Value Chain Analysis and Economic Diversification: Institutional Resources

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Outline

• Industry Clusters and Targeting

• Value Chain

• Institutional Resources
Industry Clusters

• **Industry clusters**
  
  “geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions in a particular field that compete but also cooperate”

  • Transactions
  • Communication
  • Share common opportunities and threats

Source: Deller, 2009, p. 58.
Industry Clusters

• Industry clusters
  – An array of linked industries and other entities
    • Suppliers of specialized inputs
    • Providers of specialized infrastructure
    • Extend downstream and laterally to manufacturers of complimentary products
    • Can be related by skills, technologies, or common inputs
    • Institutions (governments, universities, training providers)
    • Trade associations

Source: Deller, 2009, p. 58.
Industry Clusters and Targeting

• Cluster advantages
  – Production and marketing savings to member firms
    • Specialized input suppliers; workforce with specialized skills; public infrastructure; financial markets
  – Firms can focus on core activities & adopt new production technologies
    • Competition mandates rapid adaptability
  – Facilitates development of linkages, cooperation and collaboration
    • Knowledge spillovers

Source: Shields, Barkley, and Emery, 2009, p. 38
Industry Clusters and Targeting

• Targeted Economic Development using Clusters
  — Step 1: identify clusters that have high potential for locating or expanding in the region
    • Analysis of patterns
  — Step 2: narrow sector candidates to sectors that provide attractive economic development impacts
    • Job growth, high wages, taxes, minimal negative externalities
    • More subjective than step 1

Source: Shields, Barkley, and Emery, 2009, p. 40
Cluster Analysis

• Cluster analysis exercise: identifying clusters in the SOI region
  – 4 digit NIACCS sector screening criteria
    • Manufacturing sector
    • 2012 employment > 500
    • LQ > 1
    • Positive RS portion of shift-share
    • Exceptions
      – Employment > 2000
      – LQ > 2
## Cluster Analysis

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<td>Surgical appliance and supplies manufacturing</td>
<td>1.00</td>
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</table>
Cluster Analysis
Industry Clusters and Targeting

• Cluster shortcomings
  – Regions have difficulty ‘picking winners’
    • Too selective vs. too inclusive
  – Many regions have clusters in declining industries, or no clusters
    • Pittsburgh steel
  – Cluster focus may lead to imbalanced economic development
    • “The danger of a cluster based approach... is that it detracts from the need to take a more holistic view of regional development” (Martin & Sunley, 2003, p. 28).

Source: Shields, Barkley, and Emery, 2009, p. 38-39
Value Chain

• Most cluster based industrial targeting efforts rely on an analysis of *value chains*
  – Firms that “buy and sell from each other and in the process add value to the product as it moves up or down the value delivery chain”

Value Chain
## Machine Shops: Backward Linkages

### SOI LQs of Top Upstream Industries

<table>
<thead>
<tr>
<th>Industry Sector</th>
<th>Gross Inputs</th>
<th>SOI Empl</th>
<th>LQ</th>
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</thead>
<tbody>
<tr>
<td>Total</td>
<td>344,073,456</td>
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<td>Machined products</td>
<td>26,906,634</td>
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<td>4.9</td>
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<td>Iron and steel and ferroalloy products</td>
<td>22,300,939</td>
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<td>Plates and fabricated structural products</td>
<td>18,309,209</td>
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<tr>
<td>Securities, commodity contracts, investments, and related services</td>
<td>16,544,228</td>
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<tr>
<td>Management of companies and enterprises</td>
<td>15,731,963</td>
<td>3,118</td>
<td>0.5</td>
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<tr>
<td>Wholesale trade distribution services</td>
<td>12,073,479</td>
<td>18,231</td>
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<tr>
<td>Real estate buying and selling, leasing, managing, and related services</td>
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<td>15,964</td>
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<tr>
<td>All other miscellaneous professional, scientific, and technical services</td>
<td>9,833,276</td>
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<td>Nonferrous metals</td>
<td>9,370,111</td>
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<td>Monetary authorities and depository credit intermediation services</td>
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<td>Aluminum products from purchased aluminum</td>
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<td>Rolled, drawn, extruded and alloyed nonferrous metals (excluding ferrous)</td>
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<td>Custom computer programming services</td>
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<tr>
<td>Accounting, tax preparation, bookkeeping, and payroll services</td>
<td>5,829,759</td>
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<td>Semiconductor and related devices</td>
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<td>Advertising and related services</td>
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<tr>
<td>Paints and coatings</td>
<td>4,757,561</td>
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<td>Restaurant, bar, and drinking place services</td>
<td>4,730,765</td>
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<td>Ferrous metals</td>
<td>4,705,843</td>
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<tr>
<td>Telecommunications</td>
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<td>0.4</td>
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</table>
Machine Shops: Forward Linkages

**SOI LQs of Top Downstream Industries**

<table>
<thead>
<tr>
<th>Industry Sector</th>
<th>Gross Inputs</th>
<th>SOI Empl</th>
<th>LQ</th>
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<tr>
<td>Total</td>
<td>322,970,496</td>
<td>482,196</td>
<td>5.8</td>
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<tr>
<td>Motor vehicle parts manufacturing</td>
<td>46,241,650</td>
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<td>Fluid power process machinery manufacturing</td>
<td>33,251,964</td>
<td>3,308</td>
<td>32.8</td>
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<tr>
<td>Machine shops</td>
<td>26,906,634</td>
<td>3,821</td>
<td>4.9</td>
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<tr>
<td>Automobile manufacturing</td>
<td>16,818,831</td>
<td>3,459</td>
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<tr>
<td>Soap and cleaning compound manufacturing</td>
<td>14,048,678</td>
<td>2,989</td>
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<tr>
<td>Other industrial machinery manufacturing</td>
<td>9,952,352</td>
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<tr>
<td>Other engine equipment manufacturing</td>
<td>8,572,660</td>
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<td>10.4</td>
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<tr>
<td>Turned product and screw, nut, and bolt manufacturing</td>
<td>7,787,777</td>
<td>2,236</td>
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<tr>
<td>Pump and pumping equipment manufacturing</td>
<td>7,731,299</td>
<td>982</td>
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<tr>
<td>Other commercial and service industry machinery manfact</td>
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<tr>
<td>Other rubber product manufacturing</td>
<td>4,953,781</td>
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<tr>
<td>Motorcycle, bicycle, and parts manufacturing</td>
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<td>7.1</td>
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<td>Plate work and fabricated structural product manufacturing</td>
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<td>Farm machinery and equipment manufacturing</td>
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<td>Coating, engraving, heat treating and allied activities</td>
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<td>Valve and fittings other than plumbing manufacturing</td>
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<td>Mechanical power transmission equipment manufacture</td>
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<tr>
<td>Metal can, box, and other metal container (light gauge)</td>
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<td>4.1</td>
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<td>Other plastics product manufacturing</td>
<td>3,423,777</td>
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<td>Metal cutting and forming machine tool manufacturing</td>
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<td>3,113,041</td>
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<td>Ammunition manufacturing</td>
<td>3,097,687</td>
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Industry Clusters and Targeting

- Economic Development Agency Targeted Clusters
  - Aerospace
  - Water Technology
  - Agriculture and Food Production
  - Industrial Machine Manufacturing
  - Metals Manufacturing
  - Logistics

Source: RAEDC, InWisconsin
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<td>Iron and steel and ferroalloy products</td>
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<td>Securities, commodity contracts, investments, and related services</td>
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<td>Construction of other new nonresidential structures</td>
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<tr>
<td>38</td>
<td>Construction of other new residential structures</td>
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<td>Plastics materials and resins</td>
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<td>205</td>
<td>Construction machinery manufacturing</td>
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<td>Mining and oil and gas field machinery manufacturing</td>
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<td>Other engine equipment manufacturing</td>
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<td>Farm machinery and equipment manufacturing</td>
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<td>Heavy duty truck manufacturing</td>
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<td>413</td>
<td>Food services and drinking places</td>
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Methodology Pitfalls

• Data suppression
  – A single company, Woodward, employs 1,400 in the region
    • Manufactures airplane parts (NAICS 3364)
    • Employment at this single firm put the industry among the largest in the region
  – Aircraft parts sector had increased employment nationally between 2003 & 2012
  – However, the industry didn’t show up in the data analysis conducted to identify important sectors
Value Chain

Value Added

- Employee compensation, profits, taxes

<table>
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<tr>
<th>Description</th>
<th>Coefficient</th>
<th>Value Added</th>
</tr>
</thead>
<tbody>
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<td>Employee Compensation</td>
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<td>Proprietor Income</td>
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<td>Tax on Production and Imports</td>
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Institutional Resources

• A report from the National Governors Association, “A Governor’s Guide to Cluster-Based Economic Development” contained recommendation for many of the supporting functions show in the value chain diagram.

Source: National Governors Association, 2002
How Clusters Grow

• Concepts
  – **Innovation.** Innovators generate and commercialize new ideas, find more efficient production processes, or create new markets
  – **Imitation and competition.** Innovation builds a strong company; imitation and the competition that follows build a strong cluster
  – **Entrepreneurial energy.** Entrepreneurial capacity is the fuel that drives the expansion of cluster growth

Source: National Governors Association, 2002
How Clusters Grow

• Connections
  – **Networking and networks.** The single most important operating principle of competitive clusters is the ability to network extensively and form networks selectively
  – **Connections and intermediaries.** Some of a region’s stock of social capital resides in its civic and professional associations, and its economic value is deeply embedded in the functions of groups that bring people together to share ideas and knowledge

Source: National Governors Association, 2002
How Clusters Grow

• Competencies
  – **Specialized workforce.** The skills and knowledge of the workforce have soared to the top of the list of businesses’ requirements
  – **Industry leaders.** Behind every successful cluster is a group of innovative firms led by people who value learning, are committed to their community, and are willing to work toward a collective vision for their industry.

Source: National Governors Association, 2002
How Clusters Grow

• Competencies (continued)
  – **Talent.** Clusters, especially in knowledge-intensive sectors, need bright young people to attract other new firms and young companies
  – **Tacit knowledge.** Successful regions are home to institutions, individuals, and organizations that serve as storehouses and disseminators of undocumented knowledge

Source: National Governors Association, 2002
Institutional Resources

• Policies to Support Competitive Clusters
  – Organize service delivery around clusters
  – Target investments to clusters
  – Strengthen networking and build bridges
  – Develop human resources for clusters

Source: National Governors Association, 2002
Institutional Resources

• Organize service delivery around clusters
  – Aggregate, collect, and sort information by cluster
  • Organizing data by cluster and coordinating data collection through cluster organizations would provide useful information to local development agencies, cluster organizations, and service providers

Source: National Governors Association, 2002
Institutional Resources

• Organize service delivery around clusters
  – Form cross-agency quick-response teams
    • Form teams across agencies to coordinate and customize services for clusters
    • Provides an alternative to radical restructuring of agencies around clusters

Source: National Governors Association, 2002
Institutional Resources

• Organize service delivery around clusters
  – Encourage and support multi-firm activity
    • *Networks*: multi-firm business activities; structured alliances of firms
    • *Networking*: a process for learning and acquiring information from others; a social phenomenon that finds, moves, and spreads ideas, information, and best practices among companies

Source: National Governors Association, 2002
Institutional Resources

• Organize service delivery around clusters
  – Build incentives for multi-firm applications to funding programs

• Encourage collaboration among firms and achieve greater economies of scale without incurring additional costs
  – Design funding programs to focus on groups of companies

Source: National Governors Association, 2002
Institutional Resources

• Target investments to clusters
  – Invest in cluster R&D and innovation
    • Research at universities is often based on faculty interests, reputation, and grantsmanship
    • Investment in cluster-based R&D can help attract new specialized talent and firms
      – Longer terms, these investments may produce new commercial products and companies

Source: National Governors Association, 2002
Cluster R&D and Innovation

• Water Technology
  – University of Wisconsin–Milwaukee School of Freshwater Sciences
    • The nation’s only graduate school dedicated solely to freshwater research. Plus, Wisconsin offers 36 water-focused academic programs on 17 campuses throughout the state.
  – International Water Technology Center
    • A research center for corporate, academic and government stakeholders to address water-related issues throughout the world.
  – UW System and Water Council Partnership
    • A collaboration that taps the strengths of five UW campuses to integrate STEM education and create new approaches to the sustainable use of water systems.

Source: http://inwisconsin.com/why-wisconsin/industry-strength/water-technology/
Institutional Resources

- Target investments to clusters
  - Invest in cluster technology centers or parks
    - Office/lab space with support functions
    - A risky high cost investment that has had mixed results
      - North Carolina invested over $100 million in microelectronics and biotechnology centers
        » Biotechnology effort was successful, based on research strengths at the local universities
        » Microelectronics never found significant success

Source: National Governors Association, 2002
Technology Centers or Parks

• Whitewater University Technology Park
  – Business organization and planning
  – Marketing, promotion, sales
  – Commercialization and product development
    • Three 500-square-foot labs, including one at 775 square-feet with a laminar flow hood
  – Business operations

Source: http://www.whitewatertechpark.org/index.html
Technology Centers or Parks

• Water Council’s Global Freshwater Seed Accelerator
  – Business model and customer validation training through UW - Whitewater’s Institute for Water Business
  – Business feedback and funding advice by investment managers
  – Mentoring by leading experts in the field
  – Access to scientific expertise and guidance through the United States’ only School of Freshwater Sciences at UW - Milwaukee
  – Access to leading engineering academia from UW - Milwaukee and Marquette University
  – Guidance from business development professionals from the Wisconsin Economic Development Corporation
  – Access to graduate students trained in water technology and science

Source: http://www.thewateraccelerator.com/program-description.html
Technology Centers or Parks

• Water Council’s Global Freshwater Seed Accelerator
  – Low cost office lease
  – Access to a flow lab and wet lab space
  – Access to Pilot Sites with the Milwaukee Metropolitan Sewage District, Milwaukee Water Works and University of Wisconsin-Milwaukee School of Freshwater Sciences
  – Access to water technology symposia and other related events
  – Access to business services including legal and accounting
  – Access to global trade missions - inbound and outbound
  – Free membership to The Water Council for one year

Source: http://www.thewateraccelerator.com/program-description.html
Institutional Resources

• Target investments to clusters
  – Support cluster entrepreneurial activity
    • Entrepreneurship is a major part of cluster formation
      – Employees of large companies leave to become a supplier to the former employer to pursue expanded or related opportunities
    • Entrepreneurship support policies rarely have a cluster orientation

Source: National Governors Association, 2002
Support Cluster Entrepreneurial Activity

• Racine County: Launch Box
  – Business planning
  – Financial
  – Product development
  – Human resources
  – Sales and marketing

Source: http://launchboxracine.org/
Support Cluster Entrepreneurial Activity

• Wisconsin Innovation Service Center
  – Market Research and Product Development Services
    • New Product Assessments
    • Competitive Intelligence Search
    • Distributor Assessments: Current and Potential
    • Customer Assessments: Current and Potential
    • Licensing/Strategic Partner Search

Source: http://www.uww.edu/wisc/
Support Cluster Entrepreneurial Activity

- **EIGERlab**
  - EIGERlab leverages state-of-the-art technical resources as well as professional advisors to create an environment that inspires and guides the development of entrepreneurs throughout the region.
    - Meet with dedicated mentors and advisors to analyze and develop your business strategies
    - Research your market and competition with comprehensive data and facts
    - Connect with potential investors
    - Commercialize your product innovations

Source: http://www.eigerlab.org/incubator/
Support Cluster Entrepreneurial Activity

- EIGERlab’s Center for Product Development (C4PD) serves the region with leading edge business and engineering support services
  - Engineering
  - Product Development
  - Reverse Engineering
  - Computer-Aided Design
  - Commercialization

Source: http://www.eigerlab.org/incubator/
Support Cluster Entrepreneurial Activity

• EIGERlab’s Center for Product Development customers include
  – entrepreneurs at the “idea on a napkin” stage — in need of assistance with design and commercialization
  – existing businesses that are interested in producing a new product or modernizing an existing product

• Expertise includes consulting with clients to determine the most appropriate and economical path, from the design and printing stages to the actual manufacturing of their product

Source: http://www.eigerlab.org/incubator/
Institutional Resources

• Target investments to clusters
  – Market clusters and build cluster markets
    • Targeting certain kinds of companies for industrial recruitment helps regions focus the most widely used economic development tool (recruiting)
    • Aligning departments of development agencies around clusters helps build staff knowledge

Source: National Governors Association, 2002
Target Investments to Clusters

• Beloit Economic Development
  – Snack Food Manufacturing sector
    • SOI LQ 2.9, national employment growth 14.6%
  – Worked with State of WI to target food processor Kettle Foods
    • A $500,000 forgivable development loan from the state Department of Commerce
    • $510,000 in tax credits from Beloit
    • A $132,000 Transportation Economic Assistance grant from the Department of Transportation
    • A $50,000 grant to train new employees at Blackhawk Technical College

Source: http://www.rockcountyalliance.com/Portals/1/Gazette%20Food%20Processing%20Article%20Aug%202010.pdf
Institutional Resources

• Strengthen networking and build bridges
  – One of the most important attributes of a successful cluster is an associative infrastructure
    • Opportunities to meet other members
    • Share ideas
    • Learn
    • Develop trust
  – The ‘social capital’ of a cluster depends on trust and the frequency and depth of personal exchanges

Source: National Governors Association, 2002
Institutional Resources

• Strengthen networking and build bridges
  – Establish or recognize cluster organizations and alliances
• Organizational identity is essential to launching cluster strategies
  – Acknowledgement from high level government officials facilitates membership and resource attraction
• Cluster organizations can help government better assess the needs of the economy and target public resources
  – Many cluster councils form around a pressing need (i.e. workforce issues)

Source: National Governors Association, 2002
Cluster Organizations

- Rockford Area Aerospace Network (RAAN)
  - Committee that offers a platform for collaboration among local aerospace companies and institutions that serve the industry
  - RAAN and the Rockford Area Economic Development Council have developed educational partnerships in the region to create an aerospace education system, ensuring that a skilled workforce is available for expanding companies in the region

Source: http://www.rockfordil.com/industries/aerospace-production,-research-&-development
Cluster Organizations

• Rockford Area Aerospace Network (RAAN)
  – Established the Joint Institute of Engineering & Technology - Aerospace (JiET – A) that offers a unique opportunity that combines academic studies with real - work experience with leading aerospace companies. JiET - A academic partners include:
    • Rock Valley College
    • Northern Illinois University
    • Rockford College
    • Embry-Riddle Aeronautical University

Source: http://www.rockfordil.com/industries/aerospace-production,-research-&-development
Institutional Resources

• Strengthen networking and build bridges
  – Facilitate external linkages
    • Clusters that only focus on internal linkages miss sources of new knowledge and technology
    • The most successful clusters have lead firms that are part of global networks, encourage employees to participate in international associations and networks

Source: National Governors Association, 2002
Facilitate External Linkages

• Rockford Area Aerospace Network (RAAN)
  – Participates as a group at trade shows & conferences, internationally and domestically
    • Share costs
    • Promote their companies, the local supply chain and the Rockford region
  – Hosts supplier fairs
    • Attracts international OEMs to meet the regional supply chain
Institutional Resources

• Strengthen networking and build bridges
  – Encourage intercluster communications channels
    • Effective cluster organizations communicate frequently with customers, members, and friends
      – Newsletters
      – Websites
      – Social networking sites
      – Events

Source: National Governors Association, 2002
Encourage Intercluster Communications Channels

• Midwest Food Processors Association
  – Social Networking
    • MWFPA maintains social media tools such as Facebook, Twitter and LinkedIn to keep our members and the general public engaged. MWFPA also updates and refines our website and blog to promote events and convey political and other industry-related news and information.

  – Food Processor Directory
    • Over two thousand directories are distributed to members and policymakers with information on key industry companies and personnel throughout the Midwest.

Source: www.mwfpa.org
Encourage Intercluster Communications Channels

• Midwest Food Processors Association
  – Convention
    • Over 900 food industry experts participated in the Annual Convention in Madison, WI. The event attracted over 175 exhibitors and featured over 40 speakers addressing everything from food safety to phosphorus rules.
  – Spring Summit and Scramble
    • Over 200 processors and industry representatives participated in this annual golf event.
  – Sporting Clays Challenge
    • Over 80 members participated in the Sporting Clay Challenge which raised $10,000 for the MWFPA Scholarship Fund.

Source: www.mwfpa.org
Institutional Resources

• Develop human resources for clusters
  – Develop a skilled and specialized labor force
  • Designing a curricula around the workplace and business of firms in a local cluster
    – Learners can come to appreciate the value of the cluster
    – Understand their regional environment
    – Be more inclined to follow career paths in the cluster
  • Contextualized education has been shown to raise school retention rates and education achievement levels by making it more relevant

Source: National Governors Association, 2002
Qualify People for Cluster Employment

- Golden Eagles Manufacturing is a collaborative effort between Woodward and Rock Valley College, Rockford, Illinois
  - As a part time member at Woodward students will earn the following benefits;
    - Vacation pay
    - Performance Bonus Plan
    - Holiday pay
  - While working part time at Woodward, students rotate through a number of different production areas:
    - Machining
    - Inspection
    - Metrology
    - Prototype
    - Assembly & Test
    - Special Processes

Source: http://www.woodward.com/GEM.aspx
Qualify People for Cluster Employment

• Golden Eagles Manufacturing
  – While working at Woodward, students will:
    • Learn a variety of manufacturing processes along with an opportunity to work in Manufacturing Engineering or Engineering
    • build an understanding of how a product is designed and manufactured
    • develop communication and team skills that can be applied to any future career path
  – Students are enrolled in the Manufacturing Engineering Technology program, which is a part of the Engineering & Technology Division at RVC. Students will have an opportunity to earn additional certification such as:
    • CAD
    • CNC
    • Quality

Source: http://www.woodward.com/GEM.aspx
Qualify People for Cluster Employment

• Golden Eagles Manufacturing
  – Students will take a variety of classes that are intended to advance their knowledge/understanding of manufacturing, and also build a foundation for successful transition into the workforce or continued education.

Source: http://www.woodward.com/GEM.aspx
Institutional Resources

• Develop human resources for clusters
  – Establish cluster skills centers
    • Designate university, technical, and community college centers of excellence around clusters
      – Survey industry needs
      – Develop new curricula
      – Communicate with cluster councils
      – Update skill standards
      – Benchmark practices in other areas
      – Collect information about cluster occupations and programs
  • Could be a virtual center organizing teams from various colleges

Source: National Governors Association, 2002
Skilled and Specialized Labor Force

• Institute for Water Business at the University of Wisconsin-Whitewater
  – Educate individuals and organizations about emerging water business issues through symposia, conferences, courses, and academic programs
  – Develop and support strong alliances between students, faculty, businesses, governments, and civil society groups, offering mutually beneficial opportunities for scholarly and applied research, internships, and post-graduation employment
  – Provide real and virtual spaces in which individuals and organizations can exchange information, engage in dialogue, meet and collaborate to address freshwater challenges and opportunities

Source: http://www.uww.edu/cobe/water
Cluster Skills Centers

- Illinois Manufacturing Excellence Center (IMEC) was established to improve the productivity and competitiveness of Illinois' small and mid-sized manufacturing firms
- IMEC helps manufacturers to increase worker output and adapt to change through hands-on training, development and coaching
  - The goal: close the gap between learning and doing to get sustained business results

Source: http://www.imec.org/index.cfm
Cluster Skills Centers

• IMEC operating partners

Source: http://www.imec.org/index.cfm
Institutional Resources

• Develop human resources for clusters
  – Qualify people for cluster employment
    • Programs focused on entry level workers
    • Employ real experiences and directly linked to good jobs
    • Introduces reality and context to education
    • Aligns program with actual workplace needs

Source: National Governors Association, 2002
Cluster Skills Centers

• TMA is a non-profit association that is committed to recognizing manufacturers as value-added producers of goods and services, and creators of high quality jobs for Illinois citizens

• TMA represents and promotes the interests of all members serving as a forum and a clearinghouse for the exchange of ideas and information. This association fosters a sense of mutual support and unity among the members and the industry as a whole.

Source: http://www.tmaillinois.org/about-tma/
Cluster Skills Centers

• TMA has served as a valued source of employee learning and development for member companies
  – instructor-led Related Theory Apprentice Training programs
  – State-of-the-art, hands-on CNC training courses
  – Management development seminars

Source: http://www.tmaillinois.org/about-tma/
Qualify People for Cluster Employment

- Illinois Career Cluster Framework
  - Agriculture, Food, and Natural Resources
  - Architecture and Construction
  - Arts, Audio/Video Technology, and Communications
  - Business Management and Administration
  - Education and Training
  - Finance
  - Government and Public Administration
- Health Science
- Hospitality and Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections and Security
- Manufacturing
- Marketing
- Science, Technology, Engineering, and Mathematics
- Transportation, Distribution, and Logistics

Source: http://occrl.illinois.edu/projects/pos/
Qualify People for Cluster Employment

• Illinois Career Cluster Framework

Source: http://occrl.illinois.edu/files/Projects/pos/Brochures/Manufacturing%20Fan%20Brochure.pdf
Qualify People for Cluster Employment

- Illinois Career Cluster Guiding Principles
  - Leadership, Organization and Support
    - Programs of Study are developed, supported, and led with guidance from collaborative partners
  - Access, Equity and Opportunity
    - Each and every student has access to equitable educational opportunities and services that enable their success

Source: http://occrl.illinois.edu/projects/pos/programs-of-study-guiding-principles/
Qualify People for Cluster Employment

- **Illinois Career Cluster Guiding Principles**
  - Alignment and Transition
    - Education and training providers, with input from business and industry, enhance alignment that facilitates student preparation and transition through the educational pipeline
  - Enhanced Curriculum and Instruction
    - Curriculum and pedagogy involve rigorous and relevant instruction that enhances learning and enables students to attain academic and technical standards and credentials

Source: http://occrl.illinois.edu/projects/pos/programs-of-study-guiding-principles/
Qualify People for Cluster Employment

• Illinois Career Cluster Guiding Principles
  – Professional Preparation and Development
    • Comprehensive and continuous professional development that impacts teaching and learning is delivered to enhance the recruitment, preparation and retention of qualified instructional and administrative staff
  – Program Improvement and Accountability
    • Data are collected, shared, and utilized to improve outcomes and demonstrate accountability

Source: http://occrl.illinois.edu/projects/pos/programs-of-study-guiding-principles/
Institutional Resources

• Develop human resources for clusters
  – Engage community-based employment intermediaries
• Responsibility for preparing low-income and unemployed people for employment and career advancement has been delivered or coordinated by non-profit agencies
  – Brokers/bridges between community and industry
  – Articulate career paths and ladders
  – Develop standardized industry training
  – Assist with market coordination

Source: National Governors Association, 2002
Community-Based Employment Intermediaries

• Jane Addams Resource Corporation (JARC)
  – A Center for Working Families that focuses on job training and workforce development
    • Job training programs that target strategic skills gaps in the manufacturing sector
    • Provides bundled financial support services, such as income supports, financial coaching and employment services

Source: http://www.jane-addams.org/
Community-Based Employment Intermediaries

• JARC’s job training programs target strategic skills gaps in the metal fabricating and manufacturing sectors
  – CNC Machinist Fast Track: 20 Weeks, 500 Hours
  – Welding Fast Track: 14 Weeks, 350 Hours
  – Women in Manufacturing Program
  – Manufacturing Bridge Program

• Serve a variety of populations including unemployed adults, dislocated workers and disadvantaged job seekers, including ex-offenders and female heads of household

Source: http://www.jane-addams.org/
Community-Based Employment Intermediaries

- Through its Industry Advisory Council, JARC connects with industry leaders to ensure that they are meeting the needs of industry as well as the community

Source: http://www.jane-addams.org/
Institutional Resources

• Develop human resources for clusters
  – Support regional skills alliances
    • Networks of firms that cooperate to acquire or reduce the cost of incumbent worker training programs
      – Public sector
      – Education and training organizations
      – Organized labor
    • Need to select a training vendor carefully
      – Required expertise and familiarity with the industry

Source: National Governors Association, 2002
Regional Skills Alliances

• Wisconsin Regional Training Partnership
  – An association of over 100 employers and unions dedicated to increasing and preserving family-supporting jobs and creating a more competitive local economy
  • Pre-employment training for job seekers
  – As a workforce intermediary, WRTP works with the public sector to develop resources, services, processes and programs for their member companies to expand employment and advancement opportunities by upgrading the skills of current employees

Source: http://www.wrtp.org/index.php
Promoting Equity

• Engage community-based employment intermediaries
  – Many sector-based workforce development intervention strategies supported by private foundations have successfully prepared low-income and unemployed people for jobs with career ladders

Source: National Governors Association, 2002
Promoting Equity

• Support industry associations and intermediaries in distressed regions
  – Cluster organizations in distressed regions have a much bigger challenge and play a more active role in solving problems and delivering services

Source: National Governors Association, 2002
Promoting Equity

• Encourage civic responsibility among clusters
  – To encourage social responsibility, the civic and nonprofit sectors can be engaged in more direct ways with cluster organizations and cluster organizations can be persuaded to introduce civic goals into their agendas
  – This can best be done by getting the cluster associations to recognize associate memberships or to create working committees on common issues with nongovernmental organizations

Source: National Governors Association, 2002
Promoting Equity

- Provide incentives and subsidies to encourage employment of low income people and in distressed regions
  - Subsidies such as tax breaks, government-sponsored training, and loan guarantees can, at least at the margins, alter bottom-line decisions.
  - These same programs can be directed to develop or revitalize clusters in similar regions.
  - Similarly, states operate federal training programs for low income and dislocated workers that could be structured to match the needs of clusters.

Source: National Governors Association, 2002
Value Chain Analysis and Economic Diversification: Institutional Resources

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