Total Cost of Ownership: How and When to Use it

MS Afternoon Session

Harry Moser
President
Reshoring Initiative
TCO Comparison Example

Present and Forecast US and China Price and TCO (US$)

Year 1  Year 2  Year 3  Year 4  Year 5
US TCO  China TCO  US Price  China Price
Cumulative Cost by Category

CUMULATIVE COST BY CATEGORY, YEAR 0: PARTS

CUMULATIVE COST, U.S. $

Price | CoGS | Other Hard | Risk | Strategic | Green

- U.S.
- China
TCO Estimator

● www.reshorenow.org
Getting Started on TCO

- See Handout
Useful Tools

• ACETool
• Mismatch Cost tool from Prof. Suzanne De Treville

• TCO Estimator
• Using the TCO Estimator: A How-To Guide
• Library
• Submit a Case Study
• Economic Development Program
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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>#23576</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Description</td>
<td>Aluminum Casting</td>
</tr>
<tr>
<td>Name</td>
<td>Steve Wiegars</td>
</tr>
<tr>
<td>Date</td>
<td>Tuesday, August 21, 2012</td>
</tr>
<tr>
<td>Domestic Vendor Name</td>
<td>Syca Industries</td>
</tr>
<tr>
<td>Offshore Vendor Name</td>
<td>Caleira - Extra Light</td>
</tr>
<tr>
<td>Additional Comments</td>
<td>Syca Industries will be producing a sand casting.</td>
</tr>
</tbody>
</table>

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

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.