RESEARCH PROJECT:

Minnesota Regional Manufacturing/Technology Opportunity Assessment:
Central Region

Round Table Discussion/
Executive Summary

DATE:
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Bureau of Business
and Economic Research

University of Minnesota Duluth
Center for Economic Development
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Prepared for:

Minnesota Technology, Inc.
I. INTRODUCTION

The purpose of this paper and five others like it is to describe the economic base of six regions in the state of Minnesota, and to identify possible future niches for development. The relative health of Minnesota's economy today, and nearly full employment allows us an opportunity to plan strategically for the long term health of our state's economy. For this reason, our philosophy in formulating this paper and our recommendations has been that economic development efforts should focus on industries providing high wage/high value jobs which lead to an improved quality of life for Minnesota's citizens.

The economic base of Central Minnesota is defined today by a mixture of services and manufacturing. This economic base is described in the first section of this paper under the heading of Strongest Industries.

Our recommendations begin with a look at the top technology manufacturing performers in the region, identified by analyses of secondary data, focus group discussion, and individual interviews with knowledgeable people in the region. In the same way, we have identified candidates for business retention and development efforts that are important suppliers to the industries which comprise the economic base of the region.

Readers who are interested in further information are invited to look at reports 1 and 2 for the Central region.

Report #1: SUPPORTING DATA, including the Notion of Economic Base, Measuring Economic Base, Employment in Central Minnesota, Location Quotient Values for Central Minnesota, Shift-share Analysis for Central Minnesota, Input-output: Industry Ranking by Output Levels, Manufacturing - Technology Rankings, and appendix material with complete data.

Report #2: PRELIMINARY DATA, including Discussion of Data Sources, Data Organization, Industry Leaders, General Information and Analysis of Regional Structure for Key Industries, and tables of top performers.

The data for these reports are taken from secondary sources, including:

# Regional Economic Information System (REIS), United States Department of Commerce.

# County Business Patterns (CBP), United States Department of Commerce.

# NU OnRamp, University of Nebraska Bureau of Business Research computer based retrieval system (NUOR).

# IMPLAN 1993. MIG, Inc. Stillwater, MN.

# Standard Industrial Classification Manual, Executive Office of the President, Office of Management and Budget.
II. ECONOMIC BASE OF CENTRAL MINNESOTA

STRONGEST INDUSTRIES

Central Minnesota has a diverse economic base with a healthy mixture of services and manufacturing. If we look at industry representation in the region relative to the nation for the year 1993, we find that the top three areas of concentration are in manufacturing, with Cut Stone and Stone Products leading the list, followed closely by Household Refrigerators and Freezer manufacturing and Ophthalmic Goods.

The industries that make up the economic base of a region can be identified by their performance in five categories: employees (or level of employment), value added to the region, exports from the region either to the rest of the United States or to foreign countries, interaction with other industries in the economy leading to a ripple effect among industries, and prospects for future economic growth. A region depends upon the industries which dominate these categories in a very real way. Their strengths and weaknesses should be of major concern to those with an interest in the growth and development of the regional economy.

The following list of industries represent those in the Central region that are dominant in the above categories of performance. To be included in the following list requires that the industry be in the top thirty industries (out of over 500 industries) in at least four of these five categories of performance.

Economic base, in a technical sense, consists of industries that bring money in from outside the region through export activity. This money is then used to buy local goods and services either as semi-finished goods or professional services contributing to basic production. The secondary or local supplying industries are part of the infrastructure that makes a basic industry competitive in the global market place. Thus construction, local retail trade, business services, and other industries such as these both depend on the basic industry and nurture it.

Key Facts about Central Minnesota’s Economic Base: Top Industries from Analysis of Data Sources
n identified both by data sources and focus groups/interviews

<table>
<thead>
<tr>
<th>Top Technology/Manufacturing Industries:</th>
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<tbody>
<tr>
<td>n Poultry Processing</td>
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<td>n Cheese, Natural And Processed</td>
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<td>n Paper Mills, Except Building</td>
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<td>n Commercial Printing</td>
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<td>n Miscellaneous Plastics Products</td>
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<td>n Health Services</td>
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<td>n Many Services and Retail Categories</td>
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values = in the top 30
blank cell = not in the top 30

Industries ranking in top 30 in at least four categories for Central Minnesota:

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<tr>
<td>Maintenance And Repair Other</td>
<td>171.15</td>
<td>213.03</td>
<td>758.43</td>
<td>309.66</td>
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<td>Poultry Processing</td>
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<tr>
<td>Commercial Printing</td>
<td>69.97</td>
<td>145.52</td>
<td>211.99</td>
<td>93.69</td>
<td>2.71</td>
<td>1.99</td>
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<td>Miscellaneous Plastics Products</td>
<td>67.10</td>
<td>288.73</td>
<td>293.43</td>
<td>107.92</td>
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<td>Electric Services</td>
<td>97.80</td>
<td>263.29</td>
<td>461.26</td>
<td>306.77</td>
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<td>Wholesale Trade</td>
<td>295.47</td>
<td>59.46</td>
<td>551.83</td>
<td>506.27</td>
<td></td>
<td></td>
<td>11267</td>
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<tr>
<td>Automotive Dealers &amp; Service</td>
<td>120.32</td>
<td>62.10</td>
<td>234.00</td>
<td>190.83</td>
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<td></td>
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<tr>
<td>Miscellaneous Retail</td>
<td>162.98</td>
<td>186.00</td>
<td>367.79</td>
<td>294.94</td>
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<td></td>
<td>14735</td>
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</tbody>
</table>
# Poultry Processing

This is an industry that shows up as a major exporter from the region, has a high value of gross output, and exerts significant ripple effects on other industries in the region. Both the focus group sessions and at least one interview with an individual knowledgeable about the region identified turkey operations and agriculture value-added in general as important industries for growth over the next several years.

Analysis comparing the performance of this industry in the region to the industry’s national performance confirms the basic nature of poultry processing to the region. This industry is also one of the sectors with the largest absolute increase in employment between the years 1990 and 1993, adding an additional 644 employees. Secondary data sources for this industry report close to 1,500 total employees in 1993. In other words, all indicators point toward this being an important industry in the region today and an increasingly significant industry in the years to come.

# Cheese, Natural and Processed

Another agriculture value-added industry of some importance is related to cheese production. The importance of this industry was confirmed by those attending the focus group session. The industry employed close to 400 individuals in 1993 and experienced slight growth in employment between 1990 and 1993. It was seen to produce a significant dollar value of output in the region and to export most of that product to the rest of the United States. The ripple effect of its significance to the region is important to the rest of the region’s industries’ income and output levels.

# Paper Mills, Except Building

Paper Mills also rank high in value of exports, value of output, and regional influence through its impact on other industries. About 100 new employees were added to the region in this sector in 1993. This brought the total employment up to almost 1,500 employees. The industry did not have an impact on the rest of the region to rival the industries discussed above. However, it did have high values for employee compensation, value added, exports, and total gross output making its direct impact on the economy quite significant. Paper production was also identified by the focus groups and individual interviews. There is little question as to the importance of this industry to the region’s economic base.

# Commercial Printing

There are over 2,300 employees in this regional industry. This is over 500 additional employees from where the industry was in 1990, so it is a significant growth sector. The bulk of that growth has occurred in the lithographic aspects of the printing business. Like the paper mills, this industry does not appear in the top thirty list with respect to its impact on other regional industries. However, like the paper mills, it does appear on this list for compensation, exports, output, and value added. The individual interview did not identify this industry as a leader, but it was mentioned prominently in the focus group session.

# Miscellaneous Plastics Products

This represents a highly combined industry and is difficult to classify. However, it is quite large in terms of compensation, value added, output, and export levels. It was identified by a knowledgeable interviewee as a highly probable industry for future growth and development in the region. This is a growth industry nationally, and the region is shown as being competitive in attracting employers to this sector.

We find that the largest two components of this industry in terms of employment are Unsupported Plastics Film and Sheet Manufacturing, and Plastics Products, Not Elsewhere Classified (n.e.c.). The latter, which includes such diverse products as: air mattresses, awnings, plastic bearings, plastic boxes, plastic caps, ceiling tile, plastic doors,
and many more products, shows an employment in the region of over 1,600 individuals. This is a major industry in the region that was not identified through the focus group session.

# Health Services

An interesting outcome from the analysis of secondary data and from the interview/focus group process is that, in every region of the state, the medical industry came out as a leader. This leadership was in terms of total employment, but it was also a relative leader in every employment category in which the region was compared to the rest of the nation. We generally think of the Twin Cities and Rochester when we think of Minnesota medicine. We found out that Minnesota is a medical state, in rural areas as well as in urban areas.

Few industries depend more on outside forces such as policy changes and changes in insurance practices. Few industries are in such a state of flux. There is little doubt that major changes are in the wind for the medical industry. The Central region’s close geography and economic links to the Twin Cities will make these changes even more pronounced. There is talk of consolidation, there is the possibility of change in ownership and control of local hospitals, there is the probability that outside forces will play a larger role than in the past, and there is a likelihood that many hospitals will move from non-profit to for-profit in the near future. There is also the possibility of the loss of many rural hospitals in the not too distant future.

These possibilities tell us that this largest employer and fast growing industry should be of concern to local development, government, and interested private individuals. And all of these interested parties should prepare for an uncertain future.

# Services and Retail Categories

We will list here a few of the more important retail/service sectors identified by our data, focus groups, and interviews along with some short comments.

**Electric Services** - An important sector facing an uncertain future. Much is happening in this industry with deregulation at the wholesale level already accomplished, and a probable deregulation at the retail level in the near future.

**Wholesale Trade** - An important employer and major exporter from the region.

**Automotive Dealers and Service Stations**

**Miscellaneous Retail Trade**

**Banking**

**Amusement & Recreation** - This was identified in many ways by the focus group/interview process. The region is catering more to tourism than in the past, and this growth is reflected in this industry and in the retail/wholesale industries listed above. It should be understood as an important component of the region’s economic base.

III. RECOMMENDATIONS

**RECOMMENDATION I:** A focus of economic development efforts
should be on helping those existing industries which provide higher wage/value jobs to grow and survive, as opposed to emphasizing the recruitment of new businesses.

While this recommendation stems from conversations during focus group interviews in the region, it is a recommendation that requires discussion on its own merits, perhaps throughout the state. There is an increasing awareness in economic development circles that regional economic development, especially in rural regions, stems from internal sources. Small-to-medium sized enterprises, begun and nourished by local residents, often define the economic future of a rural region or even urban neighborhoods. Competitive industrial prospecting, combined with strong locational financial incentives, too often amounts to a zero sum game in which one region in the state simply attracts firms from other regions in the state.

Further, it is not unusual to find industries offered incentives at a location they would have chosen in any case. Locating firms simply take advantage of significant concessions from competing regions in the process. In many cases, there is a question as to whether benefits and costs of industrial prospecting, coupled with tax and financial give-a-ways, add up to positive outcomes. And finally, once industries are located in a region, they are often ignored and taken for granted.

TOP TECHNOLOGY MANUFACTURING PERFORMERS

Here we have identified the top performing technology industries with a strong local base. These are industries which typically provide higher wages and may be worthy of additional economic development attention. Individuals in the focus group/interviews confirmed that these industries existed in the region and some were identified as strong potential performers in the future.

# Household Refrigerators and Freezer Manufacturing

This industry is already a major employer in the region with close to 2,000 employees. It was also a major growth sector between the years 1990 and 1993 with an increase of over 600 employees. Interestingly, this particular sector was not brought up during the focus group or individual interviews, while heavy manufacturing as a general category was often mentioned as a strong potential future growth industry in the region.

# Ophthalmic Goods Manufacturing

This industry produces ophthalmic frames, lenses, and sunglass lenses. The industry is a major employer in the region with over 1,100 employees. It is not a growing sector in terms of employment, showing a loss of 100 employees between 1990 and 1993. This could, of course, simply be a part of the downsizing trend that has characterized manufacturing in recent years. This industry is clearly basic to the region, and of particular interest is the fact that the focus group also identified this as a strong industry in the region.

However, one person interviewed argued that there are reasons for concern with respect to ophthalmic goods manufacturing in the region. The person stated that local firms were particularly slow to respond to the change from glass to plastic lenses and that this has set the local manufacturing base at a competitive disadvantage. This participant was not optimistic that the local industry could respond to changing technology fast enough to regain competitive position.

Although this industry is on our list of strong technology industrial sectors, it might also be placed in our later section dealing with sectors of concern.

# Surgical Appliances and Supplies Manufacturing
This industry was confirmed as being present in the region by the focus groups and interviewees but they could not say much about it. It’s absolute employment in the region is a little over 500. This represents a growth in employment of about 50 employees between 1990 and 1993. The industry’s importance in the region relative to the rest of the United States declined slightly between 1990 and 1993. It is identified as being one of the higher wage industries from an employee compensation point of view.

# Electromedical Equipment

This is a fairly diverse industrial sector which produces products such as automated blood and body fluid analyzers, cardiographs, CAT scanners, and retinoscopes, among many other products. It is not a large employer compared to some of the other industries we reviewed, employing 153 individuals in 1993. This total is up 91 employees since 1990. While the medical industry was identified as having strong growth potential by both the focus groups and the individual interviewees, manufacturing of medical products was not specifically mentioned.

# Printed Circuit Boards

This industry is a relatively small employer in the region with 271 employees in 1993. This number is actually down by some 27 employees from 1990. It is identified as being basic to the region by its concentration relative to the nation, and shows a high dollar value of gross output. It was not an industry specifically identified out of the focus group/interview process, although technology industries as a general category were identified as important to the future of the region.

# Electronic Components, n.e.c.

Electronic Components (not elsewhere classified) is another composite industry producing a wide variety of products ranging from antennas to waveguides and fittings. The industry employed 340 individuals in 1993 which is a decline of around 50 employees since 1990. It was not specifically mentioned in the focus group or individual interviews.
Other Technology Industries

Other technology industries were identified by the data and will be listed here. Most of these have employment levels less than 50 employees and none were specifically identified through the focus group/interview process.

- Inorganic Pigments
- Biological Products Except Diagnostic
- Optical Instruments and Lenses

CANDIDATES FOR RETENTION EFFORTS

We found a number of industries in the Central region which are contributing significantly to the region’s economy but that are displaying signs of difficulty or are declining in relative importance. (Our next several observations are in terms of employment.) These industries should be the focus of retention efforts on the part of local governments and development agencies. A successful retention effort is likely to pay dividends at least as large as high risk efforts to attract new industry into the region.

# Cut Stone and Stone Products

This industry lost 713 employees between 1990 and 1993. It also lost its relative importance when compared to the same industry for the nation as a whole. Its 1993 employment was close to 900 individuals. The focus groups and at least one of the individual interviewees identified this industry as a problem industry and “out of date.”

Because of its past importance to the region, and especially because it remains as a significant regional employer, attempts to help the industry become competitive again could pay dividends for the region.

# Boat Building and Repairing

This is not a particularly strong, growing industry nationally and some of the concerns expressed here reflect that fact. This industry lost 320 employees between 1990 and 1993 to a 1993 total of 816 individuals. While most of this loss followed a national trend, a significant portion was identified as being attributable to competitive disadvantage for the region. This means that the region’s employment fell by more than would have been predicted compared to national trends. This industry was not identified as being a problem in the focus groups or in the individual interviews.

# Office Furniture, Except Wood

Office Furniture, Except Wood lost 206 employees between 1990 and 1993 to a 1993 total of 137 individuals. While this industry can not be identified as a growth industry nationally and its sluggish national performance is also reflected in the region, the loss can not be fully explained by national trends. Analysis indicates that the region lost more in this industry than could be explained by national forces.

# Plating and Polishing

This industry includes establishments involved in electroplating, enameling, hot dip galvanizing and related activities. It lost 180 employees between 1990 and 1993. Its total employment in 1993 was around 95 individuals. This industry was not identified by the focus groups or from the individual interviews.
# Other Candidates for Retention

We asked the focus group and interviewees for their views as to which industries are of concern to them. We have already noted that many of their concerns (optical manufacturing, the granite industry, agriculture, and agriculture value-added/servicing industries) were confirmed by the data analysis.

The telecommunications industry was identified by the focus groups/interviewees. This is an interesting industry to be identified as a problem since it is thought to be such a fast growth industry nationally.

Finally, and in a more general sense, retail trade in rural areas was listed as an area of concern. As retail trade centralizes in larger and more general stores, many of the small town retail operations are finding it difficult to compete. This was of concern to several of the focus group/interview participants.

RECOMMENDATION II: *Because basic industries buy many of their inputs to production from other local firms, attention to these local suppliers’ needs helps to make the basic industries more competitive.*

A region’s economic future requires that the region be efficient. Efficiency lowers the costs of production, making the region more competitive against other regions and globally was well. Efficiency can be associated with those industries supplying the basic sector, the provision of government services, the character of the region’s infrastructure regarding roads and communications, and the efficiency of local resources, such as the productivity of its workforce. So much attention is often paid to a region’s basic, exporting industries that those local industries supporting the base are often ignored and forgotten. This section looks at a few of those local industries that supply the economic base.

# Construction

One sector identified as the leading local supplier time and time again was that of Construction. Four basic industries are especially dependent on Construction: Agriculture; Electronic Equipment; Glass, Clay, and Stone Manufacturing; and Health Services.

Because the industry is competitive, little government encouragement or interference is necessary. However, making sure the industry has what it needs in the way of skilled workers could be viewed as a responsibility of the local education structure. Monitoring the finance picture in the region to make sure funds for construction are there when needed could be the responsibility of government and the business community. Quality assurance is the responsibility of everyone associated with construction in the region. These represent the recommendations associated with this apparently critical regional local supply industry.

# Utilities

Suffice it to say that local utilities play a major role as a supplier to regional basic industries. We highlight this industry at this point for many of the same reasons we highlighted the medical industry earlier--there is much going on that could change the efficiency and nature of this industry in the very near future. The possibility of deregulation at the federal level, the existing fact of deregulation in the interstate wholesale transmission of electricity, the ever present concerns over the environment as it relates to this industry, and the already occurring consolidation of the industry through multiple mergers and acquisitions, make this industry one of
concern to this and to many other regions in the nation.

# Business Services

The business and management consulting business is one of the fastest growing in the United States. It is apparent that these services are used to a great extent in the region with nearly every identified major industry purchasing at least $1 million from this sector in 1993. Efficient business and management services could be one of the keys to an efficient local business arrangement in the years to come.

# Real Estate

A number of regional firms not only made purchases from this sector, but very large purchases. Apparently a smoothly functioning Real Estate industry is quite important to the functioning of the Central region economy.

RECOMMENDATION III: Substituting locally produced goods and services for those previously imported defines a niche for future development. We recommend this option be explored.

The substitution of local goods and services for imported goods and services, or import substitution, is a particularly strong economic growth strategy when it works because it not only provides the direct employment associated with the new facility, but it increases the interaction between local industries. As discussed earlier in this report, local supplying industries are part of the infrastructure that makes a basic industry competitive.

# Management and Consulting Services

Following the discussion above, Business Services is an important input into the production process. One of these business services is Management and Consulting Services. Using employment as the unit of measure, this is an industry that is under represented in the region from what would be expected when looking at the country as a whole. Since it is such a fast growth industry nationally, it may be worth looking into as a possible import substitution possibility for the region.

# Other Opportunities for Import

Substitution

- Hospital and Medical Service Plans
- Private Vocational Schools
- Security and Commodity Services
- General Warehousing and Storage
- Computer Maintenance and Repair
- Heavy Construction Equipment Rental
- Data processing and Preparation
- Computer Related Services, n.e.c.
- Chemicals and Allied Products, n.e.c.
- Noncommercial Research Organizations
- Medical and Hospital Equipment
- Business Consulting, n.e.c.
VI. Potential Impediments to Future Economic Growth

This last section draws primarily on the information provided by focus groups and individual interviews. We asked the focus groups and those interviewed individually what might be their concerns and recommendations for future development. We also asked what government, local development agencies, and the business community itself might do to aid meaningful economic development. What follows is our interpretation of the interview responses categorized by topic.

# Labor Force Issues

Most regions in the state identified this as a potential problem hindering future economic development. This is consistent with an earlier work on Minnesota workforce issues by the Center for Economic Development, University of Minnesota Duluth, which identified the region as having concerns with workforce availability. Particular concerns were expressed on the highly trained and technical workforce that is going to be required for future economic development in the region.

# Issues in Government Regulation

This is another issue that appeared again and again in the regions we interviewed. Both the focus group and individual interviewees argued that reasonable, sensible government rules and regulations and efficient ways of applying for needed licenses, permits, etc., would be a particularly useful thing for state and local government to offer in order to foster economic development in the state. Coupled with this is a concern that economic development is not well supported by state government. A better attitude towards business and economic development would be particularly helpful in this regard.

# Housing Issues

This is actually related to the workforce issue. There were several statements in the focus groups and interviews indicating that affordable housing was too limited in the region. Of course, this has something to do with what people are paid for their work which ultimately determines what is “affordable.” However, several felt that there was a role for government in dealing with this problem, although the details of that role were not specified.
Lack of Communication Between Business, Government, and the Educational Community

Once again, this is an issue related somewhat to the workforce issue mentioned above. There was a general feeling that there was not enough of a “working together” attitude in the region. The feeling seemed to be that more communication would be beneficial and that people in the region, given the proper forum, would be willing to work with others to assure that policies, training, and paths of economic development would all be better coordinated. Many saw an important role for the development agencies in the region in fostering and encouraging this communication/coordination function.

A related issue was described as follows: It was often stated that the Central region is really two regions, one running from St. Cloud to the south and the other north of St. Cloud. It was felt that the two regions have very different economies and problems. It might be useful to look at the region in this way and for development agencies to be flexible enough to develop policies that take the different character of the two regions into account.

It was pointed out that better communication and coordination among government and private agencies dealing with economic development issues in the region would be beneficial. This repeats the earlier arguments in this section about lack of government communication, but among the participants of the focus groups and interviews it was given as a separate item as well.

The business community itself was included in this discussion; it was argued that business could become more involved in the development of the region and be less isolated than they are perceived to be at the present time. Involvement, communication, and coordination were all listed as important factors for all units interested in the economic development of the region. This point was made again and again at all levels of participation.

The Post-Secondary Education Merger and Technical Colleges

Finally, some of participants were concerned that the merger of the community college, state university, and technical colleges in the state will serve to undermine the technical aspects of education. No solution short of turning back on the merger was suggested and we list this as a potential concern in the region.