Duluth Area Economic Development Enterprise Network System Analysis

EXECUTIVE SUMMARY

for

Minnesota Department of Employment and Economic Development

April 28, 2005
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Executive Summary

Scope of work

Enterprise networks are federations or alliances that combine the virtues of several independent businesses into a network of collaborative ventures. The purpose of this project was to develop an economic development strategy for the Duluth, MN area economy based on the concept of enterprise network systems. The primary focus of the proposed project was to conduct a search for the possible presence of potential enterprise networks within Duluth and the surrounding communities. Secondary data sources for manufacturing industries were used to complete the study. The project was staged in two phases:

Phase I

The definition and extent of the proposed study area, including present business structures and suppliers to the Duluth area, were determined in phase one, and was considered part of the discovery process. A secondary data analysis was conducted to select industries (not currently in the study area) for possible economic development; the selection criteria included measures of local inputs and a comprehensive area firm inventory. The project scope of work included the following qualification: “If during phase one data show that no possibilities exist in the Duluth area for the proposed enterprise network system, work will be terminated and unspent grant funding will be returned to the funder.”

Phase II

The UMD Bureau of Business and Economic Research (BBER) recommended preparing a customized business plan in order to strategize around opportunities dependent on the findings of the analysis phase. Phase two of the project structured ways to implement the findings of the analysis through business planning for the Duluth area.

The goal of this research was to be as exacting as possible with follow up actions relative to the outcome of this research, including specific, action-oriented, outcomes.

Methodology

Enterprise networks are especially beneficial to small, independent businesses located in rural areas. The project identified local suppliers to potential new businesses; the project involved a search for industries that demand local outputs as inputs to their production processes. This is an analytical approach consistent with Michael Porter’s\textsuperscript{1} analysis of regional development potentials.

The project was completed in four steps: 1) Local firms were inventoried to identify inputs (suppliers) to industries. 2) A preliminary list was identified of potential industries that are not currently in the area but which use these inputs. 3) Conditions were placed on the potential enterprises on the preliminary list. 4) A limited market analysis was conducted for each new potential product and/or service.

Study area

The study area included zip codes for the following communities: Cloquet, Duluth, Esko, Herman-town, Proctor, Two Harbors, and Superior, WI.

Findings

From the secondary data analysis of the Phase I, industries were ranked for their economic

\textsuperscript{1} Porter, Michael E. The Competitive Advantage of Nations, 1990: NY. The Free Press.
development potential. With the help of stakeholders, the following three potential industries were chosen from the ranked lists: Engineered Wood Member (except Truss) Manufacturing; Custom Roll Forming; and Digital Printing. These industry selections were researched to provide background on several topics: 1) Size and scope of the industry in the region, state and nation; 2) Industry competitiveness; 3) Inputs to this industry; 4) Financials: Solvency, Efficiency, Profitability Ratios; 5) Trade information; and 6) Labor market data, using the BBER Northeast Minnesota Workforce survey data.

Preliminary summaries for the three industries selected from the analysis:

- Industry #1: Engineered Wood Member (except Truss) Manufacturing [NAICS 321213] makes fabricated or laminated wood arches and/or laminated wood structural members.

**Engineered Wood: Industry Summary**

<table>
<thead>
<tr>
<th>Size and scope of the industry</th>
<th># of firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duluth Superior MSA</td>
<td>0</td>
</tr>
<tr>
<td>Minnesota</td>
<td>17</td>
</tr>
<tr>
<td>USA</td>
<td>552</td>
</tr>
</tbody>
</table>

**Index of Industry Competitiveness (base year = 1997)**

| Total Employment index        | 116        |
| Value of Shipments index      | 149        |
| Capital Investment index      | 159        |

Who uses commodities produced

Used by: residential and commercial buildings

**Financials**

| Return on Assets ROA (%)      | 10.2       |

Sources: RefUSA; IMPLAN; U.S. Economic Census; Annual Survey of Manufacturers; BEA; Dunn and Bradstreet

**Trade Information:** The general U.S. economic climate, as it relates to this sector continues to show growth at 4% - 5%, per year. Several market segments present demand for this manufacturer: the residential market, remodeling market, industrial market and the non residential market. Timber Supply reported by the BLS North American Timber Price Trends, suggests some nationwide changes from harvest to conservation management. [See trade issues with Canada, discussed below.] However, an Engineered Wood Demand forecast from The Engineered Wood Association (APA), for glulam to 2009 predicts that glulam is still being affected by the downturn in nonresidential building construction and increased European competition.

Source: The Engineered Wood Association, Tacoma, WA

- Industry #2: Custom Roll Forming [NAICS 332114] firms making custom roll forming metal products using rotary motion with various contours to bend or shape.

**Custom Roll Forming: Industry Summary**

<table>
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</thead>
<tbody>
<tr>
<td>Duluth Superior MSA</td>
<td>0</td>
</tr>
<tr>
<td>Minnesota</td>
<td>0</td>
</tr>
<tr>
<td>USA</td>
<td>8</td>
</tr>
</tbody>
</table>

**Index of Industry Competitiveness (base year = 1997)**

| Total Employment index        | 126        |
| Value of Shipments index      | 160        |
| Capital Investment index      | 219        |

Who uses commodities produced

Used by: electronics, commercial construction, communications equipment mfg

**Financials**

| Return on Assets ROA (%)      | 17.2       |

Sources: RefUSA; IMPLAN; U.S. Economic Census; Annual Survey of Manufacturers; BEA; Dunn and Bradstreet

**Trade Information:** The Precision Metalforming Association (PMA) emphasizes the importance of consumer confidence and capital spending for this industry nationally. The industry is expected to continue with slow growth. However, industry spokesmen comment that “. . . Rollforming has become extremely competitive, and with overcapacity, rollformers are trying to keep their mills busy. We saw this coming years ago, and we had to do something to separate ourselves and attract more business. . . . If you are only doing rollforming
right now you will be in trouble down the road,” Robert Touzalin says, pointing to his increase in diversified sales for evidence of the need to diversify. --Robert Touzalin, President of American Roll Formed Products, *Metalforming Magazine*, March 2004


**Digital Printing: Industry Summary**

<table>
<thead>
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<th>Size and scope of the industry</th>
<th># of firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duluth Superior MSA</td>
<td>0</td>
</tr>
<tr>
<td>Minnesota (Census)</td>
<td>35</td>
</tr>
<tr>
<td>USA (Census)</td>
<td>1133</td>
</tr>
</tbody>
</table>

**Index of Industry Competitiveness (base year = 1997)**

- Total Employment index: 198
- Value of Shipments index: 213
- Capital Investment index: 139

**Who uses commodities produced**

Used by: wholesale trades, organizations, periodical publishers

**Financials**

- Return on Assets (ROA (%)): 5.6

Sources: RefUSA; IMPLAN; U.S. Economic Census; Annual Survey of Manufacturers; BEA; Dunn and Bradstreet

Note: No firms were found in Minnesota; and none in the US (according to RefUSA.) However, the US Census reports 35 firms in Minnesota. We asked a local printer to comment: Dean Baltes, of Shel-Don Reproduction Centre Inc. in Duluth notes there are critical difference between “digital printing” and a “digital press.” For instance Shel-Don in Duluth does digital printing, and Baltes estimates there are thousands of area printers doing “digital printing.” But Baltes agrees that 35 is a good estimate of the state-wide location of digital presses, for instance, one in Grand Rapids. Baltes suggests that most of 35 reported by the Department of Commerce are in the Metro area.2

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2 Thanks to Dean Baltes, Shel/Don Reproduction Centre, Inc., 124 E. Superior St. Duluth MN 55802 218-727-2817 See also “New Printing Technology Moves North at http://www.businessnorth.com/

**Trade Information:** “Digital printing will be a key engine of growth between now and 2010, with particularly healthy expansion likely in advertising, promotional and other direct mail materials.” --Frank J. Romano, Roger K. Fawcett Distinguished Professor at the School of Print Media, Rochester Institute of Technology, *Print E-Business Report*, February 2004

**Economic Impacts**

Economic impact models were run to provide data to describe estimates of possible impacts from the introduction to the study area of a new firm from the three industry sectors.

**Total Economic Impacts for Study Area: Three ENS Industries**

| Engineered wood member and truss manufacturing | Output $5,470,471 |
| Value added $2,462,726 |
| Employment 51 |

| Custom roll forming | Output $4,815,899 |
| Value added $1,455,842 |
| Employment 20 |

| Commercial printing | Output $5,486,615 |
| Value added $2,438,133 |
| Employment 54 |

*2001 Dollars; assuming 3.7 million output

Source: IMPLAN

Where are these industries selling? From a different source held by MN DEED, the REMI model reports aggregated REMI sectors for % of total sales exported out of MN as:

**Wood Products Manufacturing**
ENS and Economic Development, the final step ...

Developers and entrepreneurs can now know which industries have the best potential (as identified by data). They can increase success for entrepreneurs starting or expanding a business. Stakeholders have an analysis which can be used as a sales tool as they contact businesses and discuss local suppliers.

Economic developers are encouraged by the research team to spend time considering the wealth of opportunities present in the list of industries with 80% of their suppliers present in the local economy. In the case of the Duluth communities, 83 industries appear on this list.

For further information, see the Minnesota Department of Employment and Economic Development for follow-up on ENS projects and links to approved consultants. Contact your regional DEED Labor Market Representative at http://www.deed.state.mn.us/bizdev/marketrep.htm.