Australia. “iPhone Maker Foxconn Invests \$US40 Million in US Manufacturing.” November 22, 2013. <http://www.businessinsider.com.au/foxconn-invests-40-million-2013-11>  
Brian Wingfield and Romy Varghese, Bloomberg Technology. “Apple Supplier Foxconn to Invest Millions in Pennsylvania.” November 22, 2013. <http://www.bloomberg.com/news/2013-11-21/iphone-maker-foxconn-said-to-plan-investment-in-pennsylvania.html>



# Hydraulic Die Cutting Presses



- From Taiwan to Cincinnati, OH
- Ability to control own destiny
- Warranty reduced by 90% on custom presses
- Improved speed to market— at least 30
- Thus far has created 17 jobs
- Builds employee skills & morale
- Restoring long-term “Made in USA” heritage for Schwabe presses





# Fruit Products (Foreign Direct Investment)



- Portugal to Rupert, ID
- 100 jobs

# Plastic Cutlery (Foreign Direct Investment)



- China to Fogelsville, PA
- 75 jobs
- Reasons:
  - Freight cost
  - Green considerations
  - Automation/technology

# Windshields, Auto Glass (Foreign Direct Investment)



- China to near Dayton and Detroit
- 800 jobs in OH, 100 in MI
- \$200 million investment in OH, \$15.3 million in MI
- Reasons:
  - Government incentives
  - Rising wages
  - Higher productivity
  - Infrastructure
  - Skilled workforce
  - Eco-system synergies

# Copper Tubing (Foreign Direct Investment)



- China to Wilcox County, AL
- 300-500 jobs
- \$100 million investment
- Reason:
  - Government incentives

# Engine Components (Kept from Offshoring)



GE Aviation

- Asheville, NC
- Reasons:
  - Skilled and creative workforce
  - Innovation
  - Training program
  - Technology
- First time advanced ceramic-matrix composite materials being mass-produced anywhere in the world
- “Competency always trumps cost”



- High-tech batteries exported to emerging markets
- Manufactured in Schenectady, NY
- 370 employees
- Technological advancement has decreased number of factory employees BUT has led to development of GE Global Research Center (San Ramon, CA)
- 400 employees current
- Expected to hire additional 200
- “...probably the most competitive on a global basis that we’ve been in the past 30 years.” – G.E. CEO Jeff Immelt



- China to unionized facility in Louisville, KY
- 1300 jobs
- \$800 million invested to renovate facilities in Appliance Park
- Reasons:
  - Tax incentives
  - High-tech new model: IP risk
  - Ease of design collaboration with workers: retail price -20%
  - 2 tier contract
  - Chinese cost: -30% becomes +6% considering inventory and delivery problems
- Will move a “significant piece” of appliance production back



- Mexico to Louisville, KY
- 300 jobs
- \$194 million investment
- Reasons:
  - Labor concessions
  - Government incentives
  - Total cost
  - Inventory
  - Customer responsiveness
  - Lean improvements
  - Tribal knowledge loss





- Bucyrus and Circleville, OH, and Mattoon, IL
- 150 jobs
- \$30 million investment
- Reasons:
  - Walmart's U.S. Manufacturing initiative
  - Higher productivity
  - “Competitive advantage”

Sources: “GE Adds Jobs after Agreement with Walmart for Domestically Produced Light Bulbs.” Industry Week. August 23, 2013.

<http://www.industryweek.com/workforce/ge-adds-jobs-after-agreement-walmart-domestically-produced-light-bulbs>.

“Wal-Mart, suppliers to revive U.S. manufacturing.” Consumer Goods Technology. August 27, 2013.

<http://consumergoods.edgl.com/trends/Walmart,-Suppliers-to-Revive-U-S--Manufacturing88026>.



- Malta, NY instead of overseas location (Europe, Southeast Asia)
- \$8.5 billion factory
- 2,100 full-time jobs
- Job and skill training partnerships with 17 community colleges and 1 local high school
- Reason:
  - Skilled workforce availability



- Reshored production and development to White Marsh, MD and Wixom, MI from Europe
- Total investment in MD ~\$250 million
- 20 employees, projected 190
- Reasons:
  - Proximity to market
  - Technology
  - Skilled workforce
  - Design and process control
  - Quality, reliability, and performance



- “...a computer that people will wear as a headset...”
- Contracting to Taiwanese Foxconn
- Assembling in Santa Clara, CA
- Reason:
  - R&D and manufacturing proximity

# Outdoor Furniture and Housewares (Foreign Direct Investment)

GRACIOUS LIVING

- Toronto, Ont. company opening injection molding plant, U.S. manufacturing base in Buffalo, NY
- 250 jobs
- Reasons:
  - Proximity to market
  - Government incentives

Source: James Fink, Buffalo Business First. "Canadian manufacturer, 250 jobs coming to Buffalo." September 26, 2013. <http://www.bizjournals.com/buffalo/news/2013/09/26/canadian-manufacturer-250-jobs-coming.html>.

Canadian Plastics. "Canada's Gracious Living opening N.Y. manufacturing plant." September 30, 2013.

# Wood Pellets (Kept from Offshoring)



- Port of Pascagoula, MS
- 140 jobs
- \$115 million investment
- Reasons:
  - Government incentives
  - Raw materials
  - Infrastructure

Source: Wally Northway, "Is onshoring the new trend? Local manufacturers finding a more level playing field." Mississippi Business Journal. November 29, 2013.

"Green Circle Bio Energy to Expand in Mississippi." Forest2Market. July 12, 2013.

# Battery-Powered Cars (Kept from Offshoring)



- Horn Lake, MS
- 426 manufacturing jobs
- Reasons:
  - Government incentives
  - Image/brand
  - Quality





- Medical devices, injection molding
- 12,000 sq. ft. expansion, Tucson, AZ
  - One project expanded from China: Advanced injection molding, automation
  - Second project relocated from Mexico: automation

Source: Plastics Today. "GW Plastics reshores two large medical jobs." February 8, 2013. <http://www.plasticstoday.com/articles/gw-plastics-reshores-two-large-medical-jobs0208201301>





- Began reshoring in 2008
- \$5 million investment in new Shell Lake, WI facility in 2013
  - Investment as part of Wal-Mart's "Made in America" initiative
- Planning additional capital investments in 2014
- Expected to add 150 additional jobs
- Reasons for reshoring:
  - Total cost
  - Inventory
  - Environmental impact
  - Lead time

Source: Consumer Goods Technology. "Walmart, Suppliers to revive U.S. manufacturing." August 27, 2013. <http://consumergoods.edgl.com/trends/Walmart,-Suppliers-to-Revive-U-S--Manufacturing88026>.

Reuters. "Wal-Mart 'Made in America' drive follows suppliers' lead." September 25, 2013. [http://articles.economiictimes.indiatimes.com/2013-09-25/news/42394568\\_1\\_walmart-u-s-suppliers-wisconsin-plant](http://articles.economiictimes.indiatimes.com/2013-09-25/news/42394568_1_walmart-u-s-suppliers-wisconsin-plant).



- China to U.S.
- Reasons:
  - “Fits best with our core values of supporting our local community and providing the best possible product and service to out customers.”

# Candles

## (Kept from Offshoring)



- Fayetteville, AR
- 200 jobs
- Reasons:
  - Walmart initiative



- China and others to Ontario, NY
- 140 total workforce
- Reasons:
  - Inventory
  - Quality and consistency
  - Flexibility of scale
  - Shipping costs
- Customers reshoring



- Canada to Massillon, OH
- 699 jobs
- \$28 million investment
- Reasons:
  - Government/tax incentives
  - Lean process implementation



- China to Holly Pond, AL
- 100 jobs
- Reasons:
  - Rising wages
  - Shipping costs
  - Quality

Source: Michael Tomberlin, "Holly Pond site that saved jobs after tornadoes will create jobs with new owner." AL.com. July 19, 2013.



- China to Minneapolis, MN
- 3 new jobs
- Reasons:
  - Quality
  - Automation

Source: Annie Baxter, NPR. "Factories 'Reshore' Some Work From Overseas." March 13, 2012. <http://wap.npr.org/story/148470066>.

# Passenger Vehicles (Foreign Direct Investment)



- Japan to Lincoln, AL
- 50 new jobs
- \$71.8 million new investment
- Total plant employment is 4,000
- Total plant investment is \$2 billion

Source: Dawn Kent Azok, "Honda to add 50 jobs, invest nearly \$72 million at its Alabama plant." AL.com. February 10, 2014.





- China to Kent, OH
- 20 jobs
- Reasons:
  - Lead time
  - Re-design
  - Skilled workforce availability



- Reshored from China to Vermont
- Reasons:
  - TCO analysis
  - Inventory
  - Lead time
  - Freight cost
  - Redesign and flexibility
- Make the right decision initially – bringing tooling back is difficult



# Hubei Xingfa Chemicals Group (Foreign Direct Investment)



湖北兴发化工集团股份有限公司  
HUBEI XINGFA CHEMICALS GROUP CO.,LTD

- Opening U.S. headquarters and manufacturing plant in Georgia: 2014
- 50 jobs
- Phosphates
- Reasons:
  - Infrastructure
  - Skilled workforce and availability

Source: Office of the Governor, Governor Nathan Deal. “Deal: Chinese phosphate company to create 50 jobs in Georgia.” August 22, 2013. <http://gov.georgia.gov/press-releases/2013-08-22/deal-chinese-phosphate-company-create-50-jobs-georgia>



# Automotive Components (Foreign Direct Investment)



- Korea to Shorter, AL (2003)
- 490 employees

# Solar Power Plants (Foreign Direct Investment)



- Spain to Alamosa, CO, and Copper Crossing, AZ



- Baltimore, MD
- \$100,000 award from InvestMaryland Challenge, used it to install manufacturing equipment in new facility in Baltimore area
- Reasons:
  - “We’re really striving to be able to put a sticker on our box that says ‘Made in the U.S.A.’”
  - Customer Demand
  - Quality



LED Lighting | Forged in America™

- China to Boyertown, PA
- Resulting 300% sales increase
- Reasons:
  - Total Cost
  - Automation
  - Proximity to customers

# 14nm-circuit Computer Chips (Kept from Offshoring)



- Chose to expand plant in Chandler, AZ, in 2011 rather than offshore to Asia
- \$5 billion investment
- 4,000 new employees
- Reasons:
  - Intellectual property risk
  - Skilled workforce
  - Automation
  - Existing factory infrastructure





- Denver, CO
- Contract manufacturer benefited from reshoring
- \$2 million investment in machinery
- 200 employees
- Reasons customers reshored:
  - R&D
  - Lean
  - Supply Chain Interruption Risk
  - Higher productivity
  - “Cradle to grave” service



- Ipsen (FR) opens new commercial HQ in Basking Ridge, NJ
- Recent \$45 million investment in Milford, MA R&D facility
- 100 full-time jobs in NJ
- Reasons:
  - Presence/proximity of growing pharmaceutical and biopharmaceutical industries
  - Sees US as new growth market
  - Skilled workforce and talent in NJ
  - Access to US patients

# Leather Tanning (Foreign Direct Investment)



- Germany to Vicksburg, MS
- 366 jobs
- \$10.1 million investment
- Reasons:
  - Lead time/time to market
  - Quality
  - Proximity to North and South American markets
  - Government incentives

## Joseph-Samuel Specialties

- Thomasville, NC
- Transport costs: Oil prices



Karen Kane

- China to Los Angeles, CA
- Reasons:
  - Quality control
  - Rising labor and duty costs in China
  - Nimble companies are better able to capitalize on a trend
  - More sophisticated manufacturing techniques means production is no longer prohibitively expensive



# Yarn

## (Foreign Direct Investment)



- China to Lancaster County, SC
- 500 jobs
- \$218 million investment
- Reasons:
  - Freight cost
  - Price
  - Rising wages
  - Quality
  - Infrastructure
  - Skilled workforce availability
  - U.S. energy costs
  - Government incentives

Source: John Fossey, Manufacturing Trends and News. "Manufacturing jobs: how to turn America." January 6, 2014.  
Cameron McWhirter and Dinny McMahon, The Wall Street Journal. "Spotted Again in America: Textile Jobs." December 22, 2013.  
South Carolina Department of Commerce. "Keer Group to invest \$218 million, create 501 jobs in Lancaster County." December 16, 2013.



- Moved from overseas to CT
- Makes clothing out of repurposed materials from landfills
- Reasons:
  - Lead time: Cut average lead time in half
  - Ability to collaborate and monitor quality
  - Sales: A major portion of work comes from collegiate athletic programs, and to be able to produce a sample in a week, as opposed to a month, makes the sales process markedly easier
  - Customer retention: Customer satisfaction and retention rates up
  - Customer base willing to pay premium for quality, green, and made in USA





- China to Hatfield, PA, during recession (2008 and on)
- “Repatriated” \$100 million in foreign investment
- Increased local workforce 25%, about 40 jobs
- Sales increased 10% over 2010-2011, 22% over 2011-2012
- Reasons:
  - Re-design
  - Delivery and lead time
  - Quality and materials control
  - Rising labor and transportation costs
  - Communications
  - IP risk
  - Synergies





- Offshored to China in 2009, announced reshoring to Lakewood, NJ in 2012
- 50+ employees
- Reasons:
  - Proximity to customer/lead time
  - Customer demand for products made in U.S.
  - Rising wages offshore
  - Skilled workers and higher productivity in U.S.



- Montreal
- Produces 35% of products in Montreal, plans to increase that percentage
- Reasons:
  - Automation/Technology
  - Corporate social responsibility
  - Rising costs overseas
  - Re-design
  - Quality
  - Green considerations

# Tea Light Candles (Foreign Direct Investment)



- Poland to Virginia
- 170 jobs
- \$18.5 million
- Reasons:
  - Walmart initiative



- Single-source supplier/manufacturer
- Bringing customers back from Chinese/offshore manufacturers
- Reasons:
  - Quality
  - Shorter supply chain

# Buckets (Kept from Offshoring)



- Leominster, MA
- No new employees yet
- Consistent annual sales growth
- Reasons:
  - Image/brand
  - Increased consumer preference for American-made
  - Freight cost
  - Lead time
  - U.S. cost of natural gas, energy

Source: Jon Chesto, Boston Business Journal. "Leominster firm's bucket plant shows how a local manufacturer can beat overseas rivals." January 9, 2014. [http://www.bizjournals.com/boston/blog/mass\\_roundup/2014/01/leaktites-leominster-made-big-gripper.html?page=all](http://www.bizjournals.com/boston/blog/mass_roundup/2014/01/leaktites-leominster-made-big-gripper.html?page=all).

# Computers (Foreign Direct Investment)



- China to Whitsett, N.C.
- 115 manufacturing jobs, 185 logistics and refurbishment jobs
- Reasons:
  - Freight cost; Rising wages; Skilled workforce; Re-design; Lead time
  - 10-20% growth every quarter and year since beginning U.S. manufacturing
  - Morrisville, NC, call center: 185 jobs

Sources: “Has U.S. Manufacturing’s Comeback Stalled?” Pew Charitable Trust.

“Made in America? How to know which flag-waving products are true red, white, and blue.” Consumer Reports.

“Made in America: How PC Giant Lenovo Eclipsed HP.” Bloomberg News.

Tom Spring, CRN. “10 Tech Companies Bringing Jobs Back to the U.S.” Nov. 15, 2013., “Lenovo’s North Carolina Onshoring Effort: One Year Later.” December 26, 2013.



- China to Bothell, WA
- “Green” philosophy:
  - Reduces waste
  - Machines use cleaner energy sources
  - More efficient
- Support American job growth
- Cost-benefit analysis: no loss of competitive price advantage
- Reasons:
  - Time to market
  - Freight Cost
  - Rising Wages
  - Quality



- China to San Clemente, CA
- Reasons:
  - To save cost, time
  - 2%-5% cheaper when you consider all the costs
  - Communication was too difficult



# Steel Water Control Gates (Foreign Direct Investment)



- Guelph, Ont. to Lackawanna, NY
- Reasons:
  - “Buy American Act”
  - Image as Canadian company “made landing American contracts challenging”
  - Lower taxes, property costs
  - Skilled workforce, lower wages than Canada



- China to Hudson, OH
- 50 jobs
- \$3 million investment
- Reasons:
  - Freight cost
  - Rising wages
  - Image/brand
  - U.S. price of natural gas, chemicals, electricity



- Reshored manufacturing from Asia to Chino, Calif., in 2013
- Will add employees once 300,000 sq. ft. facility completed
- Reasons:
  - Shorten lead time, reduce shipping cost
  - Proximity to increased customer demand
  - Patriotism
  - Quality
  - Automation



- Bought by private equity firm
- China, Indonesia, and Mexico to Tullahoma, TN and Los Angeles, CA
- Denim to be sourced from Greensboro, NC
- 40 jobs in TN
- Reasons:
  - “Sweatshops, patriotism, and environmental concerns”
  - Image/brand
  - Quality

Source: Racked. “Lucky Brand Jeans Goes American-Made” July 26, 2013.

Ida Hargitai, Made and Worn. “Lucky Brand Jeans Will Be Made in the USA Again.” July 28, 2013.

Cathy Aycock, Shopping Diva, The Tennessean. “Lucky Brand back in the USA.” October 22, 2013.

# Linear and Rotary Position Sensors (Kept from Offshoring)



- Pennsauken, NJ
- Reasons:
  - Re-design and customization
  - Image/brand
  - Just-in-time delivery
  - Greater control
  - Higher quality
  - Demand from customers for Made in USA

- \$50MM Company was looking to move operations to Mexico from the Bay area, affecting 75 employees
- Manex employed TCO to show the total impact:
  - Direct labor is significant but,
  - Indirect and secondary costs (Warranty, travel, logistics, transportation, 3<sup>rd</sup> party subcontracting fees, worker safety etc.)
  - Company is relocating to a newer and larger facility in the East Bay and through lean efforts will reduce costs. Plan to double sales over next 5 years
  - Attractive real-estate pricing made the move a cost saver
  - Can now add second shift operations

# Toilets

## (Kept from Offshoring)



- Perrysville, OH
- \$9 million expansion
- 110 jobs already added, expected 70 additional
- Reasons:
  - Lead time
  - Customer preference responsiveness
  - Image/brand
  - Automation/technology

Source: James R. Hagerty, The Wall Street Journal. "America's Toilet Turnaround." September 24, 2013.





- India to Bridgewater, NJ
- 15 jobs
- Reasons:
  - Communications
  - Total cost
  - Higher productivity
  - Rising wages
  - Travel cost
  - Skilled workforce
  - Lead time
  - Employee turnover

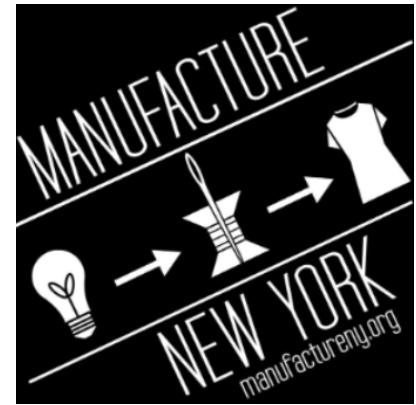
Sources: Esther Surden, "Reshoring." New Jersey Tech Weekly. March 26, 2014.

"Moving jobs back to U.S. is starting to make sense." NJBiz. January 20, 2014.

Myra Thomas, "N.J. Software Company Adds Jobs By Reshoring." Dice, November 25, 2013.



- Brooklyn, NY- 160,000 sq. ft. production facility
- Provides resources that will create 280+ jobs in garment manufacturing
- \$60 million/year economic impact for NYC
- “Vertically integrated design, production, and technology incubator”
- Reasons:
  - Sustainability
  - Foster local economic development
  - “When smaller designers demonstrate the successful bottom line of local sourcing, larger corporate brands may begin to move some production back to the U.S.”



# Steel Wire and Sheet Metal (Kept from Offshoring)



- Baltimore
- “The energy boost is contributing to our own purchases of steel from Indiana and Pennsylvania” – Drew Greenblatt, President
- Exports to China and Mexico: increased from 5% to nearly 20% of total sales; increased from 20 to 30 employees (2008-2010)
- “American labor, American robots, American steel”
- Higher quality, lower cost

# Wind Towers

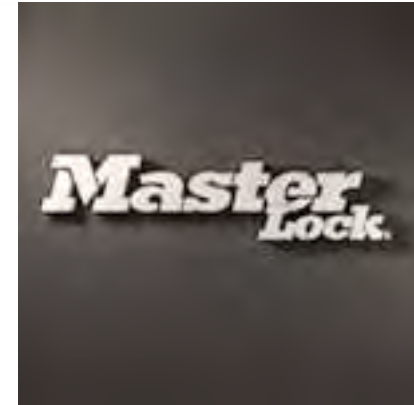
## (Foreign Direct Investment)



- Canadian company opens 150,000 sq. ft. plant in Brandon, SD
- 250 jobs by 2014
- Reasons:
  - Proximity to U.S. market
  - Skilled workforce
  - Pro-business climate

- Reshored to Topeka, KS
- 1,000 jobs
- \$250 million investment in building facility
- Reasons:
  - Produce near sales
  - Currency variation
  - Lead time





- Reshored from China to Milwaukee, WI in 2010
- 100 jobs
- Productivity 6X as high as China
- Milwaukee plant operating at capacity for first time is 15 years
- Reasons:
  - Total cost and more competitive overall cost structure
  - Control
  - Customer service
  - Economic benefit to Wisconsin

Sources:

“Master Lock Highlighted in State of the Union Address for Moving Jobs Back to U.S.” January 24, 2012. [http://www.masterlock.com/about\\_us/Master\\_Lock\\_Highlighted\\_In\\_2012\\_SOTU\\_Address.jsp](http://www.masterlock.com/about_us/Master_Lock_Highlighted_In_2012_SOTU_Address.jsp).

Uttara Choudhury, First Post. “U.S. firms ‘reshore’ manufacturing as costs rise in China, India.” March 29, 2013. <http://www.firstpost.com/world/us-firms-reshore-manufacturing-as-costs-rise-in-china-india-678613.html>. MSNBC.com 6/29/11 Scott Malone

- Reshoring manufacturing from Taiwan to Monument, CO, beginning 2013
- Spent \$70,000 on 3-D printer
- Plans to invest \$500,000 over three years for 3-D printing equipment
- 25 jobs
- Reasons:
  - Available technology: 3-D printing
  - Faster prototyping
  - Easily expand product line





- China to Montreal
- CAD 30 million+ in production capacity investments since 2011
- “Hundreds of jobs”
- Requested CAD 50M to build new production facility
- Reasons
  - Automation
  - Image/Brand
- “Mega Brands manufactures more than half of its toys in Montreal, at least double what it did a few years ago.”

Source: Canadian Press, “Mega Brands seeks \$50M from Quebec to build new plant.” Design Engineering. February 26, 2013.  
Ross Marowits, “Toy-maker’s game plan includes expansion.” The Canadian Press. February 28, 2014.

# Automobiles & Logistics (Foreign Direct Investment)



Mercedes-Benz

- Germany to Tuscaloosa, AL
- 1,400 new manufacturing jobs
- \$70 million investment in logistics center
- 600 jobs at logistics center

Source: Adam Thomas, "Mercedes-Benz bringing 1,400 new jobs to Alabama." Yellowhammer News, October 3, 2013.  
"Mercedes-Benz opening logistics center in Alabama." AP. December 18, 2013.





- Animal Health administrative operations (not including manufacturing) reshored from the Netherlands to Summit, NJ
- 300 jobs
- Reasons:
  - Centralizing overseas operations as part of cost-savings plan
  - Skilled workforce availability



- Expanding in Parsippany, NJ plant over plants in Pennsylvania and Hungary
- Reasons to manufacture in New Jersey:
  - Highly skilled workers
  - Access to universities
- Metem's CEO on the company's growth: "One of the great things about gas turbines is that the U.S. really has a leadership position in that technology. We are seeing our customers bring turbine manufacturing back to the U.S. from other parts of the world."

Source: Beth Fitzgerald, NJBiz. "Manufacturer's expansion in Parsippany expected to create jobs, CEO says." January 30, 2013.  
<http://www.njbiz.com/article/20130130/NJBIZ01/130139989/Manufacturer&apos;s-expansion-in-Parsippany-expected-to-create-jobs-CEO-says>

# Methanol Production (Foreign Direct Investment)



- Canadian company moved plant from Chile to Louisiana
- Reasons:
  - Cheaper natural gas because of shale boom
  - “Stable and well-regulated and organized market.”
  - Long-term supply security

Source: Danielle Levy, CityWire Wealth Manager. “Is it time to play the ‘nearshoring’ boom?” August 21, 2013. <http://citywire.co.uk/wealth-manager/is-it-time-to-play-the-nearshoring-boom/a697719>

# Soap

## (Foreign Direct Investment)

**method**®

- Owned by Ecover, a Belgian company
- Opening first U.S. plant in Chicago's South Side in 2014
- 100 jobs
- \$33 million investment
- Reasons:
  - Image/brand
  - Government incentives
- Ecover will receive \$1.1 million in tax credits over 10 years
- Approximately 1/3 of project's cost will be covered by city and state

# IT Services (Foreign Direct Investment)



- Indian company opened IT services center in Gainesville, Fla.
- 400 jobs
- Reasons:
  - Partnership with College of Engineering at University of Florida
  - Skilled workforce availability and training
  - Proximity to clients

# Water-Soluble Polymers (Foreign Direct Investment)

- Japan to Portage, IN
- 150 jobs
- \$95 million capital investment
- Reasons:
  - Eco-system synergies
  - Government Incentives
  - Higher productivity
  - Skilled workforce availability/training
  - Natural resource availability





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



# Hi-Chew Candies (Foreign Direct Investment)

- Japan to Mebane, NC
- 90 jobs
- \$48 million investment
- Reason:
  - Government incentives
- Japan's largest candy and confectionary firm



Source: Amanda Jones Hoyle, "Japanese Candy Manufacturer Finalizes Mebane Purchase." Triangle Business Journal. March 12, 2014.  
<http://www.bizjournals.com/triad/news/2014/03/12/japanese-candy-manufacturer-finalizes-mebane.html?page=all>





Motorola

- Flagship phone: Moto X
- China to Fort Worth, TX
- Operated by contract manufacturer Flextronics; previously Nokia's cell phone factory
- 2,000 employees projected
- Trying to attract Asian suppliers as ecosystem
- Initial output 100,000 phones/week
- Reasons:
  - Fix things faster
  - Innovate faster
  - Consumer preference for Made in U.S.

**FAILED**



- Pelahatchie, MS
- Won Chrysler contracts over Mexican, Korean suppliers
- Reasons:
  - Quality: “zero defects record”
  - “Trust”
  - Price

Source: Jeff Amy, “Miss. Aims to lure factories from other countries.” Business Week. August 21, 2012.

Ted Carter, “Mississippi getting the nod in reshoring decisions.” Mississippi Business. August 26, 2012.

Wally Northway, “Is onshoring the new trend? Local manufacturers finding a more level playing field.” Mississippi Business Journal. November 29, 2013.



- China to Glendale Heights, Ill., in 2014
- Increase local employment by 25%
- Reasons:
  - Flexibility
  - Price: “Lower volume customers want the flexibility of assembling their products in Asia or locally at the best price.”
  - Lead time
  - Freight Cost
  - Labor Cost
  - Re-design, manufacturing/engineering innovation



- China to Bradenton, FL
- Expected 283 jobs
- Reason:
  - Automation/technology



- Canada to Springfield, IL
- Reasons:
  - Currency variation
  - Rising wages
  - Total cost
  - Labor concessions

Sources: James Hagerty and Kate Linebaugh, "In U.S., a Cheaper Labor Pool." The Wall Street Journal. January 6, 2012.

- Returned from China, India and Brazil to Columbus, GA
- 350,000 sq. ft. factory
- 900 employees
- Reasons:
  - Slow response from contract suppliers, esp. lower tiers
  - Chinese wages up
  - Eliminate silos by having mfg. near engineering and customers



- China to Stratham, NH
- Expected 200 employees
- Expected \$5 million investment
- Reasons:
  - Automation/technology
  - Total cost
  - Image/brand

# Socks (Kept from Offshoring)



- Mt. Airy, NC
- Reasons:
  - Image/ Brand
  - “Farm to feet”

Sources: Joe Kita, Parade. “Putting America Back to Work: 5 Ways 'Made in the USA' is Staging a Comeback”  
<http://www.parade.com/150071/joekita/the-return-of-made-in-the-usa/>.





- China to Houston, TX
- 250-300 jobs
- Reasons
  - Quality issues
  - Goods damaged in transportation
  - Spending 30% more on labor, but after lower shipping costs, fewer defects, and increased automation, overall will be only 4% higher
  - Expects the “Made in the USA” demand to offset the 4%



- Brooklyn, NY
- Provide resources that could create 300 jobs by 2015
- 3D printing for design and prototyping
- “A place that gives NY-based entrepreneurs, innovators, designers and engineers an opportunity to launch their businesses and create jobs more than a year ahead of schedule”

# Passenger Rail Cars (Foreign Direct Investment)



- Japan to Rochelle, IL
- 90 jobs
- \$100 million capital investment
- Reasons:
  - Government Incentives: Buy America Act
  - Increased competitiveness in American market

# Automobiles

## (Foreign Direct Investment)



- 2012: Mexico to Canton, MS, added production of 2013 Sentra
  - 1000 jobs add, \$20 million spent in tooling, fended off UAW organizing effort
- 2013: Madison County Economic Development Authority approved \$100 mil. in bonds to construct buildings for Nissan plant's suppliers
  - 800 new jobs: 400 supplier jobs, 400 Nissan
  - Currently 69% of North American sales are manufactured in N.A.: increase to 85% by 2015
  - Nissan has received \$1 billion value in incentives (including tax breaks) from state. In turn, Nissan has invested \$2 billion.



# Lithium Sulfur Battery Materials, Prototypes (Kept from Offshoring)



- Rochester, NY
- Expected to create 100+ full-time jobs
- \$2.6 million capital investment
- Reasons:
  - Skilled workforce availability and training
  - Government incentives
  - “100+ year history of advanced materials innovation and manufacturing”
- Expected to have a “positive regional economic impact of ~\$50 million”

# Socks

## (Kept from Offshoring)



- Kept from offshoring, North Carolina, 2013
- 100 new jobs
- \$28 million additional investment
- Expanding “Made in USA” program alongside Walmart’s initiative

#### Sources:

Chuck Crumbo. Columbia Business Report. “TV Maker tunes into U.S. manufacturing resurgence.” August 28, 2013. <http://columbiabusinessreport.com/news/48703-tv-maker-tunes-into-u-s-manufacturing-resurgence?rss=0>.

Consumer Goods Technology. “Wal-Mart, suppliers to revive U.S. manufacturing.” August 27, 2013. <http://consumergoods.edgl.com/trends/Walmart,-Suppliers-to-Revive-U-S--Manufacturing88026>.

# Industrial Hoses (Foreign Direct Investment)



- Germany to South Bend, IN
- 32 jobs
- \$1.87 million investment
- Reasons:
  - Central location/transportation hub
  - Government incentives

# Reusable Agricultural Sheeting (Foreign Direct Investment)



OCTAL

- Oman to West Chester, OH
- Reasons:
  - Government incentives



- China to Mississippi
- 200 jobs
- Wants 25% bidding advantage in state contracts
- Predicts upwards of \$2m in sales for 2014
- Reasons:
  - Rising wages
  - IP risk
  - Transport costs
  - Raw materials cost

# Nitrogen Fertilizer (Foreign Direct Investment)



- Egypt to Wever, Iowa
- \$1.4 billion plant
- Reasons:
  - Proximity to raw materials and customers
  - Government incentives: \$100 million in tax relief
  - U.S. price of natural gas



- Reshored from Mexico to Florence, SC in 2012
- 380 jobs
- \$40 million capital investment
- Reasons:
  - Proximity of R&D to manufacturing
  - County economic incentives

Sources:

Tucker Mitchell. SC Now. "It's official: Otis closes deal to locate in Florence." August 18, 2011. [http://www.scnw.com/news/business/article\\_39e9c5f6-e2c9-5258-8f10-615a2df5297f.html](http://www.scnw.com/news/business/article_39e9c5f6-e2c9-5258-8f10-615a2df5297f.html).

PricewaterhouseCoopers. "A homecoming for US manufacturing? Why a resurgence in US manufacturing may be the next big bet." September 2013. [http://www.pwc.com/en\\_US/us/industrial-products/publications/assets/pwc-us-manufacturing-resurgence.pdf](http://www.pwc.com/en_US/us/industrial-products/publications/assets/pwc-us-manufacturing-resurgence.pdf).

- Make major changes one at a time and in phases
- Spend the money to rectify short-term problems
- Identify risks and put mitigation plans into place before problems occur
- Ensure a reliable back-up production system is in place in case of backlog, etc.
- Confirm in advance the existence of capacity for required production in new location (e.g. workforce)
- Account for external forces (e.g. market rebound)
- Be conservative: “under-promise, over-deliver”

Sources: Ted Mann, “Otis finds ‘reshoring’ manufacturing is not easy.” The Wall Street Journal. May 2, 2014.

“When it comes to reshoring, detailed planning and expectation setting is key, Otis Elevators learns the hard way.” Supply Chain Digest. May 5, 2014.



# Other Reshorners

Precision Extrusion Inc.	Medical Tubing	Glen Fall, NY
CharlieDog and Friends	Plush Toys	Rye, NY

Source: Howard Aronson, “Reshoring Toys.” The Rodon Group. May 14, 2013.

Frank Esposito, “Reshoring Gives a Boost to U.S. Manufacturers.” Plastics News. February 26, 2014.

# Cell Phone Cases



- Reshored 15-20% of volume from China in 2012
- 485 jobs at 5 major U.S. suppliers, 2 of which are in Colorado
- Reasons:
  - Total cost
  - Time to market
  - Automation

# Prosthetics (Foreign Direct Investment)

**ottobock.**

- Germany to Salt Lake City, UT
- 80 new jobs
- Reasons:
  - Synergies
  - Government incentives

# Die Castings (Kept from Offshoring)



- Harrison, AR
- \$49M capital investment
- Reasons:
  - Eco-system synergies
  - Manufacturing and engineering joint innovation
  - Re-design of the part
  - Skilled workforce
  - Walmart
  - Customer responsiveness improvement





*Pasa Furniture, Inc.*

- Reshored sourcing from Italy and Indonesia, 2012
- Jamestown, NC

Source:

Bill Esler, Woodworking Network. "Wood Industry Sees Return of 'Made in America.'" June 7, 2012. <http://www.woodworkingnetwork.com/articles/archives/WWP-wood-products-magazine/Wood-Industry-Sees-Return-of-Made-in-America-157795515.html?view=all#sthash.CgFIS4DU.dpbs>.



- China to Aurora, IL
- 319,000 square ft. in Aurora
- Reasons:
  - Cost of intellectual property protection too high
  - Enables the company to bring inventory down 20%
  - Lead time
  - Control of processes
  - Carbon footprint/green
  - Speed of product launch

Source: For Peerless A/V, the Costs of Doing Business in China Weren't Worth the Savings By [Josh Cable](#) Jan. 17, 2012



- Reshored production from China to Earl Township, PA
- Additionally, brought contract work to PA foundry and IL machine shop
- Reasons:
  - Quality
  - Equivalent price
  - Total cost

Source: Jim T. Ryan, Central Penn Business Journal. "Pequea Machine Joins the Reshoring Movement: Reshores Part Production for Better Quality." March 15, 2013. <http://www.themadeinamericamovement.com/2/post/2013/03/pequea-machine-joins-the-reshoring-movement-reshores-part-production-for-better-quality.html>

# Springs (Reshoring Considered)



- Contract manufacturer in Mount Prospect, IL
- Customers requesting quotes for potentially reshored work
- Reasons:
  - Lower total cost
  - Improved logistics
  - Lead time
  - Ease of doing business
  - Quality



- China to Irvine, CA
- Predicted 10+% revenue increase
- Reasons:
  - Rising wages/labor costs
  - Lead time
  - Quality
  - Control
  - Image/brand
  - Supply chain interruption risk
  - Reduced packaging costs
  - Lean/process improvement techniques



**PHILIPS**

- Reshored from China
- 10 jobs
- Reasons:
  - Higher productivity
  - Cost of ownership assessment

# LED Lighting (Foreign Direct Investment)

- Netherlands to Tupelo, MS
- 50 new jobs
- \$2 million investment
- Reasons:
  - Government incentives
  - “A public-private partnership that works”





- China to Port Jefferson, NY
- Reasons:
  - Could not adequately monitor quality at Chinese factories
  - Producing locally improves cash flow
  - Carrying costs in China were too big





- Middle East to Licking County, OH
- 15-30 employees
- Reasons:
  - Lead time
  - Infrastructure
  - Eco-system synergies
  - Skilled workforce availability
- “Sales are doubling every quarter”

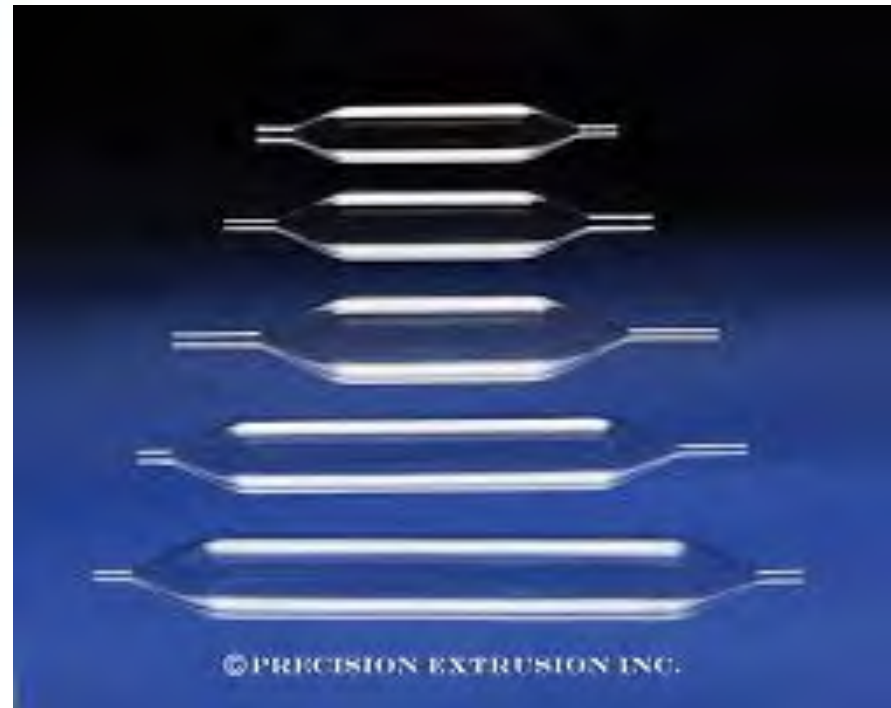
# Plastic Molding (Kept from Offshoring)



- Prairie Grove, AR
- 46 jobs since 2012, up to 10 more to be added
- \$7 million/year in sales of reshored products
- Reasons:
  - Walmart
  - Response time

# Medical Tubing Extrusion

- Glen Falls, NY
- Custom manufacturing





- Asia to New York
- Reasons:
  - Inventory
  - Lead time
  - Rising wages

Source: Joel Hans, "U.S. Manufacturers Expanding Operations at Home." IMPO Magazine. <http://www.impomag.com/articles/2011/06/us-manufacturers-expanding-operations-home>. June 29, 2011.



- China to Charlotte, NC
- Hiring 20
- Reasons:
  - 5 month delays replacing defective products
  - Automation, 40% cost reduction
  - IP control
  - Inventory down from \$6.5M to \$1M



- Convinces customers to reshore or stay onshore: Dazor Manufacturing Corp.
- Dazor reshored 90% of parts
- Reasons:
  - “First-batch syndrome”
  - Travel cost; Communication; Freight cost; Lead time; IP risks; Automation

Source: Rebecca Carnes, Design2Part Magazine. “A Case Study in Re-shoring: One St. Louis OEM Decides to Leave China and Look in His Own Backyard.” 2013. <http://www.jobshoptechnology.com/Article.aspx?ArticleID=217>



- China to Chicago, IL
- Reasons:
  - Delivery
  - Quality
  - Changing economic landscape





- China to Warwick, RI
- 200 jobs
- \$20 million investment
- Reasons:
  - IP risk
  - Quality
  - Total Cost

Source: "Company aims to create 650 jobs" Warwick Online. <http://warwickonline.com/stories/Company-aims-to-create-650-jobs,89672>





## TRUCK BODY MANUFACTURING

- Brought manufacturing of truck parts back to Reading, PA, from China
- Reasons:
  - Disorganized shipments impacted local assembly
  - Lead time/time to market
  - Customer responsiveness
  - Travel cost
  - “more control of our destiny”



- Accent furniture and antique reproductions
- From China to High Point, NC
- Reinvented business model from importing antiques to manufacturing new products, in order to become more competitive, fresh and innovative.
- Delivers quality U.S. Made products to U.S. customers

- China to Rogers, AR
- 74 jobs
- \$6.5 million investment
- Reasons:
  - Freight cost
  - Supply chain interruption risk
  - Walmart initiative
  - Government incentives





- China to Kewaskum, WI
- Reasons:
  - Gained efficiency through lean manufacturing
  - **Product delivery time shorter**
  - Inventory turnover faster

# Bumper Assemblies, R&D (Foreign Direct Investment)



- Germany to Cullman, AL
- Contractor for Mercedes-Benz
- \$115 million recent manufacturing investment
- \$2.5 million investment in R&D center
- 200 new manufacturing jobs (700 total)
- 140 R&D jobs
- Reason:
  - Skilled workforce

Source: Stephen Moore, "Alabama attracts auto investment." *Plastics Today*. December 30, 2013.  
REHAU adding 200 jobs as part of massive new expansion. Trent Moore, *Cullman Times*. June 12, 2012.  
REHAU breaks ground on new production facility, will add 200 new jobs. *WHNT*. January 14, 2013.  
REHAU to open first research and development center in Cullman. *Made in Alabama*. November 7, 2013.  
REHAU announces plans for new automotive technical center in Cullman, Alabama. *REHAU*. November 7, 2013.

# Socks

## (Kept from Offshoring)



- Cleveland, TN and Fort Payne, AL
- 250 jobs in 2011, 195 jobs in 2013
- \$20 million + total investment
- Reasons:
  - Walmart initiative



- Helping customers reshore with TCO



- Reshored some manufacturing from Taiwan to Silver Creek, NY
- Reasons:
  - Freight cost (increased 50%-60%)
  - Rising wages
  - Shipping costs dropped from 20% of production cost to 5%
  - Proximity to market
- Will retain some overseas manufacturing for overseas markets





- China to Hernando County, FL
- 15 new employees
- \$30,000 “job creation incentive” from Hernando County Commission

# Water Treatment Equipment (Foreign Direct Investment)



- Canada to Deaver, WY
- 15-20 jobs
- Reasons:
  - “This facility will enable Ridgeline to lower manufacturing costs, accelerate system delivery times and continue the development of our technology”
  - “Geographical amenities”
  - Tax incentives
  - Skilled workforce availability and training

Sources:

<http://www.justgoodnews.biz/2012/08/28/wyoming-good-news/ridgeline-energy-services-breaks-ground-on-deaver-manufacturing-facility/>  
<http://www.areadevelopment.com/newsItems/8-23-2012/ridgeline-energy-services-wyoming-manufacturing-facility-987655.shtml>

# Aerospace Engine Parts (Foreign Direct Investment)



- Opened plant in Crosspointe, Prince George County, Virginia, in 2011
- \$170 million initial investment
- 140 jobs
- Future growth projections include another 500+ jobs and total \$500 million in investment
- Reasons:
  - Lower labor costs
  - Higher Productivity
  - Do business in dollars to minimize currency risk

# Wind and Solar Power Components (Foreign Direct Investment)



**SAMSUNG**

- Four manufacturing locations, partners in Ontario
- 9,000 direct and indirect jobs total
- 1,000 manufacturing jobs created
- \$5 billion total investment, including partnerships
- Reason:
  - Green Energy Investment Agreement between Samsung and government of Ontario
- Samsung and its partners will develop 300 MW of solar power in Ontario. Part of 1,369 MW of renewable energy (wind + solar) to be created
- “\$5 billion investment in Ontario to create the world’s largest cluster of wind and solar power.”

# Plastic Christmas Trees



- China to Brunswick, OH
- Reasons:
  - Rising wages
  - Raw materials cost

# Injection-Molded Parts and Sound Dampening Materials (Foreign Direct Investment)



- Korea to Auburn, AL
- 400 jobs

Source: "Alabama is sweet home for foreign companies, investment." Made in Alabama. March 1, 2013.  
Ed Enoch, "Korean auto parts maker opens 2<sup>nd</sup> Auburn facility." oanow.com, April 3, 2012.

## SCHOOL HOUSE.

- Moved from Sri Lanka to Durham, NC
- Reasons:
  - Offshore contract manufacturer had taken on larger volume work and pushed School House to the back of the line.
  - After reshoring: increased speed to market and no inventory.
- 100 colleges and universities as customers
- “I could not have anticipated this in a million years, but we’ve started hearing from customers that they’re with us because of our social mission, which has evolved into Made in America”



- Moved from China to North Canton, OH
- Makes indoor space heaters, and is considering reintroducing vacuum cleaners
- Employs 200+ workers
- Reasons:
  - Better quality, quicker delivery
  - Can fill orders faster to meet growing demand





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



- China to Simi Valley, CA
- Adding 250-500 jobs in the next 2 years
- Reasons:
  - 25 % savings on the overall cost of each item due to cost savings of shipping and transportation
  - Prefer to create jobs in the US

## From China to Knox, Indiana

- Will invest \$1.2 million to purchase and revamp the 200,000-square-foot facility for commercial-grade wood manufacturing plant in IN.
- 100 new jobs
- Reasons:
  - Was offered up to \$425,000 in conditional tax credits by the Indiana Economic Development Corp.
  - Granted additional property tax abatement by the Knox City Council
  - IEDC also offered Selected Furniture up to \$87,500 in training grants, based on its job creation plans.



- China to Rochester, NY
- \$10 million investment

Source: Andrea Deckert, "SentrySafe to Invest \$10 million in local plant." Rochester Business Journal. <http://www.rbj.net/article.asp?aID=193098> . November 8, 2012.



- Northwest of Pittsburgh, Royal Dutch Shell opens \$2 billion plant
- Chose Pennsylvania over Ohio and West Virginia
- Reasons:
  - Proximity to natural gas supplies from Marcellus shale formation
  - Abundance of U.S. natural gas



- Taiwan to Akron, OH
- 12 new manufacturing jobs over next year, plans to triple within 5 years
- Reasons:
  - Proximity to customers
  - Total cost
  - Lead time
  - Customer responsiveness improvement

- Indian company opening its first U.S. yarn manufacturing plant in Sylvania, Georgia
- 250 jobs
- \$750 million investment to build facility
- Reasons:
  - Proximity to high-quality raw materials (cotton fiber)
  - Skilled workforce
  - “Economical and reliable supply of power”
  - “World-class infrastructure”
  - Receiving workforce training and development assistance from state

# Solar Panel Inverters (Foreign Direct Investment)



- Italian company opens first North American plant in Parsippany, NJ
- 40 employees over three years
- Reasons:
  - Transportation cost from East Coast to Italy
  - Infrastructure – proximity to Newark Airport
  - Ease of import/export in NJ
  - Potential for government incentives, training partnerships with technology schools

Source: NJBiz. “After loss of its only solar manufacturer, N.J. prepare to welcome a new one.” February 7, 2013.  
<http://www.njbiz.com/article/20130207/NJBIZ01/130209856/After-loss-of-its-only-solar-manufacturer-NJ-prepares-to-welcome-a-new-one>.



# Silicone Injection Molding (Foreign Direct Investment)



- Canada to East York, SC
- \$3.5 million investment
- 10 employees initially, up to 50 within 5 years
- Reasons:
  - Cost of land and utilities
  - Skilled workforce and training partnerships
  - Government incentives

Sources: Don Worthington, Herald Online. "Silcotech breaks ground on \$3.5 million York plant." January 8, 2014. <http://www.heraldonline.com/2014/01/08/5563681/canadian-based-silcotech-breaks.html>

# Ball Bearings, Seals, Lubricants (Foreign Direct Investment)



- Sweden to Naperville, IL
- 80 jobs
- \$18.6 million capital investment
- Reasons:
  - Government incentives
  - Skilled workforce availability/training
  - Proximity to customers

Sources: Marie Wilson, "Swedish manufacturer breaks secrecy about Naperville plans." Daily Herald. August 12, 2014.



- China to Manatee County, FL
- Reasons:
  - \$100Ks scrap
  - \$Ms lost sales
  - emergency air freight
  - costs up
  - communications: language and time
  - ~daily calls at 11 pm

- Swiss electronics manufacturing services company, Escatec, contracted Surface Mount Technology Corp., Appleton, WI
- Reasons Escatec chose SMT:
  - American manufacturing partner for foothold in region
  - Additional “gateway” to operations in Malaysia
  - Move up the value chain by providing R&D services closer to North American customers

# Soda Ash

## (Foreign Direct Investment)



- Belgium to Green River, WY
- 400 employees

# Recliners (Kept from Offshoring)



- Potontoc, MS instead of China
- Reason:
  - Image/brand

Source: Wally Northway, "Is onshoring the new trend? Local manufacturers finding a more level playing field." Mississippi Business Journal. November 29, 2013.



- Reshored “Young America” manufacturing from China and Vietnam to Robbinsville, NC
- 350 employees, invested \$4 million to retool factory
- “..the shift back to a 100% American manufacturing platform has enabled us to gain complete control over our products.”
- Reasons:
  - Eco-consciousness
  - Quality, control
  - Inventory savings for retailers
  - Technology
  - Best practices

Sources: Young America moves all production to United States. Jenny Heinzen York -- Kids Today, 9/13/2009.  
Bill Esler, Woodworking Network. “Wood Industry Sees Return of ‘Made in America.’” June 7, 2012.  
Jenny Heinzen York, Kids Today. “Young America moves all production to United States.” September 13, 2009.



# Frameless Cabinetry (Foreign Direct Investment)

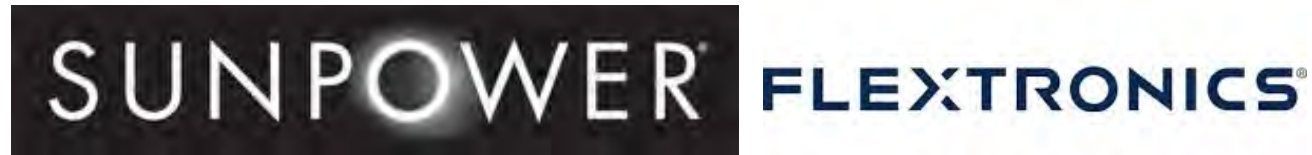


- Transplant from China to Cressona, PA
- Globally sourced kitchen cabinet manufacturer opened plant in PA to supply North American customers
- Reasons:
  - Quality and Local Sourcing
  - The customer sees the quality of the American worker
  - Good local labor force
  - Want to keep manufacturing in the U.S.
  - To service the market better
  - To be a better supplier to dealers





- China to Lake Elsinore, CA
- Reasons:
  - Quality
  - Production process control
  - “Stronger attention to detail”



- Milpitas, CA
- SunPower (Silicon Valley) partnering with Flextronics (Singapore) to bring manufacturing in California
- Expected to create 100 jobs
- California Solar Initiative
- Solar Energy Technologies Program (DOE):
- Up to \$24 million in federal funding to improve design and manufacture of solar power systems
- Federal manufacturing tax credit will support equipment investment in Silicon Valley



Partnering with  
ZeeVee Inc.



- ZeeVee Inc. moved production of high definition video distribution products from China to Methuen, MA
- As a result, Suntron has added 20 new employees, with more expected.
- Reasons:
  - Partnership significantly improves its time to market
  - ZeeVee's business has doubled

# Taesung: Injection-Molded Plastics for Auto Industry (Foreign Direct Investment)



- South Korea to Shorter, AL
- \$6.6 million investment to build and equip facility
- 70 jobs with potential for more
- Reasons:
  - Government incentives
  - Eco-system: proximity to Kia and Hyundai facilities

Source: American Manufacturing. "S. Korea Company Building Mfg. Facility in Ala." December 12, 2013.  
Tuscaloosa News/The AP. "Koren auto parts supplier Taesung will be opening in Macon County near stil-shuttered Victoryland Casino." December 7, 2013.



- Woodinville, WA
- Will be producing signs and displays, such as sandwich boards, in the U.S.
- Reasons:
  - Bulky and expensive to ship
  - Highly automatable
  - Short lead time
- 98% of taphandles will still be produced in China because of low labor costs
- Expecting to hire 150 employees in WA by 2015
- Financing expansion with tax savings from 2010 law allowing capital investments to be deducted immediately

# Injection-Molded Automotive Products (Foreign Direct Investment)



- Japan to Florence, AL
- \$19 million
- 135 jobs
- Reasons:
  - Political instability
  - Government incentives
  - Skilled workforce
  - U.S. price of natural gas, etc.
  - Proximity to market



- Was producing Collegiate licensed sterling silver beads in China
- Reshored to Grand Rapids, MI
- Added back 10 employees
- Reasons:
  - Significantly quicker product prototyping and tooling development (2 days compared to 6 weeks)
  - Reduced defectives (0% vs. 25%)
  - Ability to manufacture smaller run sizes (25 pieces versus 300).
  - Ability to handle end recipient fulfillment domestically





# Wireless Stethoscope



- China to Centennial, CO
- In-house
- Reasons:
  - 3D component printing
  - Re-design
  - Innovation
  - Ability to scale as needed
  - "Moving that back from China wasn't a question of quality — it was about our ability to innovate and make the product better."





# Men's Sweat-Proof Undershirts (Kept from Offshoring)



- Attempted to raise \$25,000 on Indiegogo (crowdfunding) because angel investors wanted them to offshore
- Reason:
  - To create jobs in the U.S.: one job per 2,000 t-shirts

# Steel

## (Foreign Direct Investment)



- Germany to Calvert, AL in 2010
- \$5 billion investment to build processing plant
- Reasons:
  - Currency variation
  - Freight cost
  - Inventory
  - Supply chain interruption risk
  - U.S. price of natural gas, energy
- Facility purchased in 2014 by ArcelorMittal and Nippon Steel and Sumitomo Metal Corp

Source: Michael Finch II, "ThyssenKrupp no more, Calvert steel processing plant gets new name after acquisition." AL.com, February 28, 2014.

Trey Hollingsworth, "Assembling Success in the U.S." CIRE Magazine, January 10, 2011.

John W. Miller, "America's \$5 billion steel mill for sale." Wall Street Journal. October 1, 2012.

# High-end Shock Absorbers (Foreign Direct Investment / Expansion)

- Germany to Hamilton, OH
- 214 new jobs
- \$27 million capital investment
- Reasons:
  - Government and private incentives
  - Expansion of pre-existing plant



- Built a factory to solve problems of quality and consistency
- Moved from off-shored outsourcing to on-shored in-house manufacturing
- Factory begun in 2012
- East Rutherford, NJ
- Reasons
  - Loss of control
  - Proximity to customers, lead time
  - R&D, customization
  - Lean manufacturing-inventory model

# Diesel Engines (Foreign Direct Investment)



- German company, opened R&D center in Aiken, SC in April 2013
- Expanded July 2013 with investment of \$22.5 million, creating 10 jobs
- “This new expansion project will enable us to enhance our engine development capabilities and will result in the most advanced diesel engine development facilities in North America.”



- German company invests in Aiken, SC, beginning 2013
- Expanding R&D center
- \$22.5 million
- Through 2015, 10 jobs
- Reasons:
  - To prepare for planned volume growth
  - Increase North American footprint



# Machined Parts for Vehicle Manufacturers (Foreign Direct Investment)



- Brazil to Franklin County, PA
- 73 jobs
- \$9 million investment
- First investment outside of Brazil

Sources: “Brazil-based Torcomp USA invests more than \$9 million to bring manufacturing plant to Franklin County, PA.” Area Development. April 21, 2014.



- San Diego, CA nearshored to Tijuana, Mexico
- Reasons:
  - Skilled workforce availability/training
  - Communications
  - IP risk
  - Inventory
  - Lead time
  - Rising wages
  - Supply chain interruption risk



# Toilets

## (Foreign Direct Investment)



- Japan to Morrow, GA
- Increasing capacity at GA plant 5%
- Reasons:
  - Increased automation
  - New machinery
  - Proximity to markets

Source: James R. Hagerty, The Wall Street Journal. "America's Toilet Turnaround." September 24, 2013.

# Plastic Toy Clean-Up Tool



- Reshored production from Mexico to Pendell, PA
- Reasons:
  - Quality
  - Automation
  - Total cost

Source: James R. Hagerty, "Wal-Mart entertains a pitch: 'Made in U.S.A.' ". The Wall Street Journal. October 6, 2013. <http://online.wsj.com/news/articles/SB10001424052702303492504579115783923496354>

# Lexus ES 350 sedan



**TOYOTA**

- 2015: moving production from Japan to Georgetown, KY
- Will create 750 jobs
- \$360 million investment
- Reasons:
  - Tax incentives
  - Stable exchange rates
- According to Toyota North America President Jim Lentza, this is a two billion dollar expansion, adding a total of 4200 jobs



- Expansion of domestic manufacturing
- Aluminum casting for transmission cases and housings in Troy, MO and Jackson, TN
- 6-speed automatic transmission from these components built in Buffalo, WV
- \$102 million total investment
- 100 jobs
- Will increase overall production nearly 50%

# Toyota Corolla (Foreign Direct Investment)



- Japan to Mississippi
- “Exporting Mississippi-built Toyotas directly supports 2,000 Toyota jobs”

Source: “Toyota rolls out Mississippi-made export.” WTVA. April 17, 2014.

# Trash Ease



- Hangs trash container from any flat surface
- Selected at Walmart's July 8 Open Call, Detroit
- Contractor: Mid-West Wire Finishing
- Quantity: 50,000



- Based in Portland, OR
- Moved operations from China to Rochester, NY
- \$8.3 million investment to create 189 jobs, operational by Q2 2014
- Reasons:
  - Government incentives
  - Low cost of doing business
  - Proximity to customer demand, lead time, time to market
  - Abundant and affordable natural resources
  - Availability of skilled workforce

Sources: Ana Liss. "Rochester can be leader in reshoring jobs." Democrat and Chronicle. July 17, 2013.

Ana Liss. "Reshoring to Rochester: Trellis Earth's move is indicative of a global trend." Democrat and Chronicle. July 11, 2013.

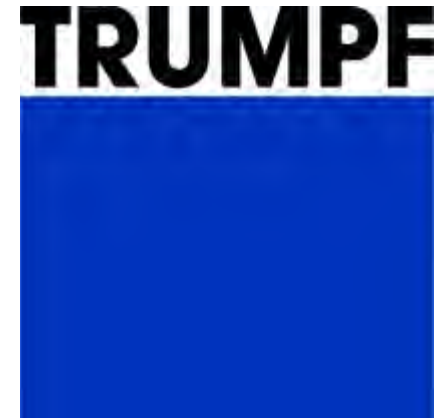
Marketwire.com. "Oregon-based manufacturer to move operations from China to Rochester, NY, creating 189 jobs." July 11, 2013.



- Ontario, CA
- Moving 50-75% of manufacturing back from China
- Reasons:
  - Tax benefits
  - Time and freight cost
  - Quality
  - Time to market
  - County incentives:
    - Instituted “local Foreign Trade Zone”
    - On-the-job training programs
  - Creating local economic opportunities: raw materials suppliers, transporters, city, county, and state



# Laser-Cutting Machines (Foreign Direct Investment)



- Germany to Farmington, CT
- 495 jobs
- \$370 million in sales
- Reasons:
  - Currency variation
  - Lean
  - R&D
  - Skilled workforce availability/training

Source: Mara Lee, "Trumpf Triumph: Made in-house, in Connecticut." The Courant. [http://articles.courant.com/2011-05-19/business/hc-trumpf-20110518\\_1\\_new-machine-tool-farmington-steel](http://articles.courant.com/2011-05-19/business/hc-trumpf-20110518_1_new-machine-tool-farmington-steel). May 19, 2011.



- Convinced customer to reshore from China to Calif. in 2011
- Received \$290,000 economic development loan to buy laser cutter to increase efficiency
- 4 new jobs
- Reasons:
  - Technology; efficient manufacturing
  - Trupart lost customer to Chinese contractor because of a 0.2¢ difference: with new machinery, Trupart beat price and manufacturer returned

- China to York, PA
- 165,000-square-foot plant built in York
- Reasons:
  - “FDA compliance is the main reason we’re here.”

# Contract Apparel and Accessory Manufacturing (Kept from Offshoring)



- Stayed in Newark, NJ, with business improving
- Exclusively producing in the U.S. for 21 years
- Increased customer inquiries because, all of a sudden, designers can't afford a "Made in China" strategy
- Rising wages overseas

# Plastic Film for Food Packaging (Foreign Direct Investment)



- China to Columbia, SC
- \$70 million investment
- 100 jobs
- Reasons:
  - “Excellent business environment”
  - Skilled workforce availability
  - Government incentives

# Vinyl Window Frames (Foreign Direct Investment)



- Germany to Fombell, PA (1983)
- 402 jobs
- Reasons:
  - Government incentives
  - Skilled workforce
  - Proximity to markets

# Wind Turbine Components (Foreign Direct Investment)



- Denmark to Windsor, Brighton, Pueblo, and Louisville, CO
- \$1 billion total investment
- “Expects to hire hundreds of workers” in 2014
- 75-125 jobs in Louisville
- Reason:
  - Renewal of wind production tax credit



# Outsourced IT (Kept from Offshoring)



- Mass. Company opens new IT services office in North Greenbush, NY instead of India or Sri Lanka
- 25 jobs, plans to hire up to 200
- Reasons:
  - Data privacy
  - Regulatory requirements
  - Client intimacy
  - Proximity to customers
  - Skilled workforce
- Major clients include J.P. Morgan Chase, AIG





- Manchester, CT
- Produces custom injection molding and medical products, using updated highly sophisticated molding and automation, and has design team under the same roof
- Customer reshored from Singapore
- Reasons
  - Found domestic products better overall value
  - Another customer reshored from Mexico
  - Cost and quality

# Steam Table Food Pans



- China to Sheboygan, WI
- Reasons:
  - Delivery
  - Quality

# Rail Fasteners (Foreign Direct Investment)



- German company opening production facility in Waco, Texas
- 30 employees
- 100,000 sq. ft. facility
- Reasons:
  - Proximity to current clients
  - “A unique tax situation at this specific site”
  - Will receive funds from county



- Because of Walmart:
- 3,654 manufacturing jobs reshored or created at 27 companies
- Jobs in U.S. Manufacturing Program (JUMP)
- Consumer products include: Towels, bicycles, toys, clothing and footwear, home and garden goods



- The company says the \$50 billion/year is just a starting point. If other retailers joined the party the figure could be much, much higher, perhaps \$500 billion.
- Walmart's U.S. president, Bill Simon, suggested in a speech to fellow retailers that the power of their order books can help reshore U.S. production in textiles, furniture, pet supplies, some outdoor categories, and higher end appliances.

- 1888 Mills in Griffin, Georgia
- Long term deal to make better quality towels.
- Capital investment required due to volume.
- “We made a commitment that was longer term than we would normally do.”



- Reshored manufacturing of prototypes from China to Menomonee Falls, WI in 2013
- Invested \$22,000 in 3-D printer
- In-house prototyping \$50-\$75 per unit vs. outsourced local prototyping \$2000 or cheapest but lowest-quality Chinese prototypes
- Reasons:
  - Quality
  - Total cost and time
  - Proximity of engineering and design teams for re-designs



# Hollow Structural Section Tube (Foreign Direct Investment)



- Concord, Ont. to Lackawanna, NY;  
110,000 sq. ft. facility opened September 2013
- 30 jobs, expected to employ 121 after three-stage plant completion
- \$50 million investment
- Reasons:
  - Proximity to existing facilities
  - Image of “Made in America”
  - Government incentives, including low-cost hydropower
- Planning two more construction phases, 34,000 sq. ft. and 30,000 sq. ft., over five years

Source: Dan Ilika, Canadian Manufacturing. “Plenty of perks for Canadian manufacturers mulling move to N.Y.” October 10, 2013.  
Business Facilities. “Welded Tube of Canada Puts Operation in Lackawanna, NY.” July 17, 2012.  
David Bertola, Buffalo Business First. “Production process starts at Welded Tube.” September 4, 2013.  
James Fink, Buffalo Business First. “Construction to begin on Welded Tube facilities.” October 31, 2012.





- WEXCO located in Pine Brook, NJ
- Reshored component sourcing from offshore vendors to AmTech International in Dayton, NJ
- Reasons:
  - Shorter lead time
  - Higher quality and precision



- 50% of Frisbee production
- China back to CA and MI
- 8 jobs added



- China to Greenville, Ohio
- Moved Production of small appliance KitchenAid hand mixers to the large appliance factory in Greenville
- Created 15 jobs at whirlpool, and 10 at their supplier Core Systems LLC
- Reasons
  - Made more sense to use the factory they already had than to build a new one

# Small Appliances



- China to Greenville, OH
- 400 jobs
- \$40 million investment
- Reasons:
  - Skilled workforce
  - Government incentives

Sources: "Brown: Whirlpool decision to reshore nearly 400 jobs a testament to the strength of Ohio workers and manufacturing." Sherrod Brown, Senator for Ohio. March 14, 2014.

Joel Hans, "Whirlpool to invest \$40m, add 400 jobs in Ohio." Manufacturing.net. March 14, 2014.

# Front-loading Washers (Kept from Offshoring)



- Five year, \$1 billion investment in U.S. facilities
- Reasons to onshore:
  - Freight cost
  - Higher productivity
- 1500 jobs
- \$200 million plant in TN
- 80% of U.S.-sold products are made in the U.S.

Sources: "Made in America? How to know which flag-waving products are true red, white, and blue."  
Consumer Reports. <http://www.consumerreports.org/cro/magazine/2013/02/made-in-america/index.htm>  
"US firms 'reshore' manufacturing as costs rise in China, India." Uttara Choudhury, First Post. March 29, 2013. <http://www.firstpost.com/world/us-firms-reshore-manufacturing-as-costs-rise-in-china-india-678613.html>

# Home Wind Turbines (Kept from Offshoring)



- Offshored production of prototypes to China in 2010
- Now produces in North Vernon, Ind., and outsources production of components to Chicago, Ill., and Ohio.
- 100 jobs
- Reasons to produce in U.S.:
  - Production cost is 10% lower per unit compared to China
  - Poor quality of Chinese prototypes

# Plastic and Rubber Band Weaving Toy (Kept from Offshoring)



- Licensed to manufacturers in MA,
- Retained 30 jobs, 100 new jobs
- Reasons:
  - Image/Brand
  - Walmart commitment
  - “Seen all the bad that has resulted from the decline of manufacturing in Detroit”
  - Quality
  - Lead time

Source: Catherine Kavanaugh, Plastics News. “Inventor brings US business into the loop with Wonder Loom.” December 17, 2013.  
<http://www.plasticsnews.com/article/20131217/NEWS/131219943/inventor-brings-us-business-into-loop-with-wonder-loom>.



- 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



# Emulsion Aggregation Toner (Kept from Offshoring)



- Webster, NY
- 25 jobs
- \$35 million total new investment; \$26 million equipment and 55,000 sq. ft. expansion
- Reasons:
  - County and state incentives
  - “Tax abatement incentives...and a grant...contributed to making Webster the most cost effective location to build additional manufacturing capacity”

# Electrical Equipment (Direct Foreign Investment)



- Japanese manufacturer of electrical motor controls for heating & ventilation equipment
- Decided to produce in Buffalo Grove, IL, rather than in China
- Reasons
  - Quicker deliveries to customers
  - Lower inventories
  - More customization

Source: Uttara Choudhury. "US firms 'reshore' manufacturing as costs rise in China, India." First Post. March 29, 2013. <http://www.firstpost.com/world/us-firms-reshore-manufacturing-as-costs-rise-in-china-india-678613.html>.

Source: JAMES R. HAGERTY, WSJ <http://online.wsj.com/article/SB10001424052702303612804577533232044873766.html>



- Japan to West Point, MS
- 500 jobs initially
- \$300 million capital investment
- Reason:
  - Lead time
- Future investment could total \$700 million and bring another 1500 jobs

Source: Bruce Meyer. "Rubber Making in America: Tire Makers Pump Billions into Facilities." Rubber News. April 7, 2014.  
Dennis Seid. "TVA CEO takes economic development tour in Northeast Mississippi." Mississippi Business News. April 16, 2014.



- Customers reshoring to Zentech, Baltimore, MD, from suppliers in Asia:
  - NovaSom
  - Offsite Networks
- Reasons:
  - Automation/Technology
  - Rework, Warranty, Quality
  - Travel Cost/Time or Local Onsite Audit
  - Wages up overseas
  - Total cost = cheaper in the U.S.
  - Lead time

# Sleep Apnea Diagnostic Kits (Kept from Offshoring)



- Contracted ZenTech in Woodlawn, MD
- Reasons:
  - Quality control
  - Lead time/time to market

# Automatic Transmissions, Gear Boxes for Wind Turbines (Direct Foreign Investment)



- German, transplant to Gray Court, SC, and Georgia in 2013
- SC: 1650 jobs, 1200 already hired
- Reasons:
  - Time to market
  - Proximity to market

#### Sources:

Chad Moutray, Member Focus; National Association of Manufacturers. "Increasing investment in manufacturing in the United States." September 2013. <http://memberfocus.nam.org/publication/?i=175819&p=4>.

PricewaterhouseCoopers. "A homecoming for US manufacturing? Why a resurgence in US manufacturing may be the next big bet." September 2013. [http://www.pwc.com/en\\_US/us/industrial-products/publications/assets/pwc-us-manufacturing-resurgence.pdf](http://www.pwc.com/en_US/us/industrial-products/publications/assets/pwc-us-manufacturing-resurgence.pdf).

# Socks/Hosiery (Direct Foreign Investment)

## Zhejiang Walt Technologies

- China to Cache County, UT
- 130-150 new jobs
- \$4 million investment
- Reasons:
  - Tax incentives







# U.S. Shale gas impact on US manufacturing

- U.S. shale gas development is giving U.S. manufacturing a boost through significant cost savings and job creation
- Energy-intensive manufacturing sectors added over 196,000 jobs from 2010-2012 in the country's metro areas alone, with inexpensive natural gas being a main driver
- Possible Impacts:
  - Annual cost savings of \$22.3 billion in 2030 and \$34.1 billion in 2040
  - 930,000 shale gas-driven manufacturing jobs created by 2030 and 1.41 million by 2040

Source: PwC analysis, Dec. 2014 [http://www.pwc.com/en\\_US/us/industrial-products/publications/assets/shale-gas-boosts-us-manufacturing.pdf](http://www.pwc.com/en_US/us/industrial-products/publications/assets/shale-gas-boosts-us-manufacturing.pdf)

“Impact of the Manufacturing Renaissance from Energy Intensive Sources,” US Conference of Mayors, March 20, 2014.





## Reshoring Example: VERT

High Reliability Doesn't Have to Mean High Cost



- High volume consumer product to measure vertical leap in athletes
- Heavily competed at Tier 1 offshore contract manufacturers
- Stepped bid process, first cut was on materials cost only, then value add / labor
- Zentech bid included DfM analysis to eliminate wires and use push pins, utilized ultrasonic welding to reduce labor and extensive design engineering to prototype



## Reshoring Example: Emergence Technology Consultants

High Reliability Doesn't Have to Mean High Cost

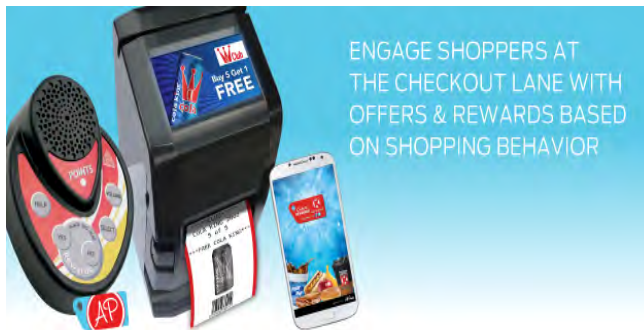


- U.S business was a reseller of Asian LED products
- Engaged Zentech to engineer and design a new OEM product
- Zentech managed UL compliance and certification
- Extensive engineering collaboration
- All manufacturing at Zentech in Baltimore – at a lower price point than the Asian product



## Reshoring Example: Outside Networks

High Reliability Doesn't Have to Mean High Cost



- Wireless Printer and Touchpad System for Consumer Loyalty Product
- Previously manufactured in China
- Virginia-based OEM experienced inconsistent quality and poor engineering collaboration with Chinese CM
- All portions of product reshored (PCBs, wire harness, SMT assembly, housings, touchpads)
- Reshoring success featured in Inc. Magazine

# HUBBARDTON FORGE®





## The Solution: TCO Calculator

- Connected with the Reshoring Initiative and Harry Moser.
- TCO Calculator
- Helps identify all the elements that make up total cost.
- HF has worked through the tool to create a customized version that fits our business.
- Resulting in an easy to use desktop tool.

## The Solution: TCO Calculator

- How It Is Used:
- **Mostly, fixed** input variables – only updated once a year.
- 8 user inputs that need to be filled for each analysis.
- Results in a calculated total cost for both sources.
- When It is Used
- New product development & during evaluation of existing components.



## The Solution: TCO Calculator

Part Number	#23576
Part Description	Aluminum Casting
Name	Steve Wiegers
Date	Tuesday, August 21, 2012
Domestic Vendor Name	Syca Industries
Offshore Vendor Name	Caletra - Extra Light
Additional Comments	Syca Industries will be producing a sand casting.

User Inputs	U.S.	Offshore	Common
Country of origin		China	
Unit Cost, \$	\$9.51	\$7.72	
Minimum Order Quantity	100	250	
Annual Forecast Quantity			150
Product category			Non Glass
Unit Weight, pounds			0.50
Quality, rework, warranty, % of cost	0%	0%	
Tooling cost	\$ 1,850	\$ 4,690	

TCO analysis  
background information  
– for file.

8 user inputs filled in  
each time.



## Key Variables to HF:

- MOQ (Minimum Order Qty)
- Supplier Lead-times
- Landed Cost – Including expedited freight costs
- Annual Forecast Qty. – for the component
- Product Life



## The Results:

- We are making decisions on a component by component basis.
- Have seen components that would have been sourced overseas now sourced domestically.
- Trends
- Components that have had a unit price difference of 50% or less have been good candidates for keeping domestic. (Is that U.S. 50% above China or China 50% below U.S.?)
- Size/Weight of component and tooling costs make a big difference.
- Beginning to see some trends among component types/commodities.

## What we have learned:

- Not just a Supply Chain decision making process.
- Need to train Engineering and Product Development teams.
- Make the right decision when a component is first sourced.
- It is more difficult and costly to re-source.
  - Potentially reinvest in tooling and training.

## Challenges:

- Need to change the mindset of the entire business.
- Product Costing
- Develop or find new domestic suppliers who compete well in the total cost model.
- Domestic suppliers to OEM's need to be educated.
- Difficulty locating domestic sources for some part types.
- New way of thinking!

# HUBBARDTON FORGE®



## Wrap Up