ECONOMIC STRATEGY
FOR
WASHINGTON COUNTY

Prepared for
Washington County Economic Summit
11/15/01
and
Wisconsin Economic Summit
11/26/01

Convened by:

Joel Rodney, Dean, UW-Washington County
Craig Johnson, WB Campus & Community Partner,
Moraine Park Technical College

Facilitator, Editor:

John B. Torinus Jr., CEO, Serigraph Inc.

EXECUTIVE SUMMARY

Washington County is known for its glacial terrain, but it also is known for its strong, diverse economy, historically based on agriculture and manufacturing. However, its economy has suffered erosion, bringing unease and the need for a new strategy for a new century. Hence, a Washington County Economic Summit was convened by the University of Wisconsin-Washington County.

The over-arching strategy arrived at by 40 participants in the summit process was to regenerate in the early 21st Century the entrepreneurial dynamic that was the county's hallmark through the first half of the 20th Century.

Using the Michael Porter model for knowledge-based industrial clusters, the summit's strategic planners concluded that Washington County should concentrate on four of the ten clusters identified at the state level as drivers of the Wisconsin economy:

- Manufacturing/Materials/Printing
- Finance/Insurance
- Agricultural Business/Food Processing
- Information Technology/Data Processing

Because Serigraph, the county's largest employer, is both a printer and a manufacturer, printing was combined for the purposes of this study with the cluster for manufacturing/materials.

Knowledge-based clusters, which also could be regarded as technology-based, are the engines of the economy. They are not the only elements of the economy, but they are the drivers. The other sectors, such as retail, healthcare and construction, get their energy from the knowledge-based clusters.

Porter is the theorist who looked at booming areas like Silicon Valley, Austin, the Research Triangle or San Diego to learn what made them so dynamic. He described these hotbeds of economic activity as "clusters," noting that they are distinguished by exporting goods or services outside the local or regional economy. He then outlined the critical success factors for stimulating the growth of the clusters.

The nine critical success factors for any cluster are:

1. Availability of start-up capital
2. Research & development capabilities
3. Availability of skilled labor
4. Training/education infrastructure
5. Energy, transportation and information infrastructure
6. Presence of market-leading companies
7. Entrepreneurial climate
8. Business climate
9. Quality of life

In the case of Washington County, other clusters were not targeted for different reasons:

- Biomedical Technology/Informatics—has a small presence in the county with Dairyland Seed and Wisconsin Pharmacal, but the county lacks the supporting infrastructure to make a major push in this cluster. Washington County could consider piggy-backing on Waukesha County's leading position in Medical Devices/Biomedical Informatics, because manufacturing figures into that cluster. Some county firms make components for medical devices.
- Health Care—The providers in the county support the local market, but do not pull many patients from outside its borders, failing Porter's expert requirement for a cluster.
- Business Services/Supply Chain Management—Some firms, like Hillman Consulting, Cesaroni Design, Kreilkamp Trucking, local law and accounting firms, and local ad agencies operate in this arena, but there is not a critical mass. The major league action in this cluster is in Milwaukee.

Each of the four major clusters that drive the county economy was then analyzed in relation to the nine critical success factors identified in Porter's work. A gap analysis on where Washington County ranked on those factors pointed to a set of strategies for each cluster. Some of those recurred, making the common denominator strategies for the county as a whole.

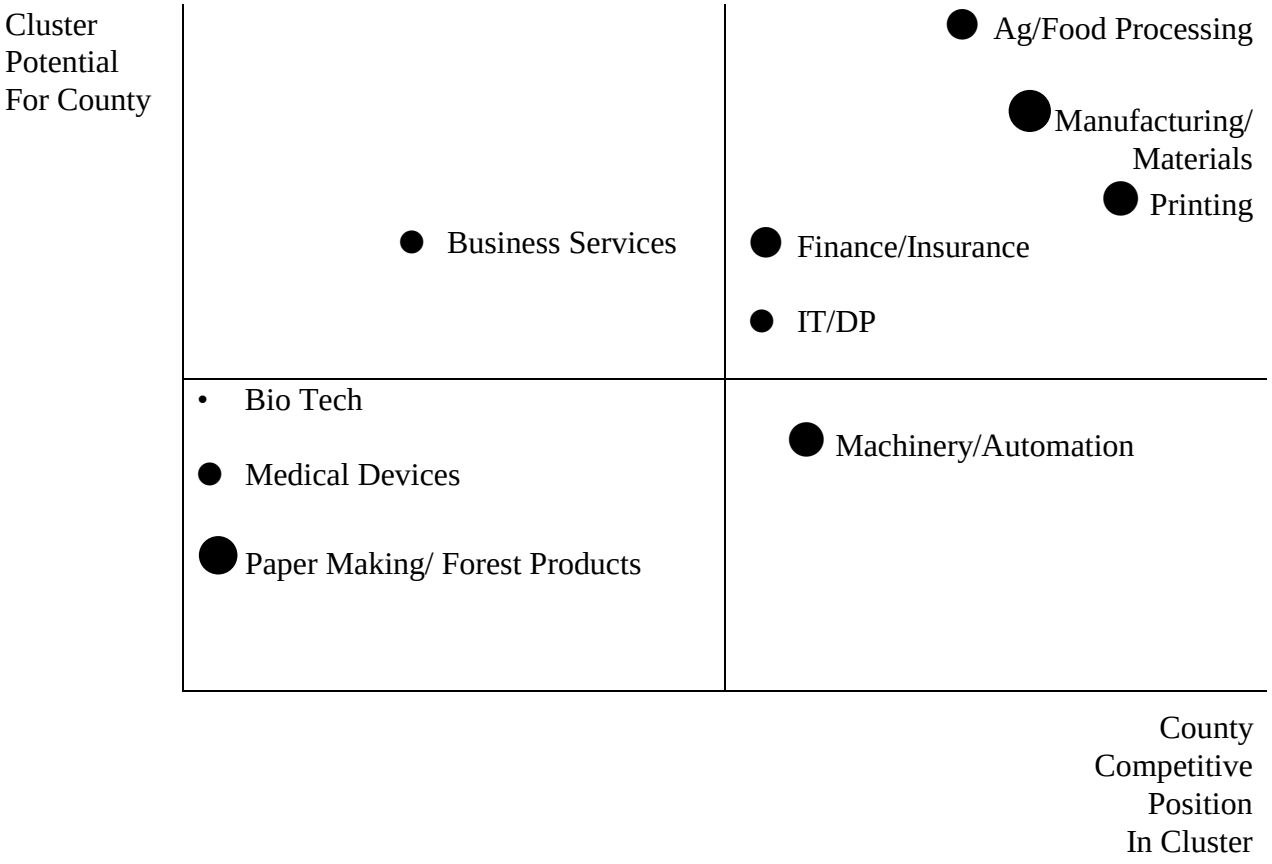
MAJOR STRATEGIES

The cross-cluster grand strategies that emerged for Washington County were:

1. **Energize the entrepreneurial climate**
   - Add an entrepreneurial course at UWWC and MPTC.
   - Create an "angel investing group" in Washington County.
   - Increase the lending pool for new ventures.
   - Launch a high-tech incubator.
2. **Enhance the pool of skilled people in fields needed by the four clusters.**
   - Add offerings in computer science, physical science, business and technology.
   - Add four-year engineering degree at UWWC.
   - Graduate more machinists via the Applied Manufacturing Technology Center.
3. **Stand up for farming in Washington County.**
4. **Stand up for manufacturing in Washington County, the tool and die center of the state.**
5. **Piggy-back on success of the Biomedical Technology/Informatics cluster in neighboring Milwaukee and Waukesha counties to participate in the rapid emergence of this cluster in Wisconsin.**
   - Recruit Biomedical companies to county, including companies that supply GE Medical and other major players.
   - Establish educational offerings at UWWC and MPTC in the Biomedical fields.

METHODOLOGY

To identify the driving clusters in the county, the planners examined the ten clusters identified as pivotal for the state's economy at last year's Wisconsin Economic Summit. Using a quadrant analysis, the four engines emerged as key.



Then a gap analysis was conducted for the nine critical success factors laid out in Porter's work. The gaps on a one to ten basis (ten being the highest score for county resources) pointed to needs that require strategic initiatives. For example, the IT/DP cluster was rated for infrastructure and came out a five on the scale of ten. The five-point gap from ideal was because of the absence of a fiber optic grid serving the county and the relative slowness of the Internet access in the county. Both must be rectified as part of the Washington County strategy.

The following spreadsheet shows the county, not surprisingly, to be best positioned in the manufacturing cluster, while having the biggest "gaps" from success in Ag-Business. Quality of like and skilled labor are long suits of the county, while capital and R&D score poorly.

Washington County Economic Summit

Gap Analysis of Four Major Clusters

CRITICAL FACTORS	Machinery Mat'ls/Printing	Info Technology/ Data Processing	Finance, Insurance	Farming/ Agriculture	Total	Average
Start-Up Capital	5	2	1	1	9.0	2.7
R & D	7	4	3	1	15	4.0
Skilled Labor	7	6	5	2	20	5.0
Education/Training	9	6	5	4	24	6.0
Infrastructure	7	4	5	6	22	5.5
Market-Leading Companies	6	2	5	2.5	15.5	3.9
Entrepreneurial Climate	8	5	3	2.5	18.5	4.6
Business Climate	5	6	7	1.5	19.5	4.9
Quality of Life	8	8	8	8	32	8.0
Total	62	43	42	28.5	175.5	43.9
	69%	48%	47%	32%	49%	

MANUFACTURING/MATERIALS/PRINTING CLUSTER

Wisconsin is manufacturing intensive, with the second highest percentage of people in the US employed in that sector, 24%. Washington County is also manufacturing intensive. However, the county, like the state, has taken some serious hits.

From its high point in the 1970s, the West Bend Company is down more than 1500 jobs. Regal Ware is down 500. Amity Leather is no longer manufacturing here; from 650 workers, it has dropped to about 100 in a distribution center. Wesbar closed down after a sale, and 85 good jobs were lost.

Nonetheless, manufacturing is by far the largest cluster in the county, with 39% of the businesses, 77% of the employees and 68% of annual sales volume. It is the "driver" of the Washington County economy.

There have been additions to the county manufacturing base through new companies in the Germantown industrial park, the new QuadGraphics plant in Hartford and new tool and die shops.

Other manufacturers, like Serigraph at 1100 employees and Broan-Nutone, the largest company by sales volume in the county at $650 million and 800 employees, have each quadrupled their sales volumes over the last decade or so, while holding their manning levels constant.

Total manufacturing jobs in the county are about 11,000 in more than 300 companies. Printing accounts for another 2000 or so jobs, thanks to growth at companies like QuadGraphics and Post Printing.

At the heart of the manufacturing process is the tool and die discipline, and that has always been a long suit of the county. It continues to be. There are more than 50 tool shops in the county, employing an estimated 1200 people in high-pay jobs.

Washington County has long recognized that its economy is driven by manufacturing. Accordingly, it has launched initiatives that already constitute a strategy in that cluster, such as:

- Creation of the Applied Manufacturing Technology Center (AMTC) at the West Bend campus of Moraine Park Technical College (MPTC). At $14 million in investment, it will sharply increase the supply of tool and die makers and machinists in a state-of-the-art facility. The center also will train people in other critical manufacturing disciplines.
- Expansion of the University of Wisconsin-Washington County (UWWC). A $10 million investment will accommodate more offerings in the sciences, business and technology. A B.S. in technology between UWWC and MPTC is in the development stage.
- Recruit manufacturing employers like QuadGraphics.
- Support the growth of home grown manufacturers like Steel Craft.

These are important strategic initiatives.

The county also scores high on several other critical success factors. It has a high quality of life, several leading companies in their markets (Broan, Serigraph, West Bend Co., Regal Ware), workers with high skill levels and with a strong work ethic, a nascent R&D capability via AMTC, an efficient highway and road system, and cost-effective energy.

The gap analysis surfaced the following four groupings of needs and strategies in this cluster:

Entrepreneurship and Investing

- A local angel investing group to help launch start-ups.
- Entrepreneur classes at all levels to create a fertile climate for start-ups.
- A high-tech incubator to provide a home for young firms.
- A network of experts to support an entrepreneurial climate.

Education and Training

- A new BA in technology between MPTC and UWWC.
- A new BS in engineering at UWWC in connection with a four-year engineering school.
- Support for the youth apprenticeship program.

Research and Development

- Exploitation of the R&D and educational resources of the AMTC. Turn Washington County into the state's mecca for tool and die and machining advances.
- Connect to the manufacturing R&D resources at UWM, MSOE and Marquette.
- Latch onto the Biomedical Devices/Informatics cluster in Waukesha County, a booming cluster.

The Manufacturing Process

- Take the high road by using technology to innovate high value products at higher margins, to reduce inventories and turn-arounds to serve a just-in-time supply chain, to automate manufacturing firms to neutralize low-cost overseas labor, to produce the highest quality products with zero defects.

AGRICULTURAL BUSINESS/FOOD PROCESSING CLUSTER

The Agricultural Business/Food Processing cluster has been an under-pinning of the Wisconsin economy and that of Washington County since the earliest days of settlement by Europeans. With the continued increase in the population and the growth of the non-farm economy, an issue today is the impact this sector has on our quality of life. The farming community brings many things to Washington County. Some of these are open space, scenic views, wildlife habitat and an interesting diversity to our community.

As we become more urban, the threat to our farmland increases dramatically. We need to put in place a long-term strategy, which will prevent Washington County from becoming like Waukesha County, where they just passed a 50-year build-out plan with no agriculture in their future.

The food-processing segment of this cluster involves some of the leading companies in their respective businesses: Gehl Company in farm machinery, Dairyland Seed in seed production, Level Valley in the cream cheese business and Sysco in foodservice distribution. All these

companies are important to Washington County, but are not threatened the same way our agricultural land is threatened. Therefore, our focus will be farmland preservation.

Washington County has lost 330 farms since 1980, and 275 of those have been dairy farms. With less than 200 dairy farms remaining from 475 in 1980, it is safe to say there is a war of survival going on in our rural areas. And the Washington County dairy farmer is losing out.

In our discussion and study groups, it has become obvious the farmers cannot save themselves without significant help from the non-farm community. For Washington County to have a viable ag industry 25 years from now, the county as a whole needs to take a stand for agriculture. Specifically, we need to do the following:

1. Create a tough land use policy via zoning (i.e. prevent development where sewer and water are not available). Than should encompass a sensible county-wide farmland preservation program (i.e. designate specific areas to agriculture forever). Find investors outside the community who are willing to commit to farmland preservation.
2. Fund a Purchase of Development Rights Program at the county level (i.e. the farmer who commits to ag long term must be compensated).
3. Encourage interested parties to put conservation easements on their land.
4. Pass strong "Right to Farm" ordinances and enforce them.
5. Support a new business model for expanded dairy farms, because the 75-cow dairy isn't competitive in the 21st century.
6. Educate the non-farming community of the significant quality of life benefits and reduced taxes resulting from farmland preservation.
7. Create a Farm Link Program to connect older farmers with younger aspirants.
8. Find niches that county farmers can exploit.

Failure to put in place a strategic plan means that, at some future date, Washington County will be following in Waukesha County's footsteps and will have no agriculture in its future.

INFORMATION TECHNOLOGY/DATA PROCESSING CLUSTER

While this cluster is not dominant in Washington County, and will never have Silicon Valley ambitions, the digital world is pervasive here as elsewhere. A number of firms and governmental organizations in the county have large IT operations that contribute heavily to the economic dynamics in the county. This cluster in Washington County requires strategic initiatives at the local, as well as the state and national, level.

Almost all of the large companies in the county have significant IT shops, including West Bend Mutual, Germantown Mutual, Serigraph, and West Bend Company.

In addition, there are several companies that essentially could be described as data processing operations, like Restat, which processes pharmaceutical claims, its parent, Dohmen, and CMS, which processes medical claims.

This sector depends heavily on a steady supply of skilled graduates coming out of our technical colleges and university system. The argument can be made that, if there is a strong school for IT graduates in an area, the firms will come to avail themselves of that pool of talent. Or, if you build the field (skilled people), they will come.

Therefore, the strategies for this sector revolve heavily around the development of people who have achieved digital fluency.

A good example of how the county can continue to react to the IT needs of the new economy is the apprenticeship in networking offered through the county's high schools. Through Cisco, the networking giant, this program has been over-subscribed by high school students. They come out with a certificate of proficiency and a two-year foundation of digital knowledge. This allows them to go directly to work as network technicians or go on to two-year or four-year colleges.

Seamless education from the K-12 system through the technical college and on to the university system is critical for this cluster. It needs to extend even past graduation to returning adult workers who need to sharpen their skills.

Organizations in the private sector must also do their part with investments in education and training. One company in the county, for instance, has a full-time trainer in various software applications and will not allow a personal computer to be issued to an employee until they have taken the requisite free training.

It is a hallmark of IT-intensive firms that they spend a higher proportion of payroll on training than do other companies. Some insurance companies, for instance, spend as much as 6% of payroll on training and education, in contrast to the 1.5% average across the United States.

The gap analysis for this sector elicited a number of infrastructure needs that have to be addressed at the county level. Washington County has adequate Internet access, but it is in need of improvement. Several IT managers pointed out that the system does not have a grid, which means the county can be knocked out if the existing fiber optic line is damaged. The county will lobby for another line coming in, so that the system can be put into a grid.

In addition, Internet access is too slow, in the minds of IT professionals. Faster, more direct access is another requirement.

The "smart city" initiative launched by West Bend is an example of proactivity that helps build the IT infrastructure. It allows firms in the county area to have direct access to each other without going out to external servers. The smart city web site also has a significant base of information about Washington County, with the appropriate links to various organizations inside the county.

The IT/DP cluster is one where more entrepreneurial activity is needed. There have been several start-ups in the area, but more are needed. To encourage that entrepreneurial climate, the following initiatives need to be launched in Washington County:

- Again, an angel network needs to be established to fund start-ups.
- A high-tech incubator, wired with the latest Internet hook-ups, needs to be launched.
- The existing network of IT managers needs to be buttressed with people who know how to launch new business start-ups.

- The infrastructure must be improved to provide a fiber optic grid and faster Internet connectivity.
- UWWC and MPTC must continue to increase IT offerings.
- As planned, UWWC must offer a BS in computer engineering in conjunction with UW-Milwaukee.
- The high school apprenticeship in networking must be leveraged to encourage those young people to go on to two- and four-year IT degrees.
- Entrepreneurship modules should be woven into IT degree curricula.

FINANCE/INSURANCE CLUSTER

Although Washington County has only about 1/15 of the population in the Milwaukee metropolitan area, it boasts a significant number of finance and insurance firms that export their products beyond the metro Milwaukee area. There are 125 finance and insurance companies in the county, large and small, employing about 2000 people.

In general, there are not many impediments for development of this cluster in the county.

The second largest company in the county by sales volume is West Bend Mutual Insurance Company, with sales approaching $400 million and employment of about 650. It is an example of a company growing from local roots, serving local customers, to a formidable enterprise in multiple states. It is a company that has reached critical mass and is now expanding even more rapidly across the country.

The county still has parts of the down-sized Ziegler Companies, an investment banking firm that has its origins in West Bend, and Germantown Mutual, a growing property/casualty company on the south end of the county. These two firms also "export" outside local boundaries.

While the local banks serve mainly the local markets, they are an important employer in the local economy.

Stewart-Peterson, a commodities broker, and other small financial firms are examples of entrepreneurial start-ups that have helped boost the economic output of the county.

This local cluster is heavily dependent upon good information technology support and a steady supply of graduates skilled in finance.

The gap analysis of critical success factors did not yield many impediments to the growth of this cluster in Washington County, but the same factors that apply to the IT/DP cluster apply to finance/insurance.

Quality of life is extremely important for attracting and retaining skilled workers in these professions.

The local strategies for this cluster are:

- Continue to develop UWWC as a source of four-year business graduates in linkage with UW-Milwaukee.
- Adopt the IT strategies outlined above.

Appendix A

Outline of Critical Success Factors
Nine Difference Makers

These nine factors are more critical than others for the success of the dynamic clusters that drive an economy. (Appendix 1 is a more detailed description and evaluation of each factor.)

1. Availability of Start-Up Capital

Relative to neighbors in the Midwest and nationally, Wisconsin does not receive a high amount of venture capital funding. In at least two recent reports (see Appendix 1), six Midwestern states together received less than 5% of the total U.S. venture capital lending, with Minnesota and Illinois getting the lion's share. Concerning IPO funds, a recent report (June 2000) by the Technology Administration, *State Science and Technology Indicators*, ranked Wisconsin 34th in IPO funds raised from 1997-1999. In terms of Small Business Investment Company awards, the same report also ranked Wisconsin 22nd. From 1996-1998, Wisconsin averaged $39 million per year in venture funds. Early stage angel investing is just getting started in the state.

2. Research & Development Capabilities

This factor represents the amount of R&D funding, public and private, provided in a given state or region per year. The paper brings together Wisconsin and its neighbors (IL, IA, MN, IN, and MI) and generated a series of benchmark comparisons from NSF data (see Appendix 1). In brief, Wisconsin ranks higher on a per capita basis in only one category: Academic R&D. A close second, however, is Industry R&D, in which Wisconsin ranks 19th in the US. Compared to Wisconsin's Gross State Product (GSP) ranking for the same year, 19, it should also be considered a strong sector of Wisconsin's R&D funding.

3. Availability of Skilled Labor

This factor is defined as the number and quality of educated workers in a given state or region. From a variety of data sources, a series of benchmark comparisons were generated between Wisconsin, its neighbors, and the US. In terms of secondary education, Wisconsin scores well nationally: 88% of its residents have a high-school diploma or equivalent, compared to 82.8% nationally. In terms of post-secondary education, however, Wisconsin fares worse: 22.3% of its citizens have BA degrees, compared to 24.4% nationally. Wisconsin ranks 13th in Science and Engineering degrees awarded, thereby outperforming both its population size and GSP rankings. It also meets or outperforms in terms of graduate and post-doctorate students in Ph.D. granting institutions. This, by and large, reflects Wisconsin's strong public and private universities. Wisconsin scores near the top in the K-12 sector on most standardized tests, including SAT and ACT scores.

4. Training/Education Infrastructure

This factor measures the state of Wisconsin's public and private institutions of higher learning. In terms of total institutions of higher learning, Wisconsin, with 66 colleges and universities, is more tilted toward larger, state-supported campuses ranks than other states. In total campuses, Wisconsin ranks above only one state, Iowa at 59. Per capita investment in education, including higher education, ranks very high. Wisconsin scores fairly well in terms of student-faculty ratios by being at or near national ratios for public 2-year and private 4-year institutions. The average pay for full-time faculty in both public and private schools is $49,325, with the former ($50,747) paying substantially more than the latter ($43,320). Wisconsin is about on par with the national average for public institutions ($50,303) and falls short for private by almost $9,000 ($52,112). Wisconsin ranks high for investment per capita in K-12 and higher education. Its system of 16 technical colleges is responsive and highly regarded.

5. Energy, Transportation, and Information Infrastructure

Wisconsin's industrial and commercial electricity rates are better than its neighbors, although residential rates are higher. Natural gas prices in Wisconsin are at the median of its neighbors and lower than the US generally. Economic growth has led to an increasing demand for power in Wisconsin. Many of our power plants are old and must be updated or replaced. Further, Wisconsin has limited capability to import electricity into the state because of inadequate high power transmission lines. Natural gas reserves are located in lands that are not open to exploration. Additionally, almost every new power plant that has been proposed uses natural gas for its fuel. With rising gas prices, that is not a good omen. In terms of transportation, the physical condition of Wisconsin's highways has declined since 1995. Roadways are the most significant aspect of Wisconsin's transportation infrastructure because of the predominance of motor freight transportation in the state (see Appendix 1). In terms of zip codes with high-speed bandwidth, Wisconsin (55%) underperforms the US (59%) as well as Indiana (63%), Michigan (68%) and Minnesota (58%). In terms of high-speed lines in each state, Wisconsin's performance also drops. State government has been ahead of the curve in adopting standards and "wiring" its operations.

6. Presence of Market-Leading Companies

The presence of market leading firms is important because industrial clusters often form around large magnet or anchor firms (e.g., consider Microsoft's role in the Redmond/Seattle area or Dell's role in Austin). Wisconsin ranks fourth in total industries with more than 500 employees in the Midwest region. Two industries comprise the largest share of market-leading companies: Manufacturing (56%) and Health Care & Social Assistance (21%). In terms of Inc. 500 companies residing in-state in 1999, Wisconsin ranks 26th, with 7 establishments. In terms of the Deloitte & Touche Technology Fast 500 companies residing in-state in 1999, Wisconsin ranks 31st, with 1 firm. In this, it outperforms only Indiana (0 firms). Illinois was ranked 26th (4 firms), Iowa 27th (1 firm), Michigan 32nd (1 firm), and Minnesota 13th (13 firms).

7. Entrepreneurial Climate

This factor brings together an array of data on the incentives offered to small-businesses and inventors as well as on the actual entrepreneurial activity in-state. The Appendix describes the specific rankings in more details, but a summary overview suggests Wisconsin meets or

exceeds national averages on the indicators identified from recent data. For example, in terms of business incubators, Wisconsin ranks first in the nation. Wisconsin ranks 18th in patents issued from 1996-1998, with an annual total of 1,643. In terms of establishment births, Wisconsin ranks 29th, with 626 technology establishment births. (Wisconsin had 11,597 births in all industries and sectors.) Only a few entrepreneurial or technology transfer networks exist in the state.

8. Business Climate

This section includes such factors as business creations, manufacturing jobs as a percentage of employment, and Internet registrations (see Appendix 1), although several indicators of business climate have been indirectly addressed under some of the other success factors (e.g., R&D, Availability of Start-Up Capital, Infrastructure, Entrepreneurial Climate). Across these dimensions, it is evident that Wisconsin has many strong points (university and tech college system, energy costs, manufacturing base, availability of graduate and post-doc workers, qualified high-school graduates, and academic R&D). However, it must address its critical economic weaknesses (brain drain, low faculty salaries, lack of venture and seed capital, lower-than-average per capita income, low export share, lagging transportation and communication infrastructures, and high personal tax rankings) if it is to secure and augment the success it has enjoyed in the last ten years.

9. Quality of Life

Competitive Wisconsin, Inc., in its 1999 report *Measuring Success*, has identified a number of factors that contribute to the quality of life in Wisconsin, and in all but one Wisconsin is performing well in relation to national and regional benchmarks. These include its low rate of uninsured citizens, low levels of violent crime, its recreational appeal, low poverty rates, high home ownership rates, and other dimensions. The data suggest that Wisconsin has a high quality of life in general, and that it must address two major factors in order to increase worker retention and to attract more residents: increase its per capita income and increase national awareness of the many positive qualities Wisconsin can offer its citizens.

Appendix B

Washington County Agriculture Profile

967 farms
156,317 acres of farmland

Farm Size in Acres		
Acres	Number	Percent
1-9	61	7.8%
10-49	182	23.1%
50-69	52	6.6%
70-99	111	14.1%
100-139	77	9.8%
140-179	68	8.6%
180-219	51	6.5%
220-259	51	6.5%
260-499	90	11.4%
500-599	30	3.8%
1,000-1,999	12	1.5%
2000 +	2	.3%

$61, 454,000 farm market value of ag products sold

Farm Value of Sales		
Value of Sales	Number	Percent
< $1,000	91	11.6%
$1,000 – 2,500	57	7.2%
$2,500 – 5,000	60	7.6%
$5,000 – 10,000	79	10.0%
$10,000 – 20,000	97	12.3%
$20,000 – 25,000	34	4.3%
$25,000 – 40,000	57	7.2%
$40,000 – 50,000	37	4.7%
$50,000 – 100,000	104	13.2%
$100,000 – 250,000	114	14.5%
$250,000 – 500,000	39	5.0%
$500,000 +	18	2.3%

Farm and related income:

- $61,454,000 -- farm market value of ag products sold
- $ 1,043,000 – value of government payments
- $ 186,000 – Conservation Reserve Program Payments
- $ 191,000 – rental of farmland
  $64,593,000

Farm and related expenses

- $45,708,000 = farm production expenses
- $ 4,754,000 = hired farm labor
  $50,462,000

Importance of farmland

$376,428,000 value of farmland (156,317 acres @ $2413, average value of farmland, that stayed in agriculture use, sold in Washington County in 1999)

56.6% of total county area is in farmland (Total county size is 432 square miles X 640 acres per square mile = 276,480 acres. 156,317 acres is 56.6% of total)

Data from the 1997 Census of Agriculture

Prepared by:
Jack Trzebiatowski
Washington County Farm Management Educator
333 E. Washington St., Suite 1200
West Bend, WI 53095
Phone; 262-335-4477
FAX: 262-335-4863
E-mail: jack.trzebiatowski@ces.uwex.edu

Appendix C

Washington County Ag Statistics									Washington County		Wisconsin State Averages			
									1980 vs 1999		1980 vs 1999			
Year	1980	1985	1990	1995	1996	1997	1998	1999	Values	% Change	1980	1999	Values	% Change
Number of Farms	1,230	1,100	1,040	1,030	1,030	950	920	900	-330	-26.83	95,000	78,000	-17,000	-17.89
Avg Size of Farms-Acres	161	146	156	155	153	148	151	150	-11	-6.83	197	209	12	6.20
Land in Farms	198,000	161,000	162,000	160,000	158,000	141,000	139,000	138,000	-60,000	-30.30	18,700,000	16,300,000	-2,400,000	-12.83
Corn Acres	28,500	29,000	30,000	31,200	29,400	28,700	27,900	27,000	-1,500	-5.26	2,980,000	2,950,000	-30,000	-1.01
Yield per Acre-Bu	99	101	115	111	101	127	139	137	38	38.52	103	137	34	33.01
Corn Silage-Acres	14,700	11,000	9,700	7,000	11,200	10,300	9,800	10,100	4,600	-31.29	900,000	730,000	-170,000	-18.89
Yield per Acre-Tons	12.6	13.7	14.6	16.0	12.0	13.0	15.0	15.0	2.4	19.05	12	16	4	33.33
Soybean Acres	500	2,000	3,200	9,800	10,700	24,500	16,300	19,000	18,500	3700.00	295,000	1,300,000	1,005,000	340.68
Yield per Acre-Bu	33	32	38	43	35	45	47	46	13	38.97	34	46	12	35.29
Wheat Acres	1,950	5,750	7,450	3,700	3,800	4,600	4,100	4,200	2,250	115.38	54,000	120,000	55,000	122.22
Yield per Acre-Bu	45	50	54	59	50	57	52	57	12	27.52	40	60	20	50.00
Forage Acres	43,100	45,000	41,800	37,700	36,500	35,000	35,600	33,500	-9,600	-22.27	4,030,000	3,600,000	-430,000	-10.67
Yield per Acre-Tons	3.1	5.0	4.4	4.7	3.7	3.0	4.0	5.1	2.0	64.52	3.3	4.1	0.8	24.24
Barley Acres	310	1,600	600	1,600	1,600	1,400	1,400	1,300	990	319.35	24,000	65,000	41,000	170.83
Yield per Acre-Bu	53	61	61	49	56	60	35	48	-5	-9.77	49	52	3	6.12
Oats Acres	14,500	12,000	12,000	5,300	4,600	4,900	4,300	4,200	10,300	-71.03	980,000	300,000	-680,000	-69.39
Yield per Acre-Bu	64	71	76	62	68	71	71	69	5	8.15	57	61	4	7.02
Sweet Corn	2,200	2,000	2,600	2,400	2,200	1,600	1,500	1,500	-700	-31.82	121,400	106,100	-15,300	-12.60
Yield per Acre-Tons	5.2	5.3	6.0	4.9	5.6	7.0	7.0	6.7	1.5	28.85	4.6	6.6	2.0	43.26
Peas	2,800	1,200	1,200	NA	NA	800	700	550	-2,250	-80.36	1,096,000	43,700	-1,052,300	-96.01
Yield per Acre-Tons	2.0	1.8	1.8	NA	NA	1.0	1.0	1.7	-0.3	-15.00	1.6	1.9	0.3	16.25
Dairy Herds	475	454	360	261	245	225	210	208	-267	-56.21	45,000	16,776	-28,224	-62.72
Dairy Cows	22,500	24,800	23,700	19,100	18,500	16,000	15,500	15,500	-7,000	-31.11	1,815,000	1,365,000	-450,000	-24.79
Production Per Cow-Lbs	12,700	13,500	13,700	15,900	15,600	16,500	17,000	17,200	4,500	35.43	12,331	16,902	4,571	37.07
Cattle and Calves	42,000	47,900	49,300	40,500	39,500	37,000	35,000	35,000	-7000	-16.67	4,280,000	3,400,000	-880,000	-20.56
Hogs and Pigs	16,100	9,100	8,600	3,700	3,200	3,700	3,500	2,500	-13,600	-84.47	1,803,000	570,000	-1,233,000	-68.39
Acres ag land sold for ag use	1,456							1,222	-234	-16.07	283,301	180,232	-103,069	-36.38
Value for ag use	$2,030							$2,919	$889	43.79	$1,190	$1,531	$341	28.66
Acres ag land sold for other uses	431							949	518	120.19	24,346	64,243	39,897	163.87
Value for other uses	$4,997							$6,947	$1,950	39.02	$1,695	$2,712	$1,017	60.00

Prepared by Jack Trzebiatowski, Washington County Farm Management Educator
333 E. Washington St., Suite 1200, West Bend, WI 53095
Phone: 262.335.4477, FAX: 262.335.4863
E-mail: jack.trzebiatowski@ces.uwex.edu

Data from:
—Wisconsin Statistical Reporting Service
—Census of Agriculture

Appendix D

Agriculture Related Businesses in Washington County

Business	Major Product or Service	City
WTKM Radio	Advertising & news	Hartford
M&I First National Bank	Ag Financing	West Bend
Bank One	Ag Financing	West Bend
Firstar Bank Wisconsin	Ag Financing	Germantown
First National Bank	Ag Financing	Hartford
Badgerland Farm Credit	Ag Financing	West Bend
State Bank of Newburg	Ag Financing	Newburg
Farmers Inc. Elevator	Animal feeds, grain storage	Allenton
L. T. Hampel Corp	Calf huts & agriculture products	Germantown
Gehl's Guernsey Farms Inc.	Dairy food processor	Germantown
Leval Valley Creamery Inc.	Dairy food processor	West Bend
Jack Walters & Sons	Farm buildings	Allenton
Gehl Company	Farm equipment manufacturer	West Bend
Horlamus Industries	Farm equipment manufacturer	West Bend
Farmers Inc. Equipment	Farm machinery dealer & repair	Allenton
Lochen Auto & Implement	Farm machinery dealer & repair	Newburg
F&I Equipment	Farm machinery dealer & repair	West Bend
St. Lawrence Equipment	Farm machinery dealer & repair	St. Lawrence
Strupp Implement	Farm machinery dealer & repair	Slinger
West Bend Elevator	Feed and farm supplies	West Bend
IMC Agribusiness	Fertilizer	Jackson
Gundrum Brothers Farm Supply	Fertilizer, seeds, pesticides	West Bend
Midwest Agribusiness Inc.	Financial & data management	West Bend
House of Home Made Sausage	Food Processor	Germantown
Kerry Foods	Food Processor	Jackson
Seneca Foods Corp.	Food Processor	Jackson
Northland Cranberries	Fruit Juice processor	Jackson
Stewart-Peterson Group	Marketing services - broker	West Bend
Kewaskum Frozen Foods	Meat processing	Kewaskum
Ardell Schmidt	Milking equipment	Richfield
Dairyland Seeds	Seeds	West Bend
West Bend Commercial Warehouse	Storage and labeling of food	West Bend
Kreilkamp Trucking	Trucking of ag products	Allenton
Kruepke Trucking	Trucking of ag products	Jackson
West Bend Transit	Trucking of ag products	West Bend
Spring Valley Turf Products	Turf products	Jackson
Large Animal Veterinarians		
Building and concrete suppliers		

This list was prepared by Jack Trzebiatowski, Washington County Farm Management Educator, from information provided by Brenda Hicks-Sorensen, Washington County Economic Development Coordinator, and from the Yellow Pages. It is not meant to be an inclusive list and does not include any businesses providing nursery, landscape, greenhous, or other horticulture or specialty agriculture products.