The Importance of Advanced Manufacturing

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Advanced Manufacturing Partnership 2.0
Regional Meeting – February 3, 2014
The Importance of Advanced Manufacturing
There are signs that U.S. manufacturing is coming back.
Cheap energy and competitive labor costs are helping to drive the resurgence

Natural Gas Price

<table>
<thead>
<tr>
<th>Year</th>
<th>Natural Gas Price ($ per million BTUs)</th>
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<tbody>
<tr>
<td>2008</td>
<td>$15</td>
</tr>
<tr>
<td>2010</td>
<td>$10</td>
</tr>
<tr>
<td>2012</td>
<td>$5</td>
</tr>
<tr>
<td>2014</td>
<td>$0</td>
</tr>
</tbody>
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Source: Dow Jones & Co

$100B investments into energy-intensive manufacturing industries

100+ new plants planned or under construction

Manufacturing – Outsourcing Cost Index

(% of U.S. cost)

Source: Alix Partners
But today’s factories are very different from what they used to be…

Source: media.ford.com, NAIAS
...because software & technology have radically transformed the manufacturing process.
This has led to three significant waves of benefits:

1st wave: Efficiency

2nd wave: Innovation & Speed to Market

3rd wave: Flexibility

Advanced Manufacturing Benefits
Three enabling factors can solidify the resurgence

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<tr>
<th>Innovation Culture</th>
<th>Adopt policies to drive robust, scalable R&amp;D and manufacturing capabilities</th>
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<tr>
<td>Nurturing Institutions</td>
<td>Strengthen the ecosystem so that industry, universities and governments collaborate better</td>
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<tr>
<td>Education &amp; Training</td>
<td>Improve the image of manufacturing and close the nation’s training gap</td>
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The U.S. is uniquely positioned to lead Advanced Manufacturing and create the country's new middle class.