

RESULTS OF THE EDA/BMT MANUFACTURING SURVEY



Statewide Analysis
July 2001

EXECUTIVE SUMMARY/STRATEGIES FOR SUCCESS

The 2001 EDA/BMT Manufacturing Survey of 2802 Indiana manufacturers produced a number of recommended strategies for success. These strategies can help *increase average wage rates and employment levels* in distressed areas of the State when implemented by local economic development officials and service providers. Among the more salient strategies are the following:

1. For many manufacturers, coming out of a recession will present additional business. Rather than waiting for the good economy to return, encourage companies to *identify and fix their weaknesses now*, in the midst of the recession, so they can be in the best position possible to profit from the return of good business.
2. Help manufacturers apply the demographics identified by the survey so they better know themselves and their market.
3. Work as partners with local manufacturers to help them find higher-value-added products and services so they are less dependent on lower wage rates to remain competitive.
4. Using survey demographics as an aid, identify the companies whose location is very critical to their success (e.g. distance to suppliers, customers, markets or major cities). Those for whom it is currently an advantage will be less likely to move outside the region, other things being equal. Develop inventive local strategies to make location even more of an advantage for them, but focus most on helping those for whom it's a disadvantage.
5. Transportation improvement is one way to make location more of an advantage for companies where it is critical to their success. Transportation improvement is also important for many of those who are particularly sensitive to lowering operating costs. Examples of companies that often fit both of these categories include producers of medical devices, autos, aeros, plastic products, electronics, metals and machine tool shops, especially those with 201-500 employees. Where the density of these kinds of companies is fairly high, consider making transportation improvements a priority.
6. Workforce availability is a key competitive advantage for some distressed-area manufacturers and a competitive disadvantage for others. Help improve the advantage by developing innovative local strategies for producing prospective employees with the priority workforce skills (identified herein) that companies believe will be most difficult to find over the next five years. This adds high-wage jobs, since many of these positions go unfilled.
7. The overwhelming majority of the “education shortfall” from a manufacturing perspective is poor math skills and work ethic. Solutions would come much quicker if communications were improved between educators and manufacturers. To improve these communications very quickly, enroll educators in a Lean Workshop—a “crash course” where they participate in a manufacturing scenario, learn what the problem is and what it isn't, all in just a few hours.

8. Encourage training on intergenerational differences and team-building to improve workforce harmony, reducing turnover and solving many of the issues incorrectly perceived as work ethic problems.
9. Especially for companies with 35-49 employees, encourage training in managing-through-others as a strategy for profitable growth.
10. Facilitate the formation of alliances and CEO roundtables as a means of addressing reduction of participants' operating costs and improving company management. Almost half of all manufacturers are open to joining them.
11. Distressed-area companies with fewer than 50 employees are especially vulnerable to capital shortfalls. These shortfalls are a key constraint on their ability to take on additional business, and coming out of a recession may well present that business. Focus first on making them aware of outside management assistance that is available, and persuade them to use that assistance so they can develop strategies to be in a more defensible position for a loan. Then, facilitate capital access where appropriate.
12. Room to expand is another key constraint to taking on additional business for companies with fewer than 50 employees. As part of the solution, encourage companies to attend a Lean Workshop where workflow improvements can be discovered to ease this need.
13. Use the economic impacts identified by respondents throughout the survey as an indication of the return on local investment that might be possible, especially if that investment supports strategies that are particularly innovative and focused on the true needs of local manufacturers.
14. Bring special attention to those industries that are most highly dissatisfied with the assistance their local communities provide. These industries include the metals, defense, aeros, printers, wood products, and machine tool, especially those with 35-49 employees.
15. Especially for companies that supply the automotive, RV and defense industries, help them face a critical challenge of improving sales. Ways to do that might include getting them enrolled in a marketing workshop or a Marketing User Group.
16. Especially for companies with fewer than 50 employees, help them learn to think more globally. This can help them find profitable opportunities to better serve their market as well as help them prepare for some of the grim realities of the global market that may soon be passed to them by their larger customers.
17. Companies tend to look for other markets when they run into trouble. One of the most important findings of this survey was that in this high-speed global marketplace, lucrative alternatives will be much harder to find and not without significant risk. *Encourage companies to fix the problems they have in the markets they are in now.* This can be done by an outside resource assessing the company from within to identify strengths and weaknesses, proscribing an action plan for improvement. Companies would then be in a better position to undertake risk, and fixing items like customer satisfaction can best be done before exposing new customers to faults

that might have been at the heart of their problems in the old markets. Improvements might even make them more competitive in the comparatively low-risk markets they now supply.

18. Facilitate regional, collaborative approaches to providing high-speed Internet access for area manufacturers.

19. Help make the proposed team-developed web site a reality. It promises higher-quality solutions for manufacturers and local economic development officials in much less time, bringing together collaborating service providers as never before.

20. Use the survey's resources-needed demographics in two ways. First, given the number of employees and the industries served by a particular company, together with the applicable region of the State, use the demographics to help predict the needs of that company. Combine that with information on other companies and county breakouts of survey answers to determine expected needs and trends for a particular region. Plan accordingly.

Second, determine from the demographics the types of companies that would be particularly receptive to certain services. Targeting companies that are most receptive can achieve maximum impact from scarce resources and more quickly meet the needs of area manufacturers.

RESULTS OF THE 2001 EDA/BMT MFG. SURVEY

The 2001 EDA/BMT Manufacturing Survey was developed by a team of local economic development officials, manufacturers, and service providers. Development was facilitated by Indiana Business Modernization & Technology Corp. (BMT) as part of a project “Moving from Distress to Commerce through Collaboration.” Funding was provided by a matching grant between BMT and the U.S. Department of Commerce Economic Development Administration (EDA).

The focus of the survey was on areas of Indiana that are below the national average in employment levels or average wage rates. These distressed areas include 44 Indiana counties as well as Gary and East Chicago. The survey’s aim was to identify the needs of manufacturers in these distressed areas so local, state and federal resources could align their services to better help them become more competitive.

Surveys were mailed during June and July, 2001, with a cover letter signed by Indiana’s Lt. Governor Joe Kernan. Addressees included all 2,442 manufacturers identified in distressed areas, plus 435 in non-distressed areas (so any effects attributable to distressed areas could be determined more clearly). The return rate was 6.9% in EDA/distressed areas (163) and 5.3% in non-distressed areas (23).

This report presents the analysis of completed surveys, with its first five sections reflecting the survey’s modality. Major topics are in bold print, followed, where appropriate, by the question in quotation marks to which the response is directed. Thence, the results and analysis of each question.

Analysis of industry trends often uses the following codes to reflect a particular industry: MT=Machine Tool, EL=Electronic, MD=Medical Device, Q=Automotive, P=Plastic Products, ER=Aeronautical, DE=Defense, RV=Recreational Vehicles, ML=Growth Metals, RN=Printing, WD=Wood Products, O=Miscellaneous Other Industries.

Where applicable, the analysis also identifies trends broken out by geography. The codes for the appropriate regions of the State of Indiana are as follows: NW=Northwest Indiana (excluding Gary/E. Chicago); G/EC=Gary/E. Chicago; E/SE=East and Southeast Indiana; SW=Southwest Indiana; W=West Indiana

Use of the term “proactive management style” herein refers to company activities outside the survey that have proven to be valid indicators of such a style. Proactive managers, for example, tend to secure Indiana Department of Commerce training grants; certify ISO/QS-9000; compete for the Indiana Quality Award (1995-2000); become clients of BMT and other statewide service providers; etc. In this case, BMT combines information from other sources to enhance the analysis.

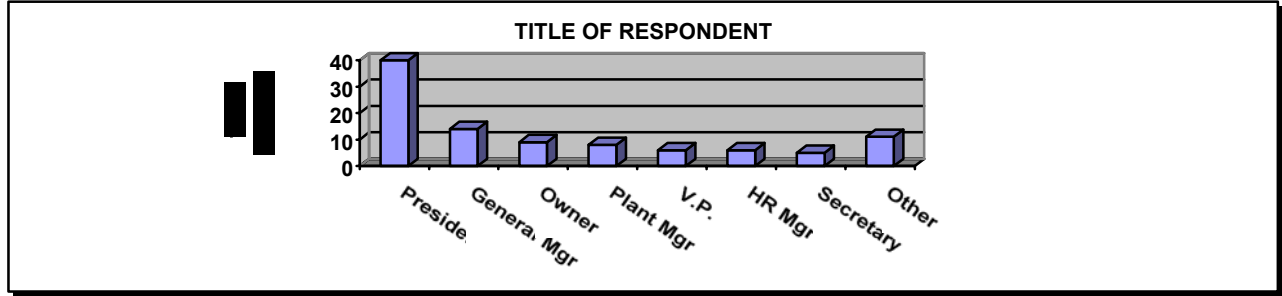
Individual company answers are confidential, so using the industry/size/regional trends identified herein can be very helpful to service providers in estimating how particular companies can best be helped.

I. Basic Company Information

--Title of Person Completing the Survey

As the chart below indicates, the rank of the employee most often chosen to complete the survey was president of the company. This was true for all industries and all sizes below 200 employees. Above 200 employees, surveys were completed most often by general managers.

Chart 1



--Respondents per County/Urban Area

The table below shows how many surveys were returned from each county or participating urban area. Those with at least 20 percent of their manufacturers completing the surveys were Crawford, Parke, Jay and Orange counties. Non-distressed areas participating in the survey as a control group are indicated with an asterisk.

Table 1

RESPONDENTS PER COUNTY/URBAN AREA					
Benton	1	Jackson	4	Pulaski	2
Boone*	1	Jasper	2	Putnam	1
Clay	2	Jay	11	Randolph	6
Crawford	5	Jefferson	4	Ripley*	1
Daviess	3	Jennings	1	Rush	4
Dubois*	2	Knox	3	Scott	2
East Chicago (Lake)	4	LaPorte (Michigan City)*	8	Starke	4
Elkhart*	1	Lagrange	12	Sullivan	1
Fayette	2	Lawrence	3	Switzerland	1
Fountain	1	Marion*	1	Union	1
Franklin	2	Marshall*	1	Vermillion	2
Fulton	6	Miami	2	Vigo	8
Gary	10	Newton	5	Warren	1
Gibson	5	Orange	8	Warrick*	1
Grant	10	Owen	2	Washington	1
Greene	3	Parke	7	White	4
Hammond (Lake)*	6	Perry	4		
Harrison*	1	Pike	3	* Non-distressed	

--Respondents Per EDA Region

To best identify local trends, the State was further divided into five regions. Each has a team of local economic development officials, manufacturers and service providers. This table shows the number of surveys returned by region, together with a reflection of the appropriate geographic part of the State. As shown in the table, the E/SE area returned the most surveys.

Table 2

Region 1 (NW Indiana)	40
Region 2 (E and SE Indiana)	49
Region 3 (SW Indiana)	39
Region 4 (W Indiana)	29
Region 5 (Gary/E. Chicago)	29

--Companies with Faxes and Web Addresses

97% of respondents have fax numbers, and 55% have web addresses. Companies with web addresses tend to be in the electronics, aeronautical, automotive, defense, growth metals, or machine tool industries, and typically have more than 35 employees. They also are more likely to have proactive management styles, be a subsidiary with headquarters outside of the State and often have grown by more than 20% over the last three years. Geographically, companies with web addresses range from 49% in W and SW Indiana to about 58% in NW, E and SE Indiana.

--Companies that use E-mail

49% of respondents say they use E-mail. The industry and size description in the previous paragraph also applies to the likelihood that a company will use e-mail. Geographically, Gary/E.Chicago joins SW Indiana as least likely to use e-mail (44%), while E and SE Indiana is highest at 58%.

--Companies with Quality Managers

50% of respondents have quality managers. These managers are most prevalent in electronics, aeros, autos or defense companies. Plastics, machine tool and growth metals are twice as likely to have a quality manager as the average Indiana manufacturer. Companies with quality managers tend to have more than 50 employees, export, and be proactive subsidiaries with out-of-state headquarters.

--Companies with R & D Directors

20% of respondents have R & D directors. Defense companies are most likely to have R & D directors, followed by aeros, electronics firms, growth metals and producers of plastics products. Companies with R & D directors tend to be growing, have more than 35 employees and export. Again, they typically have proactive management styles and often are subsidiaries, though their headquarters are as often in-state as out-of-state.

1. Companies that Want a Copy of the Survey Report: “Do you want a copy of the statewide lessons learned from this survey? Yes/No”

79% of respondents want a copy of the survey report. They tend to come from proactive companies in the automotive, aeronautical, plastics, defense or growth metals industries with more than 35 employees. They also are often subsidiaries with out-of-state headquarters who export.

2. Industries Served: “What are the top three industries served with the products or services your company produces?”

The following table reflects the responses given most often:

Table3

Type Company	Industries/Types of Companies Served			
<i>Machine Tool</i>	Automotive	Steel	Electronic	Petroleum
<i>Automotive</i>	Transportation	Electronic	Agricultural	Aftermarket
<i>Electronic</i>	Automotive	Appliance	Telecommunication	Air Conditioning
<i>Medical Device</i>	Medical	Automotive	Industrial	
<i>Plastic</i>	Automotive	Food	Chemical	
<i>Aeronautical</i>	Aeronautical	Automotive	Airports	
<i>Defense</i>	Aerospace	Industrial		
<i>Recreation Vehicle</i>	Automotive			
<i>Growth Metal</i>	Automotive	Steel	Construction	Air Conditioning
<i>Printing</i>	Schools	Gov't Offices	Churches	
<i>Wood</i>	Furniture	Home Construction		
<i>Other</i>	Construction	Food	Apparel	Agriculture

3a. Minority-Owned Companies: “Please check if your company is owned at least 51% by a minority; a woman; people with disabilities; N/A.”

The EDA statewide team identified ten minority-owned companies in distressed areas of Indiana, five of which participated in this survey. Two serve the electronics industry, two are in growth metals serving the autos and machine tool, and the fifth is in the food industry. Three have more than 200 employees, while the other two have about 30. As a group, these companies have average growth, export, and all five have headquarters where they are located--within the State of Indiana. Two are from Gary/East Chicago, and the rest are scattered about the State.

3b. Women-Owned Companies

Almost 10% of responding companies are owned by women. They tend to be in the same industries as non-women-owned firms, but especially in the autos, plastics and defense industries other than aeronautical. They are twice as likely as the average respondent to have become a BMT client, but they tend not to have certification to ISO or QS. Their companies are typically

older and smaller than the average company, with many having 35-50 employees. They are spread throughout the State, but are especially concentrated in the Gary/E. Chicago/Hammond/Michigan City area.

4a. Percentage of Minorities in the Workforce: “Approximately what percent of your workforce is minorities?”

66% of respondents say they have less than 10 percent minorities in their workforce. This is prevalent throughout the distressed areas of the State, except in Gary/E. Chicago where minorities make up 51-75% of the workforce for several responding companies. Companies with a high percentage of minority workers tend to have between 50 and 200 employees and serve the electronics, automotive, wood products or agriculture industries.

4b. Percentage of Women in the Workforce: ...“Women?”

The most popular answer was that 10-25 percent of their workforce consisted of women. This varied by industry. Defense, wood products and miscellaneous other industries are more likely to have less than 10 percent women in their workforce. Companies with 10-25 percent have a greater chance of being in the growth metals or plastics industry. Machine tool, automotive, printing, and medical device companies are more likely to have 26-50 percent women in their workforce, especially in Western Indiana. Companies in the electronics industry are more likely to have 51-75 percent women in their workforce. These companies tend to be in Southern Indiana.

5. Users of Web Sites to Run a Business: “What web site addresses do you use most often to help you run your business?”

32% of respondents listed web sites they use to help run their businesses. The growth metal industry had the highest percentage, followed by the automotive, plastics, and electronics industries. These companies typically have more than 35 employees, are growing, and have proactive management styles. The highest percentages were in subsidiaries with headquarters located outside of Indiana.

Most responding companies use search engines to help them find specific sites. They are using websites to locate vendors, suppliers, and distributors. They’re also using them to get travel, business, and financial information. Several federal and state agency websites are popular as well. Companies access web sites to several trade organizations, freight companies, or simply just to check the weather.

Geographically, the highest percent web site usage was E/SE Indiana, where 43% listed web sites (other than their own) that they use to help them run their business. This was followed by W Indiana (31%); Near-NW Indiana (27%); Gary/E.Chicago (21%); and SW Indiana (18%).

II. This next section deals with the respondents’ local community. Their responses, when combined with those from other companies, help insure scarce resources are focused in areas that do them the most good.

1. Location Competitive Advantages: “What are the three biggest advantages for being competitive *that come from where you are now located?*”

In order of priority, the three most popular responses were location, workforce and lower costs. Most manufacturers are satisfied with their location and believe it is vital to the company because it provides them with better opportunities to operate efficiently. Being close to markets, suppliers, customers, and the Interstate, companies can perform tasks more quickly and less expensively. The low labor/wage rates that exist in many of these distressed areas are attractive as well, especially when they are complemented by a quality workforce that has a strong work ethic. These and other factors help companies keep their costs down and make it easier to compete.

The various responses are listed below in order of the percent of respondents that gave them. If a particular response tended to come disproportionately from certain industries, sizes of companies, or from a particular region of the State, that is listed as well. If necessary, refer to the opening section for definition of the codes being used.

Table 4

COMPETITIVE ADVANTAGES				
Advantages	%	Size	Industry	Region
<i>Location (in general)</i>	26	10-500	P,Q,DE,ML,EL	All
<i>Quality workforce/ethic/ turnover</i>	24	50-500	P,Q,DE,EL	NW, SW
<i>Near markets/customers</i>	21	35-500	P,Q,ER,MT,MD,ML	NW, E/SE, G/E.C.
<i>Wage rates</i>	21	<50	P,DE,MT	NW, E/SE, W
<i>Low operating/real estate/workers comp/utility costs</i>	18		P,WD,ML	
<i>Near interstate/major roads/rail</i>	16		DE	W, G/E.C.
<i>Workforce availability</i>	13	>200	WD	SW, W
<i>Near suppliers</i>	12		ML	
<i>Near raw materials</i>	9		ER	SW
<i>Taxes/abatements</i>	8			

Note, for later reference, that quality workforce/ethic/turnover are listed as advantages primarily by companies with 50-500 employees, while low wage rates are listed primarily by smaller companies with less than 50 employees. Workforce availability is viewed as an advantage by companies with more than 200 employees.

Other general advantages listed less often: Small town/community (7%); low cost of living (4%); transportation (4%); local government supporting business expansion (4%); a facility with room to expand (4%); local amenities (3%); and, at 1% each: away from competition, near housing, high school interns, flexible work hours, local bidding preference, response to emergencies, and low IDEM quotas...

2. Location Competitive Disadvantages: “What do you see as the three greatest obstacles to your being competitive *that come from where you are now located?*”

While a quality workforce was listed in responses to the previous question as a major competitive *advantage* to mid-sized companies operating in distressed areas of the State, it is a major *disadvantage* to smaller and selected mid-size companies operating in the same regions. Four of the top ten disadvantages listed were workforce related: many respondents believe the education level is not high enough, mainly in math; others find it difficult to find and retain skilled employees; work ethic is unsatisfactory for many; and increasing wage rates/cost of benefits make it more and more difficult to compete. Again, this affects some industries, sizes of companies and regions more than others, as shown in the table below:

Table 5

COMPETITIVE DISADVANTAGES				
Disadvantages	%	Size	Industry	Region
<i>Education level of employees</i>	25		MT,Q,DE	NW,E/SE,W
<i>Quality workforce/ethic/ turnover</i>	24	10-34,>200	EL,MD,ML	E/SE, SW,W,G/E.C.
<i>Operating costs</i>	22	201-500	MT,Q,P,EL,ER,ML	E/SE,W,G/E.C.
<i>Taxes</i>	17	35-49	P,EL	G/E.C.
<i>Transportation</i>	12			
<i>Wage rates</i>	12	35-49		
<i>Workforce availability</i>	9		P,EL	
<i>Distance to suppliers/customers/markets/major cities</i>	8		MD	
<i>Support expansion</i>	6			
<i>Interstate access</i>	5	>500	RN	

3. Local Help Needed to Become More Competitive: “What are the top four things your local community or economic development organization could do to help you become more competitive?”

More than anything else, manufacturers want their local communities and economic development organizations to work together so they get tax relief. Many want inventory taxes eliminated and property and other taxes reduced. They also want easier access to capital, improved roads and better-educated prospective employees—especially in math. The table below shows where these and others are resonating most.

Table 6

LOCAL HELP NEEDED TO BECOME MORE COMPETITIVE				
Help Needed	%	Size	Industry	Region
<i>Taxes/abatements</i>	36	<500	MT,P,DE,ML,WD,EL,Q,MD,RN	All
<i>Capital assistance</i>	20	<50	MD,RN,WD,EL,Q	E/SE
<i>Transportation</i>	20			
<i>Education level of employees</i>	18	>500	ER	E/SE
<i>Small town/community/housing/economic growth</i>	8		DE,ER	
<i>Operating costs</i>	7		P	
<i>Marketing assistance</i>	7			
<i>Quality workforce/ethic/high turnover</i>	7	50-200		
<i>Federal mandates</i>	7			
<i>Awareness</i>	6			

4. Impact of Local Assistance: “Over the next five years, if your local community and economic development organizations met the priorities you indicated in the previous question, about how many jobs could be retained at your current location that might otherwise be lost? About how many new jobs could be added? At what average hourly wage? About how much could you increase annual sales? /Cannot estimate.”

65% of respondents were able to estimate this impact. If their local communities and economic development organizations provided the help mentioned in question #3 above, the average company believed they could retain 38 jobs that might otherwise be lost; they could also add an average of 30 new jobs per company; at a range between \$6/hour to \$23/hour for an overall average of \$11.25/hour; and, they would expect annual sales to increase somewhere between a median and a mode of \$2 million per company to a mathematical average of \$4.998 million.

5. Local Constraints to Increased Business: “If additional business presented itself, what are the first three constraints you would experience if you took it on where you are now located? (Please list in the order you would expect them to be experienced as business increased.)”

If companies took on additional business at their current location, many would face problems with space. Too often, their facilities or lots have little or no room for expansion. There were also concerns about having enough qualified workers and having access to capital to finance the purchase of new equipment.

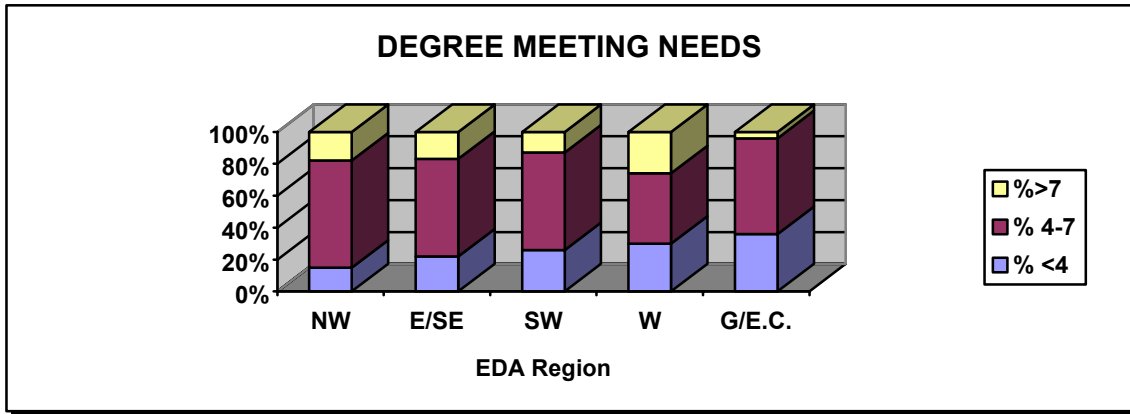
Table 7

LOCAL CONSTRAINTS TO INCREASED BUSINESS				
Constraints	%	Size	Industry	Region
<i>Room to expand</i>	24	<50	MT,MD,P,Q,DE,ER,ML,WD	All
<i>Quality workforce/ethic</i>	21	>35	P,Q,ML,WD	NW,E/SE,G/E.C.
<i>Workforce availability</i>	20	>500	MT,EL,ER,ML	
<i>Capital assistance</i>	15	<10	MD,Q,ER,WD	E/SE, SW
<i>Operating costs</i>	11		ER	NW
<i>Equipment</i>	11	10-49	EL,MD	W
<i>Transportation</i>	8			
<i>Taxes</i>	5			
<i>Material availability</i>	5			
<i>Federal mandates</i>	5			

6. Degree Local Community Meeting Needs: “On a Scale of 1 to 10 where 1 is low and 10 is high, please circle the response that indicates the degree to which your local community is meeting your needs overall: 1-10/No Opinion”

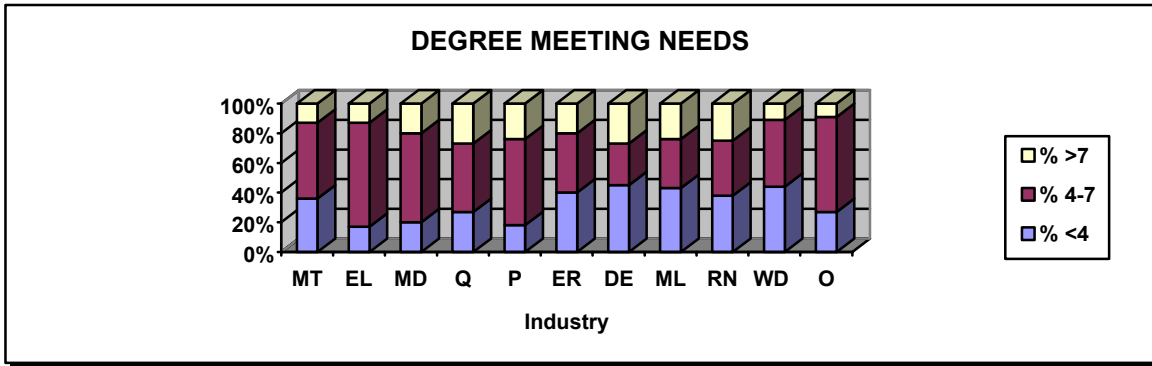
The average answer was 5, ranging regionally from 5.79 in E/SE Indiana to 4.59 in Gary/E.Chicago. The next chart shows the distribution of scores for each region: the percentage of respondents that selected a score less than 4, between 4 and 7, and greater than 7. Comparing the percentages adds perspective to how well respondents believe their needs are being met by their local community.

Chart 2



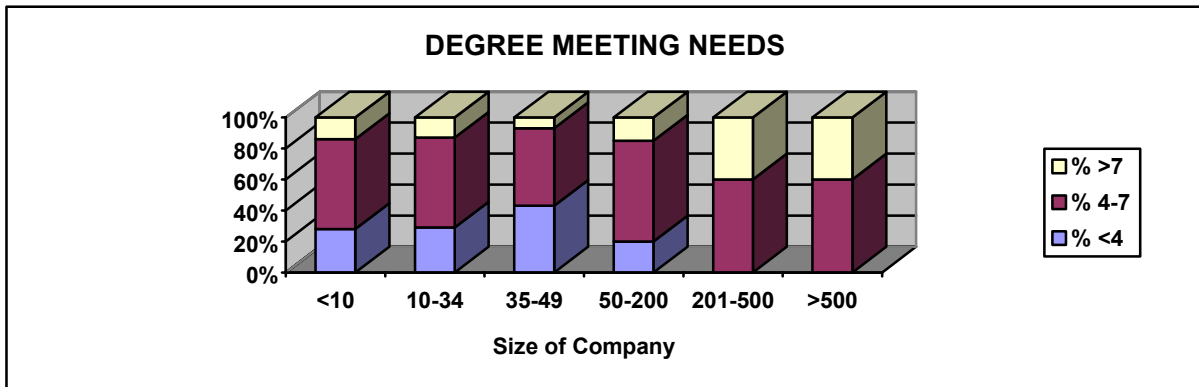
The next chart shows how well respondents believe their needs are being met by industry. Comparing “<4” with “>7” suggests several possibilities for additional emphasis by local communities.

Chart 3



Finally, the next chart shows how well respondents believe their needs are being met broken out by size of the company. Comparing the percentages suggests that smaller companies believe they should be getting more attention.

Chart 4



III. Another key to helping companies become more competitive is resolving workforce issues.

1. Impact of better math, reading, computer and work ethic skills: “Many small businesses believe they could save on training costs if applicants for entry-level positions had better math, reading, computer and work ethic skills. About how much could you save on annual training costs if these improvements were made? About how many more could you hire? At what average hourly wage? About how much could you increase annual sales? /Cannot estimate.”

36% of respondents were able to estimate this impact. If entry-level applicants had better math, reading, computer and work ethic skills, the average estimate was that \$27,023 could be saved in total annual training costs for their company; an average of 6.49 more workers could be hired per company at an average hourly wage of \$10.38. Annual sales could be increased an average of \$1.149 million per company because of the added efficiencies.

2. Difficult-to-find workforce skills: “Looking out three-to-five years, what workforce skills will you have the most difficulty finding that pay higher-than-average wages?”

The following table shows the skills most often mentioned in order of their importance to respondents. The table also reflects those industries, sizes of companies and regions where each skill was disproportionately needed.

Table 8

WORKFORCE SKILLS				
Skills	%	Size	Industry	Region
<i>Machinist</i>	17	>10	MT,EL,MD,ER,Q,ML	All
<i>Computer Skills</i>	13	>10	MT,P,Q,DE,WD	NW, E/SE, SW, W
<i>Engineers</i>	13	>35	MT,EL,P,ER,Q,DE	All
<i>Electricians</i>	12	>50	EL,MD	All
<i>Supervisor & Managerial</i>	10	>10 <200	EL,Q	NW,E/SE,W
<i>Math</i>	9	<200	MT,EL	NW,E/SE,SW, G/E.C.
<i>Work Ethic</i>	9	<200	WD,RN	E/SE,SW,G/E.C.
<i>Maintenance-All Categories</i>	8	>35	MT,Q,WD	NW,W
<i>Tool & Die Makers</i>	8		MT,P,ER,Q,ML	NW,E/SE,W
<i>Welders</i>	8	<35	MT,ML	SW,W,G/E.C.
<i>Quality Personnel</i>	7	10-200	ML	E/SE,W
<i>Technicians</i>	7	>200	ER,Q	G/E.C.

3. Impact of locating difficult-to-find workforce skills: “About how many more employees could you hire if people were available that have these skills? At what average hourly wage? About how much could you increase annual sales? /Cannot estimate”.

50% of respondents were able to estimate this impact. If difficult-to-find workforce skills identified in the previous question were available, the respondents believe they could hire an average of 7.11 more people at a wage ranging from \$6 to \$28 per hour for an overall average of

\$13.44 per hour. Annual sales could be expected to increase an average of \$1.998 million per company.

4/5. Average production wage: “What is your *average entry-level* hourly wage for production workers?”; “What is your overall average hourly wage for production workers?”

As of the time of this survey, June/July 2001, the average entry-level hourly wage for respondents’ production workers was \$8.69 per hour. The overall average wage was \$11.73 per hour. Both of these vary by region, by size and by industry. The following charts reflect the contrast.

Table 9

Hourly Wage For Production Workers		
Region	Average Entry-level	Average Overall
1 (NW)	\$8.26	\$11.05
1A/5 (G/EC)	\$9.28	\$12.69
2 (E/SE)	\$8.56	\$11.09
3 (SW)	\$8.63	\$11.72
4 (W)	\$8.70	\$12.09
Overall Average	\$8.69	\$11.73

Chart 5

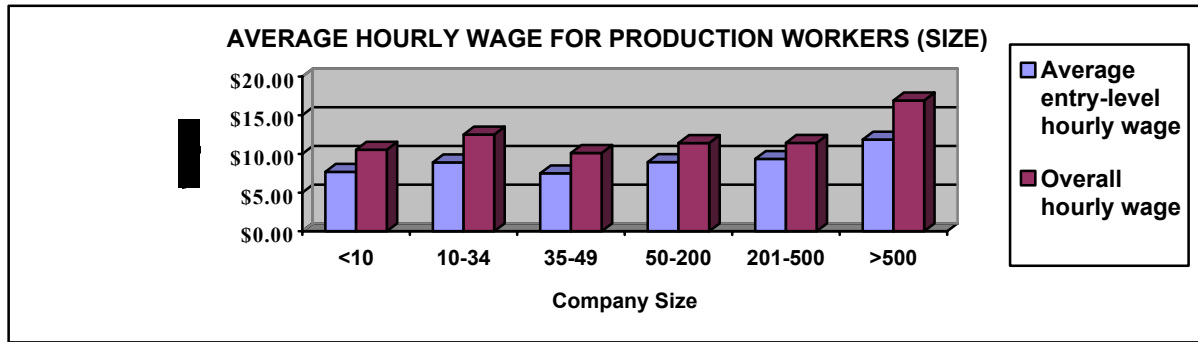
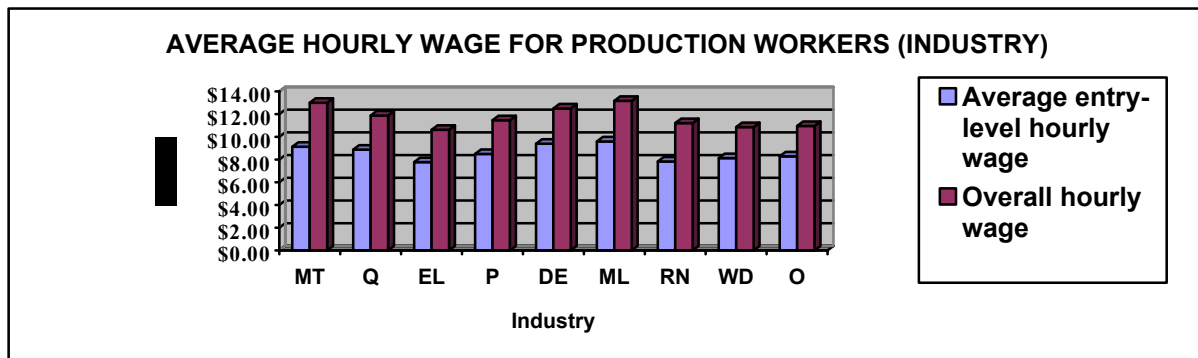


Chart 6



IV. Another avenue to becoming more competitive is having outside resources readily available to provide assistance when needed. More than 150 programs exist in Indiana to do that, but they need to become better aligned with manufacturing needs to provide the best services possible. Analysis of the questions in this section attempts to identify those challenges respondents believe are most critical to their business as they look out three-to-five years.

1. Proclivity to Use Outside Resources: “How many outside resources, in addition to accountants and lawyers, assisted your company over the last five years?”

62% of respondents used between one and five outside resources over the last five years, while 18% used six or more and 20% used none.

A comparison was made between how respondents answered this question and how they answered two others later in the survey: “Do you want to be contacted regarding how improved collaborative services can best benefit you?” and, given a listing of possible areas where they might use outside resources this next year (Question IV-13), the average number they plan to use. The results of that comparison are reflected in the following table.

Table 10

USING OUTSIDE RESOURCES					
How many outside resources?	None	1-2	3-5	6-10	More than 10
% of the total responses using	20%	32%	30%	11%	7%
% answering "yes" to contact	41%	44%	45%	71%	45%
Average # plan to use ("Yes")	5	6	7	10	9

Note that those most open to being contacted regarding collaborative services used 6-10 outside resources over the last five years. They also plan to use the most resources over the next 12 months. Together with those who used more than 10 resources, they are most receptive and, therefore, more promising candidates to target for services. They tend to be older companies that are subsidiaries with headquarters outside the State. They are 2-3 times more likely than the average company to service industries such as defense, automotive, electronic, plastics, machine tool, medical device, growth metals or aeronautical. Most are exporters, have more than 50 employees, and often have grown or declined by at least 20% over the last three years. They also tend to display other indicators of proactive management styles such as ISO/QS certification; Indiana Department of Commerce training grant winners; or Indiana Quality Award winners. Many have been BMT clients.

Geographically, respondents from Eastern, Southeastern and West-central Indiana are twice as likely to use six or more resources as any of the other distressed areas of the State.

It is also noteworthy that 41% of respondents that used no resources over the last five years are requesting to be contacted about collaborative services. Thus, they are one of the key opportunities for the future.

2. Critical Challenges: “What are the three most critical challenges facing your company?”

The most critical challenge across the whole State is workforce-related. Companies are challenged by lack of an available skilled workforce, the retention of skilled employees, and training issues associated with poor attitudes and work ethic. This ties in with the workforce obstacle identified earlier where respondents identified their greatest obstacles to being competitive. This issue resonates through all sizes of companies and all industries.

Other critical issues are listed below in order of the percent of respondents that listed them. If a particular issue tended to come disproportionately from certain industries or sizes of companies, or from a particular region of the State, that is listed as well.

Table 11

CRITICAL CHALLENGES				
Challenges	%	Size	Industry	Region
<i>Skilled, trained workforce</i>	32	All	All	All
<i>Increasing sales</i>	27		Q, DE	NW, E/SE
<i>Competing in a global economy</i>	24	50-200		W
<i>Reducing costs</i>	15	>500		E/SE
<i>Energy costs</i>	10	<35	Q,MT,ML	NW,E/SE
<i>Environmental/safety regulatory burden</i>	10	<200		SW
<i>Downturn in economy</i>	8	50-200		SW
<i>Cost of benefits</i>	7	<35		
<i>Access to capital</i>	7	<35		NW,W
<i>New product development</i>	6	50-200	Q,MT,ER,EL	NW

3. Reasons for Lost Business: “Over the last year, many Indiana manufacturers have lost business. If that has happened to you, what do you consider to be the main reasons?”

More than one-third of respondents said they lost business last year primarily because of the downturn in the economy. This was true throughout the State. Other reasons are reflected below in the order of their importance to respondents. Again, where responses occurred disproportionately in certain industries, sizes of companies or regions, that is reflected.

Table 12

REASONS FOR LOST BUSINESS				
Skills	%	Size	Industry	Region
<i>Slowdown in economy</i>	37	<200	Q,RV,MT,MD,DE,WD	
<i>Foreign competition</i>	20			
<i>Factories moving outside the U.S.</i>	13	<35		NW,E/SE
<i>Domestic competition</i>	9			
<i>Price competitiveness</i>	9			
<i>Lack of qualified skilled workers</i>	8	<35		NW,SW
<i>Customers consolidating/downsizing</i>	6			SW
<i>NAFTA</i>	5	<50	Q, MT	SW
<i>Bankruptcy of steel plants</i>	3			NW
<i>Energy/fuel costs</i>	3			

4. Customer Expectations: “What key expectations/demands do you anticipate being put on you by your customers over the next five years?”

In general, customers will be expecting distressed-area manufacturers to provide improved quality products and services faster and at a lower price—one that often they dictate. They want suppliers that can be flexible enough to provide new products and services so they can cut back on their number of vendors. They often want them to bear much of the cost of product design as well as inventory. All of this while facing a slow economy, lack of skilled labor and global competition.

Customer expectations are listed below in the order of their projected occurrence to respondents. The answers to this question were somewhat unique, in that they did not vary much by company size, industry or region. They were fairly typical across the board. *This is a key finding, as one option many manufacturers plan to pursue is to look for alternate markets where profit is more easily attained. These results show that may be extremely difficult to do, as all markets and industries are expected to operate very similarly.*

Table 13

CUSTOMER EXPECTATIONS	
Skills	%
<i>Better quality/ISO/QS Cert</i>	44
<i>Improved delivery/JIT/Fast Turnaround</i>	33
<i>Lower prices</i>	32
<i>Cost reduction</i>	29
<i>Flexibility for wider range of products/services</i>	13
<i>Shorter manufacturing lead time</i>	12
<i>Longer pay terms</i>	10
<i>Price stability</i>	6
<i>Improved service</i>	6
<i>E-commerce</i>	5

5. Proclivity for Industry Alliances: “Do you presently participate in an industry alliance? Yes/No; if not, would you? Yes/No”

30% of respondents presently participate in an industry alliance. These tend to be companies with more than 50 employees in the automotive, electronics, medical device or growth metals industries. They also typically have proactive management styles, tend to export, and are disproportionately subsidiaries with headquarters outside of Indiana. Both growers and decliners exist in the group in the normal proportion that they exist in Indiana’s manufacturing population at large.

Another 32% say they aren’t now part of an alliance but would be. As such, they are key targets for economic developers thinking of providing assistance to a group of companies at the same time. These companies typically have between 35-500 employees and service industries such as aeronautical, defense, electronics, growth metals, automotive, machine tool and medical

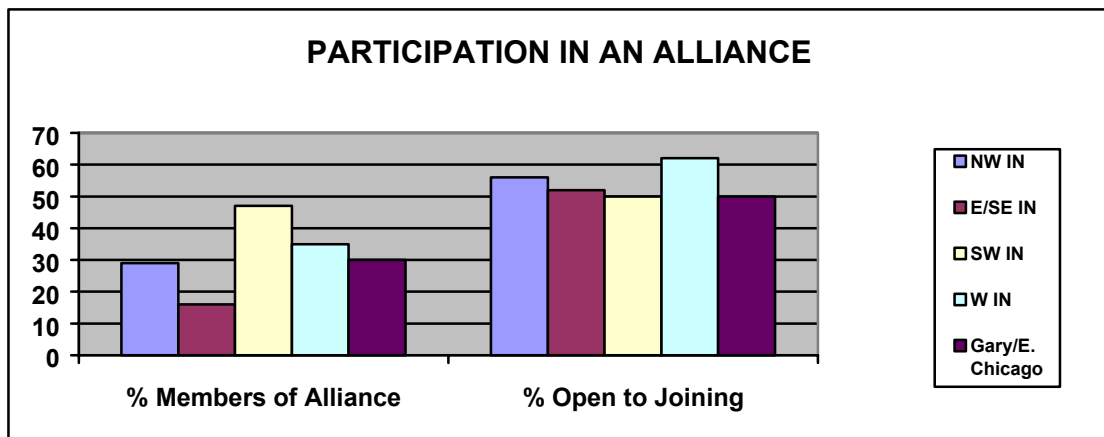
device. As with those already in an alliance, these companies tend to export; be subsidiaries with corporate headquarters outside the State; and often have proactive management styles. One difference with the first group is that these companies tend to either be growers in general or have declined by at least 20% over the last three years.

24% of respondents are not now in an alliance and say they wouldn't join one if it were available. They tend to be the opposite of the companies above as they typically have fewer than 35 employees; are printers, service the wood products or miscellaneous other industries; don't export or have a noticeably proactive management style; and often are collocated with their own headquarters. They tend to be stagnant in their number of employees or are slowly declining by less than 20% over the last three years.

The remaining 14% of respondents chose not to answer the second part of the question.

Geographically, the tendency to be part of an alliance or to be receptive to joining one varies widely around the State. The following chart shows the percent of respondents who answered that they are now in an alliance, as well as the percentage of those who are open to joining one (the latter includes those who are in an alliance now but are open to joining another).

Chart 7



Clearly, participation in an alliance is almost three times as popular in Southwest Indiana as it is in Eastern/Southeastern Indiana. Yet, it joins the other regions for being willing to join one if it were available. This represents another opportunity for the future.

6. Proclivity for CEO Roundtable: “Do you presently participate in a CEO roundtable? Yes/No; if not, would you? Yes/No”

10% of respondents presently participate in a CEO roundtable. They tend to be proactive subsidiaries with out-of-state headquarters who export. Typically, they have more than 50 employees and service the medical device, wood, growth metals, automotive, defense or plastics industries.

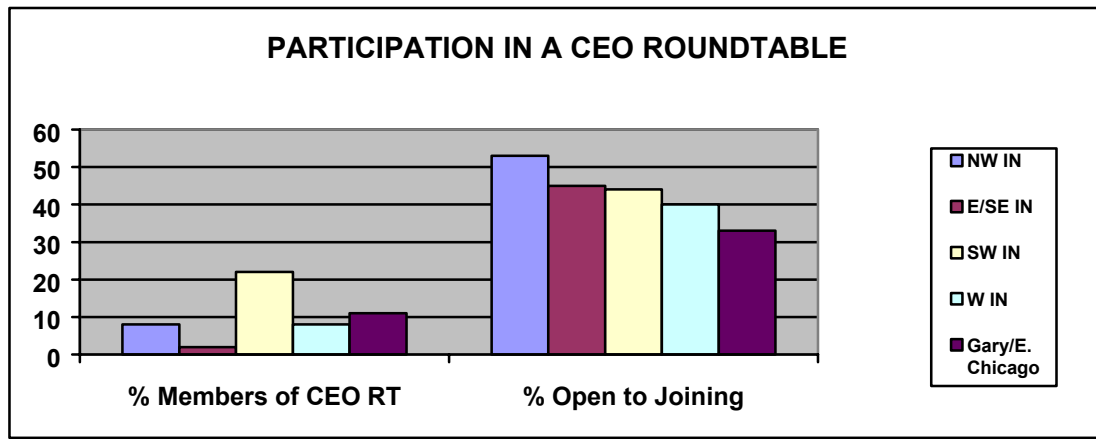
Another 41% say they don't participate in a CEO roundtable but would. Again, these are key targets for economic developers thinking of facilitating a CEO roundtable. These companies tend to have 35-500 employees and service the electronics, aeronautical, defense, growth metals, machine tool, medical device or wood products industries. Typically, they are proactive exporters with headquarters outside the State. They tend to be companies that are growing or have declined by more than 20% over the last three years.

33% of responders say they do not presently attend a CEO roundtable and wouldn't. They tend to have fewer than 35 employees; don't export; have non-proactive management styles; and are collocated with their headquarters. They service various industries, but are disproportionately in printing and miscellaneous other industries. Growers and decliners occur in this group as one would expect them to occur in a normal population of Indiana manufacturers.

The remaining 16% of respondents chose not to answer the second part of the question.

Geographically, the tendency to be part of a CEO roundtable or to be receptive to joining one also varies widely around the State. The following chart shows the percent of respondents who answered that they are now part of a CEO roundtable, as well as the percent of those who are open to joining one (the latter includes a few who participate now in a CEO roundtable and are open to joining another).

Chart 8



Clearly, participation in a CEO Roundtable around the State is a fraction of what it is in the Evansville area. Yet almost half those who are not now part of one say they would join one if it were available. This represents yet another opportunity for the future.

7. Proclivity for BMT's Buy and Sell Web Site: "As part of this project, Indiana Business Modernization and Technology Corp. has just installed a free capability on its web site (www.bmtadvantage.org) that links Indiana manufacturers to sites where they can buy or sell industrial goods. How often might you use this? Daily/Weekly/Monthly/Yearly/Never"

67% of respondents said they would use the web site at least yearly, with 79% of those choosing weekly or monthly:

Table 14

BUY/SELL PROJECTED USAGE	
Frequency	%
Daily	6
Weekly	25
Monthly	28
Yearly	9
Never	32

Companies who say they would use the web site tend to have more than 50 employees and serve the electronics, machine tool, growth metals, aeronautical, automotive or defense industries. They typically exhibit proactive management styles and export. Their headquarters' location and the degree that they are growing or declining were not indicative of any trend.

8. Ideas for new website: “In what many consider the most exciting part of this project, more than 300 Indiana manufacturers, local economic development officials and service providers have completed the initial design of a web site where manufacturers can go with a problem and get linked to a high-quality solution (see accompanying insert). Given that vision, what other ideas would you offer so the web site would better meet your needs?”

After reviewing an insert summarizing the design of the new website, 25 percent of respondents provided ideas for how it could best meet their needs. These included connections to government programs; listing best practices; business operations advice; business-to-business links; categorizing size of printing companies; collective insurance bidding; competitive banking rates; competitive sources for raw materials and service; connection to good resources; contract networking with other companies; customers providing job opportunities for quoting; excess inventory trader; finding competitive suppliers to reduce time requirements; free listing of business services; giving incentives to local businesses; good response times; government contracts available for bid; health care information; including access to financial institutions and lenders; and including agribusiness.

Other ideas include job placement and referrals; labor and human resource issues; labor relations; laws; legislative updates; linking manufacturers and suppliers; links to help reduce costs; listing of prospective markets such as Indiana and USA medical manufacturers; listing of Indiana businesses and services/products offered; listing of local programs that may be available; machine tool trader; providing an insurance consortium for machine shops; offering real solutions to problems; on-line trading; opportunities to sell slow moving inventory; OSHA requirements; project quote board where companies can bid on work; promotion, getting more involvement; quote zone for job appointment; requests for quotes; searching out and finding business; skill training and energy costs; sorting of web sites by product lines.

Ideas such as getting good business advice tended to come from companies with fewer than 10 employees, while communicating best practices tended to come from much larger companies, especially in autos and electronics. In general, though, ideas were held quite commonly without any particular trends by industry, company size or region.

9. Impact of new web site: “Looking at the challenges of the next five years, if you used the web-based system, how much might you be able to increase annual sales? Reduce costs? About how many jobs might you be able to retain or create? At what average hourly wage? /Cannot estimate.”

Of those who could estimate the impact of using such a web site, the average company believed they could increase annual sales by \$1.3 million; reduce annual costs by \$77,500; and add 13 jobs per company at an average wage of \$12.50 per hour.

10. Projected users of new web site: “How often do you believe your company would use it if it were made available? Daily/Weekly/Monthly/Yearly/Never”

Almost three out of four respondents say they would use the web site at least monthly, as shown in the table below.

Table 15

How often used?	% of responses
Daily	7%
Weekly	28%
Monthly	35%
Yearly	12%
Never	18%

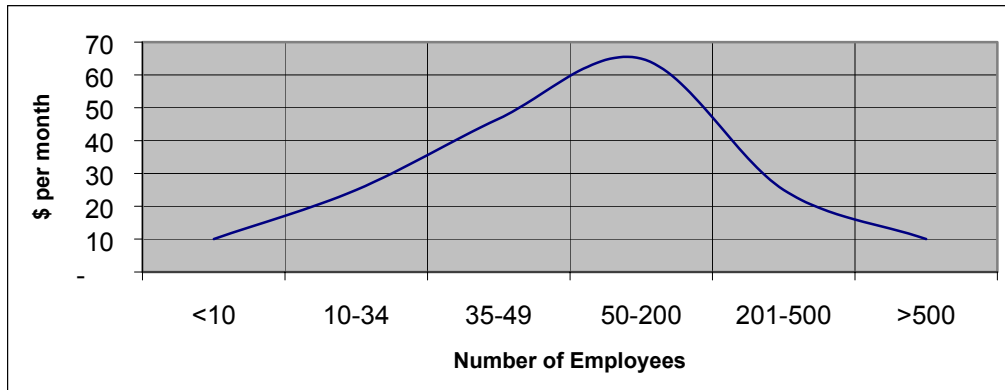
Companies that answered daily are more likely to be in the aeronautical, medical device, growth metals, defense, electronics, machine tool, automotive or printing industry and have 10-34 employees. Manufacturers that would use the web-based system on a weekly basis are likely to be in the growth metals, automotive or machine tool industry and have 35-500 employees. Companies that would use the system monthly tend to have more than 50 employees and be in the electronics, aeronautical, machine tool, automotive or plastics industry. Companies that would use the system yearly are more likely to be in the defense, medical device, electronics, wood, or growth metals industry and have more than 50 employees. Those companies that say they would never access the web-based system tend to be in miscellaneous other industries or have less than 10 employees.

11. Monthly web site subscriptions: “There are a number of ways such an operation could be financed. One is to simply charge a monthly subscription fee for users. If that were chosen, what is the most you would pay *per month* to subscribe?”

Given a brief description of the web site with their surveys, respondents estimated the monthly amount they would be willing to pay. Their overall value assessment approximates a bell curve price-wise, with companies that have 35-200 employees in the middle as displayed in the following graph.

Graph 9

Web Site: Willing to Pay (average per month)



Companies with fewer than 10 employees and those with more than 500 perceive less value: about \$15 per month with all the zeroes averaged in. The average for those with 10-34 employees and those with 201-500 employees is about \$25 per month. Companies with 35-49 are somewhat mixed, ranging from \$20 to \$100 per month for an overall average of \$46.66. And companies with 50-200 employees range from \$20 to \$250 for an overall average of \$65/month.

Broken out by industry, eight have averages of about \$40 per month (automotive, plastics, electronics, growth metals, machine tool, medical device, defense, RV). Industries seeing less value (about \$20 per month) include printing, wood products and miscellaneous other products.

Taken together, the portion that appears to value the web site most includes automotive, plastics, electronics, growth metals or machine tool companies with 35-200 employees. The average value perceived there is \$75 per month.

12. Considerations for subscribing: “Other than cost, what would your main considerations be in the decision to subscribe?”

Responses were fairly consistent across industries, sizes of companies and regions. Other than cost, the prevailing consideration is that it be beneficial/useful to their particular company. Manufacturers also want the system to be easy to use, quick and confidential. They want the information to be current (especially automotive, plastics and machine tool), practical, accurate, reliable and relevant to their business.

Companies with fewer than 50 employees are also interested in accessibility and evidence that it can help them find new business and reduce costs. Companies with fewer than 10 employees raise the question of purchase alternatives such as paying on a per-use basis; offering one year free until the worth is evaluated; and multi-site availability with one license fee.

13. Challenges and proclivity to use outside resources: “Please review the following list of issues that present challenges to all businesses at one time or another. Circle the level of challenge you currently face with each issue (using a scale from 1 to 10 where 1 is not challenging and 10 is very challenging), and indicate whether you will probably use an outside resource to help you meet the challenge. Use outside resource? Y/N”

The table below combines the answers to the two questions. It shows the percent of respondents who plan to use an outside resource to help them with each challenge, listed in priority order, compared with the percent of respondents that have a higher-than-six concern for each issue. A size and industry breakout of the primary respondents is included as well. Note the difference between what respondents are most concerned about and where they plan to get help.

Table 16

RESOURCES NEEDED				
Resource	% Usage	% Challenge	Size	Industry
Recruiting skilled labor	58	78	>50	ML,EL,ER,Q,MT
Developing or improving web page	50	32	35-500	EL,ER,MD,ML,MT,Q
Access to capital funding	48	45	10-34; >500	ML,EL,P,ER,MT
Improving e-business capabilities	47	36	35-500	EL,ER,DE,P,MT
Gaining access to new technology	43	42	35-500	ER,ML,P,EL
Improving information systems	43	38	>35	ER,EL,ML,MT,MD
Attracting new customers	42	64	201-500	ER,EL,ML,DE,MT,Q,WD
Adhering to OSHA/Safety regulations	42	38	>50	EL,ER,ML,RV,P,Q
Adhering to FDA or EPA regulations	42	40	>50	DE,ML,WD,EL,Q,RV
Identifying new markets	41	57	50-500	ER,ML,MT,WD,DE,EL,Q,P
Modernizing equipment	41	53	50-500	ML,EL,ER,MT,DE
Recruiting unskilled labor	41	20	>50	ML,EL,Q,MD
Training employees	39	46	<10>50	ML,EL,Q,ER
Achieving ISO-9000/QS certification	39	41	35-500	EL,MD,ER,DE,MT,Q,P,RV
Improving manufacturing process	35	49	50-500	EL,ER,ML,WD,Q,DE,MT
Increasing engineering/design capabilities	35	42	50-500	ML,EL,ER,MT,Q,RV
New product development	34	46	35-49; 201-500	ER,Q,RN
Improving facilities and plant layout	34	33	>35	ML,WD,DE,P,ER,Q
Achieving ISO-14000	31	38	>200	EL,ER,DE,MD,Q,MT
Exporting	31	28	10-50; 201-500	EL,ML,ER,MD,DE,P,MT
Improving product/job costing	29	39	35-500	ML,EL,MD,RV,P,ER
Finding more innovative suppliers	29	46	50-500	EL,ML,DE,MT,P
General business management	26	31	10-34; 201-500	ML,DE,EL,P,ER,WD,RV
Strategic planning	25	34	35-500	ML,DE,EL,WD,MT
Reducing costs	24	66	>50	MD,DE,EL,P,WD,Q,RV
Commercializing New Technology	21	26	35-500	EL,ER,ML,MD
Writing a marketing or business plan	20	29	10-34; 201-500	EL,ML,MT,MD,RV
Managing and documenting quality data	19	34	35-200	EL,WD,RV
Inventory and material management	16	39	>200	All
Improving customer satisfaction	15	37	50-200	ML,MT,DE,MD
Increasing sales to current customers	14	55	10-34; 201-500	ER,ML,EL,DE,MD,MT
Reducing employee turnover	13	37	50-200	ML,EL,WD,MT
Improving cash flow	13	56	50-500	ML,RV
Foreign competition	11	40	50-200	ER,DE,ML,MD,MT,EL,P

The number two challenge, for example, is reducing costs. Two-thirds of respondents have a higher-than-six concern in this area, yet it's near the bottom of the issues they plan to get resources to help them with. Other examples include improving cash flow and increasing sales with existing customers. Key Conclusion: manufacturers tend to look solely within themselves for answers to some issues about which they have a very high level of concern. Therefore, service providers who want to help companies in these areas have a double challenge: they must establish their own credibility, as they would with any service they offer, but they also must help manufacturers remain open to the possibility that there are some who must not only sell their own credibility but overcome the tendency of manufacturers not to look outside themselves in areas like this—a double challenge.

On the other hand, three of the top six issues where manufacturers are looking for outside help are e-business/IT related. This is a completely new area for many service providers, one in which product development must be hastened to meet the need as soon as possible.

14. Contact for collaborative services: “Part of this project is to bring improved collaborative services to the assistance of manufacturers. Do you want to be contacted regarding how these services can best benefit you? Yes/No”

55% of respondents asked to be contacted regarding collaborative services. They are twice more likely than the average Indiana manufacturer to service the automotive, plastics, electronics, defense, growth metals or wood industry, but three times more likely to service aeronautics or machine tool. They typically have more than 35 employees, export, and have very proactive management styles. Many have grown or declined by at least 20% over the last three years and/or are subsidiaries of companies with headquarters outside the State.

The remaining 45% chose not to have someone contact them. These companies tend to be older, have fewer than 35 employees (especially fewer than 10), and often show little evidence of a proactive management style. They are most prevalent in miscellaneous other industries.

V. A growing key to being competitive is the availability and quality of telecommunications for doing business electronically. In the following questions, we want to find out what services respondents currently have at their disposal; who provides them; how they are doing as service providers; what range of alternatives respondents have; what they don't have available that they need; and what the impact is on their business of not having it.

This portion of the survey received fewer responses than any other. Anecdotes abound of presidents/general managers giving this part to someone younger or, where available, to their “MIS types”. Some simply left it blank or answered it as best they could. Different companies from the same county sometimes gave different answers to questions on the availability of services. Given answers that may not be definitive and the low number of responses from some counties, *the results should be used carefully as indicating general perceptions about telecommunications capacity rather than fact.*

1. Telecommunication service availability: “Please complete the matrix below. If zero is appropriate, so indicate. Available? Y/N”

As a reminder, the first section of this report reflects the Indiana counties that participated in this survey. Basic voice telephone services are available in all of the counties. Respondents say voice mail services are not available in Knox and Warrick County. Internet services are reportedly not available in Warrick County. Dedicated data services are not available in Rush, Putnam, Warrick, and Crawford County. High-speed/Cable/DSL service is perhaps not available in Elkhart, Lagrange, Starke, Grant, Rush, Union, Scott, Jefferson, Switzerland, Crawford, Perry, Dubois, Warrick, Daviess, Greene, Owen, and Putnam County. Wireless services may not be available in Warrick and Crawford County. Broadband services are reportedly not available in Newton, Starke, Elkhart, Fulton, White, Grant, Parke, Putnam, Vigo, Owen, Daviess, Dubois, Crawford, Warrick, Perry, Rush, Franklin, Scott, Jefferson, and Switzerland County.

Survey data is especially scarce on the type of dedicated data services that are available. Respondents believe 56K is available in Hammond (Lake), Union, Jay and Gibson counties; T1 in Hammond (Lake) and Gibson counties; frame relay in Jay, Gibson and Marion counties; ATMode in Hammond (Lake), Jackson and Gibson counties; and no counties report the availability of ISDN.

--Current usage of telecommunication services: “Currently use? Y/N”

The table below shows the percentage of respondents who use the services indicated, together with a description of those that predominantly use or tend not to use each service.

Table 17

Service	% Usage	Tend to Use	Tend Not to Use
Basic Voice Telephone	99%	All	--
Voice Mail	66%	>50	<50,MT,ML,RN
Internet	88%	>35	<35
Dedicated Data	69%	>50,EL,ML,MD,Q	<50,MT,P,WD
High-speed/Cable/DSL	44%	>50,ER,P,MD,EL	<50,Q, MT
Wireless/Mobile	76%	>50,MT,MD,DE	<50,P
Broadband	49%	>35,EL,MD	<35,MT,P,DE

--Telecommunication service providers in the area: “How many providers are available in your area?”

(Because respondents from the same county often provided different answers, mathematical averages are used in the following analysis.)

The county with the most *basic voice telephone service providers* is reportedly Union County, which has an average of four providers in its vicinity. Grant, Lake (Hammond), Marion, Pike, Ripley, and Rush County all have two, and all other counties have at least one.

Hammond (Lake County) has the most *voice mail providers* with five. Union County reports four. All other counties that responded positively have at least one in their immediate area.

There are many more *Internet service providers* than telephone or voice mail providers. Randolph County reports eight; Greene County seven; Jefferson and Hammond (Lake) five; and Clay, Orange and Pike have four. Those with three include Crawford, Grant, Harrison, Jackson, Jay, La Porte, E. Chicago (Lake), Parke, Vermillion and Vigo. Fulton, Knox, Newton, Putnam, Union, and Warren have two. The rest who responded positively have at least one.

The counties with the most *dedicated data service providers* are Jefferson and Jasper County, with eight and six reported respectively. Grant has five; Parke four; Gibson and E. Chicago/ Hammond (Lake) have three; while Jay and Pike have two. The rest who responded positively have at least one.

Jay County reports two *High-Speed/Cable/DSL service providers* in its area. The other counties that responded positively to this question have at least one.

There are many *wireless/mobile phone providers* in the area. Hammond (Lake County) reports six; Clay, Pike, and Union County all have four. Those reportedly with three include Crawford, Franklin, Fulton, Gibson, Greene, Harrison, Lagrange, Orange, Owen, Parke, Rush and Starke. Those with two include Daviess, Grant, Jay, Jefferson, La Porte, Perry and Vigo. The rest that responded positively have at least one.

There were only a few counties that responded that they had *broadband service providers* in their area. La Porte County reportedly has four; Jasper has two; and Gibson, Jay, Lagrange, Randolph, and Starke all have at least one.

The table below reflects the average number of providers respondents believe are available in each of the EDA Regions.

Table 18

AVERAGE # OF PROVIDERS IN EACH AREA							
Region	Telephone	Voice Mail	Internet	Dedicated Data	High-speed/Cable/DSL	Wireless/Mobile	Broadband
1 (NW)	1	1	2	2	1	3	1
2 (E/SE)	2	1	2	3	1	2	1
3 (SW)	1	1	2	1	1	3	1
4 (W)	1	1	3	2	1	3	0
5 (G/E.C.)	1	2	4	2	1	4	4

--Telecommunication service provider names/respondent satisfaction ratings: “Provider name (those currently used)”; “Rate your satisfaction with each provider on a scale of 1 to 10 (where 1 is awful, 10 is outstanding) in responsiveness, price and reliability.”

More respondents use Verizon than any other telecommunications provider. It is the most frequent provider of services for the basic voice telephone, voice mail and wireless. AOL is the top provider of Internet services; Sprint with dedicated data services; and AT&T with broadband.

The tables below reflect the names of all the telecommunication service providers listed by respondents in the surveyed categories, together with the percent of respondents that use each provider and the average grade listed in the three measurements of service.

Table 19

TELEPHONE PROVIDERS				
Provider Name	% Usage	Responsiveness	Price	Reliability
<i>Verizon</i>	24	7	6	8
<i>Ameritech</i>	22	6	5	7
<i>Sprint</i>	22	5	5	6
<i>AT&T</i>	7	7	2	8
<i>GTE</i>	4	4	3	9
<i>Rochester Telephone Co.</i>	3	10	8	9
<i>Lucent</i>	2	8	8	9
<i>Broadwing</i>	2	7	7	7
<i>Qwest</i>	2	7	8	9
<i>Smithville</i>	2	8	5	5
<i>Avaya</i>	<1	8	8	8
<i>Bloomington Telephone Co.</i>	<1	9	8	9
<i>Cincinnati Bell</i>	<1	8	8	9
<i>Digital</i>	<1	2	3	3
<i>Excell</i>	<1	7	7	9
<i>MCI</i>	<1	5	5	5
<i>McLeod</i>	<1	8		9
<i>Pentastar</i>	<1	9	9	9
<i>PSCI</i>	<1	9	8	9
<i>Quantum Link</i>	<1	3	1	3
<i>TDS Telecom</i>	<1	4	2	6
<i>Telrad</i>	<1	2	5	3

Table 20

VOICE MAIL PROVIDERS				
Provider Name	% Usage	Responsiveness	Price	Reliability
<i>Verizon</i>	19	7	6	8
<i>Sprint</i>	13	6	6	7
<i>Ameritech</i>	9	5	5	5
<i>AT&T</i>	6	8		8
<i>Lucent</i>	6	8	9	9
<i>Avaya</i>	5	9	8	9
<i>GTE</i>	3	10	10	10
<i>Rochester Telephone</i>	3	9	5	9
<i>Broadwing</i>	<1	7	7	7
<i>Digital</i>	<1	1	1	1
<i>Matrix Intergration</i>	<1			
<i>Meridian Mail</i>	<1			10
<i>Nortel</i>	<1	9	6	9

<i>NWIIS</i>	<1	6	5	5
<i>ORU PBX</i>	<1			
<i>PSCI</i>	<1	9	8	9
<i>Tadiran</i>	<1	8	5	8
<i>Telrad</i>	<1	2	5	3
<i>Telstar</i>	<1	7	3	7
<i>Toshiba</i>	<1	10	5	10
<i>US Voice</i>	<1	8	9	9

Table 21

INTERNET PROVIDERS				
Provider Name	% Usage	Responsiveness	Price	Reliability
<i>AOL</i>	8	8	10	9
<i>Netnitco</i>	4	5	8	6
<i>PSCI</i>	4	8	8	8
<i>Rochester Telephone</i>	4	8	8	8
<i>Comtech</i>	3	9	9	9
<i>Kuntrynet</i>	3	7	7	6
<i>Verizon</i>	3	8	10	7
<i>Earthlink</i>	2	8	8	8
<i>Fairnet</i>	2	5	8	5
<i>Global site</i>	2	4		7
<i>MSN</i>	2	7	7	8
<i>Progressive</i>	2	3	4	3
<i>Seidata</i>	2	8	8	6
<i>Skyenet</i>	2	7	7	7
<i>Smithville</i>	2	7	7	7
<i>Voyager.net</i>	2	9		9
<i>ABCS</i>	<1	10	4	10
<i>ADS</i>	<1			
<i>Ameritech</i>	<1	8		8
<i>AT&T</i>	<1	6	3	8
<i>Automated Data</i>	<1	8	8	5
<i>Bloomington Telephone Co.</i>	<1	10	10	10
<i>Blue Light</i>	<1	6	10	6
<i>Blueriver.net</i>	<1	8	8	5
<i>BPINET</i>	<1	7	3	7
<i>Bright.net</i>	<1	9	9	9
<i>Cable + Wireless</i>	<1	7	9	10
<i>CCINET</i>	<1	10	10	10
<i>CCRTC</i>	<1	3	9	7
<i>Centro</i>	<1	2	10	8
<i>Cim Bell</i>	<1	7	6	6
<i>Citadel</i>	<1	10	10	10
<i>Compuserve</i>	<1	10	10	10
<i>Computer Consulting</i>	<1			
<i>Connectiva</i>	<1		5	8
<i>Core Comm.</i>	<1	1		1
<i>CSI Net</i>	<1	7	5	7

<i>Custom.net</i>	<1	1	5	1
<i>Dish network</i>	<1	9	4	9
<i>DM RTC</i>	<1	5	5	5
<i>DP</i>	<1	8	7	8
<i>FAI</i>	<1	4	5	4
<i>First Bank</i>	<1	5	1	5
<i>G.P.</i>	<1			
<i>GTE</i>	<1	6	7	6
<i>Hi Tech Computers</i>	<1	7	7	8
<i>Inter Company</i>	<1	5		5
<i>Internet Explorer</i>	<1			9
<i>Joink</i>	<1	5		5
<i>Maplenet</i>	<1	7	7	8
<i>MCI</i>	<1			
<i>Microsoft Network</i>	<1	8		
<i>N.K. Internet</i>	<1	6	10	10
<i>Nitune</i>	<1	4	4	4
<i>NWIIS</i>	<1	6	5	5
<i>Pulaski-White Telephone</i>	<1	8	10	8
<i>PWRTC</i>	<1	5	5	8
<i>RTC Comm.</i>	<1	8	6	8
<i>Sigecom</i>	<1	5	4	4
<i>TCTC</i>	<1	7	7	7
<i>VOL</i>	<1	3	9	7
<i>Yahoo</i>	<1	8		
<i>Zoomzown</i>	<1	10	10	8

Table 22

HIGH-SPEED/CABLE/DSL PROVIDERS				
Provider Name	% Usage	Responsiveness	Price	Reliability
<i>ABCS</i>	<1	10	4	10
<i>Ameritech</i>	<1			
<i>Bloomington Telephone</i>	<1	10	10	10
<i>Cablevision</i>	<1			
<i>Centro</i>	<1	2	10	8
<i>Charter</i>	<1	10	10	10
<i>Cim Bell</i>	<1	6	6	7
<i>Cincinnati Bell</i>	<1	9	9	9
<i>Cingular Wireless</i>	<1			
<i>Insight</i>	<1			
<i>Rochester Telephone</i>	<1	8	8	8
<i>Smithville</i>	<1	8	5	8
<i>Sprint</i>	<1	5	5	5

Table 23

WIRELESS/MOBILE PROVIDERS				
Provider Name	% Usage	Responsiveness	Price	Reliability
<i>Verizon</i>	35	7	6	7
<i>Cingular Wireless</i>	22	7	6	7

<i>Centennial Wireless</i>	15	6	6	6
<i>AT&T</i>	5	7	7	7
<i>Nextel</i>	5	4	4	5
<i>Sprint</i>	3	5	5	4
<i>Ameritech</i>	<1	8	8	8
<i>Bell South</i>	<1	2	1	3
<i>Centro</i>	<1	2	10	8
<i>Cim Wireless</i>	<1	7	5	3
<i>GTE Wireless</i>	<1	8	2	5
<i>Maplenet</i>	<1	7	7	8

Table 24

BROADBAND PROVIDERS				
Provider Name	% Usage	Responsiveness	Price	Reliability
<i>AT&T</i>	29	10	9	10
<i>Centro</i>	<1	2	10	8
<i>Cincinnati Bell</i>	<1	9	9	9
<i>Satellite service</i>	<1			
<i>Sprint</i>	<1	7		
<i>Verizon</i>	<1	10	9	10

2. Improved capabilities: “Please indicate which of the following improved capabilities you plan to have implemented over the next five years:”

Electronic Customer Service System

27% of respondents plan to implement an electronic customer service system over the next five years. These companies tend to have between 50 and 500 employees (perhaps because those with more than 500 employees have already implemented it). It is especially prominent in the automotive, electronics, defense, growth metals and machine tool industries. Those less likely to implement it include plastics, wood and printing companies and those with fewer than 50 employees.

Counties with respondents planning to implement this improvement over the next five years include Lake, La Porte, Starke, Jasper, Newton, Fulton, and Lagrange in Northern Indiana; Grant, Jay and Randolph in the East; Jackson, Jefferson and Switzerland in the Southeast; Lawrence, Perry, Dubois, Daviess, Gibson and Sullivan in the Southwest; and Vermillion, Fountain, Parke and Putnam in the West.

Electronic Supply Chain System

20% of respondents plan to implement an electronic supply chain system over the next five years. These companies tend to have more than 200 employees and service the electronic, medical device, defense, automotive, plastics, machine tool or growth metals industries. Those less likely have fewer than 200 employees or service the printing, wood or miscellaneous other industries.

Counties with respondents planning to implement this improvement over the next five years include Lake, La Porte, Newton, Jasper, Starke and Fulton in the Northwest; Grant, Jay and Randolph in the East; Franklin, Switzerland, Jefferson and Jackson in the Southeast; Lawrence, Perry, Knox and Gibson in the Southwest; and Owen, Vigo, Parke and Vermillion in the West.

Enterprise Resource Planning (ERP)

8% of respondents plan to implement enterprise resource planning (ERP) over the next five years. These companies tend to have more than 50 employees and are especially prominent in the electronics, aeronautical, and medical device industries. To a lesser degree, they are also in the automotive or plastics industry. Those much less likely to implement the improvement include companies with fewer than 50 employees or those in the growth metals, printing, wood or miscellaneous other industries.

Counties with respondents planning to implement this improvement over the next five years include Lake and La Porte in the Northwest; Grant, Jay and Randolph in the East; Jackson and Jefferson in the Southeast; Orange in the South; Vigo in the West; and Marion in the center.

Internal Communications (e.g. Intranet)

26% of respondents plan to implement internal communications improvements (e.g. Intranet) over the next five years. These companies tend to have more than 50 employees. They are especially prominent in the aeronautical and medical device industries and, to a lesser degree, in electronics and automotive. Those much less likely to implement the improvement include companies with fewer than 50 employees or those that service the plastics, growth metals or printing industries.

Counties with respondents planning to implement this improvement over the next five years include Lake, La Porte, Starke, Fulton, Jasper, Newton and Lagrange in Northern Indiana; Grant, Jay and Randolph and Rush in the East; Switzerland, Jefferson and Jackson in the Southeast; Lawrence, Perry, Dubois, Gibson and Knox in the Southwest; and Sullivan, Vigo, Clay, Owen, Parke and Fountain in the West.

Interactive Web Presence

Developing an interactive web presence was the most popular improvement listed. 41% of respondents plan to make that improvement over the next five years, particularly in West and Southwest Indiana. These companies tend to have between 50 and 500 employees (perhaps because those with more than 500 employees have already implemented it). Industries particularly prominent include aeronautical, growth metals, automotive and machine tool. Those less likely to implement typically have fewer than 50 employees.

Counties with respondents planning to implement this improvement over the next five years include Lake, La Porte, Starke, Jasper, Newton, Fulton and Lagrange in the North; Grant, Jay, Randolph, Union and Rush in the East; Switzerland, Jefferson and Jackson in the Southeast; Lawrence, Orange, Crawford, Perry, Dubois, Pike, Warrick, Gibson and Knox in the Southwest; and Sullivan, Owen, Clay, Vigo, Parke, Vermillion and Warren in the West.

Other Improved Capabilities

7% of responders listed other improvements they plan to make over the next five years. Companies with fewer than 25 employees listed improvements such as a web page, virtual office, supply management order entry or broadband/Hi-speed Internet. Mid-size companies mentioned e-commerce in general. Some automotive suppliers with more than 200 employees plan to implement EDI.

3. Improvements needed in telecommunications infrastructure: “Over the next five years, what improvements in telecommunications infrastructure where you are now located do you *need most* to help you become more competitive?”

Respondents believe the telecommunications infrastructure improvement *needed most* across the distressed areas of Indiana is high-speed Internet access. 45% of those who answered the question named it or one of its technical proxies: DSL service; broadband; improved data transactional speed; more T-1 lines; band width and reliability; cable modem; data transmission; high speed access at a low cost; improved data communication options; reliability of T-1 line and local service. This need was top priority across all industries, sizes of companies and regions, and it was especially true in Gary/E. Chicago.

What drove the second highest priority, improved telephone system/service, was not the widespread agreement about its need that applied to high-speed Internet. Instead, it was a particular segment of respondents whose views were very similar: companies in all industries in East/Southeast Indiana that have fewer than 35 employees.

The table below reflects these priorities and others, together with an indication when responses occurred disproportionately in certain industries, sizes of companies or regions.

Table 25

TELECOMMUNICATION INFRASTRUCTURE NEEDS				
Needs	%	Size	Industry	Region
High-speed Internet Access	45	All		NW, E/SE,SW,W
Improved telephone system service	24	<35		E/SE
Better cellular service	21	All		NW, E/SE,SW,W
Internet Service Providers (ISP)	10	All		All
Fiber Optics	7	All	MT,Q,WD	All
More competition	7	All		E/SE, SW
Video Conferencing	3	All	WD,O	E/SE
Dedicated Data lines	3	50-200	MT,ML	NW

4. Impact of improvements: “If these improvements were made, about how many jobs at your current location could be retained that might otherwise be lost? About how many new jobs could be added? At what average hourly wage? About how much could you increase annual sales? /Cannot estimate”

15% of respondents were able to estimate this impact. If the improvements listed above were made, an average of 13 jobs per company could be retained that might otherwise be lost; 7.6 new jobs could be added at an average of \$10.33 per hour; and annual sales could be increased by an average of \$1.043 million per company.

VI. Comparison of Distressed Versus Non-distressed Areas

As Table 1 at the front of this report indicates, manufacturers were also surveyed in selected non-distressed areas so a comparison could be made to put in perspective the needs of Indiana's distressed-area manufacturers. The following highlights the differences that were noted.

--Competitive Advantages

Relatively inexpensive labor and lower operating costs were about three times more likely to be viewed as a competitive advantage in distressed areas, and the availability of a qualified workforce was about 1.5 times more likely. Non-distressed areas, on the other hand, were 1.5 times more likely to list being located near their customer or market.

--Competitive Disadvantages

Tax issues were listed as a competitive disadvantage 51 percent more often in non-distressed areas, while education level of employees (primarily math) is comparatively an equally big issue in distressed areas. Transportation and the distance to suppliers/customers/markets and major cities are more of a disadvantage in distressed areas, while labor turnover is more of an issue in non-distressed areas.

--Local Help Needed to Become More Competitive

Although tax issues do not appear to be as much of a disadvantage in distressed areas, they were still respondents' most popular choice for local assistance needed (as they are in non-distressed areas). Other than that, local help with transportation and capital assistance is needed at least 20 percent more often in distressed areas, while help training and educating employees is needed more often in non-distressed areas.

--Local Constraints to Improved Sales

Transportation and capital assistance are similarly key constraints to growth in distressed areas more than in non-distressed. Room to expand is much more of an issue also for distressed areas.

--Degree the Local Community is Meeting Manufacturing Needs

Respondents in distressed areas were slightly more positive on how well their local community was meeting their needs than those in non-distressed areas (an average of 5.6 compared to 5.35 on a 10-point scale).

--Critical Challenges

Identifying the most critical challenges facing their company, distressed-area manufacturers are at least 50 percent more likely than non-distressed-area manufacturers to list a skilled, trained workforce; competing in a global market; and increasing sales. Non-distressed-area companies are more likely to list improving profits/cash flow or general workforce availability.

--Reasons for Lost Business

Across the State, the primary cause for lost business is seen by respondents to be the economy. Contributing factors most often mentioned by distressed-area manufacturers were foreign competition and factories moving outside the U.S.

--Customer Expectations

All the top expectations listed by non-distressed-area manufacturers are even more prevalent in distressed areas. These include JIT deliveries, improved quality, lower prices, cost reductions, shorter lead times and flexibility for a wider range of products and services.

--Average Hourly Wage for Production Workers

Average introductory wages were essentially the same (\$8.69/hour vs. \$8.66/hour), but overall production wages were higher in non-distressed areas (\$12.66/hour vs. \$11.73/hour).

--Proclivity for Joining an Alliance or CEO Roundtable

The percent of respondents who are currently members of an alliance or a CEO roundtable was essentially the same in both distressed and non-distressed areas (30% for alliances, 10% for roundtables). However, a slightly higher percent of distressed-area manufacturers are open to joining an alliance (32% vs. 26%), and the difference widens for CEO roundtables (41% vs. 26%).

--Resources Needed

The top resource needed for both distressed- and non-distressed-area manufacturers is help finding skilled labor, though it appears to be about 17 percent more critical in non-distressed areas. Beyond that, non-distressed areas are at least 20 percent more likely to need help improving manufacturing processes and e-business capabilities (though the latter is still fourth in importance in distressed areas).

On the other hand, distressed areas are at least 20 percent more likely to need help gaining access to capital and to new technology; modernizing equipment; recruiting unskilled labor; adhering to FDA or EPA regulations; identifying new markets; and improving information systems.

VII. Post-September 11, 2001 Survey Update

As indicated at the beginning of this report, the EDA/BMT Manufacturing Survey was taken during July, 2001, with analysis ongoing from August through the end of the year. During the analysis, the tragic events of September 11 cast a pall on the entire nation. Together with the steadily worsening economy during those months, these events brought into questions how much the responses provided to the primary survey would differ if the survey were done later. To see what, if any, impact these issues had on the plans of Indiana distressed-area manufacturers, a follow-on telephone survey was taken in January, 2002, with 25 manufacturers who had taken the original survey. The results are as follows:

1. "Have your plans changed in the last 60 days?" (25 respondents)

64 percent responded no, 36 percent yes.
2. "If your plans have changed, what were the primary reasons?" (9 respondents)

--Economy	66 percent
--General market conditions	44 percent
--Specific product market	11 percent
--International uncertainties	11 percent
3. "(Regardless of the answers above) What are the three most critical issues you face now?" (25 respondents)

Given the comparatively small sample size, the answers to this question were not dramatically different than they were the first time. Of those who had been highly concerned about finding skilled labor, several were less concerned now but concerned nevertheless. The continuing bad economy had produced six more months of adverse impact. Where some had earlier been concerned about reducing costs, for example, they were now concerned about cash flow for paying their bills. Specific costs like health insurance and taxes were more clearly on the minds of several, but the basic challenges of increasing sales, competing in a global economy, reducing costs and dealing with more demanding customer expectations were still critical challenges. Taken together, the lessons learned from the primary survey still look to be solid, though a bit more dire for many companies.

VIII. Conclusions and Recommendations

1. Survey Methodology. The involvement of local economic development officials, manufacturers and regional service providers in the design of the survey was invaluable for insuring the information obtained could result in the most effective help possible for local manufacturers.

The large return rate/sample size, coupled with 80 percent of the respondents being at least vice-presidential level, makes the lessons learned from the survey very credible. The post-September 11th survey update made them even more so.

The use of open-ended questions increased the time necessary to take the survey (somewhat reducing the return rate) and significantly increased the analysis time. However, as expected, it provided better information for those rural counties with few manufacturers whose sample size would have otherwise been very small. This was particularly important in helping the EDA regional teams re-visit their priorities to develop local strategies that would work best to meet the needs in every participating distressed area.

Identifying the sizes of companies, industries served and regions where certain answers occurred disproportionately was invaluable to helping the regions and statewide service providers target more specifically where the needs are, thus reducing the resources required to meet the needs while increasing the probability they can be met.

Perhaps more important, *identifying the demographics helps manufacturers exposed to the results* know more about themselves as well as their market, thus *improving their odds for success*. They can benchmark their needs compared to others of similar size, industry and region. They can better know their customer's needs, which can lead to profitable opportunities as well as more time to prepare for expected threats. Improved knowledge of vendors can help them estimate more accurately how dependable they will be when quality requirements increase or costs have to be passed along. Applying the demographics to their competitors helps them find vulnerabilities of which they can take advantage. And, knowing their markets better helps give them a head start on what is expected to happen.

2. Competitive Advantages: The three key competitive advantages for distressed regions are location, workforce and lower costs. Location is important because *the more critical it is to companies the higher the probability they will stay*, thus helping to insure stable jobs.

Lower overall wage rates are particularly important to smaller companies with fewer than 50 employees. Simply applying pressure to increase wages reduces the advantage and increases the probability the company will move elsewhere. This highlights the need for a *higher-value-added strategy* where local resources work as partners with their companies to help them find higher-value-added products and services that will enable them to provide higher wages and more secure jobs.

Workforce availability is particularly important to larger companies with more than 200 employees—economic cornerstones for many small communities. Helping to keep that as an advantage for them suggests *inventive local strategies for producing people with the priority workforce skills* companies believe will be most difficult to find over the next five years (machinists, computer skills, engineers, electricians, etc.). One team-based byproduct of this survey was finding that many youngsters avoid the machinist trade not for the reasons many believe *but because of the stress they experience in being required to consistently produce higher quality products*. Focusing on this part of the problem may improve prospects for the future.

3. Competitive Disadvantages: Several competitive advantages were also listed as competitive disadvantages—generally by different kinds of companies. Four of the top ten competitive disadvantages for distressed regions are workforce-related. Chief among these is the education level of employees. While language skills were mentioned occasionally by respondents, the *overwhelming majority related to math skills*. Regional team-based inventive strategies for meeting this need include *arranging for local educators to attend BMT workshops on Lean manufacturing*. Immersed in a manufacturing environment where they are involved in role playing, they very quickly learn “the other side of the problem” and can more effectively communicate with manufacturers to better define the math challenge and to better meet it. While all sizes of companies in the survey consider math skills a competitive disadvantage, those with more than 500 employees were particularly prominent in stating that local help is needed in this area for them to become more competitive. Hopefully, this message will get through better than it has in the past.

Together with math, work ethic is the other near-unanimous disadvantage with the workforce, especially in companies with 10-34 employees who are often training grounds for larger companies at their own expense. Here, EDA team-based inventive solutions include *focusing on inter-generational differences to produce better workforce harmony*. This reduces turnover and, together with local education initiatives, can improve perceived work ethic problems.

Wage rates are a competitive disadvantage especially for companies with 35-49 employees. This is an interesting demographic. Many companies are fast-growers who zip through this size on their way to more than 200 employees. Others struggle, going out of business, falling back to less than 35 or remaining indefinitely in the 35-49 range. A lot of family businesses are in this category, many preferring not to grow. The reason for the struggle often has to do with the ability of the entrepreneur *to manage through other people*. Some learn to do that, or bring in others for whom that talent is a strength, and continue to grow. Others continue struggling, often vulnerable to going out of business. Therefore, as the survey found, companies of that size as a group offer the lowest wages in the State—in part because with everything going on, that is often all they can afford. Resources that can provide management expertise are too often overlooked as part of the solution to this problem.

Workforce availability as a disadvantage occurs most often in the plastics or electronics industries, perhaps related to their being among the lower-wage industries in the State. It’s also a primary reason for lost business, especially for those companies with fewer than 35 employees. *Again, inventive local strategies for locating most difficult-to-find skilled labor could be a very effective strategy for raising overall wage rates.*

Operating costs are a disadvantage that is particularly alarming to many in the economic development community for two reasons. First, the issue is so often raised by larger companies with 201-500 employees who can move their operations to Mexico if they need to. Also, again because of the size of those who are most sensitive, it may portend a trend where smaller companies supplying them will have to help bear those costs in the near future. Either way, two possible local answers for *reducing operating costs* were pointed out in the survey by the respondents themselves: more than 40 percent are open to *joining an alliance or a CEO*

roundtable, or both. As was said a few years ago, companies will soon either be in an alliance or be competing with one. We're now farther down the road.

4. Local Help Needed: Perhaps not surprisingly, tax relief was the overwhelming choice here as companies of all sizes look for ways to free up money they believe they can better use elsewhere. But capital assistance is particularly salient in distressed areas compared to non-distressed, and it is especially needed in smaller companies with fewer than 50 employees. This, again, is a two-edged problem. As the survey's section on proclivity to use outside resources found, companies with fewer than 50 employees, especially those with fewer than 10, are much less likely to use outside help than larger companies. Yet 41 percent of those who hadn't used resources are asking for collaborative resource information. So, successful local strategies might focus on *helping these companies become aware of the outside management help that's available and, in other cases, help persuade them to use it.* Management assistance from these resources can help put these small companies in a more defensible position for capital assistance, rather than simply focusing on making them aware of capital sources that are available—a solution perhaps more fitting to the startup looking for venture capital.

Transportation joins capital assistance as being particularly important in distressed areas versus non-distressed areas. This would be even more important for those local communities with a heavy population of *companies particularly sensitive to lowering operating costs* (e.g. 201-500 employees in selected industries) or with *medical device companies or others* for whom the distance to suppliers/customers/markets/major cities is most often a competitive disadvantage.

The projected impacts listed in this and other sections may appear high to some. After all, 38 jobs retained, 30 jobs added and \$2 million added sales *per responding company* for the local help needed sounds like a lot, especially when quantifications on subjects like that are so seldom seen. Or, if they are seen, they too often originate with a partisan organization whose association detracts from their credibility. In this case, it is the responding manufacturers themselves who are making these estimates. Even if only 25 percent true, *the estimates still suggest a pretty healthy return on local investment, especially if that investment supports innovative strategies that are focused on the true needs of local manufacturers.*

5. Local Constraints: If additional business presented itself (and coming out of a recession will probably, by itself, present additional business), respondents identified a number of constraints they would face to take on that business where they are now located. Many companies, especially small companies with fewer than 50 employees, believe their first constraint would be needing more room to expand or needing more capital. Larger companies, even in the midst of a recession when the survey was taken, are concerned about the availability of a quality workforce. The successful local economic development official will *proactively work these problems now, in the midst of the recession, rather than reacting later when the problems are not projected but real.*

6. Degree Meeting Needs: Companies with more than 200 employees are, perhaps not surprisingly, getting their needs met better than others. Their percent of high satisfaction is much higher, and practically none of them is highly dissatisfied. This probably reflects fewer needs

than smaller companies with less staff, combined with the reality that many communities take better care of large employers than they do of small. Local communities might want to *bring special attention to those industries with high dissatisfaction rates* as reflected in this survey. These include the metals, defense, aeros, printers, wood products, and machine tool, especially those with 35-49 employees. Several of these industries are among the highest-paying in the State.

7. Critical Challenges: Perhaps not surprising in the midst of a recession and defense cutbacks, the autos, RVs and defense companies believe they face especially critical challenges in improving sales. Local resources might focus on helping many of them do that by, for example, getting them into a marketing workshop. But, perhaps a more demanding need for the smaller companies is to *help them think globally*. As mentioned earlier, several manufacturers were very active in helping to design the team survey. In the beta test, the smaller companies were practically unanimous in demanding that references to global competitiveness in the draft survey be changed to simply say “competitiveness”. They believed “global” seldom applied.

That change was made, but 24 percent of the respondents wrote that *competing in a global economy* was a critical challenge for them. These were disproportionately companies with 50-200 employees, the sorts of companies that tend to be customers of the smaller companies. Conclusion: many of the smaller companies are still not thinking globally, but the larger companies (who are their customers) are. By not thinking globally, these small companies may be missing opportunities to more profitably serve their market. At the same time, when the harmful realities of the global marketplace are passed down from their customers, many small companies that are not prepared may have difficulty staying in business.

8. Reasons for Lost Business: Although many smaller companies resist trying to think globally, companies with fewer than 35 employees disproportionately blamed recent loss of business to foreign competition and factories moving outside the U.S. To be sure, twice as many blamed the economy, which suggests another strategy to provide help. Rather than waiting on the good economy to return, local economic developers might *encourage their companies to identify and fix their weaknesses now, in the midst of the recession, so they can be in the best position possible to profit from the return of good business*.

9. Customer Expectations: As mentioned earlier, one of the most important findings in the survey was the unanimity with which this question was answered. Respondents from all industries, all sizes of companies and all geographical regions agreed almost unanimously that over the next five years their customers will be expecting them to provide essentially the same things: improved quality products and services delivered faster and at a lower price—one that the customers themselves will often dictate. They want suppliers that can be flexible enough to provide new products and services so they can cut back on their number of vendors. They will want many of them to bear much of the cost of product design as well as inventory. All of this while facing a slow economy, lack of skilled labor and global competition.

In the past, given challenges like this, manufacturers often looked for alternative markets where profits could be more easily attained. However, survey respondents are saying the grass will not necessarily be greener elsewhere. In the high-speed electronic marketplace, respondents

believe alternative markets and industries will soon operate very similarly. Given that heading in a new direction is not without risk, it may make more sense for local resources to help their companies *fix the problems they have in the markets they are in now*. This could be done by an outside resource that assesses the companies from within to identify strengths and weaknesses, proscribing an action plan for improvement. A complementary approach might include making companies more aware of advanced manufacturing techniques like Lean Manufacturing to help them improve on-time delivery, lower their costs and expand their capacity. Companies could then be in a better position to undertake risk, and fixing items like customer satisfaction can best be done before exposing new customers to faults that might have been at the heart of their problem in the old markets. Improvements might even make them more competitive in the comparatively low-risk markets they now supply.

10. New, Team-developed Web Site: Another key finding from the survey is the realization that many manufacturers see the value of the proposed team-designed web site, even given a very abbreviated description, and they plan to use it when it's available. More than 75 percent of respondents say they would use it at least monthly, and while the amount they would pay varies by size, the overall average approaches \$40 per month. The average impact from the web site that they expect in their companies is 13 jobs added, \$1.3 million added sales, and \$77,500 reduced costs. So the site, which promises higher-quality solutions in less time, bringing together collaborating service providers as never before, appears credible to them and they support it.

The site would also provide similarly high-quality solutions for local economic development officials (LEDOs). This is particularly important, as many distressed-area LEDOs believe they are seriously understaffed, forcing them into a reactive mode with little time left for proactive programs. The proposed web site could solve problems in a few minutes that might otherwise have taken a lot longer. Therefore, for both manufacturers and local economic developers, *it is critical that the proposed web site become a reality*.

11. Telecommunication Services: Clearly, there is a knowledge gap here as survey questions to determine the services that are available got a wide range of answers within the same communities. Many senior decision makers taking the survey simply didn't answer these questions or gave it to their "MIS types". While high-speed Internet access was clearly the most important telecommunications infrastructure need, several respondents complained that it was needed in areas where it already exists.

Regional initiatives may be particularly effective in addressing the knowledge gap as well as developing alternatives to the fragmentation that the survey shows exists in the rural ISP community. The downside to having many options can be that smaller service providers have fewer negotiating "chits" when working with larger telecommunications companies. Regional initiatives are likely to have a better probability of success than initiatives attempted by single ISPs or even single counties/municipalities. The number of wireless providers in these areas may suggest that wireless broadband initiatives might be a viable option to facilities-based solutions.

There can be little question that telecommunication infrastructure is a key limiting factor to the success of many rural companies, and as the world becomes smaller, telecommunications will play an even more important role. Hopefully, the information provided by this survey will

serve as a baseline for others to develop a more factual *statewide infrastructure map and broadband services evaluation to lay the foundation for a statewide broadband strategy*.

12. Resources Needed: Prior attempts at identifying the resources needed to help manufacturers were based on identifying those areas manufacturers considered most challenging. Services were then prioritized based on the degree to which a particular need was a challenge to potential users. This survey did that, but it also went a step further and asked for which services manufacturers planned to use an outside resource. The resulting prioritization looked very different from what it would have, and more accurately reflects the true need for resources. Three of the top six resources needed relate to e-business (web page, e-business and IT), yet they would have been in the lower half of all services evaluated if the ranking had been based on degree of challenge.

One key byproduct of the resource analysis was to recognize that manufacturers sometimes view issues as particularly challenging but tend to look exclusively within themselves for answers. Examples include reducing costs, increasing sales from existing customers and improving cash flow. *So, resources that provide these sorts of services, no matter how good they are at what they do, must essentially sell their services twice: establish their own credibility (which all services must do) and, in turn, overcome the manufacturer's natural tendency not to look outward for those sorts of solutions.*

Another key finding dealt with targeting. Not surprisingly, the survey found that companies that have used more resources than the average company over the past few years are planning to use more resources than the average company in the future. These companies tend to have 50-200 employees and service the machine tool, electronic, automotive, aeronautical, medical device, plastics, defense, or growth metals industries. Of these, those most receptive to outside services in general have grown or declined in number of employees by at least 20 percent over the last three years and have proactive management styles (as defined herein).

Again, the analysis for this survey took it a step further. While selected 50-200 employee companies are most receptive in general, the survey identified segments most likely to use resources in each particular service area. So, for example, the prime prospects for a service that provides access to new technology extends from 35-500 employees, especially in the aeronautical, growth metal, plastics and electronics industries. *By targeting companies like this that are most receptive, economic developers and other manufacturing service providers can get the maximum impact from their scarce resources and more quickly meet the needs of distressed-area manufacturers.*

