

# Reshoring

How to: sell more, help your customers, bring jobs home and strengthen the local economy.

NTMA/AMBA/BTC/PMA

12/9/10

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Supported by:



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# Definitions

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- Reshoring: Bringing work back to the U.S.
- Antonym: Offshoring
- Synonyms: Backshoring and Onshoring
- Nearshoring: Includes U.S., Canada & Mexico

# Reshoring Initiative Objectives

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- **Change the Sourcing Mindset:**
  - From: “Offshored is Cheaper.”
  - To: “Local Reduces the Total Cost of Ownership.”
- Train:
  - OEMs: Why to source local.
  - Suppliers: How to “sell” local sourcing.
- Do the best we can on the unlevel field now!

# The Industry-Led Initiative Provides

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- Free Total Cost of Ownership (TCO) Software for OEMs and suppliers
- Online Library of 98 reshoring articles
- Linked NTMA/PMA Purchasing Fairs
- Media coverage: WSJ, USATODAY, IW, CBS, CNBC, etc.

# Logical Foundation

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60% of manufacturers:

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

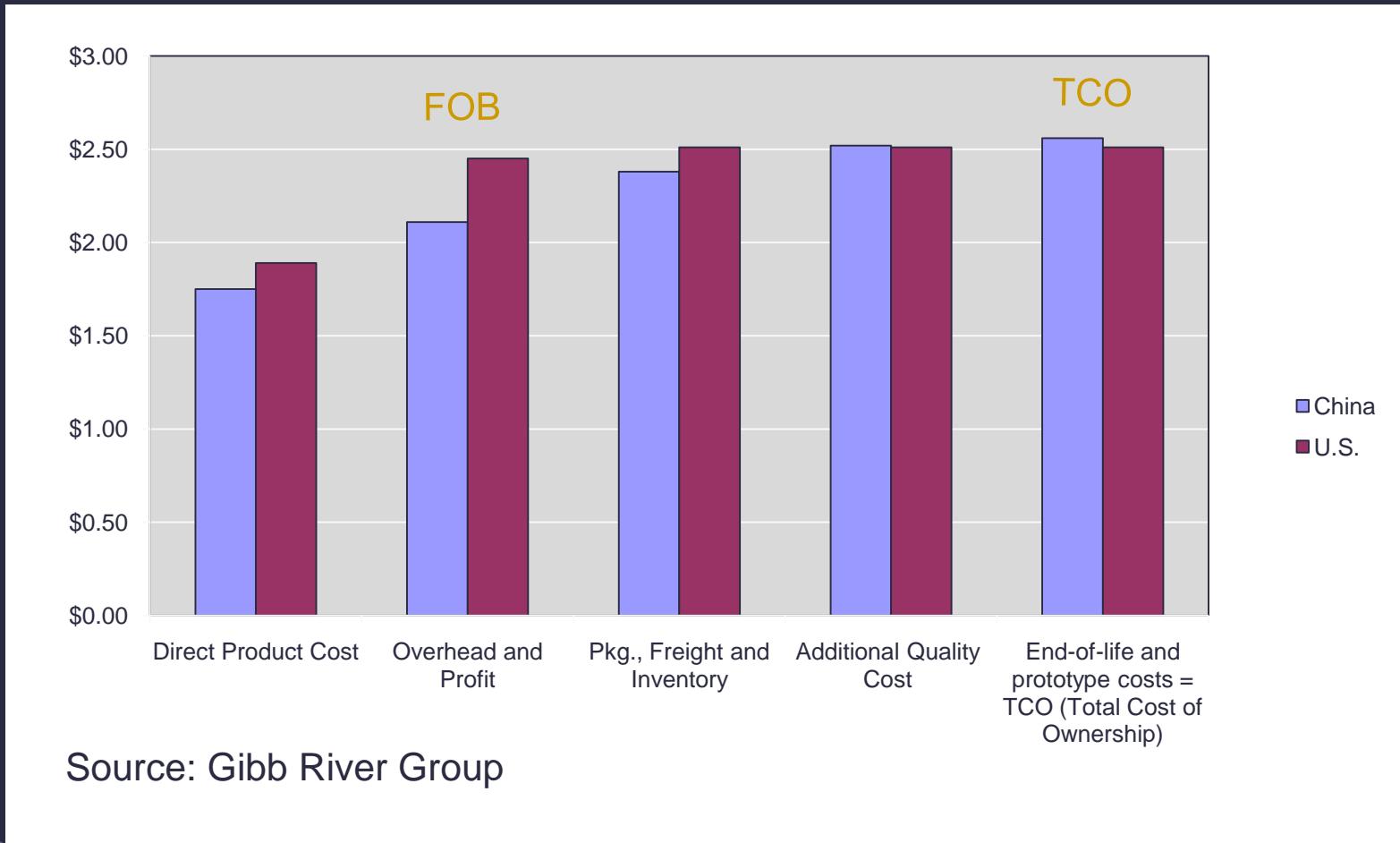
51% of companies found no financial benefit in offshoring\*\*

Sources:

\* Archstone Consulting survey, American Machinist Mag., 7/16/09

\*\* Supply Chain Solutions, Grant Thornton, Jan. 2010 survey.

# Total Cost of Ownership: Steel Gear



# TCO Estimator Available

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- Easily estimate the Total Cost of Ownership
- Compare onshore to offshore cost
- 18 user-modifiable cost factors
- Current and forecast costs
- For parts and tooling
- Status: in Beta test at customers and shops
- Available Free! [www.reshorenaw.org](http://www.reshorenaw.org)

# TCO Estimator Software: 18 Cost Factors

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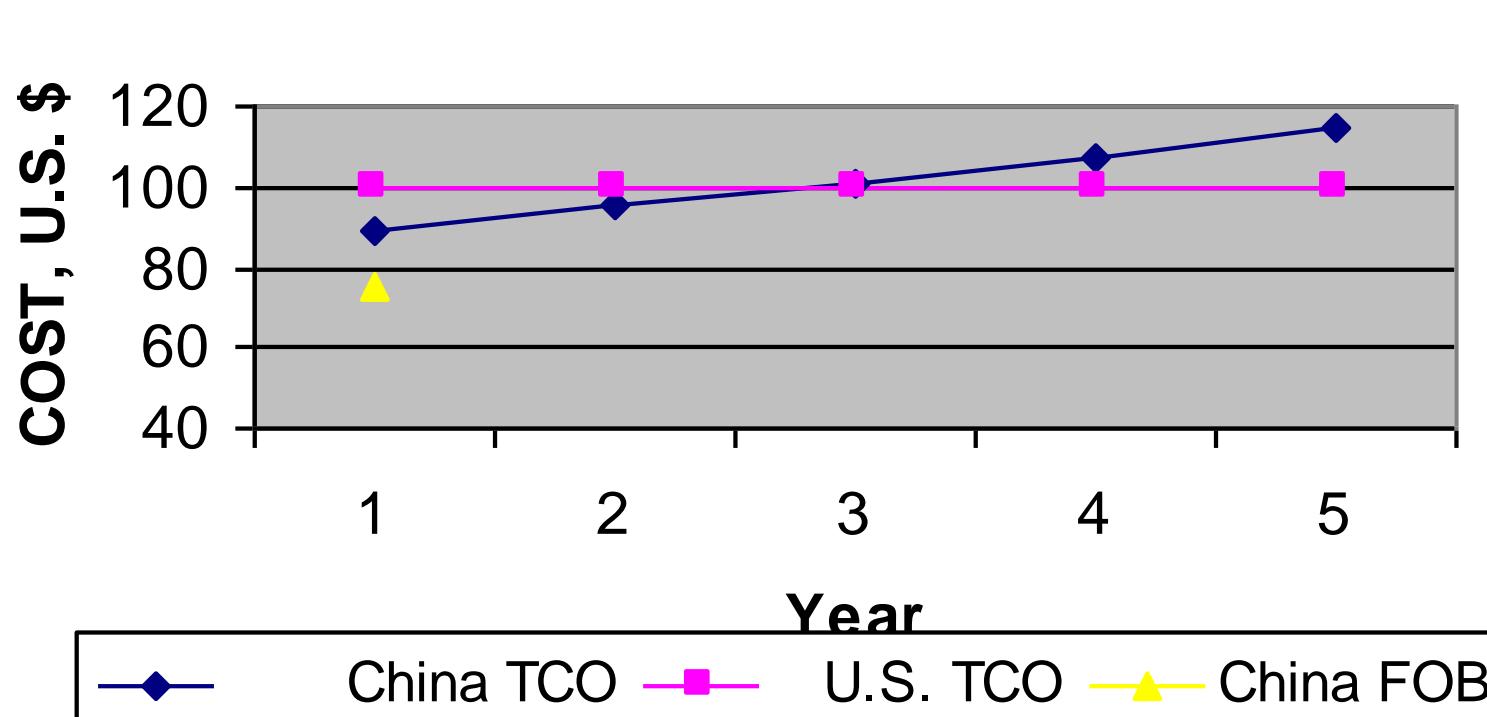
- FOB Price
- Packaging
- Duty
- Freight: air, surface, all fees
- Inventory: en-route, cycle, safety stock, obsolete
- Local warehousing
- Travel
- Rework/quality
- Product liability
- IP risk
- Impact on innovation
- Prototype
- Forecast wage inflation and currency appreciation

# Example Assumptions: a Part

Chinese unit price	\$75	Product liability*	0.50%
U.S. unit price	\$100	IP risk*	2%
# units/year	12,000	Innovation*	0%
unit weight, incl. packaging, lbs	2	Trips/yr	2
shipment size, units	1,000	Prototype cost*	\$5,000
product life, yrs	5	Obsolescence, mos.*	2
Packaging*	0	Wage inflation, annual*	8%
Payment on shipment	Yes	Currency appreciation, annual*	5%
Quality*	2%		

\* Chinese differential vs. U.S.

# TCO Comparison Example: a Low-Moderate Labor Content Part



# “As China’s Wages Rise, Export Prices Could Follow”

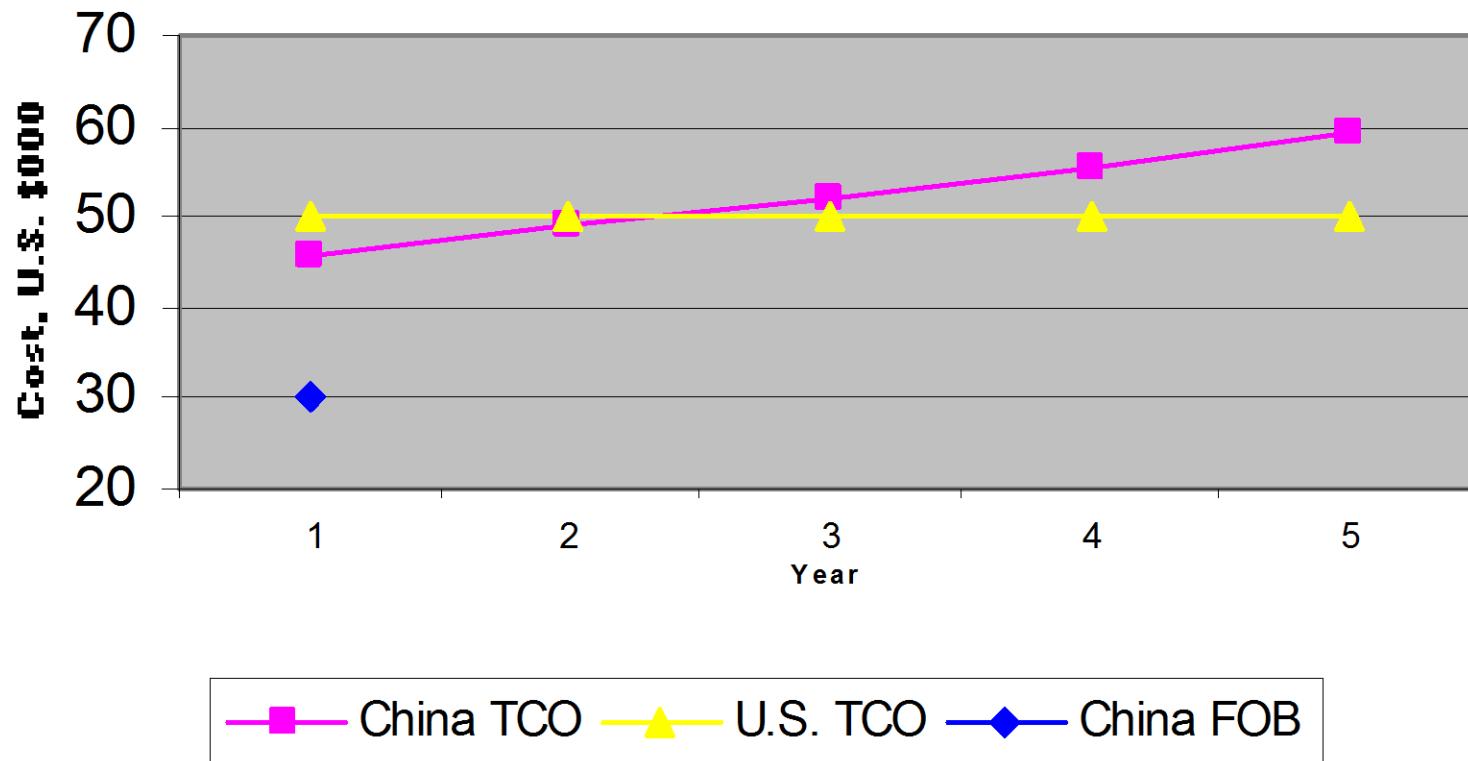
- 24% to 100% wage increases!



Source: New York Times, June 7, 2010

# TCO Comparison Example: a Die or Mold

Comparison of U.S. and China TCO: Dies/Molds



# Deming on Total Cost

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

Source: 4<sup>th</sup> key principle for management,  
“Out of the Crisis”, W. Edwards Deming

# Offshoring contributes to Waste

<u>Toyota Wastes</u>	<u>Offshoring Contributors</u>
Overproduction	Large batch shipments
Waiting	Uncertain delivery/Inconsistent quality, port, customs
Transport	12,000 mi. inbound, 6,000 return (boat ½ full)
Overprocessing	More packing and unpacking
Inventory	In transit, cycle, safety stock, uncertain delivery and quality
Motion	Large batches require a customer warehouse. Travel, e.g. 2-3 weeks, 2-3X/yr
Defects	Much higher than local sources, extra inspection of materials and tolerances

# Offshoring contributes to Instability

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- Weather
- Port strikes
- Loss from mishandling
- Language problems
- Pirates

# Offshoring contributes to Overburdening

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- Travel
- 2 am phone calls

# Impact on Product Strategy

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- Impact of batch size and distance:
  - Offshoring → commoditization
  - Reshoring → differentiation/mass customization

# Reshoring Facilitates Clustering

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- Innovation
- Partnering
- Communications
- Lean supply chain
- DFMA



## 2010 NTMA / PMA Contract Manufacturing Purchasing Fairs

A one-stop for OEMs to find competitive U.S.-based sources.

- 50+ OEMs.
- 100+ job shops - machined, stamped, fabricated and molded parts, special tooling (dies, molds, jigs, fixtures and gauges) and special machines.



# Purchasing Fairs



## Results of May 12 Fair

- 57 Customers: 64% brought offshored work
- 113 shops

## Next NTMA/PMA Fair

- Probably Chicago, 2H2011

# Why Reshoring is a Hot Topic

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- A renewed focus on manufacturing by the White House and Congress
- High international transportation costs
- High foreign wage inflation
- Expected Yuan appreciation
- Low domestic capacity utilization
- Focus on increasing employment
- Growing awareness of IP and quality risks
- Increasing understanding of TCO

# Global sourcing not reducing costs

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% of companies reporting issues:

- Unreliable delivery: 65%
- Longer lead times: 61%
- Poor quality: 61%
- Increased costs: 34%

Source: The Smarter Supply Chain of the Future,  
IBM, Jan 2009, 400 executives worldwide

# Offshoring is slowing down

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% of companies moving some or all production work offshore:

- 2010: 15%
- 2007: 35%

Source: 2010 Manufacturing and Wholesale Distribution National Survey, McGladrey, March 2 to April 5, 2010, 1061 U.S. respondents

# Sourcing Moving Home

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- 20% of companies brought sourcing closer in 2009
- Of which 59% reshored

Source: Supply Chain Solutions, Grant Thornton, Jan. 2010 survey. 312 responses.

# Reshoring Easier than Exporting More

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- There are distinct advantages for a U.S. manufacturer to compete here rather than offshore:
  - Most of the TCO costs
  - Familiar legal and regulatory system
  - Simplicity of selling into huge home market vs. added cost of overseas sales and support
  - No exchange rate issues
  - Cost advantages of greater than 24%, similar to total direct labor % of mfg. cost
  - Timing: quick impact because already selling here

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

Reshoring breaks out of:

- The economic zero-sum-game of tax/borrow and spend.
- The increases in consumer prices of relying solely on currency changes.
- The waiting-for-policy-decisions problem.

Assures that the pie grows, to the advantage of all Americans.

Focuses on the manufacturing sector which has suffered so many job losses for decades.

# Initiative Will Affect Policy

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- Survey supply chain managers:
  - What cost factors are considered?
  - What is the price elasticity of the offshoring/reshoring decision?
- Become the **national source** of actionable information on the size, motivation, decision processes and industry mix of U.S. offshoring and reshoring.

# Reshoring and Government

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- Status:
  - TCO software in Cong. Wolf's HR 5980
  - Discussions with Commerce Dep. Assist. Sec. Perez, MEPs, EDA
  - Encouraging Pres. Obama to broaden focus from exporting to include reshoring!
  - Trying to set up focused reshoring initiatives in AZ, CT, Flint, IL, MD, OH and SC.

# Local Reshoring Initiatives

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- Chambers of Commerce and Economic Development offices involve the OEM execs.
- Train supply chain managers and local suppliers re reshoring advantages.
- Hold local reshoring fairs.
- Local team motivates follow-up and monitors the results, e.g. \$ cost per job reshored.
- Develop model to take to other cities/states. \*

# Getting to the policy makers

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To influence companies that have mandates to offshore:

- Local Reshoring Initiatives
- Publicity: WSJ, CNBC, USA Today, etc.
- Work thru the Supply Chain Managers, Quality Managers and Lean and Green champions
- Start with <\$1B/year companies
- I am working NAM, US Chamber of Commerce, etc.

# Requests of OEMs and Suppliers

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- Submit successful reshoring cases \*
  - Good publicity
  - Good for the country

# Requests of OEMs

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- Try the TCO Estimator
- Help improve the Estimator
- Make sourcing decisions based on TCO, not just price
- Check our Library to see what your industry is doing
- Consider how a stronger home market benefits your sales
- Attend the Fairs!
- Bring some offshored work to the Fairs

# Requests of Suppliers

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- Talk TCO
- Use the Estimator to help customers compare costs
- Show customers Library articles, e.g.:
  - Plastic components
  - Stamped parts
  - Die castings and dies
  - Tools
  - Sheet metal parts

# 3 Related Strategies for Suppliers

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- Sell TCO (Reshoring Initiative)
- Maximize the value of proximity, and/or
- Avoid the LLC competitors

# Suppliers: Maximize the value of proximity: Beat the LLC competitors

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- Early Involvement. Partner. DFMA
- Max. face-time w/customer
- Get customer to your facility  
Show technology, lean, NTMA 6S Program
- Respond to phone calls timely
- Get customer to buy FOB destination
- Provide great customer support
- Lean

# Suppliers: Maximize the value of proximity: Beat the LLCC competitors

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- Guarantee delivery
- Help solve assembly issues
- Guarantee the integrity of supply base
- Focus on IP parts
- Automate

# Suppliers: Avoid LLCC competitors

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## Workpiece characteristics:

- Products to be sold in N. American market
- High mix/low volume
- New/quick launch/frequent engineering changes/short life cycle
- Fragile
- High risk, safety parts
- Low labor content
- Shipping cost high vs. labor costs
- 6σ
- Custom raw material, e.g. castings or forgings, sourced in U.S.

# Suppliers: Avoid LLCC competitors

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## Markets:

- Medical/pharmaceutical
- Defense ITAR/DFAR
- Aerospace
- Any requiring regulatory compliance
- Green/alternative energy
- Made in USA, e.g. fire and police equipment
- Food Processing and Packaging
- Oil and gas

# Presentations

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- 9/28 National Press Club
- 12/7 AFS Sales Training Session
- 12/9 NTMA/AMBA/BTC, W. MI
- 1/13 AFL-CIO, Washington, DC
- 2/?? PMA Roundtable, OH
- 3/10 SME Milwaukee Chapter
- 3/16 Reshoring Conference, Chicago
- 3/30 CAPM (ISM) Forum, Conn.
- 4/13 or 14 Amerimold, Chicago
- 5/4 Assembly Magazine webinar
- 6/9 New Haven Mfg. Assoc.



## For more information on the Fairs

Contact:

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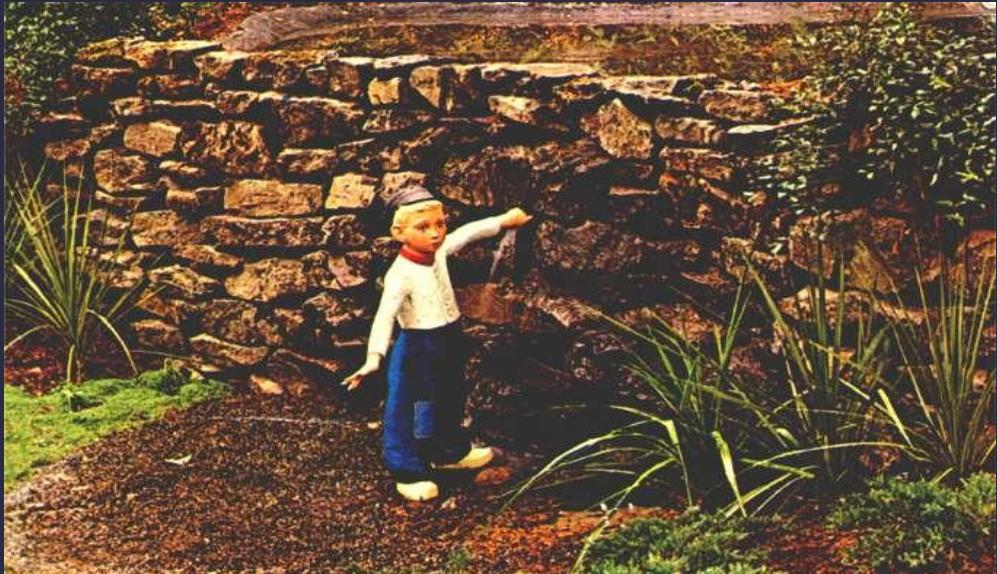
E-mail: [Rakers@ntma.org](mailto:Rakers@ntma.org)

Visit: [www.PurchasingFair.com](http://www.PurchasingFair.com)

# For more information, to increase profitability and help slow the offshoring flood now!

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