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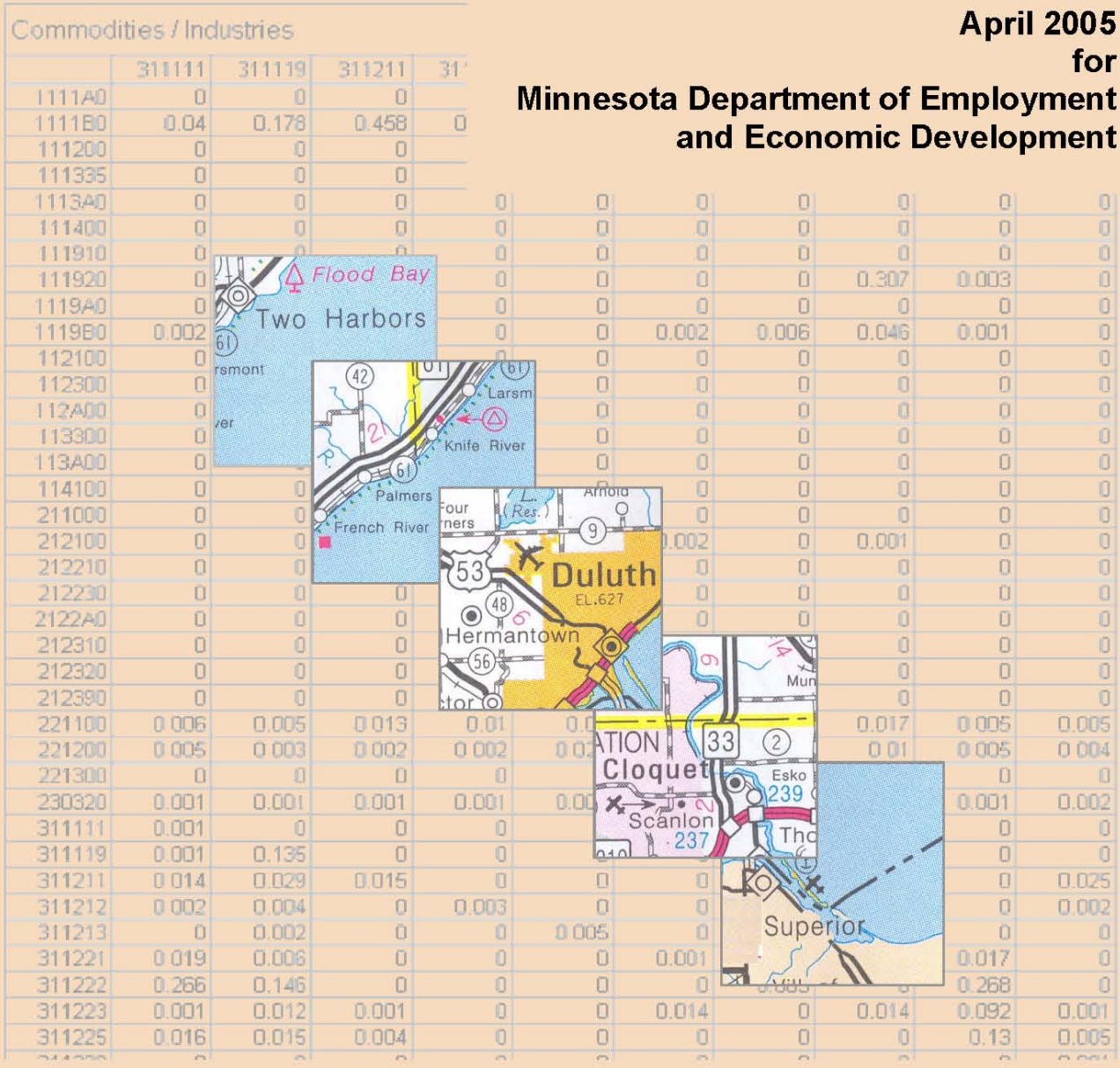
Labovitz School
OF BUSINESS AND ECONOMICS
Bureau of Business and Economic Research

Research Report

Duluth Area Economic Development

Enterprise Network System Analysis

April 2005
for
Minnesota Department of Employment and Economic Development



Letter of Transmittal

May 6, 2005

Matt Kramer, Commissioner
Minnesota Department of Employment and Economic Development
1st National Bank Building
332 Minnesota Street, Suite E200
St. Paul, MN 55101-1351

Commissioner Kramer:

On behalf of the members of the research team it is my pleasure to transmit the final report for the "Duluth Area Economic Development Enterprise Network System Analysis" project to the Minnesota Department of Employment and Economic Development.

The success of this project and the utility of this analysis for the target area has benefited greatly from the enthusiasm and excellent work of DEED representatives working with the UMD Labovitz School's research bureau. The bureau especially commends the cooperation of Bob Isaacson, Jim Wrobleski, and Scott Moore to your attention.

The Labovitz School research bureau looks forward to responding to your RFP for further work on the Enterprise Network System.

Please contact the Bureau for more information regarding the research report attached to this letter.

Respectfully,

Jim Skurla
Principal Investigator
BBER Acting Director

Labovitz School
OF BUSINESS AND ECONOMICS

Bureau of Business and Economic Research

Research Project

Duluth Area Economic Development

Enterprise Network System Analysis

for

Minnesota Department of Employment and Economic Development

April 28, 2005

This report and other research from the Labovitz School's research bureau can be found at: http://www.d.umn.edu/sbe/departments/bber/

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Note: special thanks to Curtis Theis of DEED for Access programming assistance, and Bob Isaacson for data support.

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[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

[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

Size and scope of the industry	*# of firms*
Duluth Superior MSA	0
Minnesota	17
USA	552
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

Size and scope of the industry	*# of firms*
Duluth Superior MSA	0
Minnesota	0
USA	8
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

- Industry #3: Digital Printing [NAICS 323115] printers providing sophisticated prepress services for graphic images.

Digital Printing: Industry Summary

Size and scope of the industry	*# of firms*
Duluth Superior MSA	0
Minnesota (Census)	35
USA (Census)	1133
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

[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/

Source: Reference USA; U.S. Census; Dean Baltes, Shel-Don, Duluth.

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

(including Engineered wood).....79.5%
Fabricated Metal Manufacturing
(including Custom roll forming)....56.0%
Printing and Related Support Activities
(including Digital printing).....53.9%
Source: MN DEED

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.

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PROJECT OVERVIEW

The purpose of this proposed pilot study was to develop an economic development strategy for the greater Duluth, MN area economy based on the concept of Enterprise Network Systems (ENS). The State of Minnesota Department of Employment and Economic Development (DEED) partnered with the UMD Labovitz School of Business and Economics' (LSBE) research bureau to develop the following ENS for selected communities in Northeast Minnesota.[3] The ENS strategy assisted the State in presenting Minnesota JOBZ[4] economic development opportunities to interested stakeholders. The primary focus of the proposed project was to conduct a search for the possible presence of potential enterprise networks within the Duluth area and within the communities surrounding the Duluth area. Secondary data sources for manufacturing sectors were used to complete the study. The results of the proposed study are presented in this written report and presentations to the sponsors and the general public.

Study Area

The project was designed to discover new potential business opportunities within the study area. The definition and extent of the proposed study area, including present manufacturing business structures and suppliers to the Duluth area, was determined in phase one below, and was considered part of the discovery process.[5]

The study area includes zip codes for the following communities. We used the US Post Office ZIP Code Look Up, All ZIP Codes for a City/Town Results, finding ". . .(anytown) associated with the following ZIP Code(s):" including "standard zip code type" and "acceptable status" for city name.

Cloquet	.....	55720 ACCEPTABLE (DEFAULT) STANDARD
Duluth	.....	55816 ACCEPTABLE (DEFAULT) PO BOX ONLY
		55701 ACCEPTABLE STANDARD
		55801 ACCEPTABLE (DEFAULT) PO BOX ONLY
		55802 ACCEPTABLE (DEFAULT) STANDARD
		55803 ACCEPTABLE (DEFAULT) STANDARD
		55804 ACCEPTABLE (DEFAULT) STANDARD
		55805 ACCEPTABLE (DEFAULT) STANDARD
		55806 ACCEPTABLE (DEFAULT) STANDARD
		55807 ACCEPTABLE (DEFAULT) STANDARD
		55808 ACCEPTABLE (DEFAULT) STANDARD

[3] BBER notes the generous and knowledgeable assistance of Scott Moore, Northeast Minnesota Regional Analyst, MN DEED, and Jim Wrobleski, Northeast Minnesota Regional Administrator, MN DEED, on this project.
[4] JOBZ is Minnesota Governor Pawlenty's key initiative to stimulate economic development activity in Greater Minnesota by providing local and state tax exemptions to new and expanding businesses. See, for example, http://www.deed.state.mn.us/bizdev/jobz.htm.
[5] Note: Although it was proposed as possible that during phase one data might show no possibilities exist in the Duluth area for the proposed enterprise network system, this possibility did not transpire.

55810 ACCEPTABLE (DEFAULT) STANDARD
55811 ACCEPTABLE (DEFAULT) STANDARD
55812 ACCEPTABLE (DEFAULT) STANDARD
55814 ACCEPTABLE (DEFAULT) PO BOX ONLY
55815 ACCEPTABLE (DEFAULT) PO BOX ONLY

Esko..... 55733 ACCEPTABLE (DEFAULT) STANDARD
Hermantown ... 55810 ACCEPTABLE STANDARD
55811 ACCEPTABLE STANDARD
Proctor..... 55810 ACCEPTABLE STANDARD
Two Harbors... 55616 ACCEPTABLE (DEFAULT) STANDARD
Superior, WI .. 54880 ACCEPTABLE (DEFAULT) STANDARD

Figure 1. Study Area Map; Communities of Duluth, Proctor, Cloquet, Two Harbors, Esko, and Superior.

Source: Mapquest

METHODOLOGY

Phase I: ANALYSIS

Enterprise Networks

Enterprise networks are federations or alliances that combine the virtues of several independent businesses into a network of collaborative ventures. Enterprise networks are especially beneficial to small, independent businesses located in rural areas. For example, a successful enterprise

network was noted in the production of robotics in Italy: In the early 1990s, several small businesses located in neighboring rural communities collaborated in a joint venture to produce and market robotics. Through secondary data analysis it was seen that together, these small businesses could provide the necessary inputs and services, such as electronic components, fabricated metals, transportation, marketing, etc., to produce robotics. Today, this enterprise is a major supplier of robotics worldwide. Importantly, their success was accomplished without a change in business ownership. Business independence was maintained.

Enterprise networks address at least five important issues:

1) They offer a new kind of competitive advantage.
2) They offer the federation of companies important economies and benefits that may not be available in individual companies, particularly if the companies are small businesses.
3) They can create positive tension between cooperation and competition as companies compete to join the most successful and most profitable networks.
4) They can compete globally because of their comparative advantage and their ability to be flexible in state-of-the-art technologies.
5) They do not adversely impact inter-community relationships. Instead, they encourage community-based partnerships.

The project proposed to identify local suppliers to *new* businesses; the project involved a search for industries that demand local outputs as inputs to their production processes. This is a straight forward approach and is consistent with Michael Porter's[6] analysis of regional development potentials.

The search for possible enterprise networks for the Duluth area and region involved the following steps. (Note: The process was referred to as a "search," because it is possible that *for any particular region, potential enterprise network systems may not exist.* This was not the outcome for the Duluth region.)

Step One:

Step One involved an assessment of the kinds of products and services now being produced within the Duluth area and surrounding communities. The study was successfully completed with the use of secondary data sources, more specifically, using the Input-Output Tables of the Bureau of Economic Analysis Industry Economic Accounts from the U.S. Department of Commerce, and a local firm list compiled from the publicly available sources InfoUSA, RefUSA, and Harris InfoSource as well as Quarterly Census Employment and Wages (QCEW) treated confidentially through a data sharing agreement between the University of Minnesota and

[6] Porter, Michael E. *The Competitive Advantage of Nations*, 1990: NY. The Free Press.

the State of Minnesota.[7]

Regarding identifying suppliers to current businesses: The team identified a list of products and services where a certain percent of input requirements are available locally in the study area (a customer of current businesses). [Note: The research plan did not include identifying suppliers to current businesses.]

Step Two:

A preliminary list of products and services (commodities) not currently being produced in the study area was developed. This list included only products and services where at least 60 percent of production input requirements are currently available within the study region. The matrices of the Input-Output Tables of the BEA were used in this analysis to identify potential suppliers. This was a supply side analysis, consistent with theories of agglomeration.[8] The point was to see if smaller cities and rural areas have a chance for such localization economies as is often found in larger cities and their surrounding region.

Step Three:

Step Three involved placing conditions on the potential enterprises on the preliminary list (Step Two) by creating categories. The threshold of input requirements, which greatly influenced the final lists of enterprises, is somewhat arbitrarily derived, but is intended to report significance. The percentages chosen to show significance are therefore somewhat arbitrary. For instance, the highest category included enterprises where

1) at least 80 percent of input to potential industries in dollars of intermediate goods production requirements are available in the study region;
2) at least two sources (i.e., two businesses) exist for supplying key inputs (the following analysis for the Duluth area finds at least eighteen);
3) lead businesses are located in Duluth and the surrounding region.

Step Four:

Based on the industry findings from step three, a more in depth follow-up analysis on several top industries was done. This was completed from a business plan perspective. The goal was to drill down from the industry level to specific products that could be produced. These products must be potentially economically viable or profitable.

A constraint was imposed by following only the highest ranking products and services, and by

[7] See Appendix for full data source information.
[8] Agglomeration: the effects resulting from the clustering of industrial activities.

providing an initial vetting of products and services that were identified. Products and services that were obviously a poor fit for the region were eliminated rather than included in additional market analysis. Consultation with local business stakeholders contributed to this discussion. The business plan approach was used in identifying specific products, including such key factors as size and scope of the industry, competitiveness, industry projections and growth, solvency, efficiency, profitability. This step attempted to answer the questions: 1) why isn't the industry here already? and 2) what does the industry need to be successful here?

Phase I: FINDINGS

From the matrix of all possible U.S. industries, we chose the industries with the highest percent local inputs (commodities from suppliers). First, we ranked the potential industry by percent local inputs, creating a list of industries with greater than 60%.9

Table 1: Top 83 Industry Prospects, showing: >60% local suppliers present; and no firms currently found in the immediate region

NAICS	naicstitle	Percent Local
321213	Engineered Wood Member Manufacturing	95%
321214	Truss Manufacturing	95%
327213	Glass Container Manufacturing	94%
311823	Dry Pasta Manufacturing	94%
324199	All Other Petroleum and Coal Products	94%
322226	Surface-Coated Paperboard Manufacturing	91%
311830	Tortilla Manufacturing	90%
311212	Rice Milling	90%
33121	Purchased Iron and Steel Pipe and Tube	89%
322233	Stationery and Related Product Mfg	89%
322232	Envelope Manufacturing	89%
327212	Other Pressed & Blown Glass/Glassware	88%
322299	All Other Converted Paper Products	86%
32742	Gypsum Product Manufacturing	85%
32513	Synthetic Dye and Pigment Manufacturing	85%
311512	Creamery Butter Manufacturing	85%
323111	Commercial Gravure Printing	84%
323115	Digital Printing	84%
325221	Cellulosic Organic Fiber Manufacturing	84%
322223	Plastics, Foil, and Coated Paper Bags	83%
322224	Uncoated Paper Bag Manufacturing	83%
332114	Custom Roll Forming	82%
3162	Footwear Manufacturing (rubber footwear for indi	82%
327111	Vitreous China Plumbing Fixtures	82%
32213	Paperboard Mills	81%
331222	Steel Wire Drawing	80%
331221	Rolled Steel Shape Manufacturing	79%
33711	Wood Kitchen Cabinets and Countertops	79%
33242	Metal Tank (Heavy Gauge) Manufacturing	78%
337214	Office Furniture, ex. Wood, Mfg	76%
335912	Primary Battery Manufacturing	76%
32532	Agricultural Chemicals Except Fertilizer	76%
32592	Explosives Manufacturing	76%
323117	Books Printing	75%
324122	Asphalt Shingle and Coating Materials	73%
333921	Elevator and Moving Stairway Mfg	73%
336612	Boat Building	73%
325222	Noncellulosic Organic Fiber Mfg	72%
327999	Misc Nonmetallic Mineral Products Mfg	72%
335224	Household Laundry Equipment Mfg	71%
332115	Crown and Closure Manufacturing	70%
332117	Powder Metallurgy Part Manufacturing	70%
327113	Porcelain Electrical Supply Mfg	69%
332111	Iron and Steel Forging	69%
333132	Oil and Gas Field Machinery & Equipment	68%
333112	Lawn and Garden Equipment Manufacturing	68%
337211	Wood Office Furniture Manufacturing	68%
334516	Analytical Laboratory Instruments	68%
333991	Power-Driven Handtool Manufacturing	68%
325312	Phosphatic Fertilizer Manufacturing	67%
339993	Fasteners, Buttons, Needles, and Pins	67%
33995	Sign Manufacturing	67%
32791	Abrasive Product Manufacturing	67%
337124	Metal Household Furniture Manufacturing	67%
333314	Optical Instrument & Lens Manufacturing	66%
333412	Industrial & Commercial Fans & Blowers	66%
332214	Kitchen Utensil, Pot, and Pan Mfg	66%
334514	Fluid Meters and Counting Devices	66%
311822	Mixes & Dough Made from Purchased Flour	65%
311230	Breakfast Cereal Manufacturing	65%
334411	Electron Tube Manufacturing	65%
332811	Metal Heat Treating	64%
327123	Other Structural Clay Product Mfg	64%
327124	Clay Refractory Manufacturing	64%
335921	Fiber Optic Cable Manufacturing	64%
33994	Office Supplies, except Paper, Mfg	64%
333511	Industrial Mold Manufacturing	64%
333513	Metal Forming Machine Tool Manufacturing	63%
33241	Power Boiler and Heat Exchanger Mfg	63%
333311	Automatic Vending Machine Manufacturing	63%
333312	Commercial Laundry/Drycleaning Machinery	63%
32613	Laminated Plastics Plate, Sheet & Shapes	63%
33792	Blind and Shade Manufacturing	63%
3325	Hardware Manufacturing	63%
33312	Construction Machinery Manufacturing	62%
335212	Household Vacuum Cleaner Manufacturing	62%
339995	Burial Casket Manufacturing	62%
334518	Watch, Clock, and Part Manufacturing	62%
334513	Industrial Process Variable Instruments	61%
333612	Speed Changer, Drive, and Gear Mfg	61%
335311	Electric Power & Specialty Transformers	61%
33322	Plastics and Rubber Industry Machinery	61%
32552	Adhesive Manufacturing	61%
311919	Other Snack Food Manufacturing	60%

9 (Note: For purposes of economic development, all industries on this list are very interesting, and the following list, used as a handout to a stakeholders' group, showed details of the 83 first-cut industries for consideration.)

Source: U.S. Department of Commerce, BEA Industry Economic Accounts, 1997 Benchmark Input-Output Data; UMD LSBE/BBER

We note that the first step in the development of new industries is a sufficient level of local demand for that industry's output. As in Step Three of the methodology outlined above, conditions were placed on the potential enterprises on the preliminary list. For instance, the highest category included enterprises where there exist at least 80 percent of inputs to potential industries in dollars of intermediate goods from the study area.

Table 2: Top 26 Industry Prospects, showing: >80% local suppliers present, and no firms currently found in the immediate region

NAICS	naicstitle	Percent Local
321214	Truss Manufacturing	95%
321213	Engineered Wood Member Manufacturing	95%
327213	Glass Container Manufacturing	94%
311823	Dry Pasta Manufacturing	94%
324199	All Other Petroleum and Coal Products	94%
322226	Surface-Coated Paperboard Manufacturing	91%
311830	Tortilla Manufacturing	90%
311212	Rice Milling	90%
33121	Purchased Iron and Steel Pipe and Tube	89%
322233	Stationery and Related Product Mfg	89%
322232	Envelope Manufacturing	89%
327212	Other Pressed & Blown Glass/Glassware	88%
322299	All Other Converted Paper Products	86%
32742	Gypsum Product Manufacturing	85%
32513	Synthetic Dye and Pigment Manufacturing	85%
311512	Creamery Butter Manufacturing	85%
323115	Digital Printing	84%
323111	Commercial Gravure Printing	84%
325221	Cellulosic Organic Fiber Manufacturing	84%
322224	Uncoated Paper Bag Manufacturing	83%
322223	Plastics, Foil, and Coated Paper Bags	83%
332114	Custom Roll Forming	82%
3162	Footwear Manufacturing (rubber footwear for indices	82%
327111	Vitreous China Plumbing Fixtures	82%
32213	Paperboard Mills	81%
331222	Steel Wire Drawing	80%

Source: U.S. Department of Commerce, BEA Industry Economic Accounts, 1997 Benchmark Input-Output Data; UMD LSBE/BBER

Again, we wanted to see the highest percent local inputs possible in order to identify the greatest chance for success. This definition will always represent the ideal (best) definition if such industries can be found.

Business Outlook

As part of the industry selection process, data were collected to show, for each industry on the

preliminary list, a composite (average) index of business planning variables. The index numbers in this part of the analysis show comparable measures of growth, constructed on the basis of three variables: Value of Shipments, Total Employment, and Capital Investment. A resulting composite index number was ranked for all industries on the 80% local input list from the Phase I analysis. We selected composite industry growth scores greater than 120 from the ranked industries for the resulting new list.

The composite index scores reflect the growth rate from 1997 to 2004 (base year 1997=100). To be selected for this list, an industry must show an index score of at least 120, which means the industry had a growth rate of 20 percent or better between 1997 and 2004.

Table 3: Top Industries: Ranking by composite index number ≥ 120
Sources: 1997 Economic Census; Annual Survey Manufacturers; County Business Patterns, index years 1997-2001; index base year = 1997; U.S. Department of Commerce, BEA Industry Economic Accounts, 1997 Benchmark Input-Output Data; UMD LSBE/BBER

naicstitle	Percent Local	composite index score
Fiber Optic Cable Manufacturing	64%	260
Commercial Laundry/Drycleaning Machinery	63%	259
Boat Building	73%	221
Powder Metallurgy Part Manufacturing	70%	191
Optical Instrument & Lens Manufacturing	66%	187
Digital Printing	84%	183
Wood Kitchen Cabinets and Countertops	79%	176
Truss Manufacturing	95%	175
Custom Roll Forming	82%	168
Household Laundry Equipment Mfg	71%	149
Other Snack Food Manufacturing	60%	147
Gypsum Product Manufacturing	85%	141
Engineered Wood Member Manufacturing	95%	141
Misc Nonmetallic Mineral Products Mfg	72%	140
Analytical Laboratory Instruments	68%	139
All Other Converted Paper Products	86%	139
Surface-Coated Paperboard Manufacturing	91%	137
Automatic Vending Machine Manufacturing	63%	133
Household Vacuum Cleaner Manufacturing	62%	130
Other Structural Clay Product Mfg	64%	129
Fluid Meters and Counting Devices	66%	128
Mixes & Dough Made from Purchased Flour	65%	128
Sign Manufacturing	67%	128
Watch, Clock, and Part Manufacturing	62%	128
Blind and Shade Manufacturing	63%	127
Porcelain Electrical Supply Mfg	69%	123
Paperboard Mills	81%	123
Adhesive Manufacturing	61%	120

The selection process continued: Given our selection criteria included that "at least two local sources (i.e., two businesses) exist for supplying key inputs," we ranked industries by number of local supplying firms. We derived a list for which the number of local supplying firms was greater than

18.

Table 4. Top Industries: Ranked by local participation firms. Cut-off ≥ 18 firms in local count
Sources: 1997 Economic Census; Annual Survey Manufacturers; County Business Patterns, index years 1997-2001; index base year = 1997; U.S. Department of Commerce, BEA Industry Economic Accounts, 1997 Benchmark Input-Output Data; UMD LSBE/BBER

		local supply %	industry growth (	local participation
NAICS	naicstitle	Percent Local	avg index score	local NAICS count
32213	Paperboard Mills	81%	123.00	81
323115	Digital Printing	84%	183.33	72
327212	Other Pressed & Blown Glass/Glassware	88%	106.00	59
32513	Synthetic Dye and Pigment Manufacturing	85%	112.00	52
33121	Purchased Iron and Steel Pipe and Tube	89%	110.33	38
322299	All Other Converted Paper Products	86%	139.00	32
32742	Gypsum Product Manufacturing	85%	141.33	30
332114	Custom Roll Forming	82%	168.33	30
327111	Vitreous China Plumbing Fixtures	82%	118.33	24
321214	Truss Manufacturing	95%	174.67	18
321213	Engineered Wood Member Manufacturing	95%	141.33	18

Finally, we ranked industries on combined results: This table represents the likeliest potential industries for development, as measured by secondary data sources, ranked by selection criteria we developed. Note combined results in Table 5, which shows potential industries ranked by the Percent Local inputs, and including rankings for the selection criteria discussed above:

Table 5. Percent Local Inputs; Combined Index Ranking; and Regional Participation.
Sources: 1997 Economic Census; Annual Survey Manufacturers; County Business Patterns, index years 1997-2001; index base year = 1997; U.S. Department of Commerce, BEA Industry Economic Accounts, 1997 Benchmark Input-Output Data; UMD LSBE/BBER

NAICS	naicstitle	Percent Local	composite index	regional participation
321214	Truss Manufacturing	95%	174.67	18
321213	Engineered Wood Member Manufacturing	95%	141.33	18
33121	Purchased Iron and Steel Pipe and Tube	89%	110.33	38
327212	Other Pressed & Blown Glass/Glassware	88%	106.00	59
322299	All Other Converted Paper Products	86%	139.00	32
32742	Gypsum Product Manufacturing	85%	141.33	30
32513	Synthetic Dye and Pigment Manufacturing	85%	112.00	52
323115	Digital Printing	84%	183.33	72
332114	Custom Roll Forming	82%	168.33	30
327111	Vitreous China Plumbing Fixtures	82%	118.33	24
32213	Paperboard Mills	81%	123.00	81

Note: Some of the sources used to create and rank this Combined Index Ranking are frequently updated. This project used the most recent (2004) data publication for analysis. However, at the writing of this report, 2005 data are becoming available for further study.

Top Three Industry Selections

As part of the research project, the final list of likeliest potential new businesses was presented for discussion on two occasions to focus groups consisting of regional developers and economic development stakeholders. These discussions helped narrow the list of potential industries to three: 321213 Engineered Wood Member Manufacturing; 332114 Custom Roll Forming; and 323115 Digital Printing.

Phase II will show how the initial analysis of secondary data is extended to include conditions where other business predictors of success can be considered, including elements of standard business planning for the three industry sectors selected.

Phase II: BUSINESS PLANNING

The UMD BBER recommended preparing a customized business plan in order to strategize opportunities dependent on the findings of the analysis phase. The preliminary discovery of phase one showed there to be several significant potential enterprise networks, phase two of the project then structured ways to implement the findings of the analysis through strategic business planning for the Duluth area.

An important observation on the business plan strategies of phase two: for this project, business planning is targeted at the potential of a firm as represented by industry sector analysis. And, although much can be reported about industry data at the sector level, analysis and projections regarding a specific (because hypothetical) firm are therefore not possible.

Each of the three industries selected through the secondary data analysis and stakeholder discussions are investigated for preliminary feasibility. Each industry is presented below from the standpoint of seven topics:

1) **Size and scope of the industry in the region, state and nation.** Using RefUSA business listings; and also National Employment, Value added, Cost of Materials, Shipments, Capital expenditures, from the Economic Census 2002, Manufacturing Industry Series.
2) **Industry competitiveness.** Using industry projections and growth description, using data from the variables of the "composite" index used to track input data and growth for the industries suggested by the secondary data analysis of Phase 1, including data from the1997 Economic Census; Annual Survey of Manufacturers; County Business Patterns, index years 1997-2001; index base year - 1997; U.S. Department of Commerce, BEA

Industry Economic Accounts, 1997 Benchmark Input-Output Data; and the UMD LSBE/BBER. And also industry concentration in the area, using location quotient analysis with IMPLAN data and models.

3) **Inputs to this industry.** Tracking the BEA's direct requirements coefficients, showing the amount of a commodity required by the industry to produce a dollar of the industry's output.
4) **Financials**. Solvency, Efficiency, Profitability Ratios, using data from 2004 Dun and Bradstreet Industry Norms and Key Financial Ratios.
5) **Trade associations.** Listings from public sources.
6) **Trade information.** Using industry analysts and publications of relevant trade associations.
7) **Labor market data.** Using the BBER Northeast Minnesota Workforce survey data.

About NAICS coding for locating firms:

This analysis proceeds by arraying "enterprises" as NAICS coded industries. The analysis uses six-digit NAICS codes corresponding to the industry codes of the U.S. Bureau of Economic Analysis. The following discussion of specifics for business planning is conducted with the understanding that NAICS coding is erected on a production-oriented or supply-based conceptual framework, and that the production distinctions become more narrowly defined as one moves down the hierarchy. Locating actual firms with great precision, according to production functions from among the study area's firm inventory becomes open to closer scrutiny, and invites discussion with existing firms.

Also note: The first two digits of the code designate the sector, the third designates the subsector, the fourth digit designates the industry group, the fifth digit designates the NAICS industry, and the sixth digit designates the national industry.

NAICS definitions include industry examples and exclusions under the headings "Illustrative Examples" and "Cross References."

Industry #1:
Engineered Wood Member (except Truss) Manufacturing [NAICS 321213]

— makes fabricated or laminated wood arches and/or laminated wood structural members.

321213 Engineered Wood Member (except Truss) Manufacturing

2002 NAICS Definitions:
source: http://www.census.gov/epcd/naics02/

321213 Engineered Wood Member (except Truss) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated or laminated wood arches and/or other fabricated or laminated wood structural members.

Illustrative Examples:

- Arches, glue laminated or pre-engineered wood, manufacturing
- Fabricated structural wood members (except trusses) manufacturing
- Finger joint lumber manufacturing
- I-joists, wood, fabricating
- Laminated structural wood members (except trusses) manufacturing
- Laminated veneer lumber (LVL) manufacturing
- Lumber, parallel strand, manufacturing
- LVL (laminated veneer lumber) manufacturing
- Parallel strand lumber manufacturing
- Structural members, glue laminated or pre-engineered wood, manufacturing
- Structural wood members (except trusses), fabricated, manufacturing
- Timbers, structural, glue laminated or pre-engineered wood, manufacturing
- Wood I-joists manufacturing

Industry exclusions:

Manufacturing prefabricated wood buildings, or wood sections, and panels for buildings—are classified in U.S. Industry 321992, Prefabricated Wood Building Manufacturing; Manufacturing wood trusses—are classified in U.S. Industry 321214, Truss Manufacturing; and Manufacturing solid wood structural members, such as dimension lumber and timber from logs or bolts,—are classified in U.S. Industry 321113, Sawmills.

1) Size and scope of the industry in the region, state and nation:

- Location and size of firms in industry sector in the Duluth Superior MSA:
  None found.
  Source: RefUSA on-line search

- Location and size of firms in industry sector in the State of Minnesota
  Source: RefUSA on-line search

Table 6. Engineered Wood Firms in Minnesota

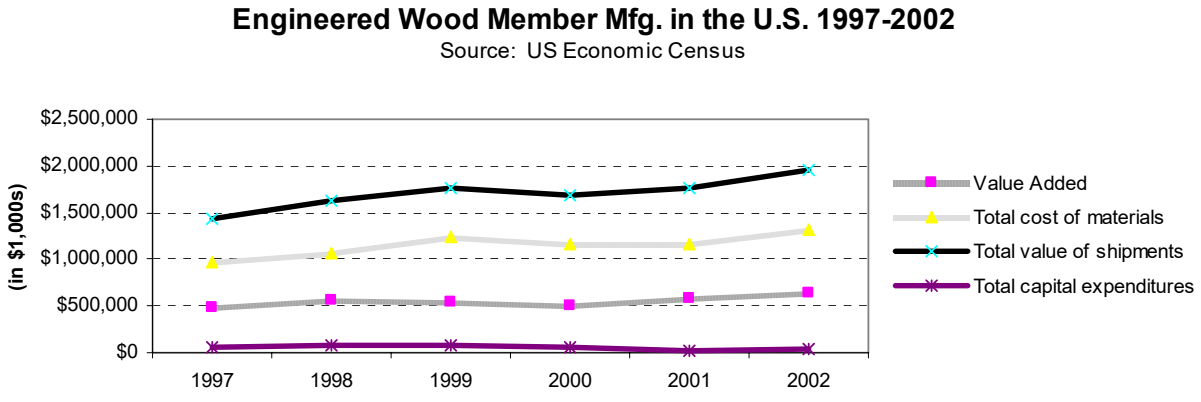
Primary, Secondary and Tertiary NAICS 321213 in the State of Minnesota

Source: on-line RefUSA

NAME	COUNTY	EMP SIZE	NAICS	NAICS CODE 1	NAICS CODE 2
GARFIELD TRUSS SYSTS INC	DOUGLAS	10 to 19	**32121303**		
ALAMCO WOOD PRODUCTS INC	FREEBORN	100 to 249	**32121303**	23816011	32199102
AUTOMATED BUILDING COMPONENTS	WRIGHT	100 to 249	**32121303**	32199201	44419067
VILLAUME INDUSTRIES INC	DAKOTA	100 to 249	**32121303**	32192007	32192008
FABRICATED WOOD PRODUCTS INC	STEELE	20 to 49	**32121303**	44419069	44419067
VERNDALE TRUSS INC	WADENA	20 to 49	**32121303**	32121403	
LITTFIN LUMBER CO	MC LEOD	50 to 99	**32121303**	32191201	42331029
MARSHALL TRUSS SYSTEMS	LYON	50 to 99	**32121303**		
TRUSS MANUFACTURING CO	WRIGHT	50 to 99	**32121303**	23816011	
HIAWATHA INC	HENNEPIN	20 to 49	33251015	**32121303**	42371011
LLOYD LUMBER CO	BLUE EARTH	20 to 49	44411001	**32121303**	44419069
COUNTRY PRIDE SVC COOPERATIVE	COTTONWOOD	20 to 49	44413005	**32121303**	42472020
SOUTH SIDE LUMBER CO	HENNEPIN	50 to 99	44419044	**32121303**	44419069
FULLERTON BUILDING SYSTEMS INC	NOBLES	100 to 249	32199201	23622012	**32121303**
TIMBER ROOTS MTD	WADENA	100 to 249	44419067	32111303	**32121303**
LESTER BUILDING SYSTEMS	MC LEOD	250 to 499	23621003	23622008	**32121303**
ENGINEERED BUILDING COMPONENTS	HENNEPIN	50 to 99	44419067	23816011	**32121303**

- Location and size of firms in industry sector in the United States
  552 firms are listed for the six-digit NAICS 321213, distributed in most states across the U.S.
  Source: RefUSA on-line search

Figure 2. Economic Census 2002, Manufacturing Industry Series; Historical Statistics for the Engineered Wood Member Mfg: 2002 and Earlier Years



And see appendix for more complete Economic Census 2002 tables for this industry, including: Historical Statistics for the Engineered Wood Member Mfg: 2002 and Earlier Years; Industry Statistics for Selected States: 2002; Detailed Statistics by Industry: 2002; Industry Statistics by Employment Size: 2002; Industry Statistics by Primary Product Class Specialization: 2002; Products Statistics: 2002 and 1997; and Materials Consumed by Kind: 2002 and 1997

2) Industry Competitiveness

The variables of the "composite" index used to track input data and growth for the industries suggested by the secondary data analysis of Phase 1 show the following details for this industry:

Table 7. Engineered Wood Firms in the US: Indexed Growth and Outlook, 1997 to 2004

	Industry Outlook Growth and Index Numbers for Three Industries								
			Input Data		Growth				
	NAICS	naicstitle	Percent Local	# of Local Inputs	Total Employment index	Value of Shipments index	Capital Investment index	index total	avg index scores
➔	**321213**	**Engineered Wood Member Manufacturing**	**95%**	**18**	**116**	**149**	**159**	**424**	**141**
	323115	Digital Printing	84%	72	198	213	139	550	183
	332114	Custom Roll Forming	82%	30	126	160	219	505	168
	Sources: 1997 Economic Census; Annual Survey of Manufacturers; County Buinsess Patterns, index years 1997-2001; index base year - 1997; U.S. Department of Commerce, BEA Industry Economic Accounts, 1997 Benchmark Input-Output Data; UMD LSBE/BBER								

- **Industry concentration in the area**

BBER made a preliminary analysis to estimate the relation of sector 321213's local share of the economy to its state and national share, and to identify and interpret differences between local conditions and regional/national conditions, as well as to identify whether this sector shows strengths (specialization) within the local economy of the zip codes of the study region as compared to Minnesota and the U.S. From the data in our analysis, comparisons can be made for employment, output, and value added measures.

When comparing the study area communities to Minnesota and the U.S. as a whole, this industry does not export many of its goods to non-local markets, and not many of the jobs in this sector

are basic sector jobs.[10]

However, when comparing the state of Minnesota to the U.S. this industry does export many of its goods to out-of-state markets, and jobs in this sector are jobs that are an important part of the State's economic base. [Base industries = LQ of 1 or greater.]

Table 8. Engineered Wood Industry Concentration in the Study Area, State and US

IMPLAN sector Engineered Wood Member & Truss Manufacturing

DEED region v. MN	LQ	DEED region v. US	LQ	MN v. US	LQ
Employment	0.22	Employment	0.39	Employment	1.80
Output	0.31	Output	0.59	Output	1.89
Value Added	0.33	Value Added	0.67	Value Added	2.05

Source: IMPLAN 2002

3) Inputs to this industry

The BEA Direct Requirements table is derived from other BEA tables that relate commodity input for an industry to the industry's output. The values in this table, referred to as the "direct requirements coefficients," show the amount of a commodity required by the industry to produce a dollar of the industry's output. Based on this Direct Requirements table, the suppliers to BEA industry 321213, ranked by percent input, include:

[10] Industries that mainly export may be termed basic industries; and industries that mainly produce for local consumption are termed non-basic industries.

Table 9. Direct Requirements for Engineered Wood 321213

Commodity-by-Industry Direct Requirements for BEA Industry 321213					
Source: BEA.gov					
Rank	Commodity Name	Percentage	Rank	Commodity Name	Percentage
1	Sawmills	28.8%	32	Management consulting services	0.2%
2	Wholesale trade	7.4%	33	Waste management and remediation services	0.2%
3	Miscellaneous wood product manufacturing	6.3%	34	Hotels and motels, including casino hotels	0.2%
4	Truck transportation	2.8%	35	Food services and drinking places	0.2%
5	Fabricated structural metal manufacturing	2.4%	36	Automotive repair and maintenance, except car washes	0.2%
6	Reconstituted wood product manufacturing	2.1%	37	Electronic equipment repair and maintenance	0.2%
7	Management of companies and enterprises	1.6%	38	Maintenance and repair of nonresidential buildings	0.1%
8	Hardware manufacturing	0.8%	39	Paper and paperboard mills	0.1%
9	Monetary authorities and depository credit intermediation	0.7%	40	Petroleum refineries	0.1%
10	Power generation and supply	0.6%	41	Turned product and screw, nut, and bolt manufacturing	0.1%
11	Real estate	0.6%	42	Metal coating and nonprecious engraving	0.1%
12	All other miscellaneous professional and technical services	0.6%	43	Electroplating, anodizing, and coloring metal	0.1%
13	Semiconductors and related device manufacturing	0.5%	44	Relay and industrial control manufacturing	0.1%
14	All other electronic component manufacturing	0.5%	45	Retail trade	0.1%
15	Rail transportation	0.5%	46	Water transportation	0.1%
16	Telecommunications	0.4%	47	Scenic and sightseeing transportation and support activities for transportation	0.1%
17	Other State and local government enterprises	0.4%	48	Couriers and messengers	0.1%
18	Air transportation	0.3%	49	Insurance carriers	0.1%
19	Nondepository credit intermediation and related activities	0.3%	50	Machinery and equipment rental and leasing	0.1%
20	Scientific research and development services	0.3%	51	Legal services	0.1%
21	Commercial machinery repair and maintenance	0.3%	52	Accounting and bookkeeping services	0.1%
22	Natural gas distribution	0.2%	53	Advertising and related services	0.1%
23	Carpet and rug mills	0.2%	54	Employment services	0.1%
24	Engineered wood member and truss manufacturing	0.2%	55	Business support services	0.1%
25	Machine shops	0.2%	56	Services to buildings and dwellings	0.1%
26	Warehousing and storage	0.2%	57	Household goods repair and maintenance	0.1%
27	Data processing services	0.2%	58	Civic, social, professional and similar organizations	0.1%
28	Securities, commodity contracts, investments	0.2%		Total	100.0%
29	Automotive equipment rental and leasing	0.2%			
30	Lessors of nonfinancial intangible assets	0.2%			
31	Architectural and engineering services	0.2%			

4) Financials: Solvency, Efficiency, Profitability

Ratios:

Note the data sources for these data do not provide NAICS related values; BBER has used the corresponding SIC codes for the following table. Entrepreneurs and venture capitalists have many sources and reports for financial numbers to consider. The following Dun and Bradstreet analysis (from 2004 Dun and Bradstreet *Industry Norms and Key Financial Ratios*) is presented to represent a much wider context of financial analysis that can be useful for judging the market position of a possible firm. For helpful definitions of the terms presented in this table see the Dun and Bradstreet text above. Note again that the secondary data analysis from Phase 1 of this study has delivered findings in terms of industry sector rather than firm specific data.

See in addition: Risk Management Association, through paper copy publications from RMA, Philadelphia, PA, or www.rmahq.org; specifically RMA 00-01_04-05 for NAICS 32311, 321213, and 332114. *2005 Almanac of Business and Industrial Financial Ratios*, Leo Troy, Prentice Hall.

Table 10. Structural Wood Members Financial Ratios

SIC 2439 **Structural Wood Members**
Ratios (Median Figures)
Source: 2004 Dun and Bradstreet

Solvency		Efficiency		Profitability	
Quick (times)	1.5	Coll Period (days)	31.4	Return on Sales (%)	3.4
Current (times)	2.8	Sales to Inv (times)	15.3	ROA (%)	10.2
Curr Liab to NW (%)	38.5	Assets to Sales (%)	33.3	Return on NW (%)	16.3
Curr Liab to Inv (%)	119.2	Sales to NWC (times)	6.9		
Total Liab to NW (%)	70.1	Acct Pay to Sales (%)	2.1		
Fixed Assets to NW (%)	46.3				

See also: *2005 Almanac of Business and Industrial Financial Ratios*, Leo Troy; RMA 2000-2001
As reported under SIC 2439, Structural Wood Members

The Solvency measures show that the Current Ratio is almost twice as large as the Quick Ratio. The Total Liabilities to Net Worth ratio of 70.1% indicate that the structural wood member firms are somewhat leveraged. Their Efficiency measures report the Accounts Receivable collection at just over 1 month (31.4 days). However, the Sales to Inventory ratios of 15.3 times might be low and the Accounts Payable to Sales percentage is a mere 2.1 %. Finally, the profitability ratios suggest a typical Return on Assets percentage of 10.2 % and a Return on Net Worth percentage of 16.3 %.

5) Trade Associations

APA - The Engineered Wood Association
7011 So. 19th, Tacoma, WA 98466
(253) 565-6600 / Fax: (253) 565-7265
email: help@apawood.org
http://www.apawood.org/

6) Trade information:

The general U.S. economic climate, as it

Note: "GENEVA (CP) - The World Trade Organization has set up a panel to decide if the United States complied with the global commerce body's rulings in a long-running lumber dispute with Canada.

The compliance panel will rule within three months and if it finds the United States has failed to comply with WTO rules, that will open the way for Canada to retaliate, said trade officials, speaking on condition of anonymity.

But the WTO held off on authorizing Ottawa's request to punish the United States with immediate retaliatory duties worth $200 million Cdn. That makes little immediate difference to the dispute, however, because Ottawa had already agreed with Washington not to apply any penalties until a final WTO decision on U.S. compliance.

In 2002, the United States slapped import duties on Canadian softwood lumber, which is used by house builders, accusing Ottawa of hurting U.S. manufacturers by subsidizing its lumber industry. Canada denied this.

Canada claims the United States failed to respect decisions made by the WTO last spring, but Washington says it has adopted them."

[http://www.recorder.ca/cp/National/050114/n011429A.html]

relates to engineered wood manufacture, continues to show real growth at 4% - 5%, which has increased from 2003 and 2002. There is some general consensus that the U.S. economy can maintain 3% or better growth without significant inflation. The downside for this forecast includes the risk from increased demand which can increase the government's need to borrow, the risk of lower demand for U.S. bonds in the global economy, a weak labor market, and increasing costs for energy. In the general picture for this sector, the Canadian economy is also important to track: growth rates around 3% are expected for 2004 and 2005.

The US/Canada lumber trade dispute continues to create uncertainty in international timber supply.

Several market segments present demand for this manufacturer: a residential market where the U.S. Department of Commerce says that housing starts for 2004 turned out to be another good year; a remodeling market, where expenditures are expected to remain strong; an industrial market, where the market has many different niches (wood container and pallet; furniture and related product, travel trailer and campers, and etc.) and in which specialties are slowing or increasing, but that overall is forecast to reflect a turning point in 2004 and cycle up for the next five years; and finally a nonresidential market, where the U.S. recession and slow-growth economy since 2001 [sic] shows a drop in construction of nonresidential buildings.

Timber supply, as reported by the BLS North American Timber Price Trends, suggests some nationwide changes from harvest to conservation management. Timber owners will be asked to produce more wood fiber. Also of consequence is the increasing use of short-rotation plantations. Wood fiber from these sources will be of lower quality, less conducive to structural solid-wood, but more beneficial to engineered wood manufacture.

Engineered wood demand. The forecast from the APA - The Engineered Wood Association,[11] for glulam [glued-laminated structural timber] 2004 to 2009 predicts that glulam is still being affected by the downturn in nonresidential building construction [sic] and increased European competition. However, nonresidential construction is expected to recover and consume more glulam in 2004. It is possible that nonresidential building designers will follow the provision of the International Building Code that allows greater heights and areas for wood construction, which could increase demand for engineered wood products.

The forecast for the use of engineered joists, beams and headers shows increases through 2009 but in small volume, with the assumption that these products will continue to displace solid sawn beams and headers in residential and nonresidential construction markets.

11 *Regional Production & Market Outlook for Structural Panels and Engineered Wood Products 2004 – 2009*, The Engineered Wood Association, March 2004, Tacoma, WA.

Also note, for comparison, the following specific firm profiles:

- Profile of the firm in the study region (including Superior, WI) with the closest primary NAICS code (32199929)
- Profile of the nearest firm in Minnesota (Albert Lea) with the closest primary NAICS code (32121303)

Table 11. Area Firms with NAICS codes related to 321213 Engineered Wood

Other Engineered Wood Manufacturers in Minnesota And Wisconsin

Source: RefUSA

Name:	**Superior Wood Systems**	**Alamco Wood Products Inc**
Address:	1301 Garfield Ave	1410 W 9th St
City:	Superior	Albert Lea
St:	Wi	Mn
Zipcode:	54880	56007
County:	Douglas	Freeborn
Emp Size:	20 To 49	100 To 249
Sales:	$1 To $2.5 Million	$10 To $20 Million
NAICS:	32199929	32121303
NAICS Description:	Misc Wood Prod Mfg	Engineered Wood Member Mfg
NAICS Code 1:	42331029	23816011
NAICS Description 1:	Lumber & Wood Merchant Whols	Roofing Contrs
NAICS Code 2:		32199102
NAICS Description 2:		Manufactured Home, Mobile Home, Mfg

7) Labor market

BBER's Workforce Survey dataset helps answer some questions about the existence in this region of workers who have the apparently needed skills for an industry such as Engineered Wood Member Manufacturing.

In the Workforce Survey, all occupations (with industry) and skills respondents want to use were listed -- 3123 items. The relevance of each listed item to a potential Engineered Wood Member Manufacturing industry was coded using the following categories:

0 *Skill or occupation not relevant to this industry*
1 *Skill or occupation is relevant a general labor for this industry (bookkeepers, accounts, general labor, janitorial, secretarial, etc.)*
2 *Skills that are relevant as specific supportive staff for a given industry*
3 *Highly relevant, key skills required in this specific industry*

In the appendix to this report, Table 1 indicates that 28% of the respondents had skills judged relevant to the Engineered Wood Member Manufacturing industry. Among those in the labor force (working or who want to work), 35% have skills judged relevant to the Engineered Wood Member Manufacturing industry. Among those respondents with relevant skills, 2% were highly

relevant to the Engineered Wood industry.

Perhaps a better estimate of the available labor force for each industry can be seen by combining those with highly relevant skills plus those with skills relevant as specific staff skills for each industry. Among respondents with relevant skills 26% fall in this category for Engineered Wood Member Manufacturing.

In the appendix to this report, Table 2 provides information about the distribution of various workforce characteristics for those who have the top two categories of relevance of their skills for this industry.

Industry #2:
Custom Roll Forming [NAICS 332114]

— firms making custom roll forming metal products using rotary motion with various contours to bend or shape.

332114 Custom Roll Forming

2002 NAICS Definitions:

332114 Custom Roll Forming[US]
source: http://www.census.gov/epcd/naics02/

This U.S. industry comprises establishments primarily engaged in custom roll forming metal products by use of rotary motion of rolls with various contours to bend or shape the products.

Industry exclusions:

Establishments primarily engaged in manufacturing and installing rolled formed seamless gutters at construction sites are classified in Industry 235610, Roofing, Siding, and Sheet Metal Contractors.

1) Size and scope of the industry in the region, state and nation:

- Location and size of firms in industry sector in the Duluth Superior MSA:
  None found.
  Source: RefUSA on-line search

- Location and size of firms in industry sector in the State of Minnesota
  None found.
  Source: RefUSA on-line search

- Location and size of firms in industry sector in the United States
  Source: RefUSA on-line search

Table 12. Custom Roll Forming Firms in the US from RefUSA

Primary, Secondary and Tertiary NAICS 332114 in the U.S.

Source: on-line RefUSA

NAME	COUNTY	EMP SIZE	NAICS	NAICS CODE 1	NAICS CODE 2
WESTERN ROLLFORMING & MFG	CA	1 to 4	**33211401**		
DYNAMIC METAL LLC	IN	20 to 49	**33211401**	33149104	33299910
TRU-TECH TOOL & MACHINE CORP	MI	20 to 49	**33211401**	33211610	33351307
MEZ INDUSTRIES	CA	100 to 249	**33211401**		
CONCEPT ENGINEERING & MFG CORP	MI	20 to 49	**33211401**	33232204	
ERIE ROLL FORM & ENGINEERING	MI	1 to 4	**33211401**	33232107	33232204
PORTER STEEL & WELDING CO	MI	10 to 19	33231210	33231206	**33211401**
AMERICAN WIRE PRODUCTS INC	KY	100 to 249	33261804	**33211401**	42351042

Also note:

Table 13. Custom Roll Forming Firms in the US from U.S. Census

332114, Custom roll forming establishments in the U.S., 2002		
Source: 2002 Economic Census		
	Establishments	
	Total	20 employees or more
United States	446	232
California	49	23
Florida	18	9
Illinois	30	18
Indiana	18	10
Massachusetts	7	4
Michigan	24	12
Minnesota	11	4
Missouri	10	4
New York	15	3
Ohio	35	23
Oregon	6	4
Pennsylvania	25	14
Washington	13	4

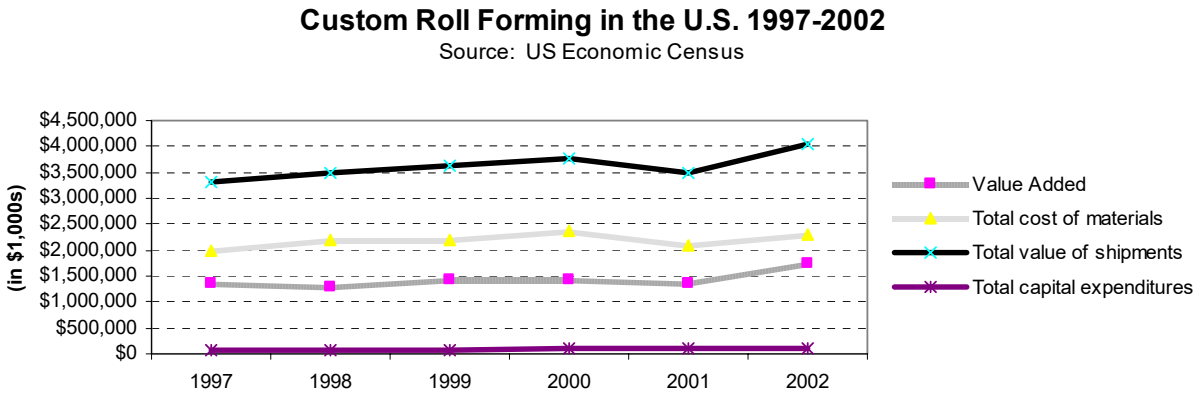
Table 14. Custom Roll Forming Firms in Minnesota

Primary, Secondary and Tertiary NAICS 33211 in the State of Minnesota

Source: on-line RefUSA

NAME	COUNTY	EMP SIZE	NAICS	NAICS CODE 1	NAICS CODE 2
EMP SIZE: 10,000+ (1/137)					
PENTAIR INC	HENNEPIN	60	**33211602**	32212103	32222101
EMP SIZE: 1000-9,999					
NONE					
EMP SIZE: 100- 999 (26/137)					
BERMO INC	ANOKA	100 to 249	23891054	32619910	32619916
GAUTHIER INDUSTRIES INC	OLMSTED	100 to 249	23891054	33232204	**33211610**
AIR-SERV INC	DAKOTA	100 to 249	**33211601**	33391201	33331934
BOKER'S INC	HENNEPIN	100 to 249	**33211610**	33272202	
BTD MFG INC	BECKER	350	**33211610**	33351413	
CLOW STAMPING INC	CROW WING	250 to 499	**33211610**		
DAYTON ROGERS MFG CO	ANOKA	100 to 249	**33211610**	33911203	54161303
GLOBE TOOL & MFG CO	HENNEPIN	100 to 249	**33211610**	33351412	42351022
GREATBATCH GLOBE TOOL	HENNEPIN	100 to 249	**33211610**	42351022	
HARVEY VOGEL MFG CO	WASHINGTON	100 to 249	**33211610**		
KLESK METAL STAMPING CO	HENNEPIN	100 to 249	**33211610**	33351209	33271002
MODERN TOOL INC	ANOKA	100 to 249	**33211610**		
MORRISSEY INC	HENNEPIN	100 to 249	**33211610**	23891054	42399019
TEMPCO MANUFACTURING CO INC	DAKOTA	100 to 249	**33211610**		
WIRCO STAMPING CO	HENNEPIN	100 to 249	**33211610**		
UNITED STEEL PRODUCTS CO	LE SUEUR	268	33231206	33251015	33232302
CAMBRIDGE METALS & PLASTICS	ISANTI	200	33232204	23822030	**33211610**
LEAF INDUSTRIES INC	HENNEPIN	100 to 249	33232204	23891054	**33211610**
MERCURY MINNESOTA INC	RICE	100 to 249	33232204	23822030	**33211610**
TENERE INC STILLWATER DIV	WASHINGTON	100 to 249	33232204	23891054	**33211610**
KURT MANUFACTURING	ANOKA	500 to 999	33271002	**33211606**	33299910
TCR ENGINEERED COMPONENTS	HENNEPIN	100 to 249	33272202	33272101	**33211107**
FEDERAL CARTRIDGE CO	ANOKA	950	33299201	**33211610**	33299301
ASSURANCE MANUFACTURING	ANOKA	100 to 249	33299910	23822030	33211610
BMC INDUSTRIES INC	ANOKA	25	33331404	**33211610**	33281305
ALLTOOL MANUFACTURING CO	SHERBURNE	100 to 249	33351413	**33211610**	33299910
EMP SIZE: 1- 100 (110/137)					
110 firms					

Figure 3. Economic Census 2002, Manufacturing Industry Series; Historical Statistics for Custom Roll Forming: 2002 and Earlier Years



And see appendix for more complete Economic Census 2002 tables for this industry, including: Economic Census 2002, Manufacturing Industry Series; Historical Statistics for Custom Roll Forming: 2002 and Earlier Years; Industry Statistics for Selected States: 2002; Detailed Statistics by Industry: 2002; Industry Statistics by Employment Size: 2002; Industry Statistics by Primary Product Class Specialization: 2002; Products Statistics: 2002 and 1997; and Materials Consumed by Kind: 2002 and 1997

Source: *Industry Outlook, BBER*

Note this summary of industry outlook variables:

Table 15. Custom Roll Forming in the US: Indexed Growth and Outlook

	Industry Outlook Growth and Index Numbers for Three Industries									
			Input Data		Growth				
	NAICS	naicstitle	Percent Local	# of Local Inputs	Total Employment index	Value of Shipments index	Capital Investment index	index total	avg index scores
	321213	Engineered Wood Member Manufacturing	95%	18	116	149	159	424	141
	323115	Digital Printing	84%	72	198	213	139	550	183
➔	**332114**	**Custom Roll Forming**	**82%**	**30**	**126**	**160**	**219**	**505**	**168**
	Sources: 1997 Economic Census; Annual Survey of Manufacturers; County Buinsess Patterns, index years 1997-2001; index base year - 1997; U.S. Department of Commerce, BEA Industry Economic Accounts, 1997 Benchmark Input-Output Data; UMD LSBE/BBER								

2) Industry Competitiveness

Industry concentration in the area
Source: IMPLAN

Table 16. Custom Roll Forming Industry Concentration in the Study Area, State and US

332114 Custom Roll Forming		DNE = "Does not exists"			
DEED region v. MN	**LQ**	**DEED region v. US**	**LQ**	**MN v. US**	**LQ**
Employment	DNE	Employment	DNE	Employment	1.48
Output	DNE	Output	DNE	Output	1.52
Value Added	DNE	Value Added	DNE	Value Added	1.71

Source: IMPLAN 2002

BBER made a preliminary analysis to estimate the relation of sector 332114's local share of the economy to its state and national share, and to identify and interpret differences between local conditions and regional/national conditions, as well as to identify whether this sector shows strengths (specialization) within the local economy of the zip codes of the study region as compared to Minnesota and the U.S. [Base industries = LQ 1 or greater.]

From the data in our analysis, comparisons cannot be made for employment, output, and value added measures, because of the lack of firms declaring this industry code. We note that this industry, as identified by the six-digit NAICS is not currently present in the Region or the State.

3) Inputs to this industry

The BEA Direct Requirements table is derived from other BEA tables that relate commodity input for an industry to the industry's output. The values in this table, referred to as the "direct requirements coefficients," show the amount of a commodity required by the industry to produce a dollar of the industry's output. Based on this Direct Requirements table, the suppliers to BEA industry 332114, ranked by percent input, include:

Table 17. Direct Requirements, Custom Roll Forming 332114

Commodity-by-Industry Direct Requirements for BEA Industry 332114					
Source: BEA.gov					
Rank	Commodity Name	Percentage	Rank	Commodity Name	Percentage
1	Iron and Steel Mills	31.1%	37	Architectural and engineering services	0.2%
2	Wholesale Trade	6.6%	38	Management consulting services	0.2%
3	Aluminum sheet, plate, and foil manufacturing	2.7%	39	Scientific research and development services	0.2%
4	Fabricated structural metal manufacturing	2.7%	40	Advertising and related services	0.2%
5	Primary aluminum production	2.0%	41	Hotels and motels, including casino hotels	0.2%
6	Sheet metal work manufacturing	2.0%	42	Food services and drinking places	0.2%
7	Truck transportation	1.8%	43	Electronic equipment repair and maintenance	0.2%
8	Management of companies and enterprises	1.6%	44	Wood container and pallet manufacturing	0.1%
9	Custom roll forming	1.1%	45	Paper and paperboard mills	0.1%
10	Miscellaneous fabricated metal product manufacturing	1.0%	46	Petroleum refineries	0.1%
11	All other forging and stamping	0.7%	47	Steel wire drawing	0.1%
12	Monetary authorities and depository credit intermediation	0.7%	48	Other aluminum rolling and drawing	0.1%
13	Real estate	0.7%	49	Copper rolling, drawing, and extruding	0.1%
14	Power generation and supply	0.6%	50	Ferrous metal foundaries	0.1%
15	All other miscellaneous professional and technical services	0.6%	51	Metal window and door manufacturing	0.1%
16	Primary nonferrous metal, except copper and aluminum	0.5%	52	Ornamental and architectural metal work manufacturing	0.1%
17	Turned product and screw, nut, and bolt manufacturing	0.5%	53	Metal coating and nonprecious engraving	0.1%
18	Semiconductors and related device manufacturing	0.5%	54	Electroplating, anodizing, and coloring metal	0.1%
19	All other electronic component manufacturing	0.5%	55	Metal forming machine tool manufacturing	0.1%
20	Rail transportation	0.4%	56	Relay and industrial control manufacturing	0.1%
21	Telecommunications	0.4%	57	Postal service	0.1%
22	Commercial machinery repair and maintenance	0.4%	58	Couriers and messengers	0.1%
23	Other State and local government enterprises	0.4%	59	Warehousing and storage	0.1%
24	Nonferrous metal, except copper and aluminum, shaping	0.3%	60	Insurance carriers	0.1%
25	Air transportation	0.3%	61	Machinery and equipment rental and leasing	0.1%
26	Nondepository credit intermediation and related activities	0.3%	62	Legal services	0.1%
27	Securities, commodity contracts, investments	0.3%	63	Employment services	0.1%
28	Automotive repair and maintenance, except car washes	0.3%	64	Business support services	0.1%
29	Natural gas distribution	0.2%	65	Services to buildings and dwellings	0.1%
30	Maintenance and repair of nonresidential buildings	0.2%	66	Waste management and remediation services	0.1%
31	Paint and coating manufacturing	0.2%	67	Household goods repair and maintenance	0.1%
32	Other miscellaneous chemical product manufacturing	0.2%	68	Civic, social, professional and similar organizations	0.1%
33	Machine shops	0.2%		Total	100.0%
34	Data processing services	0.2%			
35	Automotive equipment rental and leasing	0.2%			
36	Accounting and bookkeeping services	0.2%			

4) Financials: Solvency, Efficiency, Profitability

Table 18. Custom Roll Forming Financial Ratios

Ratios: Solvency, Efficiency, Profitability

SIC 3449 **Misc Metalwork**

Ratios (Median Figures)

Source: 2004 Dun and Bradstreet

Solvency		Efficiency		Profitability	
Quick (times)	1.1	Coll Period (days)	32.5	Return on Sales (%)	9.1
Current (times)	6.2	Sales to Inv (times)	25.6	ROA (%)	17.2
Curr Liab to NW (%)	9.9	Assets to Sales (%)	36.1	Return on NW (%)	24.9
Curr Liab to Inv (%)	79.5	Sales to NWC (times)	11.3		
Total Liab to NW (%)	12.3	Acct Pay to Sales (%)	2.3		
Fixed Assets to NW (%)	18.3				

See also*: 2005 Almanac of Business and Industrial Financial Ratios*, Leo Troy;RMA 2000-2001

Metalwork, as reported under SIC 3449

The Solvency measures show that the Current Ratio is almost 6 times the Quick Ratio. The Total Liabilities to Net Worth ratio is a low of 12.3% indicating that the Metalwork Industries are not leveraged. Their Efficiency measures demonstrate a healthy Accounts Receivable collection at just over 1 month (32.5 days). In addition, the Sales to Inventory ratio of 25.6 times is a strong ratio. However, the Accounts Payable to Sales percentage is only 2.3 %. Finally, the profitability ratios indicate a strong Return on Assets percentage of 17.2 % & Return on Net Worth percentage of 24.9 %

5) Trade Associations

Precision Metalforming Association
6363 Oak Tree Blvd.
Independence, OH 44131
http://www.metalforming.com/

National Tooling & Machining Association
9300 Livingston Road
Ft. Washington, MD 20744
(800) 248-6862
Fax: (301) 248-7104
http://www.ntma.org/

6) Trade information

Note the following firm comparison from http://www.makeitmetal.com/

Elrae Industries, Inc.
11035 Walden Ave.
Alden, NY 14004
716/681-7151 Fax:716/681-5216
mmancuso@elrae.com

Industry description: Elrae, for instance, advertises that the firm provides innovative metal forming and assembly solutions to a large number of industries. These solutions typically result in cost reduction, higher levels of quality and a quicker time to market. Capabilities: Stamping 20-600 tons, Roll Forming, Assembly & Retail Ready Services, Customer Services: JIT/Kanban, EDI &

PMA is participating in upcoming hearings before the International Trade Commission (ITC) regarding barriers on imported hotrolled and stainless steel. The ITC previously imposed duties on hot-rolled and stainless steel from certain foreign countries because it found that the countries were exporting the material to the United States below market cost, causing injury to the U.S. steel-producing industry. Because these duties have been in place for five years, the ITC must now conduct a "sunset review" to determine whether to revoke the import duties or keep them in place. U.S. steel consumers have argued that these duties must be relaxed or eliminated due to the increase of global demand and skyrocketing prices. PMA will argue that "changed circumstances" in the U.S. steel market must be taken into account, and that domestic steel consumers need to have access to the same steel as foreign competitors and at comparable prices. It is also anticipated that recent profitability reports of U.S. steel producers should make it difficult for producers to argue that they risk being harmed by steel imports at the present time. *–PMA Update at a Glance* February 2005

Distribution, Quality Certifications: QS 9000 & ISO 9002

The Precision Metalforming Association (PMA) conducted a membership-wide survey which identified the activities of the basic metal forming sector as including: metal stamping including high speed stamping, transfer, deep draw; metal spinning; slide forming; precision sheet metal fabricating and custom roll forming. These industry segments serve a diverse base of commodity users including aerospace, agriculture, appliances, automotive, business machines, defense/ ordinance, electronics, health and medical, industrial/ consumer hardware, instrumentation, telecommunications, and trucking. Forecasts from the industry analysts continue to emphasize the importance of consumer confidence and capital spending as the life-blood for their member companies. With the exception of aerospace, defense, medical and housing-related products, industry orders going to off-shore companies are increasingly among the negative pressures on U.S. manufacturing, and are shared by the Custom Roll Forming industry. As with other manufacturing industries, this industry is expected to continue a slow growth scenario.

Metalforming Magazine, and trade associations such as the National Tooling and Machining Association and PMA are pursuing legislative lobbying on issues critical to the industry such as: trade practices of Asian nations (for example Chinese currency exchange rates), tax relief, funding for manufacturing institutions, legal reform, and affordable health care for small and medium-sized businesses.

Market segments. Metalforming and the need to diversify. Spokesmen for the Custom Roll Forming industry are quoted in *Metalforming Magazine* with the following predictions for the industry: "Along with rollforming, we've been in the tubing business for 40 years, and rollforming is going the way of tubing—turning into a commodity. . . . 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," he says, pointing to the increase in sales for evidence of the need to diversify. . . .While rollforming is our primary business, we see ourselves as a custom high-production fabricator."

--Robert Touzalin, president of American Roll Formed Products (ARFP), Painesville, OH, in *Metalforming*, March 2004 p.35

New technologies present new possibilities, such as: "Wrought-zinc-strip alloys (typically with at least 98-percent zinc content) can be stamped, deep drawn, rollformed, hydroformed, coined, impact extruded and perforated, usually on tooling originally designed for steel or other materials. Also, zinc strip can be soldered and welded without difficulty."

--*Metalforming*, November 2004 p.47

7) Labor market

As noted for Engineered Wood, BBER's Workforce Survey dataset helps answer some questions about the existence in this region of workers who have the apparently needed skills for an industry such as Custom Roll Forming.

In the Workforce Survey, all occupations (with industry) and skills respondents want to use were listed -- 3123 items. The relevance of each listed item to a potential Custom Roll Forming industry was coded using the following categories:

0 *Skill or occupation not relevant to this industry*
1 *Skill or occupation is relevant a general labor for this industry (bookkeepers, accounts, general labor, janitorial, secretarial, etc.)*
2 *Skills that are relevant as specific supportive staff for a given industry*
3 *Highly relevant, key skills required in this specific industry*

In the appendix to this report, Table 1 indicates that 26% of the respondents had skills judged relevant to the Custom Roll Forming. Among those in the labor force (working or who want to work), 32% have skills judged relevant to the Custom Roll Forming industry. Among those respondents with relevant skills, 3% were highly relevant to the roll forming industry.

Perhaps a better estimate of the available labor force for each industry can be seen by combining those with highly relevant skills plus those with skills relevant as specific staff skills for each industry. Among respondents with relevant skills 12% fall in this category for Custom Roll Forming.

In the appendix to this report, Table 2 provides information about the distribution of various workforce characteristics for those who have the top two categories of relevance of their skills for this industry.

Industry #3:
Digital Printing [NAICS 323115]

— printers
providing sophisticated prepress services for
graphic images.

323115 Digital Printing

2002 NAICS Definitions:
323115 Digital Printing[CAN]
source: http://www.census.gov/epcd/naics02/

This U.S. industry comprises establishments primarily engaged in printing graphical materials using digital printing equipment. Establishments known as digital printers typically provide sophisticated prepress services including using scanners to input images and computers to manipulate and format the graphic images prior to printing.

Cross-References.

Establishments primarily engaged in printing with ‘‘up front’’ computer files on conventional type printing equipment are classified based on the type of printing equipment (e.g., lithographic, flexographic, screen) being used.

Prepress services include using scanners to input images and computers to manipulate and format the graphic images prior to printing.

_____

For the NAICS system, in 1997, a new U.S. national industry was created for Digital Printing, U.S. NAICS 323115. The Federal Register describes the industry as follows: Digital printing includes establishments that use a unique process involving heavy "front end" or prepress processing. Establishments in this industry use sophisticated scanning equipment and powerful computing equipment to prepare computerized input to newly developed digital output devices (printers). The products of this industry are typically banners, signs, and posters that are generally of high quality and large size. They are graphic as opposed to textual products. This is a distinct production process that is a new and emerging industry that should be recognized in NAICS.

1) Size and scope of the industry in the region, state and nation:

- Location and size of firms in industry sector 323115 in the Duluth Superior MSA:

  None found.
  Source: RefUSA on-line search

  Note, however, the following findings for 32311 Commercial Printing (with greater than 5 employees), as representing the related five digit NAICS.

Table 19. Digital Printing Related NAICS Code Industries in Minnesota

Primary, Secondary and Tertiary NAICS 32311 in the State of Minnesota					
Source: on-line RefUSA					
NAME	CITY	EMP SIZE	NAICS	NAICS CODE 1	NAICS CODE 2
EMP SIZE: great than 5					
ADVANTAGE EMBLEM & SCREEN PTG	DULUTH	20 to 49	31499905	**32311301**	44819029
PRO-PRINT	DULUTH	20 to 49	**32311009**	32311908	44312013
ROGER'S PRINTING	ELY	5 to 9	**32311009**	**32311908**	
SUPERIOR PRINT OF DULUTH INC	DULUTH	10 to 19	**32311009**	**32311926**	32312216
CHRISTIE PRINTING CO	DULUTH	5 to 9	**32311009**	42412005	
ON THE LIMIT USA LTD	DULUTH	10 to 19	**32311301**	31499905	42412024
JERSEY CITY	DULUTH	5 to 9	**32311301**	33636003	44819029
HAND-DONE T-SHIRTS INC	ELY	5 to 9	**32311301**	44819029	54149001
J 'N T PRINTERY INC	DULUTH	5 to 9	**32311908**	**32311009**	32312104
STEWART TAYLOR PRINTING	DULUTH	20 to 49	**32311908**	**32311009**	32312216
MANNEY'S SHOPPER	HIBBING	100 to 249	**32311908**	**32311009**	45399870
SERVICE PRINTERS OF DULUTH INC	DULUTH	20 to 49	**32311908**	**32311009**	54143006
TODD SIGNS	HERMANTOWN	10 to 19	33995008	31499908	**32311301**
IKON OFFICE SOLUTIONS INC	DULUTH	20 to 49	42342015	**32311908**	42369017
IKONICS CORP	DULUTH	66	42383084	**32311301**	54161303
JOHN MARXHAUSEN JEWELRY DSGN	DULUTH	5 to 9	44831013	**32311908**	33991106
OFFICE MAX	DULUTH	20 to 49	45321007	**32311009**	42321003
GLENWOOD COMMUNICATIONS INC	DULUTH	5 to 9	45399867	**32311009**	32312203
MANNEY'S SHOPPER	VIRGINIA	5 to 9	51111002	**32311009**	45399870
COOK NEWS HERALD	COOK	5 to 9	51111003	**32311009**	**32311908**
PROCTOR JOURNAL PRINTING	DULUTH	5 to 9	51111003	**32311009**	**32311908**
AREA MESABI DAILY NEWS	VIRGINIA	50 to 99	51111003	**32311009**	45399870
HIBBING DAILY TRIBUNE	HIBBING	20 to 49	51111003	**32311908**	
CPL IMAGING	DULUTH	5 to 9	51821015	**32311009**	81292102
CUSTOM LETTERING	HIBBING	5 to 9	54149001	31499921	**32311301**
JPG COMMUNICATIONS INC	VIRGINIA	10 to 19	54181001	**32311009**	**32311908**
WA FISHER ADVERTISING & PRINT	VIRGINIA	10 to 19	54181001	51119908	**32311009**
ELY ECHO	ELY	10 to 19	54181005	51111002	**32311009**
DULUTH BUDGETEER NEWS	DULUTH	20 to 49	54181005	51111003	**32311908**
MELLIN PROMOTIONAL ADVERTISING	DULUTH	5 to 9	54189006	**32311301**	42412024
SHELDON REPRODUCTION CTR	DULUTH	10 to 19	56143903	**32311009**	32312216

- Location and size of firms in industry sector 323115 in the State of Minnesota

  None found.

  Source: RefUSA on-line search

Note, however: The 2002 Economic Census Industry Series lists (by NAICS coding 323115) Minnesota as having 35 Digital Printing establishments, 4 with employment greater than 20; compare the U.S. total of 1,133 total establishments for this industry.

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 1000s 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.[12]

Baltes suggests that most of 35 reported by the Department of Commerce are in the Metro area.

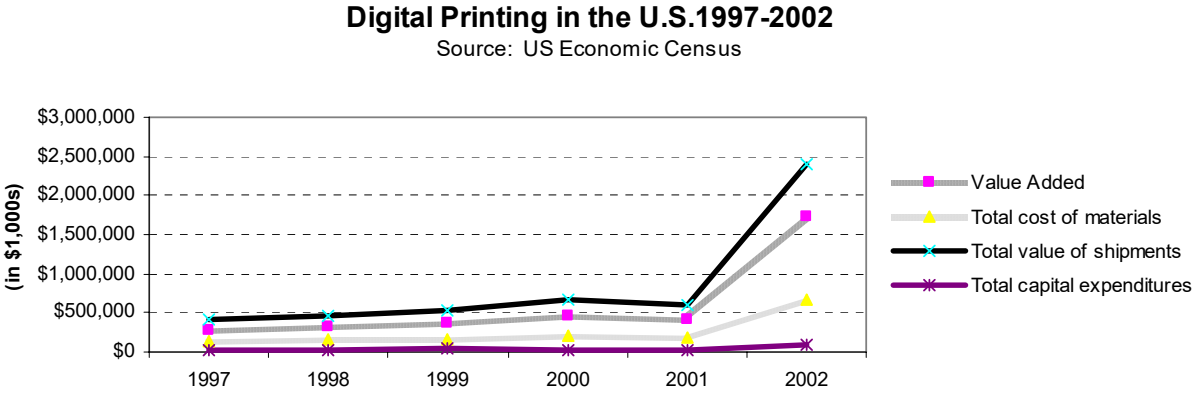
- Location and size of firms in industry sector in the United States
  Source: RefUSA on-line search – None found
  However, the U.S. Economic Census, Industry Series for 2002 reports the following industry totals and locations:

Table 20. Digital Printing Related NAICS Code Industries in the U.S. from the U.S. Census

323115, Digital printing establishments in the U.S., 2002		
source: 2002 Economic Census	Establishments	
	Total	20 or more employees
United States	1133	253
California	158	32
New York	91	27
Florida	67	10
Texas	63	19
Illinois	60	19
Pennsylvania	44	14
Georgia	38	6
Colorado	36	6
Minnesota	35	4
Massachusetts	34	13
Ohio	34	7
North Carolina	33	10
New Jersey	29	5
Arizona	28	3
Missouri	28	9
Maryland	23	4
Tennessee	23	5
Indiana	22	7
Nevada	22	3
Washington	22	1
Kentucky	16	3
Oregon	15	2
Connecticut	13	6
Utah	13	3
Iowa	8	3
New Hampshire	7	4

[12] 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/

Figure 4. Economic Census 2002, Manufacturing Industry Series; Historical Statistics for the Industry: 2002 and Earlier Years



And see appendix for more complete Economic Census 2002 tables for this industry, including: Economic Census 2002, Manufacturing Industry Series; Historical Statistics for the Industry: 2002 and Earlier Years; Industry Statistics for Selected States: 2002; Detailed Statistics by Industry: 2002; Industry Statistics by Employment Size: 2002; Industry Statistics by Primary Product Class Specialization: 2002; Products Statistics: 2002 and 1997; and Materials Consumed by Kind: 2002 and 1997

Table 21. Digital Printing Firms in the US: Indexed Growth and Outlook

	Industry Outlook Growth and Index Numbers for Three Industries									
			Input Data		Growth				
	NAICS	naicstitle	Percent Local	# of Local Inputs	Total Employment index	Value of Shipments index	Capital Investment index	index total	avg index scores
	321213	Engineered Wood Member Manufacturing	95%	18	116	149	159	424	141
➔	**323115**	**Digital Printing**	**84%**	**72**	**198**	**213**	**139**	**550**	**183**
	332114	Custom Roll Forming	82%	30	126	160	219	505	168
	Sources: 1997 Economic Census; Annual Survey of Manufacturers; County Buinsess Patterns, index years 1997-2001; index base year - 1997; U.S. Department of Commerce, BEA Industry Economic Accounts, 1997 Benchmark Input-Output Data; UMD LSBE/BBER								

2) Industry Competitiveness

Industry concentration in the area
Source: IMPLAN

Table 22. Digital Printing Industry Concentration in the Study Area, State and US

32311 Commercial Printing

DEED region v. MN	**LQ**	**DEED region v. US**	**LQ**	**MN v. US**	**LQ**
Employment	0.36	Employment	0.78	Employment	2.15
Output	0.43	Output	0.97	Output	2.27
VA	0.35	VA	0.85	VA	2.46

Source: IMPLAN 2002

BBER made a preliminary analysis to estimate the relation of sector 32311's local share of the economy to its state and national share, and to identify and interpret differences between local conditions and regional/national conditions, as well as to identify whether this sector shows strengths (specialization) within the local economy of the zip codes of the study region as compared to Minnesota and the U.S. From the data in our analysis, comparisons can be made for employment, output, and value added measures. [Base industries = LQ 1 or greater.]

When comparing the study area communities to Minnesota and the U.S. as a whole, this industry does not export many of its goods to non-local markets, and the jobs in this sector are not basic sector jobs.

However, when comparing the state of Minnesota to the U.S. this industry does export many of its goods to out-of-state markets, and jobs in this sector are jobs that are an important part of the State's economic base.

3) Inputs to this industry

The BEA Direct Requirements table is derived from other BEA tables that relate commodity input for an industry to the industry's output. The values in this table, referred to as the "direct requirements coefficients," show the amount of a commodity required by the industry to produce a dollar of the industry's output. Based on this Direct Requirements table, the suppliers to BEA industry 323115, ranked by percent input, include:

Table 23. Direct Requirements, Digital Printing 323115

Commodity-by-Industry Direct Requirements for BEA Industry 323115					
Source: BEA.gov					
Rank	Commodity Name	Percentage	Rank	Commodity Name	Percentage
1	Paper and paperboard mills	16.1%	44	Architectural and engineering services	0.2%
2	Wholesale trade	5.7%	45	Management consulting services	0.2%
3	Commercial printing	3.0%	46	Waste management and remediation services	0.2%
4	Printing ink manufacturing	2.8%	47	Hotels and motels, including casino hotels	0.2%
5	Management of companies and enterprises	2.8%	48	Automotive repair and maintenance, except car washes	0.2%
6	Prepress services	2.6%	49	Electronic equipment repair and maintenance	0.2%
7	Truck transportation	2.5%	50	Wet corn milling	0.1%
8	Coated and laminated paper and packaging materials	2.1%	51	Other basic organic chemical manufacturing	0.1%
9	Printing machinery and equipment manufacturing	1.2%	52	Paint and coating manufacturing	0.1%
10	Real estate	1.1%	53	Other miscellaneous chemical product manufacturing	0.1%
11	Power generation and supply	0.9%	54	Plastics packaging materials, film and sheet	0.1%
12	Cut and sew apparel manufacturing	0.8%	55	Plastics pipe, fittings, and profile shapes	0.1%
13	Other leather product manufacturing	0.8%	56	Plastics plumbing fixtures and all other plastics products	0.1%
14	Monetary authorities and depository credit intermediation	0.8%	57	Rubber and plastics hose and belting manufacturing	0.1%
15	Photographic film and chemical manufacturing	0.7%	58	Other rubber product manufacturing	0.1%
16	Scientific research and development services	0.7%	59	Turned product and screw, nut, and bolt manufacturing	0.1%
17	Envelope manufacturing	0.6%	60	Metal coating and nonprecious engraving	0.1%
18	Semiconductors and related device manufacturing	0.6%	61	Electroplating, anodizing, and coloring metal	0.1%
19	Advertising and related services	0.6%	62	Cutting tool and machine tool accessory manufacturing	0.1%
20	All other miscellaneous professional and technical services	0.6%	63	Fluid power cylinder and actuator manufacturing	0.1%
21	All other electronic component manufacturing	0.5%	64	Computer terminal manufacturing	0.1%
22	Air transportation	0.5%	65	Relay and industrial control manufacturing	0.1%
23	Rail transportation	0.5%	66	Retail trade	0.1%
24	Telecommunications	0.5%	67	Postal service	0.1%
25	Automotive equipment rental and leasing	0.5%	68	Couriers and messengers	0.1%
26	Paperboard container manufacturing	0.4%	69	Database, directory, and other publishers	0.1%
27	Natural gas distribution	0.3%	70	Securities, commodity contracts, investments	0.1%
28	Textile and fabric finishing mills	0.3%	71	Insurance carriers	0.1%
29	Custom compounding of purchased resins	0.3%	72	General and consumer goods rental except video tapes and discs	0.1%
30	Warehousing and storage	0.3%	73	Other computer related services, including facilities management	0.1%
31	Nondepository credit intermediation and related activities	0.3%	74	Employment services	0.1%
32	Machinery and equipment rental and leasing	0.3%	75	Business support services	0.1%
33	Accounting and bookkeeping services	0.3%	76	Services to buildings and dwellings	0.1%
34	Food services and drinking places	0.3%	77	Other support services	0.1%
35	Commercial machinery repair and maintenance	0.3%	78	Household goods repair and maintenance	0.1%
36	Maintenance and repair of nonresidential buildings	0.2%	79	Civic, social, professional and similar organizations	0.1%
37	Broadwoven fabric mills	0.2%	80	Noncomparable imports	0.1%
38	Petroleum refineries	0.2%		Total	100.0%
39	Adhesive manufacturing	0.2%			
40	Machine shops	0.2%			
41	Industrial process variable instruments	0.2%			
42	Data processing services	0.2%			
43	Legal services	0.2%			

4) Financials: Solvency, Efficiency, Profitability

Table 24. Digital Printing Financial Ratios

SIC 2759 **Commercial Printing**

Ratios (Median Figures)

Source: 2004 Dun and Bradstreet

Solvency		Efficiency		Profitability	
Quick (times)	1.2	Coll Period (days)	41.3	Return on Sales (%)	1.9
Current (times)	1.8	Sales to Inv (times)	19.5	ROA (%)	5.6
Curr Liab to NW (%)	62.2	Assets to Sales (%)	39.9	Return on NW (%)	11.9
Curr Liab to Inv (%)	253.9	Sales to NWC (times)	8.1		
Total Liab to NW (%)	112.5	Acct Pay to Sales (%)	4.5		
Fixed Assets to NW (%)	68.1				

See also: *2005 Almanac of Business and Industrial Financial Ratios*, Leo Troy; RMA 2000-2001

Commercial Printing, as reported under SIC 2759

The Solvency measure of Current ratio is only slightly higher than the Quick Ratio. The Total Liabilities to Net Worth ratio is an extremely high 112.5% implying that the commercial printing industry is very highly leveraged. Its Efficiency measures indicate a weak Accounts Receivable collection of almost one and a half months (41.3 days). The Sales to Inventory ratios of 19.5 times is an average ratio. The Accounts Payable to Sales percentage is 4.5 %. Finally, the Profitability Ratios indicate a relatively low Return on Assets percentage of 5.6 % and a Return on Net Worth percentage of 11.9%.

Federal and State Advocacy Issues Pursued by SGIA:

- South Coast Rule 1171- SGIA supports compliance extension (1.27.05)
- Employer Pay PPE Rule– SGIA comments on "Tools of the Trade" exception (8.23.04)
- OSHA Site Specific Targeting Program – SGIA suggests SST improvements (7.20.04)
- Hazard Communication–SGIA comments on OSHA guidance documents (5.17.04)
- Report to Congress on Costs of Regulations - SGIA's industry comments (5.20.04)
- U.S. EPA Shop Towel Rule – SGIA comments on proposed shop towel regulations (4.9.04)
- OSHA Amputation Guide – Graphic Arts Coalition highlights errors in OSHA printing guide (3.6.04)
- U.S. EPA Shop Towel Testimony – SGIA offers expertise to the U.S. EPA (2.9.04)
- OSHA Walking/Working Surfaces Rule - SGIA comments on fall protection standards (7.29.03)
- Small Business Regulatory Relief - SGIA submits comments on the Small Business Paperwork Reduction Act (3.7.03)

5) Trade Associations

Specialty Graphic Imaging Association

10015 Main Street,
Fairfax, VA USA 22031-3489
Phone: 703.385.1335
Fax: 703.273.0456
E-mail: sgia@sgia.org \
Webmaster: webmaster@sgia.org
1.888.385.3588
assist@sgia.org

Digital Printing and Imaging Association
703-385-1339
888-385-3588
Email: assist@sgia.org
http://www.dpia.org/dpi.cfm

Printing Industries of America (PIA)/Graphic Arts Technical Foundation (GATF)
200 Deer Run Road
Sewickley, PA 15143-2600
Phone: 412/741-6860
Fax: 412/741-2311
E-mail: gatf@piagatf.org
http://www.gain.net/

6) Trade Information

Regulation issues faced by this industry are mostly environmental, safety and health compliance, as well as hazardous materials, patents and copyright issues.

Industry overview: Speakers at *Print Outlook* conference in Washington, DC, sponsored by The Association for Suppliers of Printing, Publishing, and Converting Technologies, predicted improving revenues and profits for the printing, publishing, and converting industry in 2004 after a long and difficult recession, but also warned that the industry still faces challenges. "It's an on-demand world after all. Sure, we know about print on demand or POD. It is a euphemism for digital printing in all its guises. Because digital printing has neither make-ready nor drying time, it can produce a job faster than offset litho." . . .

From another perspective, the RIT School of Print Media, summarized a study on digital printing business models as follows: "In sum, we validated four success models for digital print providers. As more printers see a way for digital printing to fit into their existing businesses, we anticipate that the demand for digital printing equipment and supplies will continue to increase in

the next few years. -"Digital Printing Success Models: Validation Study" (2004) By Patricia Sorce, Ph.D. Administrative Chair, Rochester Institute of Technology, School of Print Media.

See also: Davis R. The outlook for print. December 2004 GATFWorld 16(1).

Another academic view was expressed by Frank Romano, suggesting that digital printing is the engine of growth for the commercial printing industry: "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," said Frank J. Romano, Roger K. Fawcett Distinguished Professor at the School of Print Media, Rochester Institute of Technology. Likely changes in the print environment may include more last minute jobs, more capabilities to make changes right up to and during a press run, and a greater ability to have confidence in job quality with less demand for repeated proofs. "Commercial printers have lost roughly five percent of their print volume annually for the last four years," Romano said, "but these losses weren't easy to identify because so many printers were building revenues in ancillary service areas such as mailing and fulfillment. The generally poor economy also served to mask fundamental declines in print volume."

Barbara Pellow (RIT) comments on who's creating demand for digital print: The understanding of personalized digital printing still lags in many advertising agencies, according to a recently completed study at the Sloan Printing Industry Center at Rochester Institute of Technology, reported at Print Outlook by RIT's Gannett Distinguished Professor Barbara Pellow. "The concept of personalized printing, from an agency perspective, has not taken hold," she said. "Agencies are starting to see value in personalized print applications, but there is still a major void." Many print specifiers still mistake ordinary mail merges for personalization, she added. On the client side, "marketing executives are becoming much more technology-savvy." The main cost barrier is the job of building the client's data infrastructure to support personalization. "Investment in software can be two to three times greater than the investment in equipment,"
--(http://www.gain.net/PIA_GATF/PDF/0204peb.pdf)

Under-reported technology and business trends that may catch printers and suppliers off-guard are covered by Joe Webb's industry analysis: "Printing shipments have continued to stagnate, yet other segments of the economy are doing well. This webinar will explore some of the factors that seem to be contributing to this lackluster performance, and offer owners and managers of printing businesses guidance on how they might combat this downward trend," stated Randy Davidson, President of WhatTheyThink.com. –WhatTheyThink.com [Wednesday, March 30th from 2:00 to 3:00 pm EST. http://members.whattheythink.com/home/webinarregistration form.cfm]

7) Labor market

As noted for the other industry sectors considered here, BBER's Workforce Survey dataset helps answer some questions about the existence in this region of workers who have the apparently needed skills for an industry such as Digital Printing.

In the Workforce Survey, all occupations (with industry) and skills respondents want to use were listed -- 3123 items. The relevance of each listed item to a potential Digital Printing industry was coded using the following categories:

0 *Skill or occupation not relevant to this industry*
1 *Skill or occupation is relevant a general labor for this industry (bookkeepers, accounts, general labor, janitorial, secretarial, etc.)*
2 *Skills that are relevant as specific supportive staff for a given industry*
3 *Highly relevant, key skills required in this specific industry*

In the appendix to this report, Table 1 indicates that 18% of the respondents had skills judged relevant to the Digital Printing. Among those in the labor force (working or who want to work), 23% have skills judged relevant to the Digital Printing industry. Among those respondents with relevant skills, 4% were highly relevant to the roll forming industry.

Perhaps a better estimate of the available labor force for each industry can be seen by combining those with highly relevant skills plus those with skills relevant as specific staff skills for each industry. Among respondents with relevant skills 40% fall in this category for Digital Printing.

In the appendix to this report, Table 2 provides information about the distribution of various workforce characteristics for those who have the top two categories of relevance of their skills for this industry.

Caveats

- The analysis is a pilot study for the identification of potential new economic development industries in Duluth and surrounding communities.

- The search for possible enterprise networks for the Duluth area and region involved the steps outlined above. Note however, that the process is referred to as a "search," because it is possible that for some regions, potential enterprise network systems may not exist. Although this was not the outcome for the Duluth region, the UMD BBER recommended that this project terminate and unspent monies be returned, if the search outcome showed no potential enterprise network systems existed.

- The results of an ENS analysis are determined by the selection of communities to be analyzed. Including large metropolitan areas could present misleading results (too many, if not all networks will be present); or if a study area is described by gerrymandering through an economic labor shed, for instance, findings of the analysis will also be misleading and may overlook possible networks.

- Step Three involved placing conditions on the potential enterprises on the preliminary list (Step Two) by creating a highest condition category. The threshold of input requirements, which will greatly influence the final lists of enterprises, is somewhat arbitrarily derived, but is intended to report significance. The percentages in any suggested categories are therefore somewhat arbitrary.

    - Category A: Category A will include enterprises where
      1) at least 80 percent of input to potential industries in dollars of intermediate goods production requirements are available in the study region;
      2) at least two sources (i.e., two local businesses) exist for supplying key inputs;
      3) lead businesses are located in Duluth and the surrounding region.

    - Category B: Category B will include potential enterprises that meet conditions (2) through (3) for Category A. Condition (1) will be modified to 60 percent of input requirements are available in the study region.

    - Category C: This category will include potential enterprises where at least 60 percent of input requirements are available in the study region. No restrictions on the number and location of suppliers within the study region.

- The availability and robustness of an input supply should be verified; for example, casual conversation with industry stakeholders suggests wood supply to manufacturers is not predictable due to the Canadian/US timber trade dispute.

- BBER recommends, as crucial, a very active role for local stakeholders and economic developers who can assist entrepreneurs with strategic business insights and planning.

- Study results are for a defined region. It is possible that the secondary data analysis of a study area defined by community zip codes, for instance, may overlook the presence of that firm in near proximity, but not technically *in* the study area. Note that the presence of a neighboring industry already here will surface in a feasibility study.

- Before pursuing economic development resources based on Enterprise Network Systems analysis, questions need to be raised about the availability of labor skills, plant technologies, and plant capacity.

- Industry outlook data refresh schedule might be crucial to the timeliness of the results. Updates are always coming and projections vis-a vis market analysts can be fluid. Other factors such as governmental policy changes or political influences, and the variety of "experts" reporting industry forecasts indicates the difficulty in any industry selection or projection remaining stable over time.

For Economic Developers

The Minnesota Department of Employment and Economic Development plans to offer assistance to economic developers and interested stakeholders who indicate they would like to run an ENS analysis of the data for specific communities in Minnesota. Please contact your regional representative to tap into this and other Department of Employment and Economic Development financial and technical assistance programs.

Entrepreneurs ready to move on ideas from this analysis will want to pursue current industry specific information through standard business practices. Complete feasibility studies can be done to determination that the business process, design, procedure, and plan can be successfully accomplished in the required time frame, and cost benefit analyses can be done to determine if a project is economically worthwhile.

See also: Minnesota Economic Trends, December 2004, Commissioner's Forum, "Enterprise Network System Will Bring Data to Your Desktop" by Commissioner Matt Kramer. http://www.deed.state.mn.us/lmi/publications/trends/1204/commissioner.htm

Further Research

As indicated in the caveats listed above, further analysis can be done with the secondary data to develop less obvious possibilities in the rankings. Changing the percentage condition from 80% to 60% or 70%, or including more local suppliers as a criterion for selection can change the list of possible industries for consideration.

It might also be possible to look at suppliers to local industries, but such an investigation would be, for a variety of reasons, a different project from the one here proposed.

Using the framework of this analysis as a way to study possible import substitution is a further possible use of these data.

Appendix

Including:

1) About NAICS coding for locating firms
2) Supporting data for Engineered Wood, Custom Roll Forming, Digital Printing:
   - Selected Reference USA data for location of competition in MN counties, neighboring states, and US
   - Economic Census 2002 Manufacturing Series
3) Workforce Prospects for Three Prospective Northland Industries, UMD/BBER Workforce Survey
4) Data sources

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1) About NAICS coding for locating firms

NAICS is an establishment classification system, not a company classification system. To determine in which industry each establishment of your company is classified, you should first identify the primary activity of each establishment and then go to the alphabetic list of activities in the NAICS United States Manual. Find that activity in the alphabetic index, turn to the industry description of the specified code, read the definition of the industry as printed in the description, and determine if that description fits the activities of your establishment.

NAICS uses a six-digit coding system to identify particular industries and their placement in this hierarchical structure of the classification system. The first two digits of the code designate the sector, the third designates the sub-sector, the fourth digit designates the industry group, the fifth digit designates the NAICS industry, and the sixth digit designates the national industry. A zero as the sixth digit generally indicates that the NAICS industry and the U.S. industry are the same.
The sub-sectors, industry groups, and NAICS industries, in accord with the conceptual principle of NAICS, are production-oriented combinations of establishments. However, the production distinctions become more narrowly defined as one moves down the hierarchy.

Source: On-line NAICS Documents Prepared by: Office of Management and Budget's Economic Classification Policy Committee, www.census.gov/naics.

2) Supporting data for Engineered Wood, Custom Roll Forming, Digital Printing

321213 Engineered Wood Member Manufacturing

—Selected Reference USA data for location of competition:

Where are NAICS sector 321213 firms located, and how many workers do they employ? Is NAICS sector 321213 the firm's primary, secondary or tertiary code identification?

Note the representative data below which lists all 321213 firms in Minnesota by county, with employment and sales. Other variables are available from RefUSA and were reviewed by the BBER.

321213 Engineered Wood Member Manufacturing in the State of Minnesota
Source: RefUSA on-line search for 32123 in Minnesota, 2/2005

on-line RefUSA highlighted NAICS sector:										
NAME	CITY	COUNTY	EMP SIZE	SALES	BUS STATUS	NAICS	YR01	NAICS CODE	NAICS DESC	NAICS CODE
LESTER BUILDING SYSTEMS	LESTER PRAIRIE	MC LEOD	250 to 499		SUBSIDIARY	23621003	1988	23622008	COMMERCIA	32121303
ALAMCO WOOD PRODUCTS INC	ALBERT LEA	FREEBORN	100 to 249	$10 to $20 M	SINGLE LOC	32121303	1988	23816011	ROOFING CC	32199102
AUTOMATED BUILDING COMPONENTS	MONTROSE	WRIGHT	100 to 249	$20 to $50 M	BRANCH	32121303	1987	32199201	PREFABRICA	44419067
FABRICATED WOOD PRODUCTS INC	OWATONNA	STEELE	20 to 49	$5 to $10 MIL	SINGLE LOC	32121303	1987	44419069	OTHER BUILI	44419067
GARFIELD TRUSS SYSTS INC	GARFIELD	DOUGLAS	10 to 19	$1 to $2.5 MI	SINGLE LOC	32121303	1988			
LITTFIN LUMBER CO	WINSTED	MC LEOD	50 to 99	$5 to $10 MIL	SINGLE LOC	32121303	1988	32191201	CUT STOCK,	42331029
MARSHALL TRUSS SYSTEMS	MARSHALL	LYON	50 to 99	$10 to $20 M	SINGLE LOC	32121303	1988			
TRUSS MANUFACTURING CO	ALBERTVILLE	WRIGHT	50 to 99	$10 to $20 M	SINGLE LOC	32121303	1987	23816011	ROOFING CONTRS	
VERNDALE TRUSS INC	VERNDALE	WADENA	20 to 49	$5 to $10 MIL	SINGLE LOC	32121303	1988	32121403	TRUSS MFG	
VILLAUME INDUSTRIES INC	EAGAN	DAKOTA	100 to 249	$20 to $50 M	SINGLE LOC	32121303	1988	32192007	WOOD CONT	32192008
FULLERTON BUILDING SYSTEMS INC	WORTHINGTON	NOBLES	100 to 249	$10 to $20 M	SINGLE LOC	32199201	1987	23622012	COMMERCIA	32121303
HIAWATHA INC	MINNEAPOLIS	HENNEPIN	20 to 49	$2.5 to $5 MI	SINGLE LOC	33251015	1994	32121303	ENGINEERED	42371011
LLOYD LUMBER CO	NORTH MANKATO	BLUE EARTH	20 to 49	$5 to $10 MIL	SINGLE LOC	44411001	2000	32121303	ENGINEERED	44419069
COUNTRY PRIDE SVC COOPERATIVE	MOUNTAIN LAKE	COTTONWO	20 to 49	$2.5 to $5 MI	SINGLE LOC	44413005	1997	32121303	ENGINEERED	42472020
SOUTH SIDE LUMBER CO	ROGERS	HENNEPIN	50 to 99	$10 to $20 M	SINGLE LOC	44419044	1984	32121303	ENGINEERED	44419069
ENGINEERED BUILDING COMPONENTS	HOPKINS	HENNEPIN	50 to 99	$20 to $50 M	SINGLE LOC	44419067	1988	23816011	ROOFING CC	32121303
TIMBER ROOTS MTD	WADENA	WADENA	100 to 249	$20 to $50 M	SINGLE LOC	44419067	2004	32111303	SAWMILLS	32121303

—National Employment, Value added, Cost of Materials, Shipments, Capital expenditures
Source: Economic Census 2002, Manufacturing Industry Series.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year1	Com-panies2	All establish ments3	All employees		Production Workers			Value added ($1000)	Total cost of materials ($1000)	Total Value of Ship-ments	Total Capital expend-itures
			Number4	Payroll ($1000)	Number4	Hours (1000)	Wages ($1000)				
321213, Engineered wood member (except truss) manufacturing.....2002.	90	120	6903	231 333	5 775	12 392	179 194	641 740	1 316 093	1 953 897	r34 978
2001	N	N	5724	193 583	4 932	11 091	154 889	583 350	1 165 356	1 755 446	18 683
2000	N	N	5709	185 192	4 844	10 925	141 393	495 571	1 165 735	1 690 861	59 991
1999	N	N	5884	192 765	5 049	11 699	150 127	537 359	1 243 101	1 766 770	84 216
1998	N	N	5811	173 489	4 869	10 887	132 829	560 184	1 066 818	1 620 870	69 985
1997	32	58	5372	154 564	4 469	9 701	118 939	476 346	974 548	1 431 123	53 742

1Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).
2For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
3Includes establishments with payroll at any time during the year.
4Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from America FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E	All Establishments		All Employees		Production Workers						
		Total	With 20 employees or more	Number	Payroll	Number	Hours (1000)	Wages	Value Added ($1000)	Total Cost of Materials ($1000)	Total Value of Shipments ($1000)	Total Capital Expenditures ($1000)
321213, Engineered wood member (except truss) manufacturing												
United States	-	120	64	6 903	231 333	5 775	12 392	179 194	641 740	1 316 093	1 953 897	r34 978
Alabama	-	6	3	499	18 074	428	955	14 433	74 941	109 959	178 076	r3 058
California	1	10	2	381	13 177	283	595	8 514	34 916	65 225	100 158	r545
Oregon	-	18	13	1 430	48 437	1 232	2 605	39 614	145 187	311 557	461 014	r11 405
Washington	3	10	7	276	7 178	252	554	6 285	16 210	29 578	45 752	r455

1Some payroll and sales data for small single- establishment companies with upto 20 employees (cut off varied by industries) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10% or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

2Includes establishments with payroll at any time during the year.

3Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, non sampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item		Value
321213, Engineered wood member (except truss) manufacturing		
Companies[1]	number	90
All establishments[2]	number	120
Establishments with 1 to 19 employees	number	56
Establishments with 20 to 99 employees	number	43
Establishments with 100 employees or more	number	21
All employees[3]	number	6,903
Total compensation	$1,000	293,750
Annual payroll	$1,000	231,333
Total fringe benefits	$1,000	62,417
Production workers, average for year	number	5,775
Production workers on March 12	number	5,673
Production workers on May 12	number	5,801
Production workers on August 12	number	5,849
Production workers on November 12	number	5,769
Production worker hours	1,000	12,392
Production worker wages	$1,000	179,194
Total cost of materials	$1,000	1,316,093
Materials, parts, containers, packaging, etc., used	$1,000	1,235,27
Resales	$1,000	40,263
Purchased fuels	$1,000	7,671
Purchased electricity	$1,000	23,182
Contract work	$1,000	9,150
Quantity of electricity purchased for heat and power	1,000 kWh	467,077
Quantity of electricity generated less sold for heat and power	1,000 kWh	-
Total value of shipments	$1,000	1,953,897
Primary products value of shipments	$1,000	1,838,101
Secondary products value of shipments	$1,000	63,617
Total miscellaneous receipts	$1,000	52,179
Value of resales	$1,000	41,983
Contract receipts	$1,000	D
Other miscellaneous receipts	$1,000	D
Primary products specialization ratio	percent	97
Value of primary products shipments made in all industries	$1,000	1,992,978
Value of primary products shipments made in this industry	$1,000	1,838,101
Value of primary products shipments made in other industries	$1,000	154,877
Coverage ratio	percent	92
Value added	$1,000	641,740
Total inventories, beginning of year	$1,000	181,832
Finished goods inventories	$1,000	112,893
Work_in_process inventories	$1,000	15,252
Materials and supplies inventories	$1,000	53,687
Total inventories, end of year	$1,000	193,837
Finished goods inventories	$1,000	113,658
Work_in_process inventories	$1,000	18,423
Materials and supplies inventories	$1,000	61,756
Gross value of depreciable assets (acquisition costs) at beginning of year	$1,000	r948,533
Total capital expenditures (new and used)	$1,000	r34,978
Buildings and other structures (new and used)	$1,000	r6,821
Machinery and equipment (new and used)	$1,000	r28,157
Automobiles, trucks, etc., for highway use	$1,000	r1,701
Computers and peripheral data processing equipment	$1,000	r1,957
All other expenditures for machinery and equipment	$1,000	r24,499
Total retirements	$1,000	13,479
Gross value of depreciable assets at end of year	$1,000	r970,032
Depreciation charges during year	$1,000	r62,638
Total rental payments	$1,000	18,262
Buildings and other structures	$1,000	9,883
Machinery and equipment	$1,000	8,379
Total other expenses[4]	$1,000	61,167
Response coverage ratio[5]	percent	52
Repair and maintenance services of buildings and/or machinery4	$1,000	7,141
Communications services[4]	$1,000	1,026
Legal services[4]	$1,000	430
Accounting, auditing, and bookkeeping services[4]	$1,000	362
Advertising and promotional services4	$1,000	463
Expensed computer hardware and supplies and purchased computer services[4]	$1,000	619
Refuse removal (including hazardous waste) services[4]	$1,000	1,275
Management consulting and administrative services[4]	$1,000	558
Taxes and license fees[4]	$1,000	4,827
All other expenses[4]	$1,000	44,465

1For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
2Includes establishments with payroll at any time during the year.
3Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.
4Based on 2002 Annual Survey of Manufactures (ASM) sample data.
5A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.
Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.
Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. Products Stastics: 2002 and 1997

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product Code	Product	Number of Companies with shipments of $100,000 or more	Quantity of Production for all purposes	Product Shipments	
				Quantity	Value ($1000)
321213	Engineered wood member (except truss) manufacturing.....2002	N	X	X	1 992 978
	1997	N	X	X	1 326 062
3212130	Engineered wood members (except trusses).....2002	N	X	X	1 992 978
	1997	N	X	X	1 326 062
32121301	Laminated veneer lumber.....2002	N	X	X	511 256
	1997	N	X	X	314 631
321213011	Laminated veneer lumber..... mil bd ft 2002	44	X	S	511 256
	1997	6	X	20.3	314 631
32121302	Other engineered structural wood members, except trusses				
	and laminated veneer lumber.....2002	N	X	X	1 382 995
	1997	N	X	X	1 011 431
3212130221	Glued laminated timber, beams.....mil bd ft.....2002	43	X	S	202 192
	1997	29	X	326.4	333 364
3212130231	Wood I-joists, I-beams.....mil lin ft.....2002	66	X	S	845 405
	1997	8	X	520.9	515 751
3212130241	Other engineered structural wood members.....mil cu ft.....2002	40	X	S	335 398
	1997	9	X	S	162 316
3212130Y	Engineered wood members (except trusses), nsk, total.....2002	N	X	X	98 727
	1997	N	X	X	
3212130YWW	Engineered wood members (except trusses), nsk, for non administrative-				
	record establishments.....2002	N	X	X	76 275
	1997	X	X	X	
3212130YWY	Engineered wood members (except trusses), nsk, for				
	administrative- record establishments.....2002	N	X	X	22 452
	1997	N	X	X	

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity- value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p–10 to 19 percent estimated; q–20 to 29 percent estimated. If 30 percent or

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material Cod	Material Consumed		Quantity	Delivered Cost ($1000)
321213	Engineered wood member (except truss) manufacturing			
900001	Total materials	2002	X	1 235 827
		1997	X	869 602
32100023	Hardwood rough lumber, mil bd ft	2002	S	363 938
		1997	N	N
32100029	Softwood rough lumber, mil bd ft	2002	S	34 067
		1997	N	N
32100027	Hardwood dressed lumber, mil bd ft	2002	p3.3	2 437
		1997	N	N
32100033	Softwood dressed lumber, mil bd ft	2002	S	176 947
		1997	p364.1	186 789
32121201	Softwood plywood, mil sq ft sm	2002	D	D
		1997	N	N
32742005	Gypsum building board	2002	X	199
		1997	X	N
33251009	Builders' hardware (including door locks, locksets, lock trim, screen hardware, etc.)	2002	X	3 916
		1997	X	N
32799301	Mineral wool insulation (fibrous glass, rock wool, etc.)	2002	X	D
		1997	X	N
190056	Windows and window units, including wood, metal, and vinyl, thousands	2002	S	382
		1997	N	N
32191100	Wood doors and door units	2002	X	D
		1997	X	N
33232103	Metal doors and door units, thousands	2002	D	D
		1997	N	N
33711000	Kitchen cabinets, wood	2002	X	D
		1997	X	N
32121901	Reconstituted wood products (including particleboard, oriented strandboard, medium density			
	fiberboard, and hardboard)	2002	X	92 300
		1997	X	88 732
33232207	Metal siding, including aluminum, steel	2002	X	D
		1997	X	N
33231201	Fabricated structural iron, steel, and aluminum (including truss plates)	2002	X	2 116
		1997	X	N
001900B3	Current-carrying wiring devices (including switches, connectors, lampholders, etc.)	2002	X	D
		1997	X	N
31411001	Floor coverings, textile	2002	X	D
		1997	X	N
970099	All other materials and components, parts, containers, and supplies	2002	X	436 946
		1997	X	568 160
971000	Materials, ingredients, containers, and supplies, nsk	2002	X	118 621
		1997	X	25 921

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity- value relationships of reported data The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p–10 to 19 percent estimated; q–20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

332114 Custom Roll Forming

Industry Description

Selected Reference USA data for location of competition:

Where are NAICS sector 332114 firms located, and how many workers do they employ? Is NAICS sector 3332114 the firm's primary, secondary or tertiary code identification?

Note the representative data below which lists all 332114 firms in the US, with employment and sales. Other variables are available from RefUSA and were reviewed by the BBER.

Location and size of firms in industry sector 332114 Custom Roll Forming in the US
Source: RefUSA on-line search for 332114 in Minnesota, 2/2005

		33214 in the COUNTRY							
NAME	ST	EMP SIZE	SALES	BUS STAT	NAICS	YR01	NAICS CC	NAICS DE	NAICS CO
WESTERN ROLLFORMING & MFG	CA	1 to 4	LESS THAN	SINGLE L	33211401	1994			
DYNAMIC METAL LLC	IN	20 to 49	$5 to $10 MI	SINGLE L	33211401	1995	33149104	NONFER	33299910
TRU-TECH TOOL & MACHINE CORP	MI	20 to 49	$5 to $10 MI	SINGLE L	33211401	1998	33211610	METAL S	33351307
MEZ INDUSTRIES	CA	100 to 249	$20 to $50 M	SINGLE L	33211401	1993			
AMERICAN WIRE PRODUCTS INC	KY	100 to 249	$20 to $50 M	SINGLE L	33261804	1994	33211401	CUSTOM	42351042
CONCEPT ENGINEERING & MFG CORP	MI	20 to 49	$10 to $20 M	SINGLE L	33211401	1988	33232204	SHEET M	
ERIE ROLL FORM & ENGINEERING	MI	1 to 4	$1 to $2.5 M	SINGLE L	33211401	1987	33232107	METAL W	33232204
PORTER STEEL & WELDING CO	MI	10 to 19	$1 to $2.5 M	SINGLE L	33231210	1984	33231206	FABRICA	33211401

Given that NAICS sector 332114 firms are not found in the RefUSA database for the State of Minnesota, BBER looked for related NAICS coded industries in Minnesota, for instance NAICS 332116. The data below show the location of 332116 Metal Stamping industry firms, selected for high sales and employment.

				Major Employers of *33211* in MN						
				Emp Size:	100-10,000					
NAME	CITY	COUNTY	EMP SIZE	SALES	BUS STAT	NAICS	YR01	NAICS CODE	NAICS DE	NAICS CODE
PENTAIR INC	MINNEA	HENNEPIN	12360	$2,724,365,000	HEADQU	33211602	1989	32212103	PAPER, E	32222101
AIR-SERV INC	MENDC	DAKOTA	100 to 249	$20 to $50 MILL	SINGLE L	33211601	1996	33391201	AIR & GA	33331934
ALLTOOL MANUFACTURING CO	ELK RI	SHERBUR	100 to 249	$10 to $20 MILL	SINGLE L	33351413	1996	33211610	METAL S	33299910
ASSURANCE MANUFACTURING	COON F	ANOKA	100 to 249	$20 to $50 MILL	SINGLE L	33299910	1988	23822030	PLUMBIN	33211610
BERMO INC	CIRCLE	ANOKA	100 to 249	$20 to $50 MILL	SINGLE L	23891054	1988	32619910	ALL OTHE	32619916
BMC INDUSTRIES INC	ANOKA	ANOKA	25	$248,098,000	HEADQU	33331404	1988	33211610	METAL S	33281305
BOKER'S INC	MINNEA	HENNEPIN	100 to 249	$20 to $50 MILL	SINGLE L	33211610	1984	33272202	BOLT, NU	
BTD MFG INC	DETROI	BECKER	350	$39,800,000	SUBSIDIA	33211610	1988	33351413	SPECIAL	
CAMBRIDGE METALS & PLASTICS	CAMBR	ISANTI	200		SUBSIDIA	33232204	1987	23822030	PLUMBIN	33211610
CLOW STAMPING INC	MERRIF	CROW WI	250 to 499	$50 to $100 MIL	SINGLE L	33211610	1984			
DAYTON ROGERS MFG CO	BLAINE	ANOKA	100 to 249	$20 to $50 MILL	SINGLE L	33211610	1989	33911203	SURGICA	54161303
FEDERAL CARTRIDGE CO	ANOKA	ANOKA	950		SUBSIDIA	33299201	1988	33211610	METAL S	33299301
GAUTHIER INDUSTRIES INC	ROCHE	OLMSTED	100 to 249	$10 to $20 MILL	SINGLE L	23891054	1994	33232204	SHEET M	33211610
GLOBE TOOL & MFG CO	MINNEA	HENNEPIN	100 to 249	$20 to $50 MILL	SINGLE L	33211610	1984	33351412	SPECIAL	42351022
GREATBATCH GLOBE TOOL	MINNEA	HENNEPIN	100 to 249	$20 to $50 MILL	SINGLE L	33211610	2004	42351022	METAL M	
HARVEY VOGEL MFG CO	WOODE	WASHINGT	100 to 249	$20 to $50 MILL	SINGLE L	33211610	1988			
KLESK METAL STAMPING CO	MINNEA	HENNEPIN	100 to 249	$10 to $20 MILL	SINGLE L	33211610	1984	33351209	METAL C	33271002
KURT MANUFACTURING	MINNEA	ANOKA	500 to 999	$50 to $100 MIL	SINGLE L	33271002	1984	33211606	METAL S	33299910
LEAF INDUSTRIES INC	PLYMO	HENNEPIN	100 to 249	$10 to $20 MILL	SINGLE L	33232204	1987	23891054	SITE PRE	33211610
MERCURY MINNESOTA INC	FARIBA	RICE	100 to 249	$10 to $20 MILL	SINGLE L	33232204	1987	23822030	PLUMBIN	33211610
MODERN TOOL INC	COON F	ANOKA	100 to 249	$10 to $20 MILL	SINGLE L	33211610	1988			
MORRISSEY INC	BLOOM	HENNEPIN	100 to 249	$10 to $20 MILL	SINGLE L	33211610	1984	23891054	SITE PRE	42399019
TCR ENGINEERED COMPONENTS	BROOK	HENNEPIN	100 to 249	$20 to $50 MILL	SINGLE L	33272202	1988	33272101	PRECISIC	33211107
TEMPCO MANUFACTURING CO INC	MENDC	DAKOTA	100 to 249	$10 to $20 MILL	SINGLE L	33211610	1988			
TENERE INC STILLWATER DIV	STILLW	WASHINGT	100 to 249	$10 to $20 MILL	SINGLE L	33232204	1988	23891054	SITE PRE	33211610
UNITED STEEL PRODUCTS CO	MONTG	LE SUEUR	268		SUBSIDIA	33231206	1988	33251015	HARDWA	33232302
WIRCO STAMPING CO	PLYMOU	HENNEPIN	100 to 249	$20 to $50 MILL	SINGLE L	33211610	1984			

The RefUSA database answered the question: where are these Metal Stamping firms concentrated in the state by county?

Distribution of companies in counties of MN Emp Size: 1-100; RefUSA on-line

COUNTY	NUMBER	COUNTY	NUMBER
ANOKA	13	LAKE OF WOODS	1
BECKER	1	LE SUEUR	1
BENTON	1	MORRISON	2
BLUE EARTH	1	MOWER	1
CARVER	1	PINE	1
CHISAGO	3	POPE	1
CLAY	1	RAMSEY	11
CROW WING	1	RENTVILLE	1
DAKOTA	10	SCOTT	2
DOUGLAS	1	SHERBURNE	2
FREEBORN	2	SIBLEY	1
GOODHUE	2	STEARNS	1
GRANT	1	STEVENS	1
HENNEPIN	37	SWIFT	1
HUBBARD	1	WINONA	1
ISANTI	1	WRIGHT	6

—National Employment, Value added, Cost of Materials, Shipments, Capital expenditures
Source: Economic Census 2002, Manufacturing Industry Series.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year1	Com-panies2	All establish ments3	All employees		Production Workers			Value added ($1000)	Total cost of materials ($1000)	Total Value of Ship-ments ($1000)	Total Capital expend-itures
			Number4	Payroll ($1000)	Number4	Hours (1000)	Wages ($1000)				
332114, Custom roll forming.....2002	373	446	17 227	638 369	12 892	26 629	403 872	1 735 533	2 318 125	4 035 142	r106 737
2001	N	N	15 468	529 900	11 549	23 002	330 772	1 357 346	2 104 025	3 471 283	93 979
2000	N	N	16 240	557 869	12 150	24 665	350 428	1 421 158	2 382 813	3 783 951	88 717
1999	N	N	15 978	541 722	11 880	24 268	337 901	1 431 408	2 181 814	3 624 374	69 374
1998	N	N	15 538	542 067	11 077	23 779	332 709	1 304 404	2 180 582	3 483 675	52 554
1997	360	404	15 852	522 950	11 370	23 765	314 799	1 343 729	1 992 247	3 301 907	58 607

1Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).
2For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
3Includes establishments with payroll at any time during the year.
4Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.
Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E	All Establishments		All Employees		Production Workers			Value Added ($1000)	Total Cost of Materials ($1000)	Total Value of Shipments ($1000)	Total Capital Expenditures ($1000)
		Total	With 20 employees or more	Number	Payroll	Number	Hours (1000)	Wages				
332114, Custom roll forming												
United States	1	446	232	17 227	638 369	12 892	26 629	403 872	1 735 533	2 318 125	4 035 142	r106 737
California	1	49	23	1 356	51 835	956	1 967	30 350	129 740	136 855	262 971	r5 244
Florida	-	18	9	748	29 210	587	1 189	18 853	132 893	88 945	224 356	r4 698
Illinois	-	30	18	1 725	62 691	1 331	2 860	42 213	155 769	165 801	313 579	r8 146
Indiana	2	18	10	774	24 320	541	1 101	16 566	72 988	172 116	244 257	r6 212
Massachusetts	5	7	4	122	4 359	102	216	3 218	17 358	32 662	48 457	r851
Michigan	2	24	12	560	24 998	372	790	12 400	44 486	50 268	90 227	r2 285
Minnesota	-	11	4	242	8 366	180	408	5 403	17 966	25 739	43 617	r754
Missouri	-	10	4	199	7 575	132	268	4 224	7 463	46 081	53 426	r1 646
New York	1	15	3	206	7 511	153	323	4 466	17 114	13 592	30 710	r1 384
Ohio	-	35	23	2 735	111 037	2 103	4 468	74 000	348 187	630 040	982 607	r19 072
Oregon	-	6	4	239	9 941	183	407	6 336	18 298	9 763	27 999	r360
Pennsylvania	1	25	14	877	32 681	643	1 309	20 485	95 672	56 600	150 381	r2 941
Washington	4	13	4	241	7 503	163	266	4 402	16 230	31 669	46 895	r1 257

1Some payroll and sales data for small single- establishment companies with upto 20 employees (cut off varied by industries) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10% or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.
2Includes establishments with payroll at any time during the year.
3Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.
Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item		Value
332114, Custom roll forming		
Companies[1]	number	373
All establishments[2]	number	46
Establishments with 1 to 19 employees	number	214
Establishments with 20 to 99 employees	number	195
Establishments with 100 employees or more	number	37
All employees[3]	number	17,227
Total compensation	$1,000	778,020
Annual payroll	$1,000	638,369
Total fringe benefits	$1,000	139,651
Production workers, average for year	number	12,892
Production workers on March 12	number	705
Production workers on May 12	number	12,857
Production workers on August 12	number	13,092
Production workers on November 12	number	12,852
Production worker hours	1,000	26,629
Production worker wages	$1,000	403,872
Total cost of materials	$1,000	2,318,125
Materials, parts, containers, packaging, etc., used	$1,000	2,070,086
Resales	$1,000	112,631
Purchased fuels	$1,000	22,658
Purchased electricity	$1,000	28,546
Contract work	$1,000	84,204
Quantity of electricity purchased for heat and power	1,000 kWh	432,736
Quantity of electricity generated less sold for heat and power	1,000 kWh	S
Total value of shipments	$1,000	4,035,142
Primary products value of shipments	$1,000	3,740,874
Secondary products value of shipments	$1,000	115,824
Total miscellaneous receipts	$1,000	178,444
Value of resales	$1,000	136,775
Contract receipts	$1,000	18,813
Other miscellaneous receipts	$1,000	22,856
Primary products specialization ratio	percent	97
Value of primary products shipments made in all industries	$1,000	3,981,614
Value of primary products shipments made in this industry	$1,000	3,740,874
Value of primary products shipments made in other industries	$1,000	240,740
Coverage ratio	percent	94
Value added	$1,000	1,735,533
Total inventories, beginning of year	$1,000	532,124
Finished goods inventories	$1,000	169,348
Workinprocess inventories	$1,000	98,861
Materials and supplies inventories	$1,000	263,915
Total inventories, end of year	$1,000	559,008
Finished goods inventories	$1,000	185,953
Workinprocess inventories	$1,000	100,772
Materials and supplies inventories	$1,000	272,283
Gross value of depreciable assets (acquisition costs) at beginning of year	$1,000	r1,912,815
Total capital expenditures (new and used)	$1,000	r106,737
Buildings and other structures (new and used)	$1,000	r21,786
Machinery and equipment (new and used)	$1,000	r84,951
Automobiles, trucks, etc., for highway use	$1,000	r3,996
Computers and peripheral data processing equipment	$1,000	r4,787
All other expenditures for machinery and equipment	$1,000	r76,168
Total retirements	$1,000	r44,397
Gross value of depreciable assets at end of year	$1,000	r1,975,155
Depreciation charges during year	$1,000	r144,198
Total rental payments	$1,000	53,445
Buildings and other structures	$1,000	33,013
Machinery and equipment	$1,000	20,432
Total other expenses[4]	$1,000	342,579
Response coverage ratio[5]	percent	78
Repair and maintenance services of buildings and/or machinery[4]	$1,000	40,688
Communications services[4]	$1,000	5,392
Legal services[4]	$1,000	4,006
Accounting, auditing, and bookkeeping services[4]	$1,000	4,069
Advertising and promotional services4	$1,000	4,975
Expensed computer hardware and supplies and purchased computer services[4]	$1,000	5,976
Refuse removal (including hazardous waste) services[4]	$1,000	3,617
Management consulting and administrative services[4]	$1,000	7,382
Taxes and license fees[4]	$1,000	12,812
All other expenses[4]	$1,000	253,662

1For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
2Includes establishments with payroll at any time during the year.
3Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.
4Based on 2002 Annual Survey of Manufactures (ASM) sample data.
5A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.
Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.
Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors.
Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix

Table 6a. Products Stastics: 2002 and 1997

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product Code	Product	Number of Companies with shipments of $100,000 or more	Quantity of Production for all purposes	Product Shipments	
				Quantity	Value ($1000)
332114	Custom roll forming.....2002	N	X	X	3 981 614
	1997	N	X	X	3 455 053
3321140	Custom roll form products.....2002	N	X	X	3 981 614
	1997	N	X	X	3 455 053
33211401	Custom carbon steel roll form products.....2002	N	X	X	2 731 109
	1997	N	X	X	2 327 156
3.32E+09	Custom carbon steel roll form products.....2002	220	X	X	2 731 109
	1997	253	X	X	2 327 156
33211402	Custom stainless steel roll form products.....2002	N	X	X	283 694
	1997	N	X	X	233 724
3.32E+09	Custom stainless steel roll form products.....2002	128	X	X	283 694
	1997	137	X	X	233 724
33211403	Custom aluminum roll form products.....2002	N	X	X	327 993
	1997	N	X	X	274 130
3.32E+09	Custom aluminum roll form products.....2002	72	X	X	327 993
	1997	83	X	X	274 130
33211404	Other custom metal roll form products.....2002	N	X	X	303 193
	1997	N	X	X	245 474
3.32E+09	Other custom metal roll form products.....2002	72	X	X	303 193
	1997	70	X	X	245 474
3321140Y	Custom roll form products, nsk, total.....2002	N	X	X	335 625
	1997	N	X	X	374 569
3321140Y\	Custom roll form products, nsk, for nonadministrative-				
	record establishments.....2002	N	X	X	283 866
	1997	N	X	X	338 945
3321140Y\	Custom roll form products, nsk, for administrative-				
	record establishments.....2002	N	X	X	51 759
	1997	N	X	X	35 624

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity- value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p–10 to 19 percent estimated; q–20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material C	Material Consumed	Quantity	Delivered C
332114	Custom roll forming		
900001	Total materials	X	2 070 086
		X	1 794 421
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products	X	48 899
		X	20 013
33200095	Other fabricated metal products (excluding castings and forgings)	X	74 262
		X	34 684
33100035	Castings, rough and semifinished	X	D
		X	9 611
33210000	Forgings	X	D
		X	N
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products	X	135 248
		X	191 886
33120016	Steel sheet and strip (including tinplate)	X	331 971
		X	N
33120069	Steel structural shapes (excluding castings, forgings, and fabricated metal products)	X	84 293
		X	60 697
33120036	All other steel shapes and forms (excluding castings, forgings, fabricated metal products, bars,		
	bar shapes, plate, sheet, strip, and structural shapes), including concrete reinforcing bars	X	424 139
		X	N
33131500	Aluminum and aluminum- base alloy sheet, plate, foil, and welded tubing	X	67 941
		X	N
33100008	All other aluminum and aluminum- base alloy shapes and forms, including refinery shapes and		
	extruded shapes (excluding castings and forgings)	X	74 702
		X	N
33100077	Other nonferrous shapes and forms (excluding castings, forgings, and fabricated metal		
	products)	X	73 224
		X	N
32551002	Paints, varnishes, stains, lacquers, shellacs, japans, enamels, and allied product	X	D
		X	N
970099	All other materials and components, parts, containers, and supplies	X	437 637
		X	1 294 606
971000	Materials, ingredients, containers, and supplies, nsk	X	268 704
		X	182 924

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity- value relationships of reported data The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p–10 to 19 percent estimated; q–20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

323115 Digital Printing

Selected Reference USA data for location of competition:

RefUSA on-line search for Minnesota, and for St. Louis County, MN shows no firms for 323115.

Narrowing the location but broadening the industry sector, RefUSA on-line search in St. Louis County, MN shows many firms for the related NACIS code 32311 Commercial Printing. (See discussion of this by a study area industry spokesman in the report.) Note this partial list of related NAICS sector firms ranked for largest employers with largest sales volume.

NAME	CITY	ZIPCODE	EMP SIZE	SALES	BUS STATUS	NAICS	NAICS DESCRIPTION	NAICS CODE 1	N
IKONICS CORP	DULUTH	55807	66	$12,105,000	HEADQUARTE	42383084	INDUSTRIAL MACHINERY MERCHANT WHOL	32311301	C
SUPERIOR PRINT OF DULUTH INC	DULUTH	55811	10 to 19	$1 to $2.5 MILLION	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING	32311926	C
ON THE LIMIT USA LTD	DULUTH	55806	10 to 19	$1 to $2.5 MILLION	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING	31499905	A
TODD SIGNS	HERMANTOWN	55811	10 to 19	$1 to $2.5 MILLION	SINGLE LOC	33995008	SIGN MFG	31499908	A
JPG COMMUNICATIONS INC	VIRGINIA	55792	10 to 19	$1 to $2.5 MILLION	SINGLE LOC	54181001	ADVERTISING AGENCIES	32311009	C
SHELDON REPRODUCTION CTR	DULUTH	55802	10 to 19	$1 to $2.5 MILLION	SINGLE LOC	56143903	OTHER BUSINESS SVC CENTERS	32311009	C
CHRISTIE PRINTING CO	DULUTH	55811	5 to 9	$1 to $2.5 MILLION	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING	42412005	C
HAND-DONE T-SHIRTS INC	ELY	55731	5 to 9	$1 to $2.5 MILLION	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING	44819029	C
MANNEY'S SHOPPER	HIBBING	55746	100 to 249	$10 to $20 MILLION	SINGLE LOC	32311908	OTHER COMMERCIAL PRINTING	32311009	C
ERICKSON POST CARDS & SVNRS	DULUTH	55811	1 to 4	$2.5 to $5 MILLION	SINGLE LOC	42499088	OTHER NONDURABLE GOODS MERCHANT V	32311908	C
WA FISHER ADVERTISING & PRINT	VIRGINIA	55792	10 to 19	$2.5 to $5 MILLION	SINGLE LOC	54181001	ADVERTISING AGENCIES	51199908	A
ELY ECHO	ELY	55731	10 to 19	$2.5 to $5 MILLION	SINGLE LOC	54181005	ADVERTISING AGENCIES	51111002	N
ADVANTAGE EMBLEM & SCREEN PTG	DULUTH	55808	20 to 49	$2.5 to $5 MILLION	SINGLE LOC	31499905	ALL OTHER MISC TEXTILE PROD MILLS	32311301	C
PRO-PRINT	DULUTH	55811	20 to 49	$2.5 to $5 MILLION	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING	32311908	C
SERVICE PRINTERS OF DULUTH INC	DULUTH	55805	20 to 49	$2.5 to $5 MILLION	SINGLE LOC	32311908	OTHER COMMERCIAL PRINTING	32311009	C
STEWART TAYLOR PRINTING	DULUTH	55802	20 to 49	$2.5 to $5 MILLION	SINGLE LOC	32311908	OTHER COMMERCIAL PRINTING	32311009	C
OFFICE MAX	DULUTH	55811	20 to 49	$2.5 to $5 MILLION	BRANCH	45321007	OFFICE SUPPLIES & STATIONERY STORES	32311009	C
HIBBING DAILY TRIBUNE	HIBBING	55746	20 to 49	$2.5 to $5 MILLION	SINGLE LOC	51111003	NEWSPAPER PUBLISHERS	32311908	C
DULUTH BUDGETEER NEWS	DULUTH	55802	20 to 49	$2.5 to $5 MILLION	SINGLE LOC	54181005	ADVERTISING AGENCIES	51111003	N
IKON OFFICE SOLUTIONS INC	DULUTH	55811	20 to 49	$5 to $10 MILLION	BRANCH	42342015	OFFICE EQUIP MERCHANT WHOLS	32311908	C
AREA MESABI DAILY NEWS	VIRGINIA	55792	50 to 99	$5 to $10 MILLION	SINGLE LOC	51111003	NEWSPAPER PUBLISHERS	32311009	C
ELITE PRINTING & GRAPHICS	DULUTH	55806	1 to 4	$500,000 to $1 MILLION	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING		
MIDWEST PRINT GROUP	DULUTH	55802	1 to 4	$500,000 to $1 MILLION	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING		
BARK DESIGN & SCREEN PRINTING	CHISHOLM	55719	1 to 4	$500,000 to $1 MILLION	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING	32311009	C
BARBER GRAPHICS INC	VIRGINIA	55792	1 to 4	$500,000 to $1 MILLION	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING	33636003	M
DULUTH DECAL-TRADE DATA	DULUTH	55803	1 to 4	$500,000 to $1 MILLION	SINGLE LOC	32311401	QUICK PRINTING		
EDGEWATER PRESS	DULUTH	55802	1 to 4	$500,000 to $1 MILLION	SINGLE LOC	32311908	OTHER COMMERCIAL PRINTING	32311009	C
EXPRESS PRINT I LTD	HIBBING	55746	1 to 4	$500,000 to $1 MILLION	SINGLE LOC	32311908	OTHER COMMERCIAL PRINTING	32311009	C
NORTHERN BUSINESS SOLUTIONS	DULUTH	55806	1 to 4	$500,000 to $1 MILLION	SINGLE LOC	42412005	OFFICE SUPPLIES MERCHANT WHOLS	32311604	M
NATIONAL AUDIO VISUAL	DULUTH	55802	1 to 4	$500,000 to $1 MILLION	SINGLE LOC	44311203	RADIO, TV & OTHER ELECTRONICS STORES	32311003	C
ROGER'S PRINTING	ELY	55731	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING	32311908	C
JERSEY CITY	DULUTH	55802	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING	33636003	M
J 'N T PRINTERY INC	DULUTH	55802	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	32311908	OTHER COMMERCIAL PRINTING	32311009	C
JOHN MARXHAUSEN JEWELRY DSGN	DULUTH	55802	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	44831013	JEWELRY STORES	32311908	C
GLENWOOD COMMUNICATIONS INC	DULUTH	55802	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	45399867	STORE RETAILERS NOT SPECIFIED ELSEWH	32311009	C
MANNEY'S SHOPPER	VIRGINIA	55792	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	51111002	NEWSPAPER PUBLISHERS	32311009	C
COOK NEWS HERALD	COOK	55723	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	51111003	NEWSPAPER PUBLISHERS	32311009	C
PROCTOR JOURNAL PRINTING	DULUTH	55805	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	51111003	NEWSPAPER PUBLISHERS	32311009	C
CPL IMAGING	DULUTH	55802	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	51821015	DATA PROCESSING & RELATED SVCS	32311009	C
CUSTOM LETTERING	HIBBING	55746	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	54149001	OTHER SPECIALIZED DESIGN SVCS	31499921	A
MELLIN PROMOTIONAL ADVERTISING	DULUTH	55805	5 to 9	$500,000 to $1 MILLION	SINGLE LOC	54189006	OTHER SVCS RELATED TO ADVERTISING	32311301	C
PENGAL'S BASSWOOD TRADING CO	ELY	55731	1 to 4	LESS THAN $500,000	SINGLE LOC	31499914	ALL OTHER MISC TEXTILE PROD MILLS	32311301	C
INSTY-PRINTS	DULUTH	55807	1 to 4	LESS THAN $500,000	BRANCH	32311009	COMMERCIAL LITHOGRAPHIC PRINTING	32311908	C
PAPER HOG	DULUTH	55802	1 to 4	LESS THAN $500,000	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING	32311908	C
VIVID DESIGN	AURORA	55705	1 to 4	LESS THAN $500,000	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING	54189006	C
MINUTEMAN PRESS	HIBBING	55746	1 to 4	LESS THAN $500,000	BRANCH	32311009	COMMERCIAL LITHOGRAPHIC PRINTING	56143903	C
J K PRINTING & LAMINATING	DULUTH	55807	1 to 4	LESS THAN $500,000	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING	56199012	A
JOHN HULL ENTERPRISES	DULUTH	55804	1 to 4	LESS THAN $500,000	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING		
NORTHART	ELY	55731	1 to 4	LESS THAN $500,000	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING		
RANGE PRINT SHOP	EVELETH	55734	1 to 4	LESS THAN $500,000	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING		
SEAPOINT PRESS	DULUTH	55812	1 to 4	LESS THAN $500,000	SINGLE LOC	32311009	COMMERCIAL LITHOGRAPHIC PRINTING		
T-SHIRT FACTORY & ODD SHOP	HIBBING	55746	1 to 4	LESS THAN $500,000	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING	33636003	M
PENGAL'S SILKSCREENING	ELY	55731	1 to 4	LESS THAN $500,000	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING	54149001	C
ADVENTURE ADVERTISING	DULUTH	55811	1 to 4	LESS THAN $500,000	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING	54189006	C
IDENTITEE SPORTSWEAR	DULUTH	55812	1 to 4	LESS THAN $500,000	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING		
SHIRT SHACK PLUS	DULUTH	55811	1 to 4	LESS THAN $500,000	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING		
TEXTILESPLUS	EVELETH	55734	1 to 4	LESS THAN $500,000	SINGLE LOC	32311301	COMMERCIAL SCREEN PRINTING		
FUHR PRINTING CO	DULUTH	55802	1 to 4	LESS THAN $500,000	SINGLE LOC	32311908	OTHER COMMERCIAL PRINTING	32311009	C
LAKESIDE PRINTING CO	DULUTH	55804	1 to 4	LESS THAN $500,000	SINGLE LOC	32311908	OTHER COMMERCIAL PRINTING	32311009	C
QUEEN CITY SUN	VIRGINIA	55792	1 to 4	LESS THAN $500,000	SINGLE LOC	32311908	OTHER COMMERCIAL PRINTING	32311009	C
DULUTH RULING & BINDING CO	DULUTH	55802	1 to 4	LESS THAN $500,000	SINGLE LOC	32312102	TRADEBINDING & RELATED WORK	32311804	B
IRON RANGE AWARDS	GILBERT	55741	1 to 4	LESS THAN $500,000	SINGLE LOC	33281202	METAL COATING & NONPRECIOUS ENGRAV	32311908	C
AMERICAN SOLUTIONS-BUSINESS	DULUTH	55804	1 to 4	LESS THAN $500,000	SINGLE LOC	42412005	OFFICE SUPPLIES MERCHANT WHOLS	32311604	M
CHISHOLM TRIBUNE PRESS	CHISHOLM	55719	1 to 4	LESS THAN $500,000	SINGLE LOC	51111003	NEWSPAPER PUBLISHERS	32311009	C
RANGE TIMES	BIWABIK	55708	1 to 4	LESS THAN $500,000	SINGLE LOC	51111003	NEWSPAPER PUBLISHERS	32311009	C
BABBITT WEEKLY NEWS	BABBITT	55706	1 to 4	LESS THAN $500,000	SINGLE LOC	51111003	NEWSPAPER PUBLISHERS	32311908	C
FLOODWOOD FORUM	FLOODWOOD	55736	1 to 4	LESS THAN $500,000	SINGLE LOC	51111003	NEWSPAPER PUBLISHERS	32311908	C
GILBERT HERALD	GILBERT	55741	1 to 4	LESS THAN $500,000	SINGLE LOC	51111003	NEWSPAPER PUBLISHERS	32311908	C
ARNOLD'S SHIRTWERKS	DULUTH	55807	1 to 4	LESS THAN $500,000	SINGLE LOC	54149001	OTHER SPECIALIZED DESIGN SVCS	31499931	A
SWANSON'S CUSTOM LETTERING	EVELETH	55734	1 to 4	LESS THAN $500,000	SINGLE LOC	54149001	OTHER SPECIALIZED DESIGN SVCS	32311301	C
BULLSEYE SILKSCREEN	DULUTH	55802	1 to 4	LESS THAN $500,000	SINGLE LOC	54149001	OTHER SPECIALIZED DESIGN SVCS	33636003	M
COPY MAGIC INC	VIRGINIA	55792	1 to 4	LESS THAN $500,000	SINGLE LOC	56143903	OTHER BUSINESS SVC CENTERS	32311009	C

—National Employment, Value added, Cost of Materials, Shipments, Capital expenditures
Source: Economic Census 2002, Manufacturing Industry Series.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year1	Com-panies2	All establish ments3	All employees		Production Workers			Value added ($1000)	Total cost of materials ($1000)	Total Value of Ship-ments ($1000)	Total Capital expend-itures ($1000)
			Number4	Payroll ($1000)	Number4	Hours (1000)	Wages ($1000)				
323115, Digital printing.....2002	1 036	1 133	20 459	747 491	13 498	23 732	429 263	1 731 776	671 472	2 400 807	r98 374
2001	N	N	6 627	199 106	4 394	7 542	119 257	417 959	190 871	609 523	25 031
2000	N	N	6 627	212 640	4 464	7 709	124 865	455 096	212 300	665 307	33 796
1999	N	N	5 216	158 539	3 603	6 541	92 344	366 474	161 926	527 928	38 866
1998	N	N	4 582	130 574	3 052	5 838	70 013	320 429	151 616	471 568	31 132
1997	386	386	4 222	122 560	2 834	5 058	67 259	270 928	134 210	405 679	27 700

1Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

2For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

3Includes establishments with payroll at any time during the year.

4Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from America FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E	All Establishments		All Employees		Production Workers			Value Added ($1000)	Total Cost of Materials ($1000)	Total Value of Shipmen-ts ($1000)	Total Capital Expenditu res ($1000)
		Total	With 20 employee s or more	Number	Payroll	Number	Hours (1000)	Wages				
323115, Digital printing												
United States	1	1 133	253	20 459	747 491	13 498	23 732	429 263	1 731 776	671 472	2 400 807	r98 374
Arizona	2	28	3	267	8 953	163	249	4 396	18 344	8 591	26 939	r760
California	2	158	32	2 263	80 802	1 477	2 370	45 999	181 346	70 511	250 900	r15 116
Colorado	2	36	6	460	16 577	289	406	7 725	26 736	12 235	39 024	r1 379
Conneticut	-	13	6	705	29 506	479	1 055	20 106	76 944	19 895	96 662	r1 333
Florida	1	67	10	769	23 318	535	879	14 853	51 503	18 614	72 356	r5 269
Georgia	1	38	6	835	29 766	569	881	18 107	78 590	26 408	104 715	r2 159
Illinois	-	60	19	1 699	71 324	1 049	1 903	38 342	159 522	94 075	253 135	r6 826
Indiana	-	22	7	838	28 683	550	1 027	15 339	66 521	35 179	102 091	r3 512
Iowa	3	8	3	370	11 320	216	355	6 049	25 859	9 949	35 865	r1 802
Kentucky	4	16	3	233	8 055	134	211	3 654	14 932	5 324	20 184	r730
Maryland	2	23	4	231	8 182	143	238	4 168	16 728	8 490	25 126	r1 021
Massachusettes	2	34	13	650	24 775	435	780	14 857	52 922	22 058	74 820	r1 184
Minnesota	-	35	4	387	14 628	246	431	7 963	36 308	12 625	48 468	r1 418
Missouri	2	28	9	525	22 784	340	631	13 774	49 384	13 549	62 961	r1 716
Nevada	1	22	3	236	9 155	146	287	4 862	17 936	7 662	25 740	r1 202
New Hampshire	-	7	4	144	4 863	99	176	2 881	10 001	3 006	12 937	r957
New Jersey	-	29	5	450	18 671	307	528	12 338	60 358	23 530	83 786	r1 744
New York	1	91	27	2 156	82 639	1 442	2 655	47 424	197 950	53 665	249 995	r8 429
North Carolina	-	33	10	934	35 167	694	1 363	23 755	80 483	47 073	126 392	r4 896
Ohio	1	34	7	769	25 628	572	972	18 396	49 512	17 565	67 603	r3 832
Oregon	-	15	2	209	7 952	140	246	4 360	17 987	9 916	27 924	r1 034
Pennsylvania	2	44	14	680	21 879	408	632	11 480	48 330	22 466	70 373	r3 242
Tennesse	-	23	5	461	15 737	263	460	6 161	58 775	12 171	71 432	r2 232
Texas	1	63	19	1 380	48 736	1 033	1 778	30 516	120 299	32 158	152 699	r6 565
Utah	7	13	3	289	10 920	170	319	5 203	22 887	10 646	33 524	r769
Washington	1	22	1	184	6 385	134	244	4 078	14 371	4 458	18 886	r983

1Some payroll and sales data for small single -establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

2Includes establishments with payroll at any time during the year.

3Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item		Value
323115, Digital printing		
Companies[1]	number	1,036
All establishments[2]	number	1,133
Establishments with 1 to 19 employees	number	880
Establishments with 20 to 99 employees	number	220
Establishments with 100 employees or more	number	33
All employees[3]	number	20,459
Total compensation	$1,000	863,741
Annual payroll	$1,000	747,491
Total fringe benefits	$1,000	116,250
Production workers, average for year	number	13,498
Production workers on March 12	number	13,527
Production workers on May 12	number	13,467
Production workers on August 12	number	13,414
Production workers on November 12	number	13,532
Production worker hours	1,000	23,732
Production worker wages	$1,000	429,263
Total cost of materials	$1,000	671,472
Materials, parts, containers, packaging, etc., used	$1,000	500,428
Resales	$1,000	66,738
Purchased fuels	$1,000	3,415
Purchased electricity	$1,000	15,211
Contract work	$1,000	85,680
Quantity of electricity purchased for heat and power	1,000 kWh	225,010
Quantity of electricity generated less sold for heat and power	1,000 kWh	–
Total value of shipments	$1,000	2,400,807
Primary products value of shipments	$1,000	1,802,457
Secondary products value of shipments	$1,000	291,638
Total miscellaneous receipts	$1,000	306,712
Value of resales	$1,000	104,588
Contract receipts	$1,000	–
Other miscellaneous receipts	$1,000	202,124
Primary products specialization ratio	percent	86
Value of primary products shipments made in all industries	$1,000	2,899,077
Value of primary products shipments made in this industry	$1,000	1,802,457
Value of primary products shipments made in other industries	$1,000	1,096,620
Coverage ratio	percent	62
Value added	$1,000	1,731,776
Total inventories, beginning of year	$1,000	112,374
Finished goods inventories	$1,000	25,722
Workinprocess inventories	$1,000	27,333
Materials and supplies inventories	$1,000	59,319
Total inventories, end of year	$1,000	111,287
Finished goods inventories	$1,000	25,025
Workinprocess inventories	$1,000	30,471
Materials and supplies inventories	$1,000	55,791
Gross value of depreciable assets (acquisition costs) at beginning of year	$1,000	r927,563
Total capital expenditures (new and used)	$1,000	r98,374
Buildings and other structures (new and used)	$1,000	r7,112
Machinery and equipment (new and used)	$1,000	r91,262
Automobiles, trucks, etc., for highway use	$1,000	r3,154
Computers and peripheral data processing equipment	$1,000	r19,041
All other expenditures for machinery and equipment	$1,000	r69,067
Total retirements	$1,000	r63,877
Gross value of depreciable assets at end of year	$1,000	r962,060
Depreciation charges during year	$1,000	r95,187
Total rental payments	$1,000	127,353
Buildings and other structures	$1,000	60,723
Machinery and equipment	$1,000	66,630
Total other expenses[4]	$1,000	160,462
Response coverage ratio[5]	percent	80
Repair and maintenance services of buildings and/or machinery4	$1,000	41,881
Communications services4	$1,000	11,562
Legal services[4]	$1,000	1,538
Accounting, auditing, and bookkeeping services[4]	$1,000	2,604
Advertising and promotional services4[4]	$1,000	4,681
Expensed computer hardware and supplies and purchased computer services[4]	$1,000	3,332
Refuse removal (including hazardous waste) services[4]	$1,000	1,169
Management consulting and administrative services[4]	$1,000	2,432
Taxes and license fees[4]	$1,000	4,705
All other expenses[4]	$1,000	86,558

1For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
2Includes establishments with payroll at any time during the year.
3Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.
4Based on Annual Survey of Manufactures (ASM) sample data.
5A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.
Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.
Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. Products Statistics: 2002 and 1997

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product Code	Product	No. of Companies with shipments of $100,000 or more	Quantity of production for all purposes	Product Shipments	
				Quantity	Value ($1000)
323115	Digital Printing.....2002	N	X	X	2 899 077
	1997	N	X	X	492 767
3231150	Digital Printing.....2002	N	X	X	2 899 077
	1997	N	X	X	492 767
32311501	Digital Printing.....2002	N	X	X	2 743 726
	1997	N	X	X	454 120
3231150100	Digital Printing.....2002	1 373	X	X	2 743 726
	1997	519	X	X	454 120
3231150Y	Digital printing, nsk, total.....2002	N	X	X	155 351
	1997	N	X	X	38 647
3231150YWW	Digital printing, nsk, for nonadministrative- record				
	establishments.....2002	N	X	X	61 320
	1997	N	X	X	9 007
3231150YWY	Digital printing, nsk, for administrative- record	N	X	X	94 031
	establishments.....2002	N	X	X	29 640

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity- value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p–10 to 19 percent estimated; q–20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Materials Code	Material Consumed		Quantity	Delivered Cost ($1000)
323115	Digital Printing			
900001	Total materials	2002	X	500 428
		1997	X	112 858
32212009	Uncoated paper, sheets	2002	X	32 719
		1997	X	5 113
32212011	Uncoated paper, rolls	2002	X	15 784
		1997	X	D
32200011	Coated paper, sheets	2002	X	16 182
		1997	X	3 996
32200013	Coated paper, rolls	2002	X	25 573
		1997	X	635
32222200	Pressure- sensitive base stock, self adhesive(paper, film, foil etc)	2002	X	15 622
		1997	X	2 228
32591002	Printing inks	2002	X	12 515
		1997	X	N
32599203	Light sensitive films and papers	2002	X	2 466
		1997	X	944
32599201	Unexposed photosensitive printing plates	2002	X	3 285
		1997	X	D
32312201	Printing plates, prepared for printing	2002	X	2 149
		1997	X	D
32221001	Paperboard containers, boxes, and corrugated paperboard	2002	X	4 969
		1997	X	307
32223200	Envelopes, purchased	2002	X	6 936
		1997	X	344
00970099	All other materials and components, parts, containers, and supplies	2002	X	106 849
		1997	X	9 779
00971000	Materials, ingredients, containers, and supplies, nsk	2002	X	255 379
		1997	X	86 962

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p–10 to 19 percent estimated; q–20 to 29 percent

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder

3) Workforce Prospects for Three Prospective Northland Industries

Background

Three industries were identified by University of Minnesota Bureau of Business and Economic Development economists as industries where there is a high percentage of needed supplier businesses located in the Northland region. This would seem to make them good prospects for business development especially by regional entrepreneurs. The three potential industries are:

Engineered Wood Member Manufacturing (except Truss) (321213)
Primarily engaged in manufacturing fabricated or laminated wood arches and/or other fabricated or laminated wood structural members. Examples: finger joint lumber manufacturing, I-joists, wood, fabricating, laminated veneer lumber manufacturing, parallel strand lumber manufacturing timbers, structural, glue laminated or pre-engineered wood manufacturing related.

Digital Printing (323115)
Primarily engaged in printing graphical materials using digital printing equipment. Establishments known as digital printers typically provide sophisticated prepress services including using scanners to input images and computers to manipulate and format the graphic images prior to printing.

Custom Roll Forming (332114)
Primarily engaged in custom roll forming metal products by use of rotary motion rolls with various contours to bend or shape the products.

While the industry studies examined needed suppliers for these industries, BBER's Workforce Survey dataset helps answer some questions about the existence in this region of workers who have the apparently needed skills.

The 2001 Workforce Survey was an extensive telephone interview with a random sample of 1453 household within which a random adult aged 16 or over was interviewed. Questions were asked about employment, interest in starting a business, occupation, work skills they wanted to use, interest in changing employment and criteria (salary, benefits, location, etc.) they had for a job using more of their skills. This is the larger of a series of Workforce Surveys conducted by BBER over several years. Summary results of these surveys can be obtained from BBER.

All occupations (with industry) and skills respondents want to use were listed -- 3123 items. The relevance of each listed item to each of the three potential industries was coded using the following categories:

0 *Skill or occupation not relevant to this industry*
1 *Skill or occupation is relevant a general labor for this industry (bookkeepers, accounts, general labor, janitorial, secretarial, etc.)*
2 *Skills that are relevant as specific supportive staff for a given industry*
3 *Highly relevant, key skills required in this specific industry*

Respondents received a 0-3 code for each of the three potential industries depending upon the highest coding of any occupation or skill that they mentioned (some respondents listed several occupations and/or skills that they wanted to use). Thus, there were three new variables added to the dataset, one for each potential industry. Each respondent had a 0 to 3 code for each variable, depending upon how relevant one or more of their skills was to that potential industry.

Results:

Table 1 indicates that 28% of the respondents had skills judged relevant to the Engineered Wood Member Manufacturing industry, 18% for Digital Printing industry, and 26% for the Custom Roll Forming industry.

Among those in the labor force (working or who want to work), 35% have skills judged relevant to the Engineered Wood Member Manufacturing industry, 23% for Digital Printing industry, and 32% for the Custom Roll Forming industry.

Among those respondents with relevant skills, 2% were highly relevant to the Engineered Wood industry, 4% for Digital Printing, and 3% for Custom Roll Forming industry.

Perhaps a better estimate of the available labor force for each industry can be seen by combining those with highly relevant skills plus those with skills relevant as specific staff skills for each industry. Among respondents with relevant skills 26% fall in this category for Engineered Wood Member Manufacturing, 40% for Digital Printing, but only 12% for Custom Roll Forming.

Table 2 provides information about the distribution of various workforce characteristics for those who have the top two categories of relevance of their skills for each industry.

Table 1
Percent Distribution of Respondents by Relevance to Each Industry,
2001 BBER Workforce Survey, Northeastern Minnesota

	Engineered Wood Member Manufacturing	***Digital Printing***	***Custom Roll Forming***
Percent of respondents with some relevant skill			
Among all respondents	27.7% *(1453)*	18.5% *(1453)*	25.8% *(1453)*
Among respondents in the labor force	35.0% *(709)*	23.4% *(836)*	32.2% *(740)*
Relevance of respondent's skill to an industry			
Percent highly relevant skill	2.0%	3.6%	2.7%
Percent specific support staff skill	23.7	36.6	9.5
Percent relevant general labor force skill	74.3	60.9	87.8
	100% *(403)*	100% *(269)*	100% *(375)*

Table 2
Percent Distribution of Selected Workforce Characteristics
Among those in the Highest Two Categories of Relevance to Each Industry,
2001 BBER Workforce Survey, Northeastern Minnesota

	Engineered Wood Member Manufacturing	***Digital Printing***	***Custom Roll Forming***
Background Characteristics			
Percent in the Port Cities	22% *(100)*	38% *(104)*	30% *(42)*
Percent female	13% *(100)*	52% *(104)*	11% *(42)*
Age group			
16-37	41%	60%	25%
38-53	38	29	54
54 and older	21	11	21
	100% *(100)*	100% *(101)*	100% *(42)*
Average age	40.2 yrs *(100)*	34.8 yrs *(101)*	43.7 yrs *(42)*
Employment Status			
Currently employed	69% *(100)*	65% *(104)*	89% *(42)*
Somewhat & very satisfied with work situation	88% *(67)*	84% *(65)*	87% *(38)*
Self-employed *among employed*	18% *(69)*	15% *(67)*	10% *(38)*
Among unemployed			
Taking steps to start a new business	4% *(31)*	0% *(37)*	10% *(5)*
Work Qualifications and Training			
Education			
High school grad or less	34%	39%	35%
Technical school	31	27	21
College	28	29	40
Graduate school	6	5	3
	100% *(100)*	100% *(103)*	100% *(42)*
Top (3) on an overall knowledge scale (0 to 3)	14% *(100)*	19% *(103)*	36% *(42)*
Personal assessment of technical knowledge:			
High (3+) on a 0-6 scale of technical knowledge	52% *(100)*	68% *(104)*	61% *(42)*
Average on scale of technical knowledge (0 to 6)	*3.0 (100)*	*3.4 (104)*	3.2 *(42)*
Holds one or more job related certificates or degrees	58% *(100)*	47% *(104)*	88% *(42)*
Employed has 1+ valid, certificates unused in job	28% *(100)*	18% *(104)*	55% *(42)*
Interest in machine/process control programming is a			

current skill or could do it with short term training.	19% *(92)*	27% *(100)*	35% *(40)*
Average work ethic scale *(16 is high)*	*12.8 (100)*	12.3 *(94)*	12.9 *(38)*
Currently taking courses or training to update skills	17% *(100)*	26% *(104)*	29% *(42)*
Availability and Conditions for Employment			
Planning to quit job within next year	4% *(65)*	22% *(59)*	10% *(36)*
Planning to leave the area next year	12% *(97)*	18% *(99)*	8% *(42)*
Current job uses all work skills	47% *(69)*	25% *(66)*	60% *(36)*
Willing to change job to one that uses more skills	54% *(36)*	22% *(59)*	62% *(16)*
Wants more work			
Unemployed, wants to work full time	12%	16%	7%
Unemployed, wants to work part time	19	19	3
Employed, wants to use more skills	31	40	26
Employed, wants more hours or jobs	6	8	12
Does not want more work	32	17	51
	100% *(100)*	100% (22)	100% *(42)*
Job Fluidity			
Not fluid	7%	5%	6%
In a fluid job situation	2	3	1
Planning to change work situation	5	10	5
Currently looking for work	86	82	88
	100% *(100)*	100% *(104)*	100% *(42)*
Total hours employed worked per week *(mean)*	44.3 hrs *(66)*	40.9 hrs *(66)*	46.6 hrs *(38)*
Hours/week respondent would like to work *(mean)*	35.7 hrs *(28)*	35.4 hrs *(37)*	39.0 hrs *(5)*
Lowest hourly pay to take a new job for unemployed *(median)*	$10.00/hr *(30)*	$9.38/hr *(36)*	$12.02/hr *(5)*
Lowest hourly pay to change to a job using more skills for currently employed *(median)*	$16.00/hr *(18)*	$10.00/hr *(25)*	$16.00/hr (10)
A current job pays more than $10/hr.	80% *(69)*	52% *(66)*	85% *(38)*
Willing to travel 16+ miles one-way to change to a job that used more skills, among employed	87% *(19)*	82% *(37)*	90% *(10)*
Willing to travel 16+ miles one-way to work among currently unemployed	43% *(31)*	50% *(37)*	69% *(5)*
Would like a job in:			
Port Cities	62% (95)	64% *(98)*	64% *(42)*
Northeast Minnesota	64% *(98)*	57% *(99)*	63% *(41)*
Greater Minnesota	52% *(99)*	31% *(103)*	40% *(42)*
Twin Cities metro area	24% *(100)*	14% *(103)*	17% *(42)*
Outside Minnesota	22% *(96)*	28% *(101)*	30% *(41)*
Would stay even if paid less than elsewhere:			
In Port Cities area	58% *(56)*	64% *(61)*	54% *(27)*
In Northeast Minnesota	56% *(24)*	41% *(21)*	73% *(8)*

Would like telecommuting job	48% *(97)*	74% *(101)*	46% *(40)*
Benefits:			
Current benefits for currently employed			
Medical coverage	74% *(69)*	44% *(67)*	86% *(38)*
Life Insurance	55% *(67)*	34% *(67)*	68% *(38)*
Retirement plan	63% *(69)*	38% *(67)*	78% *(38)*
Paid vacation	67% *(69)*	535 *(67)*	78% *(38)*
Would not change to a job that used more skills if it did not offer (among employed):			
Medical coverage	56% *(17)*	22% *(27)*	55% *(10)*
Life Insurance	59% *(17)*	17% *(26)*	43% *(10)*
Retirement plan	75% *(17)*	19% *(27)*	67% *(9)*
Paid vacation	60% *(18)*	43% *(26)*	75% *(10)*
Would not take a job if it did not offer (among unemployed):			
Medical coverage	37% *(31)*	67% *(36)*	69% *(5)*
Life Insurance	40% *(28)*	35% *(32)*	0% *(3)*
Retirement plan	25% *(28)*	51% *(35)*	60% *(3)*
Paid vacation	32% *(30)*	20% *(36)*	17% *(5)*
Would like to change how much they work	42% *(69)*	32% *(67)*	45% *(37)*
Type of desired work change:			
No change	12%	0%	0%
Fewer different jobs	0	9	0
Fewer hours at current jobs	63	51	66
More hours at current jobs	10	24	6
Fewer hours, more jobs	3	2	18
Fewer jobs, fewer hours	4	7	4
Fewer jobs, more hours	4	1	0
More jobs, more hours	3	5	6
	100% *(28)*	100% *(22)*	100% *(17)*
Laborforce overlap between these industries			
Have skills in *Engineered Wood Members*	*100%*	22%	68%
Have skills in *Digital Printing*	70%	*100%*	50%
Have skills in *Custom Roll Forming*	42%	5%	*100%*

4) Data sources

BEA Direct Requirements IO matrix data for MSAccess queries: The estimates from the 1997 benchmark input-output (I-O) accounts at the summary level (134 commodities and 131 industries) and at the detailed level (483 commodities and 491 industries), including a discussion of the matrix algebra underlying the derivation of the tables, are available on BEA's Web site. Go to <www.bea.gov>, click on "Industry: GDP by industry and input-output data," and look under "Input-Output data" to access the data interactively or in a published format.

Firm Inventory data for MS Access queries: CEW, with guarantee of confidentiality through data sharing agreement between MN DEED and the Labovitz School research bureau; Harris, and RefUSA/InfoUSA

Workforce data: Labovitz School of Business and Economics' Bureau of Business and Economic Research.