The Changing Face of Clusters

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Sources of competitive advantages have shifted

- 1960s & 1970s “Making things cheaper”
  Advantages are Cost and Functionality
  Division of labor, MTS, mass production

- 1980s & 1990s “Making things better”
  Advantages are Quality & Delivery
  TQM, JIT, flexible specialization, automation

- 2000s “Making better things”
  Advantages are Differentiation & Authenticity
  Aesthetics, customization, originality

- 2000+s “Creating memorable experiences”
  Advantages are Quality of sensation, link to place
“When people talked about innovation in the '90s they invariably meant technology. When people speak about innovation today, it is more likely to they mean design. Consumers, who are choking on choice, look at design as the new differentiator” *Business Week*, 7-4-05
Innovation (and training) are undervalued

- US manufacturers rank innovation seventh highest among eight objectives
- Chinese manufacturers rank innovation second highest among eight objectives
- US manufacturers spend 2% of annual labor budget on training
- Chinese manufacturers spend 5% of annual labor budget on training

Industry Week, November 2004
CEO’s Views (survey of 707)

- 72.7% agree “design is key competitive weapon against low-cost imports”
- 90.3% agree that design is a discipline that top management needs to understand and champion
- 81.1% agree that design is something that can be left to a design department
- 86.6% disagree design is “too easily duplicated to provide a lasting advantage”

“Taking the Public Pulse in Design,”
Fast Company, June 2006
How frequently companies collaborate with various actors in innovation process

Council on Competitiveness Survey, 2006

Helping people and places innovate, collaborate, and prosper.  www.rtsinc.org  ©2006
Compete by incorporating art & design that appeals to consumer taste.
Compete by incorporating art & design that creates a product identity...
Compete by using art & design to create a corporate image
Creative enterprise clusters include firms and organizations

- in which art or design is the product
- where art or design is the *distinguishing feature* or competitive advantage of a product or company
- that *sell, reproduce distribute, supply, or support* firms with art or design-intensive goods or services
### Self-employment in selected creative sectors in North Carolina

<table>
<thead>
<tr>
<th>Sector</th>
<th>Employed</th>
<th>Self-employed</th>
<th>Percent self-employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artists, writers, performers</td>
<td>585</td>
<td>10,223</td>
<td>95</td>
</tr>
<tr>
<td>Architects</td>
<td>4,637</td>
<td>862</td>
<td>16</td>
</tr>
<tr>
<td>Landscape architects</td>
<td>1,436</td>
<td>1,360</td>
<td>49</td>
</tr>
<tr>
<td>Photo studios</td>
<td>2,236</td>
<td>1,713</td>
<td>43</td>
</tr>
<tr>
<td>Interior design</td>
<td>933</td>
<td>3,322</td>
<td>78</td>
</tr>
<tr>
<td>Graphic design</td>
<td>1,227</td>
<td>523</td>
<td>29</td>
</tr>
</tbody>
</table>
## Preliminary Industry comparisons in North Carolina

<table>
<thead>
<tr>
<th>Sector</th>
<th>Employees 000s</th>
<th>% of all</th>
<th>Firms 000s</th>
<th>% of all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative (core)</td>
<td>41.8</td>
<td>1.2</td>
<td>19.3</td>
<td>2.7</td>
</tr>
<tr>
<td>Creative (full)</td>
<td>110.0</td>
<td>3.1</td>
<td>32.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Furniture</td>
<td>61.9</td>
<td>1.7</td>
<td>1.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Biotech</td>
<td>41.5</td>
<td>1.2</td>
<td>0.4</td>
<td>-</td>
</tr>
<tr>
<td>Computer &amp; elect.</td>
<td>41.2</td>
<td>1.1</td>
<td>0.6</td>
<td>0.1</td>
</tr>
<tr>
<td>Transportation equip</td>
<td>33.0</td>
<td>0.9</td>
<td>0.5</td>
<td>0.1</td>
</tr>
<tr>
<td>Apparel</td>
<td>30.8</td>
<td>0.9</td>
<td>1.1</td>
<td>0.2</td>
</tr>
</tbody>
</table>
Preserving Manufacturing in NC: Catawba River Valley & the Hosiery Cluster

Despite loss of apparel and textile hosiery remains strong in NC

- Region has been highly dependent on manufacturing
- 35,000 jobs in hosiery—not including suppliers
- $4,000,000,000 in sales
- Produces 60% of all U.S. hosiery production
- Mostly firms with less than 75 employees
- Many are family owned, 2nd and 3rd generation
Hosiery Technology Center Catawba Valley Community College (Hickory, North Carolina)

- Trains entry level workers and technicians
- ESL using hosiery environment as context
- Trains management and customers
- Conducts quality testing for companies
- Demonstrates new equipment
- Web site for jobs, procurement and e-commerce
- Brokers research and production networks
- Lean manufacturing, product development
- Design and finding niche markets

www.legsource.com
• Sponsored by USDA Grant
• 30x30 booth in Original Design Area
• 16 manufacturers of hosiery, apparel and seamless garments
• All Made In USA garments
• Partnership between THA, SEAMS, HTC and USDOC

• Companies wrote orders at the booth!
• Seminar on advantages of sourcing US-made goods attended by over 130 retail buyers.
• So successful Magic officials want us to expand the US presence to add fabric and yarn firms.
• Proved need for quick turn, technical products.
• Proved the benefit of joint marketing!
Some small creative firms have high growth potential

Company in Kalispell, Montana
10 years old
20 employees in 2003, 43 now
Sold 1,500 doors in 2003, 3,500 now
80% of sales in state in '03, 60% now
Works with 13 Montana artists
Changes in clusters

- Diminished importance of local suppliers and expertise
- Changing functions within clusters
- Focus on intangible assets
- Recruitment of talent and amenities that attract it
Industrial opportunities for advanced nations

• Highly customized products
• High fashion industries
• Place-based development
• Branded products
• Creative industries
• Big things
Barriers to U.S. adjusting to design-oriented economy

• Lack of emphasis on design in technical education programs
• Limited definition of innovation in government agencies
• Underestimation of scale of “design industries”
• Preoccupation with recruitment
What could be done

- Research on design comparable to modernization
- Support structure for design similar to MEP (DEP?)
- Interdisciplinary education
- Design centers at colleges
- New cluster strategies
A prospective research proposal (DK, UK, and states of NC, MA, PA) to discover:

- Industries most likely to benefit from design
- Characteristics of companies within sectors likely to be “design adopters”
- Current sources of innovative design
- Changes in company policy necessary to become “design-oriented”
- Potential of design industry as growth sector