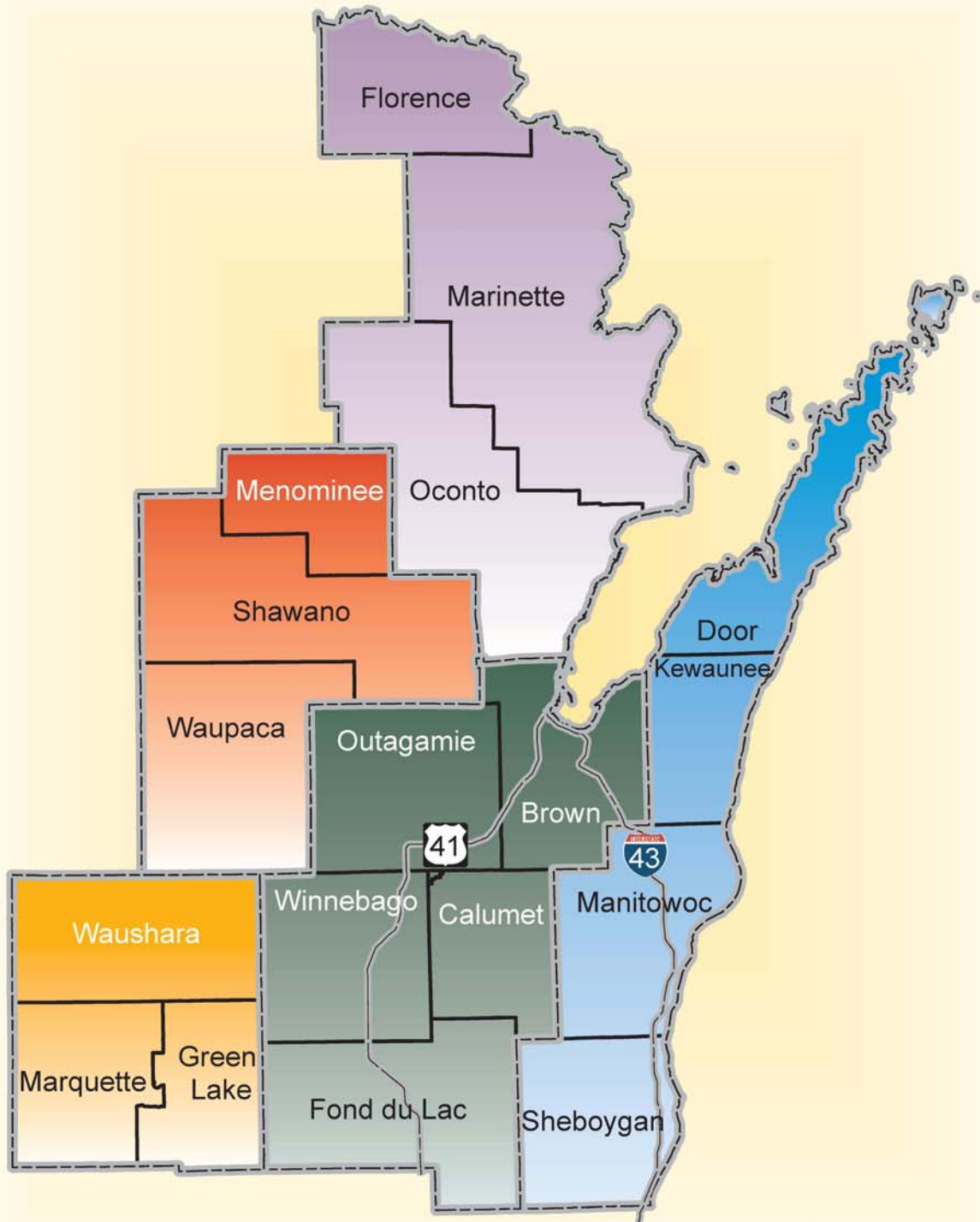


NORTHEAST WISCONSIN ECONOMIC OPPORTUNITY STUDY



October 2004

Sponsored by:



Northeast Wisconsin (NEW) Economic Opportunity Study

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October, 2004

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EXECUTIVE SUMMARY

The Fox Valley Workforce Development Board, Inc. and the Bay Area Workforce Development Board, Inc. commissioned NorthStar Economics, Inc. to conduct Phase III of an economic opportunity study (EOS) to determine how to halt the deteriorating employment trends in their service areas in Northeast Wisconsin. The outcome of the study is to provide an impetus to develop policies geared toward a prosperous economy. The Boards realize that workforce development and economic development are interrelated and interdependent for a strong, creative economy.

Phase III involves generating an economic development strategy for seventeen counties in Northeast Wisconsin (NEW). Phase III builds upon work done in Phase I by the East Central Wisconsin Regional Planning Commission and in Phase II by UW-Extension and UW-Madison Department of Agricultural and Applied Economics.

Phase III analysis identified economic development strengths and challenges in NEW and constructed a strategic plan to meet the challenges based upon the assets in the region. The findings and recommendations are summarized below as are the concepts that shaped the strategic economic development plan and the strategies themselves. The full report includes a discussion of the analysis and the tactics and action steps that pertain to each strategy.

Premise

The model for future economic prosperity has changed. In the previous model (Old Economy) the production of goods was based upon proximity to raw materials and limited distribution channels. Abundant labor chased growing businesses. Capital supplanted labor to increase productivity and, in turn, profits and wages.

The new model (New Economy) is based on ideas, creativity, and innovation. Now successful businesses chase a scarcity of skilled workers. Skilled workers are attracted to places with high qualities of life and rich cultural and recreational environments.

Old Economy

The Old Economy was based upon a competitive cost race to the bottom to secure and hold markets. The competition has become so fierce that it has constricted community wealth and the means to supply government services and maintain a high quality of life. NEW needs to abandon this economic development model.

New Economy

The New Economy is based upon knowledge and abundance theory, the concept that collaboration will grow the pie sufficiently large enough to serve an ample piece to everyone. A skilled workforce is imperative in this economic model. Creativity and innovation coupled with entrepreneurship and risk capital generate high value-added products. These products yield higher margins, better pay, and more community wealth. NEW needs to embrace this economic development model.

Gap

NEW lacks a sufficiently skilled workforce to operate in the New Economy. NEW workers must advance in education and training. Furthermore, because of inherent demographics, NEW must attract skilled workers to the region. Skilled workers are attracted to culturally rich environments. NEW does not have an image of such an environment. It is also struggling with paying for community services and maintaining its cherished high quality of life.

Task

NEW must move to a New Economy model. In order to do that, it needs to: 1) raise the skill level of its workforce, 2) create high value-added products, 3) collaborate across all sectors, 4) plan economic development for the region, and 5) promote an attractive image to retain and attract skilled workers and New Economy businesses. NEW needs to build New Economy industry clusters based upon the existing industry set and create new industries in the region.

Challenges

NEW has three primary economic challenges: tightening labor market, falling relative per capita income levels, and unfavorable educational attainment levels. There is a global scarcity of talented labor, as indicated by the increasing spread in earnings by education attainment. Given that the New Economy, one based on knowledge, is dependent upon talented workers, educational attainment becomes increasingly important in the future. Higher skilled workers command higher incomes. Skilled workers are attracted to communities with rich working and living environments. NEW needs to attract skilled workers to meet the needs of industry and raise per capita incomes.

Further Challenges

- Data and information gathered in Phase III (CEIGS, survey data, interviews) indicate a mixed portfolio of the local assets and knowledge of drivers of the New Economy. On one hand, NEW possesses some of the basic building blocks for the New Economy – quality of life and recreational amenities. On the other hand, the region is falling behind in several critical areas that are essential drivers of the New Economy – brain power, capital, innovation and entrepreneurship.
- There is a disconnect between the existing economic views and mindsets in NEW and the factors required to ensure economic prosperity in the New Economy. Much of the region remains in an economic development construct that is a cost race to the bottom. Moreover, the region looks to big business and government as the primary drivers of the economy and shies away from free markets, when, in fact, most jobs are created by small businesses and the very engines of growth in the New Economy – brain power, risk capital, entrepreneurship, and technological innovation – are all free market based.

- There is large frustration in NEW with the number and disparate activities of governmental units. The parochialism that permeates the region is costly and, at times, counterproductive. NEW lacks a common vision of its economic future and a collaborative operating model.
- There is limited cultural diversity in NEW. The conformity of the region dampens creativity, open discussions, and the advances that develop from the melding of various best practices, be they in business, government, or other areas of the community.
- NEW and much of the greater Midwest has an image of being a wholesome but dull place. It is perpetuated by the national press and exists in the mindsets of Hollywood and Wall Street. That image is somewhat internalized, but also generally accepted by businesses and worker talent outside the region, making it difficult to retain and attract talent to the region.

Recommendations

- NEW must abandon the economic strategy of a cost race to the bottom and embrace the concept of abundance theory – that by collaborating, the pie will increase with everyone getting a larger piece. This is best and most efficiently accomplished through proactive collaboration across all sectors in the region – business, labor, government, education, and the general populace.
- NEW needs to reengage the very things that made the regional economy vibrant in the past and what will make its economy vibrant in the future – risk-taking, capital, and technological innovation – the fundamental building blocks of the New Economy.
- In order for disparate groups to work together, they need a common vision. NEW’s vision should be bold and all encompassing. The region should initiate an economic development plan that brings all facets of the region’s resources together while maintaining the quality of life in the region.
- Proactive collaboration will require an opening up of the region’s mindset both socially and culturally. Cultural diversity is a key to the melding of fresh ideas, best practices, and collaboration. It is what has worked in the country and the region in the past and it will be what works in the future.
- NEW must also develop both an internal and external image that promotes the resource and lifestyle benefits in the region. Inventorying and promoting the richness of the region’s assets will help to retain and attract businesses and workers to NEW.

Concepts

The unifying concepts that underlie the economic development strategies listed below involve a movement to New Economy building blocks and proactive collaboration across NEW. Initiated together, these concepts will set the foundation for economic prosperity in the region.

The New Economy building blocks are brain power, risk capital, technological innovation, and entrepreneurship. These New Economy building blocks must be incorporated within the mindset of abundance theory. Business, labor, government, education, and the communities across NEW must all work actively together under a common vision to harness the resources available within the region (and some outside the region) to drive future economic growth.

The five strategies developed for the NEW Economic Opportunities project are:

- Strategy I – Move to a New Economy Construct
- Strategy II – Move to a Collaborative Economic Development Construct
- Strategy III – Change Social and Cultural Mindset to Risk and Collaboration
- Strategy IV – Change Regional Image
- Strategy V – Promote Industry Cluster Development

Installing and instilling these strategies will not be accomplished quickly or suddenly. A long-term action plan needs to be developed, the pieces of which are proposed in the full report. Adhering to the plan does not mean it can't be altered as situations change in the region. It means that continual and lasting effort must be applied over the course of the next ten to twenty years to monitor NEW's economy, comparatively assess its trends, and take proactive collaborative actions to adjust the path of the region's success.

The industry clusters that should be expanded and built in NEW are:

BioRefinery/Paper Products	BioMass/Agriculture/Food Processing
Printing and Publishing	Maritime Vessels and Equipment
Insurance Products	Tourism
Production Technology	Specialty Crops
Nutraceuticals	Automated Manufacturing Technology
Machine Tool Design	Education and Workforce Training Services
Healthcare	New Economy Building Block Created Products

Most of the cluster industries listed above should form up into super clusters. That is to say, the cross cluster opportunities can be immensely larger than those presented within a singular particular cluster. For example, the Printing and Publishing cluster should integrate with the Paper Products cluster and the Education and Workforce Training cluster to develop and produce a hybrid slate of goods and services that will expand the parts substantially. The BioRefinery/Paper Products cluster, for example, can triple the value of the Paper Products cluster.

The main strategies for the region are applied to the subregions to specify what each subregion can contribute to the regional plan.

Summary

Workforce development and economic development are interrelated and interdependent. The strategic economic development plan presented here is one based on the New Economy drivers of innovation, collaboration, and culture. Supplanting an economic development strategy of a cost race to the bottom with one of abundance theory based upon free market building blocks of brain power, risk capital, technological innovation, and entrepreneurship is the key to its economic prosperity in the future.

Ultimately, NEW's economic prosperity is the responsibility of the businesses and citizens in the region. The talent and the resources required for future prosperity are available to NEW. They just need to be focused under a common vision, steered by strong leadership, and driven by the natural, human, capital, and creative resources available to NEW.

Northeast Wisconsin Economic Opportunity Study

Phase III: Regional Economic Development Strategy

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Bay Area Workforce Development Board

Federal Reserve Chairman Alan Greenspan has voiced his concern about a growing earnings gap between highly educated skilled workers and those workers with less education and fewer skills.

The result, he said, has been that inflation-adjusted wages have been flat to declining for the lower half of income earners, and rising for the highest-paid quarter of the workforce.

"It's a problem caused basically by our skill mix not keeping up with the technology that our capital stock requires," the Republican Fed chairman said. . . .

FOREWORD

The Fox Valley Workforce Development Board and the Bay Area Workforce Development Board, with concern and foresight, commissioned an economic opportunity study (EOS) to determine how to halt the deteriorating economic trends in their service areas in Northeast Wisconsin. The outcome of the study is to provide an impetus to develop policies geared toward a prosperous economy. The Boards correctly realize that workforce development and economic development are interrelated and interdependent for a strong, creative economy.

The EOS was structured in three phases. Phase I was conducted by the East Central Wisconsin Regional Planning Commission to benchmark the region's economic and demographic terms. Phase II was conducted by UW-Extension and the UW-Madison Department of Agricultural and Applied Economics to determine regional trends and regional projections for key economic measures. Phase III was conducted by NorthStar Economics, Inc. (NorthStar) to develop an economic development strategy for the region.

NorthStar used the data and information generated in Phases I & II and added information gathered from public and private data sources, community economic information gathering

sessions, surveys, and interviews. The information was combined and distilled down into key themes and ideas that illustrated the strengths, challenges, and opportunities in the Northeast Wisconsin region.

NorthStar's charge was to develop an economic development strategy that would help the region secure future economic vitality. Below, NorthStar presents a comprehensive economic development strategy that uses the region's assets to meet and overcome the challenges facing the region. NorthStar expands upon the strategies, citing tactical steps and specific action steps that could lead to implementation of the strategies.

The strategic plan presented below encompasses a fifteen to twenty year time frame. There are no quick fixes to adjust the economy of a seventeen county region. While there are many immediate action steps suggested, the strategies must be sustained over the long-term with adjustments made according to the progress being achieved.

Ultimately, the responsibility of economic success lies with the region's stakeholders.

INTRODUCTION

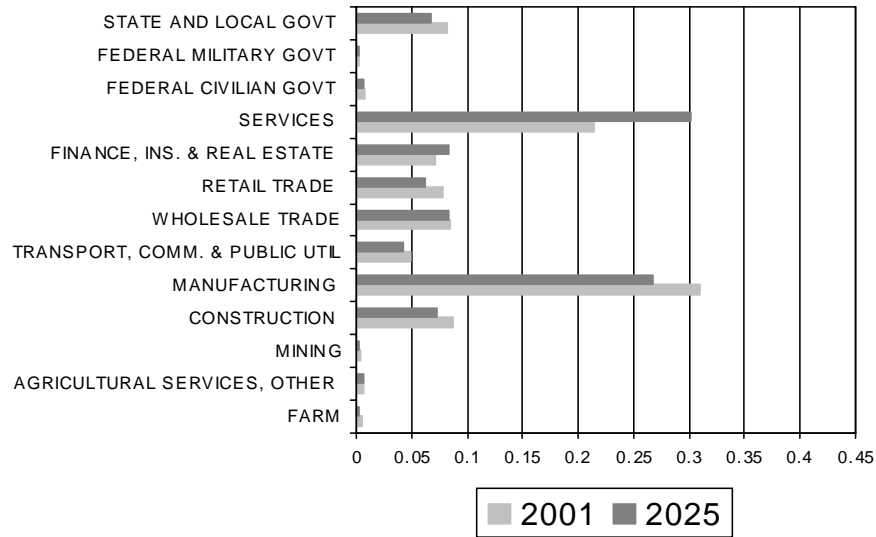
Northeast Wisconsin (NEW) is defined in this study by seventeen counties in the northeast part of the state. The counties comprise about one-fourth of the state's land mass and encompass rural, suburban and urban areas. The area has some of the highest concentrations of manufacturing employment in the country and is also well endowed with agricultural assets.

However, NEW has been falling behind the state and the nation on a number of important economic measures. For example, in 1970, per capital income in the region was essentially equivalent to the Wisconsin and U.S. average. Over the last thirty years, per capita income has fallen increasingly behind the state and the nation. Only one county, Outagamie, has per capital income now above the U.S. average and one more, Brown, is slightly above the state average. The region is also behind the averages for educational attainment, earned income, and wealth.

While manufacturing will continue to play a significant role in NEW's economy, manufacturing jobs being lost through competition, productivity gains, and technological substitution must be replaced and increased by jobs created by new products and services. There are ample reports of manufacturing companies in the region increasing output with significantly fewer workers per unit of output. Total wages and salaries earned in manufacturing declined by \$722 million from the first quarter of 2001 to the first quarter of 2004, while manufacturing income increased by \$118 million. Sustained manufacturing success in NEW will rely on new products, innovative processes, and value-added products.

The services sector is growing globally, nationally, regionally, and locally. Service industries now account for the largest share of jobs and are projected to be the fastest growing industries. (See Figure 11 below from Phase II data, which is indicative of the entire NEW region.) Service industries constitute everything from lawn care services to doctors, lawyers, accountants, and business consultants. The most rapid growing service industries are business services, education services, and social services.

Figure 11: Fox Valley WDA Earnings Forecasts as a Percent of Total Earnings – 2001 to 2025



Source: Woods and Poole, Inc
 Department of Agricultural and Applied Economics, University of Wisconsin-Madison/Extension

NEW has been affected by some hard economic realities in the latest business cycle that have amplified its current economic construct exposure to economic threats in what is referred to as the New Economy. The New Economy is a knowledge-based economy. According to the Progressive Policy Institute, Professor Richard Florida, David Brooks, and a host of futurists and modern economic development professionals, the primary drivers of the future economy are based on creative, innovative ideas that develop into new products and services and add value to existing products and services. For example, instead of stamping out commodity products, the new product lines must enhance the customers’ wellbeing, either in profitability or in value added. Added value translates into higher margins and increased income for workers and business owners.

If the deterioration of NEW’s economic vitality continues, dire consequences will develop across a number of fronts. For example, lower per capita income will eventually lead to a degradation of public services that the citizens of the area hold dear — quality of life items such as good schools, cultural and recreational opportunities, and social amenities. To avoid this potential outcome, NEW requires an economic development strategy that addresses the challenges facing the region.

In view of the national, regional, and local trends, NEW must revert to what made the nation and the region economically prosperous in the first place: ingenuity, risk-taking and resourcefulness. The paper industry in NEW, for example, was fostered as wheat production moved further west in the late 1800’s, threatening Wisconsin’s established wheat production and flour milling livelihood. In 1872, a flour miller named John Kimberly and some compatriots took a risk and

founded the paper industry in Wisconsin, an industry that still has a global concentration in the region. This contrasts with the risk aversion that was indicated so prevalently in the NEW community economic information gathering sessions (CEIGS) and survey responses. Global commerce has changed the paper industry in the region (mergers & acquisitions, foreign ownership, more productivity). But the industry still operates due to new technology (bigger, faster machines) and new products (non-woven paper products).

Today, firms like Oshkosh Truck (testing non-controlled robot vehicles) and Schneider National (state-of-the-art logistics) lead their respective industries through innovative products and processes. The same recipe must be applied to other basic industries across the region, such as plastics, wood products, and shipbuilding, to make NEW's economy vibrant in the future. In addition, the recipe must be applied to new product development in new horizon industries with new technologies, such as nanotechnologies or nutraceuticals.

Turning back to what led past prosperity of the region, NEW needs to embrace the tools and culture that previously brought it good fortune. While nobody can predict which businesses will succeed in the future (many future technological breakthroughs have not yet been envisioned), the essential ingredients for new businesses and industries are well understood – brain power, creativity, innovation, capital, and entrepreneurship.

BENCHMARK AND TREND ANALYSIS

The general summary of the data and trends analyzed in Phases I and II reflect that while NEW is growing in population, jobs, and income, it is growing slowly relative to the nation. NEW is doing better than the Wisconsin average in terms of population growth and gaining over other areas of the state in job growth and income growth. However, the region continues to lag behind the U.S. and parts of Wisconsin in terms of per capita income, a critical measure of economic wellbeing.

A brief summary of the employment and occupational trends in Wisconsin is given below. Many NEW trends mimic state trends.

Employment Trends

Industry employment is shifting away from manufacturing into services. According to Wisconsin Department of Workforce Development (DWD) data, there are only eight manufacturing industries among the state's thirty largest employing industries. DWD projects that there will be a net loss of 12,480 manufacturing jobs by 2010. Only three manufacturing industries will have job gains of more than 1,000 jobs. The gains will be in Food & Kindred Products, Furniture & Fixtures, and Lumber & Wood Products. Two manufacturing industries are listed among the top thirty industries adding the most new jobs, Lumber & Wood Products, and Furniture & Fixtures, adding 2,780 and 2,660 jobs, respectively. One manufacturing industry, Furniture & Fixtures, is listed among the state's thirty fastest growing industries.

Contrast those employment gains with the fastest growing employment industries (and the number of new jobs created) of Health Services (54,690), Business Services (28,310), Education Services (24,750), and Social Services (24,080), which are creating orders of magnitude more jobs. Many of the jobs in those industries will pay wages favorable to manufacturing wages, but

only if the workers are trained at the appropriate level. This leads to the educational and occupational requirements of the New Economy.

This situation is congruent for NEW. Manufacturing employment growth projections for NEW are the lowest for any non-farm industry sector. This is true across all NEW subregions except for finance in the Highway 22 corridor. (See table below from Phase II data.)

Table 11: Growth in Employment 2001-2025

	Lakeshore	I-43 Corridor	Highway 141-41 North	Highway 22 Corridor	Fox Valley WDA	Bay Area WDA	Fox Valley Urban	Fox Valley Rural
TOTAL EMPLOYMENT	23.0%	30.6%	29.4%	29.1%	41.1%	34.1%	36.5%	24.4%
FARM	-13.4%	-12.4%	-12.4%	-11.1%	-12.0%	-12.9%	-12.0%	-12.4%
AGRICULTURAL SERVICES, OTHER	27.7%	50.0%	20.9%	14.4%	41.6%	27.2%	37.0%	37.0%
MINING	17.4%	13.6%	29.4%	29.0%	27.7%	25.3%	44.3%	11.7%
CONSTRUCTION	34.1%	38.8%	44.9%	36.8%	32.6%	37.4%	33.8%	28.8%
MANUFACTURING	9.2%	16.1%	13.0%	22.0%	15.0%	14.9%	17.3%	13.6%
TRANSPORT, COMM. & PUBLIC UTIL	28.2%	30.2%	20.1%	29.8%	28.3%	26.0%	24.1%	42.6%
WHOLESALE TRADE	21.2%	26.5%	19.9%	35.1%	54.2%	30.6%	33.4%	38.3%
RETAIL TRADE	20.5%	19.4%	29.1%	25.8%	25.4%	24.6%	23.9%	16.7%
FINANCE, INS. & REAL ESTATE	18.5%	56.9%	14.6%	5.7%	47.2%	54.1%	48.0%	24.6%
SERVICES	48.6%	47.2%	68.2%	53.1%	82.3%	63.7%	66.9%	42.9%
FEDERAL CIVILIAN GOVT	-5.5%	6.3%	1.1%	13.2%	22.2%	7.1%	14.8%	12.9%
FEDERAL MILITARY GOVT	5.8%	6.1%	5.7%	5.8%	5.8%	5.8%	5.8%	5.7%
STATE AND LOCAL GOVT	20.0%	28.7%	21.7%	34.8%	26.5%	26.3%	35.4%	35.9%

Occupational Trends

There are two-frequently used ways to measure trends in occupations: occupational growth and job openings. Occupational growth measures the total number of people working in a particular occupation. Forecasts of occupational growth over a chosen period of time (e.g. ten years) show the increase (or decrease) in the net number of people expected to work in that occupation.

Job openings, on the other hand, measure the gross number of job postings expected in a particular occupation. Job openings will almost always exceed the expected occupational growth because of job turnover. Many jobs, particularly low skilled, low paying jobs, (e.g. food counter service or sales clerks), will turn over two or three times in a year. Thus job openings reflect job “churn” and are not a good guidepost for gauging where jobs may be created.

According to DWD, of the thirty fastest growing occupations over the 2000 to 2010 period, seventeen require a college degree. Most of the occupations in this group are in the medical or computer field. Within those two subgroups, the vast majority of the positions require a college degree. Those jobs that don’t require a college degree are far down the wage listing. Those fast growing occupations that don’t require the degree pay less than \$25,000 per year in all but three cases. (See Table E below from DWD.)

Table E: Fastest Growing Occupations in Wisconsin 2000-2010

Occupational Title	Estimated Employment ⁽³⁾				Education and Training Typically Required ⁽⁵⁾	Annual Salary (\$) ⁽⁶⁾
	2000	2010	Change	Percent Change		
Computer Software Engineers/Software Support Specialists	2,220	3,820	1,600	72.1%	Bachelor's degree	60,290
Computer Support Specialists	8,420	14,430	6,010	71.4%	Associate degree	39,840
Computer Software Engineers/Applications	3,230	5,260	2,030	62.8%	Bachelor's degree	62,790
Network/Computer Systems Administrators	4,010	6,300	2,290	57.1%	Bachelor's degree	48,940
Desktop Publishers	1,260	1,950	690	54.8%	Postsecondary vocational training	33,270
Medical Records/Health Information Technicians	3,290	5,050	1,760	53.5%	Associate degree	24,060
Network Systems/Data Communications Analysts	2,120	3,250	1,130	53.3%	Bachelor's degree	47,950
Personal and Home Care Aides	11,200	17,070	5,870	52.4%	Short-term OJT	18,060
Medical Assistants	6,310	9,570	3,260	51.7%	Moderate-term OJT	25,050
Physician Assistants	860	1,300	440	51.2%	Bachelor's degree	70,950
Social/Human Services Assistants	6,830	10,070	3,240	47.4%	Moderate-term OJT	24,810
Database Administrators	1,600	2,330	730	45.6%	Bachelor's degree	50,550
Gaming Change/Booth Cashiers	850	1,230	380	44.7%	Short-term OJT	18,410
Fitness Trainers/Aerobics Instructors	2,740	3,890	1,150	42.0%	Postsecondary vocational training	22,170
Physical Therapist Aides	670	940	270	40.3%	Short-term OJT	21,420
Occupational Therapist Assistants	600	820	220	36.7%	Associate degree	32,780
Cardiovascular Technologists/Technicians	700	950	250	35.7%	Associate degree	34,790
Home Health Aides	11,990	16,230	4,240	35.4%	Short-term OJT	19,010
Speech-Language Pathologists	2,270	3,060	790	34.8%	Master's degree	48,040
Respiratory Therapy Technicians	550	740	190	34.5%	Postsecondary vocational training	35,470
Manicurists/Pedicurists	550	740	190	34.5%	Postsecondary vocational training	19,990
Respiratory Therapists	1,450	1,950	500	34.5%	Associate degree	39,420
Dental Assistants	5,780	7,740	1,960	33.9%	Moderate-term OJT	24,150
Veterinarian Assistants/Lab Animal Caretakers	680	910	230	33.8%	Short-term OJT	17,950
Computer/Information Systems Managers	5,130	6,860	1,730	33.7%	Work experience & degree	72,820
Veterinary Technologists/Technicians	1,090	1,450	360	33.0%	Associate degree	23,020
Dental Hygienists	3,000	3,980	980	32.7%	Associate degree	49,270

Furthermore, DWD projects the largest number of occupational titles and job openings requiring more than short-term or medium-term on-the-job-training will require a college education. (See Figure 2.1 below from the Wisconsin Projections 2000-2010: Employment in Industries and Occupations report of November 2003.)

Figure 2-1: Education and Training Categories, by Number of Occupations and Job Openings 2000 to 2010				
Source of Education or Training ⁽¹⁾	Number of Titles	Percentage of Titles	Number of Job Openings	Percentage of Job Openings
Short-Term On-The-Job Training (ST OJT)	144	19%	437,560	43%
Moderate-Term On-The-Job Training (MT OJT)	161	21%	149,840	15%
Long-Term On-The-Job Training (LT OJT)	86	11%	70,220	7%
Work Experience in a Related Occupation (Work Exp)	45	6%	53,970	5%
Postsecondary Vocational Award (Voc)	52	7%	52,410	5%
Associate Degree (AA/AS)	37	5%	34,240	3%
Bachelor's Degree (BA/BS)	120	16%	136,020	13%
Master's Degree (MA/MS)	31	4%	17,360	2%
Doctoral Degree (PhD)	41	5%	11,890	1%
First Professional Degree (Prof)	9	1%	10,830	1%
Bachelor's or Higher Degree, Plus Work Experience (Work + Degree)	27	4%	38,420	4%
Total	753		1,012,760	

⁽¹⁾ Each occupation is assigned to the education or training category typically required to enter the occupation. However, there may be other education or training accepted by employers.

Information derived using data from 2001 OES, 2000 ES-202 and 2000 CES (3/01 Benchmark). Unpublished data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau was also used.

Source: Projections Unit, Office of Economic Advisors, Wisconsin Department of Workforce Development

By contrast, of the top 30 occupations that will have the most job openings during the 2000 to 2010 period, only six require more than on-the-job training. Nurses and teachers are in this group, which require a bachelor's degree, with annual earnings greater than \$40,000. Only three of the twenty-four remaining occupations in this group pay wages above \$26,000 per year. The large number of job openings in this group is due to the high turnover nature of the jobs – sales clerks, cashiers, food preparation, etc. (See Table D from DWD below.)

Table D: Occupations with the Most Job Openings in Wisconsin: 2000-

Occupational Title	Estimated Average Annual Openings(2)	Education and Training Typically Required (3)	Average Annual Salary
Retail Salespersons	4,290	Short-term O-J-T*	20,450
Cashiers	4,000	Short-term O-J-T	15,780
Combined Food Preparation/Serving Workers	3,980	Short-term O-J-T	15,730
Waiters/Waitresses	2,840	Short-term O-J-T	14,230
Registered Nurses	2,010	Bachelor's degree	46,750
Laborers/Freight/Stock/Material Movers, Hand	1,700	Short-term O-J-T	21,850
Office Clerks/General	1,490	Short-term O-J-T	22,560
Janitors/Cleaners Except Maids/Housekeeping	1,460	Short-term O-J-T	20,140
Stock Clerks/Order Fillers	1,440	Short-term O-J-T	20,730
Customer Service Representatives	1,270	Moderate-term O-J-T	28,310
Nursing Aides/Orderlies/Attendants	1,240	Short-term O-J-T	20,730
Truck Drivers, Heavy and Tractor-Trailer	1,140	Moderate-term O-J-T	35,670
Special/Vocational Ed	1,140	Bachelor's degree	42,210
Bartenders	1,140	Short-term O-J-T	16,240
Teacher Assistants	1,050	Associate degree	19,890
Technical/Scientific Products	1,020	Moderate-term O-J-T	49,240
Packers/Packagers, Hand	1,020	Short-term O-J-T	19,710
General and Operations Managers	980	Bachelor's or higher	72,180
Team Assemblers	950	Moderate-term O-J-T	25,150
Maids/Housekeeping Cleaners	950	Short-term O-J-T	16,960
Education	910	Bachelor's degree	41,850
Receptionists/Information Clerks	910	Short-term O-J-T	20,920
Food Preparation Workers	830	Short-term O-J-T	16,980
Retail Sales Workers/Supervisors	810	Work Exp	34,290
Landscaping/Groundskeeping Workers	810	Short-term v	21,550
Hairdressers/Hairstylists/Cosmetologists	800	Vocational training	22,320
Bookkeeping/Accounting/Auditing Clerks	780	Moderate-term O-J-T	26,060
Cafeteria/Concession/Coffee Shop	770	Short-term O-J-T	14,910
Personal/Home Care Aides	760	Short-term O-J-T	18,060
Child Care Workers	760	Short-term O-J-T	16,820

Source: Wisconsin Department of Workforce Development, Division of Workforce Solutions, Bureau of Workforce Information, Projections Unit, M 2003

O-J-T = On-the-Job Training

Notes:

(1) The Occupational (Occ) Codes are based on Standard Occupational Classification (SOC) Codes.

(2) Average Annual Openings include both expected new jobs (growth) and openings due to people permanently leaving the occupation. Openings are rounded to the nearest ten.

(3) Education and Training Typically Required means this is the most common way people are expected to enter the occupation during 2000 to 2010.

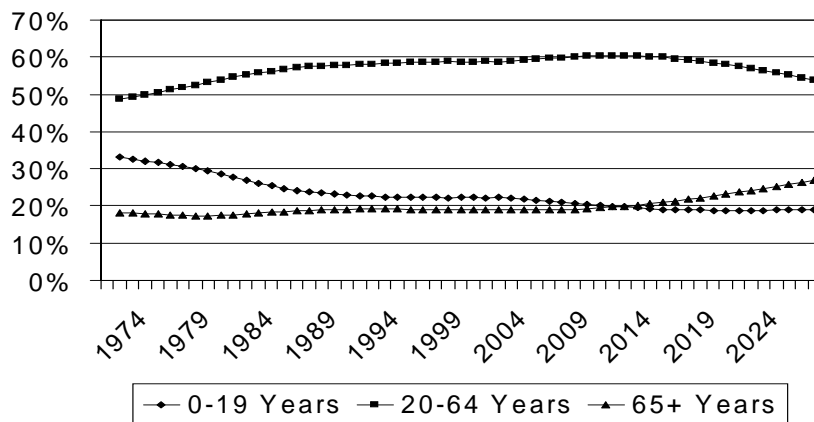
Information is derived using the 2001 OES/Wage Survey, 2000 ES-202 and 2000 CES (3/01 Benchmark) data. Unpublished data from the US Bureau of Labor Statistics and US Census Bureau was also used.

It is clear that employment growth continues to move into the service sectors and financial occupational rewards continue to move toward more highly trained workers.

Other benchmarks and trends that are not currently favorable to NEW are demographic, per capital income levels, and education attainment levels, which are highly correlated with income. All of these items are interrelated and will dramatically impact NEW’s economic prosperity in the future. Below are a series of figures from Phase II analysis that portray the situation.

The first figure demonstrates that under current conditions demographic trends indicate a large segment of the NEW workforce will be retiring in the next 10-20 years. That means that new workers will need to be attracted to the area to fulfill the workforce needs. NEW must offer the opportunities to attract workers from other regions of the country and the globe.

Figure 2: Fox Valley WDA Population Age Profile 1969-2025



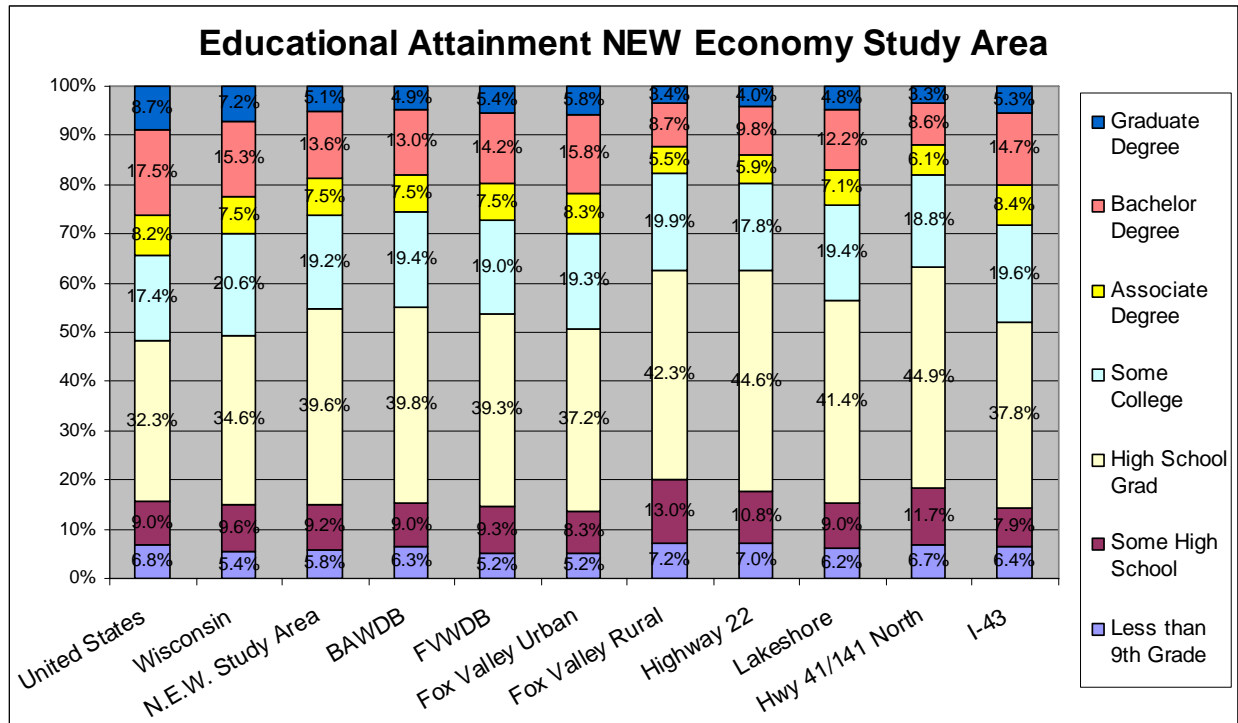
Source: Woods and Poole, Inc
Department of Agricultural and Applied Economics, University of Wisconsin-Madison/Extension

Per capital income in NEW has fallen behind the state and national averages. Over the last thirty years, NEW per capita income has decreased from equivalent to the state and U.S. average to significantly below those averages, 82% of U.S. average.

NEW Per Capita Income and Percent of U.S. Average

Per Capita Income (dollars)	
Wisconsin	2001 \$29,923
Percent of US Average	97%
N.E.W. Study Area (avg. of 17 counties)	\$24,987
Percent of US Average	82%
Percent of Wisconsin Average	84%
<i>Source: Wisconsin Department of Revenue, Economic Outlook Appendices; August, 2002;</i>	
<i>*REIS 1969-2001, BEA; 2002. Compiled by Bay Lake and East Central RPCs, 2003.</i>	

Income is highly correlated to educational attainment. The figure below from Phase I analysis shows educational attainment in the region is below average state levels which are below average national levels. NEW must offer the opportunities to highly educated people in order to attract them to the region and increase NEW's per capita income levels.



SWOT ANALYSIS

Strengths, Weaknesses, Opportunities, and Threats or SWOT analysis is a process used to assess the possibilities for an area for economic development. The SWOT analysis reveals much about the potential of an area under the circumstances that currently exist in that area.

NEW SWOT analysis was determined by the combination of information from a variety of sources such as survey data, information gathering sessions, interviews, and data from Phases I and II of this study. Below, the SWOT analysis results are presented by category. It is not uncommon for a Strength to also be a Weakness, or an Opportunity to also register as a Threat. This result usually occurs when an area becomes too dependent upon a successful enterprise or industry that leaves it vulnerable to a decline or loss of that enterprise for unforeseen reasons. One only has to review a few examples of the boom and bust economic cycles that have been seen throughout the country over history: energy and Texas; defense and Washington state; computer software and California; defense, finances, and computer technology and the Northeast U.S.; and steel and the Midwest.

Below is a listing of the SWOT categories and the items that register within each category. These are the general themes that will most effect NEW's economic development in the future.

Strengths

Quality of Life
Traditional Infrastructure
Intra-Regional Proximity
Export Markets

Education
Geographical Location
Manufacturing Base

Work Ethic
Environment
Recreation

Weaknesses

Educational Attainment
Research & Development
Image and Promotion
Vision
Asset Inventory

Access to Risk Capital
Technology Transfer
Parochialism
Culture
Changing Work Ethic

Entrepreneurial Support
Regional Planning
Leadership
Diversity
New Infrastructure

Opportunities

Regional Assets
Vision
Global Markets

Collaboration
Access to Research

Time vs. Distance
Risk Capital Networks

Threats

Population Growth
Global Competition
Old Economy Mindset

Aging Population
Brain Drain
Provincial Culture

Per Capita Income Trends
Manufacturing Dependence

FINDINGS

The findings listed below form the basis for developing the strategic economic development plan. The findings of the SWOT analysis listed above will not be repeated here, nor will the information and analysis from Phases I & II, except where used as support material.

Data and information gathered in Phase III (CEIGS, survey data, interviews) paint a conflicting picture of the local assets and knowledge of the drivers of the New Economy. On one hand, NEW possesses some basic assets that are building blocks of the New Economy – quality of life and recreational amenities. On the other hand, the region is falling behind in several critical areas that are essential drivers of the New Economy – brain power, innovation, and collaboration.

The findings are summarized below.

Findings:

- Generally speaking, a substantial percentage of the residents in the region are unaware that NEW is falling behind in economic terms. For some that are aware of the trends, there is a mindset that business as usual, with perhaps a little more effort, will make things right.
- The most highly recognized attribute in the region is the quality of life.

- There is a huge frustration with the role of government in terms of the number of governmental units, governmental regulations and inconsistencies, lack of coordination and collaboration, and service levels.
- Assets in the region that are assessed most highly, at somewhat above average are workforce productivity, K-12 education, technical college system, emergency services provision, electricity and water utilities, recreational opportunities, loan availability, and libraries. Technical colleges are the single highest rated NEW asset. All education entities were highly rated, but workforce retraining was rated average.
- Assets in the region that received lower scores, although none on average ranked poor, are number of high-tech businesses, research facilities, R&D spending, number of high-paying jobs, number of new business startups, number of patents, venture capital access, and technical expertise.
- The items identified as most vital for attracting fast growing businesses and talented people to NEW were quality workforce and quality of life.
- The items identified as least vital for attracting fast growing businesses and talented people to NEW were diversity, government collaborations, image, local amenities, and entrepreneurship.
- Factors identified as the most helpful in guiding and boosting the NEW economy were investment by major regional companies and government support and incentives.
- Factors identified as the least helpful in guiding and boosting the NEW economy were free market enterprise (by some margin), mentoring, grassroots community involvement, and regional strategic planning.

STRATEGIC ECONOMIC DEVELOPMENT PLAN

The findings above form the basis for developing the strategic plan. The approach taken in presenting the strategic plan is fairly efficient. Existing Old Economy structures, based upon the information gathered in Phases I, II and III, are compared to New Economy structures. The gaps are identified and the tasks to remedy those gaps are proposed.

Statement of Premise

There has been a fundamental shift in the building blocks of economic development. The fundamental building blocks of the New Economy are brain power, capital, research, innovation, entrepreneurship, and quality of life. The Progressive Policy Institute, Professor Richard Florida, David Brooks, and a host of futurists and modern economic development professionals recognize that the primary drivers of the future economy are based on creative, innovative ideas that develop into new products and services and add value to existing products and services. No

longer will local government subsidy of cost race to the bottom programs effectively compete with the race to the top of innovative new product development.

Professor Florida may state it most succinctly when he refers to Talent, Technology, and Tolerance. Talent refers to the workforce and the creativity that generates the product and service ideas and innovations. Technology is the basic toolbox that drives the exchange of ideas and develops product and service advancement and raises productivity and, subsequently, incomes. Tolerance is the mindset to accept and embrace new ideas, search the non-conformist for insight into current practices, and expand conformists' creative capacity.

The New Economy is also based upon networking and collaboration. Abundance theory, the concept that by working together the pie will grow sufficiently to provide enough for all, is a shared vision that constructs multi-dimensional working partnerships, melding talents and spawning creativity. Networking and collaboration are the mechanisms through which the New Economy building blocks find each other and are combined to generate new products and new companies, spurring economic development.

There is a large disconnect between the existing economic construct and mindsets in NEW and the factors that are required to ensure future economic prosperity in the New Economy.

Old Economy

NEW remains largely in the old economy construct that leads to a cost race to the bottom. A lot of the area still looks to commodity agriculture and basic manufacturing as the foundation of its economy and culture. In the findings above, NEW looks to rely on the major companies in the region and government to drive the economy when growth in those companies has slowed or declined and government is in financial straits.

Over the last fifty years, the region has been showered with grand news about how good their manufacturers are, how they have some of the best farm land in the country, how their education system is among the best in the nation, how their workforce is among the most productive in the U.S., how their quality of life is unsurpassed. Meanwhile, NEW was falling behind in per capita income, educational attainment, wealth creation, investment, and new high-tech business formation.

NEW has taken its proverbial eye off the ball. It was back in 1985 that Kimberly-Clark moved its headquarters out of the region to Texas, the very founders of the region's paper industry gone after more than a hundred years. The Institute of Paper Chemistry moved to Georgia in 1987. Aid Association for Lutherans merged with the smaller Lutheran Brotherhood in 2000, but they moved corporate headquarters to Minnesota and changed their name to Thrivent. Many of the largest companies in the region are now foreign-owned.

Similar losses have led to fewer corporate headquarters in the region. For example, the paper industry in NEW has moved from local ownership, to state firms, to national firms, to global entities that now have foreign ownership. The shift has caused a loss of civic leadership, community loyalty, and the accumulated wealth that builds community trusteeship.

Even with the decorporatization of the region and critical government budget problems, NEW still clings to the mid-twentieth century idea that big business and government are the solutions to future economic prosperity. This view is contrary to the fact that the vast bulk of new jobs are created by new and small businesses.

In the Old Economy, there was an abundance of workers to fill what were largely unskilled labor positions on assembly lines in factories and labor on the farm. Technology added to workers' productivity and rising incomes, but the skills required to operate the machinery were still fairly simple. As technology advanced with the onset of computers, lasers, robotics, and biological applications, the skills of the workforce began to lag behind. The value and scarcity of skilled labor became evident with the increasing spread in earning capacity of trained workers. An increasing share of today's occupational duties cannot be met with short-term on-the-job training or a high school diploma. Those less-skilled jobs are being done by others cheaper and in different parts of the world. Technical college and university degrees are increasingly required to operate the complex production processes today. The earnings spread based upon educational attainment is ever widening, with earnings of the unskilled stagnant or worse.

NEW is behind the state and U.S. averages in educational attainment. It affects the skill of the labor pool offered businesses and it limits the personal income and growth of wealth in the area, which in turn affects the level of community services provided and the region's quality of life.

In the heydays of manufacturing in NEW and the U.S., good salaries were paid and great wealth was accumulated. Communities competed with pride on the high level of services available to their constituents. As global competition increased, local communities began to compete not for services, but for the businesses themselves. What was a service race to the top became a cost race to the bottom to attract businesses. As seen today, community is pitted against community in a cost race to the bottom to attract businesses. Parochial competition has taken on a whole new meaning, the net result being a smaller pie.

As business subsidies have increased and services have continued to expand, the tax burden has shifted to the workers. The region, the state, and the nation face severe revenue constraints, to the degree that services are now having to be cut back. Even school systems have been impacted. Local service levels cannot be maintained without higher taxes (or fees).

Also, the old adage "build a better mousetrap and the world will beat a path to your door" is not true. One must make sure everyone knows a better mouse trap has been invented. Image and the promotion of assets is important for showing businesses and labor that NEW is a great place to live, work, learn, and play.

In a sense, NEW still believes in the Green Bay Packer sweep, even when Brett Favre shows off the strongest arm in the league thirty times a game.

New Economy

The New Economy is one based upon the pursuit of abundance theory. The pursuit is driven by a value race to the top. The focus is on the creation of new products and services that add value to the customer. Those new products come from the transfer of innovative technologies to the production process and new products and services to the marketplace. Those technologies and products are generated from the advancement of research, which requires advanced education and training. As Ms. Fiorina, CEO of Hewlett Packard, has stated, “keep your tax incentives and your highway interchanges, show me the number of college graduates in your area.”

The production of value-added products yields increased margins. The skilled labor that makes the value-added products commands higher wages. The products command higher margins, generating higher incomes and more wealth creation.

Population demographics will limit the labor force in NEW as Baby Boomers (those born between 1946 and 1964) move into retirement age. About the year 2015, the labor force in the region will begin to tighten then possibly even decline if new workers don't move to the area. Labor will become limited; skilled labor may become scarce. In order to maintain NEW's quality of life and desired level of public services, the region will have to attract more workers, especially skilled workers with higher incomes.

To maintain the desired level of public services, the services must be provided by the most efficient means possible. That will require economies of scale across locales, which will have to come about through collaborative efforts across the region in providing community services.

The building blocks of the New Economy are brain power, capital, research, innovation, entrepreneurship, and quality of life. The New Economy is based on open, multi-dimensional networks and collaborations of these building blocks for business development and services provision.

Promoting the assets of a region will attract talented labor, which is the primary attraction for New Economy businesses. In the New Economy, business will follow labor and labor will be attracted to culturally rich environments with an excellent quality of life.

Gap

NEW can not win the cost race to the bottom in the global market place, and it is the global marketplace in which NEW is competing for business and workforce. Labor is cheaper overseas, a lot cheaper. The going rate for unskilled labor globally is \$0.98 per hour. NEW must change its business strategy from trying to compete with low cost providers and instead look to develop global markets. While the global marketplace is highly competitive, it also offers up great opportunities. For example, China's top commodity import in 2003 was not steel, or petroleum, or agricultural commodities. It was electronic machinery and equipment: \$103 billion worth. Products and services must be developed to take advantage of the new markets rising in the U.S. and around the world.

The fundamental building blocks of the New Economy are brain power, capital, research, innovation, entrepreneurship, and quality of life. Risk-taking and entrepreneurship, which started many of the major industries in the region, such as the paper industry, are now missing in the economic development mindset of the region. NEW needs to refocus on those building blocks.

Those building blocks are all free-market based. They will be attracted to regions that will yield the best return on investment. CIEGS and survey information demonstrated that NEW relies on the major companies in the region and government to drive the economy even though growth in those companies has slowed or declined and government is in financial straits, and new companies create 75% of employment growth. On the other hand, in the same data, NEW deemed free-market based economic development drivers as the least helpful guides in future economic prosperity. NEW must change its mindset.

Entrepreneurship and risk-taking underpin the creation of new companies in NEW. There is a limited entrepreneurial spirit in NEW (see dependence on existing large company data above). Risk capital is available. However, entrepreneurship is not well understood in the area and there are no visible formal angel capital groups in NEW.

Educational attainment in NEW is well behind the state and the nation (see education attainment data in benchmark section above). Education is the key to the skilled workforce required to create and develop high value-added products. It is also increasingly valued by employers as is evident in the widening spread of incomes for higher education.

Companies in the region complain they can't find enough skilled workers to mind the capital they have in place to produce goods and services. Workforce training programs need to be expanded to meet these needs. The training programs must also be agile enough to meet the ever changing needs of the marketplace, as technological advance is rapid and sometimes orthogonal.

CEIGS and survey data demonstrated the enormous frustration with the parochial competition in the region. This angst was felt across the board in the inability to share resources, make regulations equivalent or at least congruent, or work together in attracting business.

NEW has an image problem on Wall Street and Main Street. New Economy images that attract talented workers seeking rich intellectual and cultural environs are essentially absent from NEW. Wall Street sees little return on investment in what they see as agriculture and old line manufacturing sectors; neither will those sectors create many new jobs. Main Street views the greater Midwest, and, by association, Wisconsin and NEW, as a wholesome if not dull place. Images of cheeseheads, freezing Packer fans, and acres and acres of corn do not project exciting, culturally rich images.

Tasks

NEW needs to understand New Economy concepts and embrace them. The New Economy fundamentals should be taught early so the future workforce in the area will understand the

concepts and realize the opportunities in the marketplace and in the region that will keep them in NEW. That understanding also needs to permeate the general populace.

NEW needs to reengage the very things that made its economy vibrant in the past and what will make its economy vibrant in the future – risk-taking, capital, and innovation. NEW is behind the pack on all but quality of life. This is not surprising given the fact that survey data shows NEW views free-market economic development mechanisms, such as risk-taking and entrepreneurship, as the least helpful in guiding their economic future.

While NEW understands that quality workforce attracts businesses and quality of life keeps people, it doesn't understand that highly educated workers want stimulating living and working environments.

Collaborative visible networking is also paramount in the pursuit of abundance theory. NEW must build, expand, and promote the private and public networks within the region to bring together the multi-dimensional arrays of assets in the region. Public/private partnerships must also be created and expanded for generating the buy-in and critical mass of resources to efficiently apply those resources.

A promotional campaign within NEW will help people learn about and understand how the economy has shifted and why NEW must accommodate the change or fall farther behind in economic terms. The campaign should also be focused externally to overcome the existing image of a regional culture as richly diverse as a ten-acre field of corn.

STRATEGIES

Below are set out the strategies to move NEW forward to future economic prosperity. The Strategic Plan focuses on the gaps between NEW's Old Economy construct and that of the New Economy. The Strategic Plan consists of five strategies that specifically address the principle challenges affecting economic development in NEW:

- Strategy I – Move to a New Economy Construct
- Strategy II – Move to a Collaborative Economic Development Construct
- Strategy III – Change Social and Cultural Mindset to Risk and Collaboration
- Strategy IV – Change Regional Image
- Strategy V – Promote Industry Cluster Development

The five strategies are presented below with associated tactics for carrying out the strategies and more specific action steps to point toward implementation steps. The strategies are presented in the context of some NEW history, Old Economy constructs, New Economy constructs, gap assessment, and tasks.

STRATEGY I – MOVE TO A NEW ECONOMY CONSTRUCT

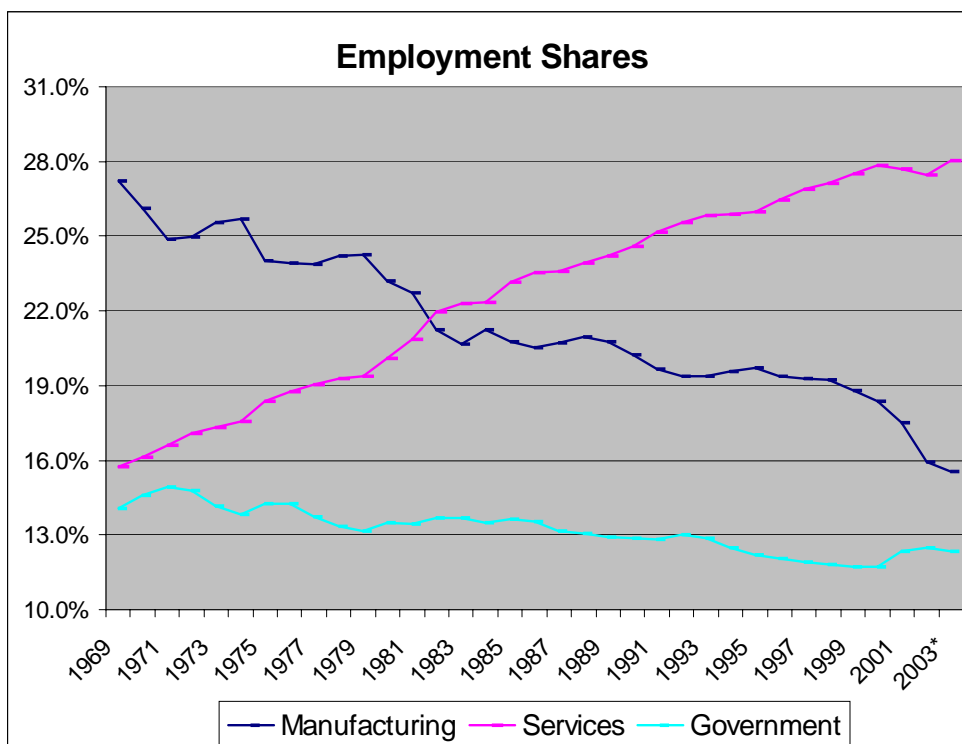
NEW is falling behind the state and the nation in per capita income due to its anchorage in the old economy construct of a cost race to the bottom. NEW is also well behind the state and national averages in educational attainment, a precursor to gains in personal income and vitally important in the increasingly demanded workforce skill set in the New Economy.

	<u>NEW</u>	<u>WI</u>	<u>U.S.</u>
Per capita Income	\$28,796	\$30,050	\$30,906
Four-year Degrees	18.8%	22.4%	26.2%

Old Economy

Mature industries are in fierce competition around the globe. They must compete on lowest cost, which means either lower paying jobs or a lower number of jobs, and lower tax payments. Mature manufacturing and commodity agricultural production do not yield high returns on investment, thus not attracting large amounts of investment capital. These industries are also becoming a smaller share of the region's employment constitution.

Wisconsin



Manufacturing in the state and in the region has seen large losses in employment, predating the most recent recession.



Many of the largest mature manufacturing employment industries in the region, such as paper, metal works, plastics, printing, and machinery manufacturing, have seen employment decreases over time. Large mature industries are no longer the drivers of employment growth.

Recent NEW Manufacturing Employment Cycle

MSA	Peak	Date	Trough	Date	Current 7/04
Green Bay	29.6	Aug-00	26.0	Feb-03	28.9
Appleton	59.4	Jul-00	46.2	Feb-04	48.9

New Economy

The New Economy construct is based on a value race to the top, supplied by innovation and workforce talent. The key drivers of the New Economy are brain power, research & development, technology, capital and high-tech startups, and quality of life. NEW has a great quality of life.

Executives of high-tech companies now look to place their companies in areas that aren't the lowest-cost sites, but rather those that have the best labor pool. HP CEO Carly Fiorina has

stated, “Keep your tax incentives and highway interchanges, show me the number of college graduates in the area.” Moreover, Professor Richard Florida in his book *The Rise of the Creative Class* states that talented and creative people want to live in environments that are rich in ideas and knowledge.

This talent and creativity is realized through the coordinated application of education, innovation from research and development, entrepreneurship, risk capital, and the technology to network the pieces together into a powerful economic engine of growth.

Gap

The per capita income of NEW is falling behind the state and the nation. NEW education attainment is below state and national levels. R&D spending is behind the U.S. average. Risk capital in NEW is discrete and hard to access. The region is risk averse. New Economy communications technology is lacking in the region.

The precursors of higher incomes are educational advancement, increased proprietary income, which means taking risk on starting a business or developing new products, and the development of high-value added products and services. These products and services come from the exchange of creativity and innovation in a value-added race to the top, not from finding ways to lower costs for producing traditional products and services in a cost race to the bottom.

Task

The very foundation of the NEW Economic Development Strategy is the realization, acceptance, and desire to shift to the New Economy construct. The New Economy is an economy that is no longer based on brawn mixed with raw materials and the pursuit of lowest costs, but rather one based on brains, innovation, and offering the highest value-added products and services. This is true across all sectors in the region.

This strategy can not be stressed enough. The need to incorporate the advancement and application of knowledge into innovative and creative products and processes is imperative to future economic prosperity in NEW. This initiative does not end at the factory floor. Rather it must be applied across all walks of life, education, business, labor, government, and the general culture of the area.

This shift from old to new needs to be accomplished both physically and mentally. The mindset of education, business, labor, government, and the populace must also change to embrace the New Economy construct – replacing local competition theory with abundance theory, taking your share of the growing pie. This mindset change will be addressed later in the report.

Task List

- Advance Educational Attainment
- Redouble R & D
- Instill Entrepreneurism
- Increase Access to Risk and Growth Capital

- Install State-of-the-Art Communications Technology

The tactics below begin with brain power or education.

Tactic IA – Advance Educational Attainment

Rationale: A higher-skilled workforce is needed in NEW to attract more businesses and increase per capita income above the national level. Educated workers are attracted to rich living environments. Educational attainment in NEW is below the state and national average. Wisconsin ranks 34th in the number of scientists and engineers in the workforce according to the Progressive Policy Institute (PPI) State New Economy Index. Income levels are highly correlated with educational attainment.

Education is the key to the New Economy. Not only is education the wellspring of new ideas, creativity, and innovation, it is also highly correlated with income. Serving two purposes in the pursuit of NEW economic goals (an innovation driven economy and higher per capita income, and attracting businesses and talented workers), education is the cornerstone of economic advance.

Earnings by Education

<u>Education</u>	<u>Annual Income</u> (Real 2001 Dollars)		<u>Difference</u>	
	1981	2001	1981	2001
High School Diploma	\$23,006	\$26,176	n/a	n/a
Bachelors Degree	\$36,724	\$50,325	\$13,718	\$24,150

Jobs skills in the new economy increasingly require post-secondary education. Lack of education is affecting the competitive nature of regional business and industry. A high school education is no longer sufficient to advance individual or community economic wellbeing. Earning capacity of high school graduates is stagnant. On the other hand, earning capacity of the college educated is rapidly increasing, reflecting the demand for skilled labor.

Gap – Educational attainment in NEW is below the state and national averages. The table below shows NEW educational attainment data.

NEW Educational Attainment

2000	<u>State Rank</u>	<u>Workforce %</u>
U.S. Average	n/a	25.6
Wisconsin	32	23.8
NEW	49	18.8
BAWDA	49	18.8
FVWDA	46	19.6

Task – Increase educational attainment levels in NEW

NEW must maintain its quality elementary and secondary school system (K-12) as the basic foundation of future education. However, the NEW community culture must instill the idea that education is a life-long endeavor. Education must not end with a high school diploma, or an Associate Degree or a Bachelor Degree. The speed of technological advancement and the rapidity with which markets shift require constant upgrading of skill sets for all – proprietors, managers, workers, even educators.

Post-secondary education is the key to workforce development and economic development. Creative ideas and innovative technologies come from increased knowledge. It is through advanced education that breakthrough and disruptive technologies are discovered. It is with the advanced knowledge and training that those new technologies are transferred from the laboratory to the shop floor to the marketplace and through that advanced training that the value-added goods and services are produced and delivered to the market, affording companies more profit and workers more income.

NEW has a wide array of high quality public and private post-secondary education institutions. Cooperation among these institutions is increasing. The Northeast Wisconsin Educational Resource Alliance (NEWERA) is a working example of that cooperation among the public institutions of higher education. The activity should be embraced and enhanced.

Action Steps:

1. Educate students, parents, teachers, and guidance counselors about the skill sets required in the New Economy. Develop civics or economic course modules to be taught at the middle school and high schools levels.
2. Create a NEW education scholarship fund to assist the financial needs of college bound students. Private donations should be sought as the private sector will benefit the most from increased worker education and training.
3. Expand upon the NEWERA collaborative to develop more programs between high schools, technical colleges, state and private universities, and on-line access coursework. Offer and expand joint university degrees with other campuses that focus on science and technology, business, and entrepreneurship. For example, expand engineering degree offerings in the region, like the UW-Fox Valley/UW-Platteville Mechanical Engineering degree and the UW-Oshkosh and UW-Stout Masters Degree. Nursing degree programs should also be expanded in the region, perhaps collaborating with private college programs such as at Marion College, as demand for health care workers will increase dramatically over the next 20 years.
4. Build upon and expand training centers such as the NWTC's Manufacturing Technology Center to rapidly increase workforce education and skill levels. Support the efforts of technical colleges to be highly adaptive to changes in applied technologies. Production technology changes rapidly and the technical colleges must be able to supply state-of-the-art training and change quickly with changes in technology.

5. Expand adult education access that will lead to more college degrees of non-traditional students. This will help raise the college attainment levels of the existing population and give more training to experienced workers.
6. Expand the Workforce Development Boards' training programs up the career ladder. Determine the promising future careers in the region that pay a living wage and establish programs along those paths.

Tactic IB – Redouble R&D

Rationale: Wisconsin is a billion dollars behind the U.S. average in industrial R&D spending: inferred R&D spending, \$2.856 billion; actual R&D spending, \$1.706 billion. (Source: Wisconsin's Economy in the Year 2010, Figure 4-3, page 54.) Wisconsin ranks 25th in PPI index of industry R&D investment. CEIGS information of a lack of company research and development spending supported this data in NEW.

Research and Development (R&D) is the discovery or invention of new technology and its application to production. It is the key to product innovation. It is through R&D and its transfer into the production process that NEW companies will develop the new products and processes to advance in the New Economy. Basic research is usually conducted in laboratories at large companies or institutions. The transfer of new technology to the production process is critical to developing new products and services for the marketplace.

Gap – NEW needs more R & D. While the UW-Madison is a leader in public university research, private R&D spending is substantially behind in the state and was \$1 billion below the U.S. average in 1997. CEIGS information of a lack of company research and development spending supported this data in NEW.

Task – Increase the R & D. NEW does not have a major tier-one research university. Therefore, it is necessary to 1) tap into the research centers in the state and the Midwest, 2) promote research at colleges and universities in the regions, and 3) develop research centers of excellence in the region.

R&D should be a two-way street. Products and processes developed in the laboratories can find their way to industry application. In the opposite direction, industry problems can foster research for solutions. The only way these two can be mutually beneficial is for each to know the other. It therefore becomes imperative that open lines of communication, dialogue, and resources flow constantly in each direction. A formal network of communication needs to be established for this flow of information. This is one of the tasks of the REDC discussed later.

Private and public funding for R&D is also paramount. Private industry must take an active role in sponsoring the R&D network and be heavily involved in the transfer of new technology into their businesses. They must also be willing to spin off new and innovative companies, even sponsoring and taking equity positions in the new companies.

Action Steps:

7. Establish centers of excellence in NEW and establish a formal network to review and combine complementary technology overlaps across companies and across industries from all over the globe. This could be a function within the business and engineering programs of the local technical colleges and universities in collaboration with the REDC. Major funding of centers of excellence should come from private industry with matching state and federal grants. Expand on Congressman Mark Green's initiative to locate a paper research center in NEW. Other candidates for the centers are automated manufacturing, shipbuilding, health care, manufacturing equipment design, logistics software, and data services. Explore ideas for others. In this way, expertise can be shared and new companies spun off.
8. Tap into the research entities of the state and the region. Establish formal networks with the local technical colleges and universities. Formalize networks with other research centers in the state, such as the UW-Madison, Marshfield Clinic, Medical College of Wisconsin (MCW), Milwaukee School of Engineering (MSOE), and the Center for Advanced Technology & Innovation (CATI) in Racine. Formalize use of the UW-Madison Office of Corporate Relations (OCR), Wisconsin Alumni Research Foundation (WARF), WiSys, and the University Research Park. This is a representative task for the Research Liaison of the NEW REDC that is discussed in Strategy II, Tactic C.
9. Study the possibility of the research centers licensing or taking equity positions in research center spin out businesses as a vehicle for long-term center funding. This would probably occur on a case by case basis with the help of local faculty and WiSys. WARF should serve as a valued consultant in such matters. OCR, MCW, MSOE, and CATI could also advise, depending upon the product.
10. Charge NEW federal representatives with bringing home more earmarked federal funding. Wisconsin is behind the U.S. average in obtaining federal funding. While the Wisconsin federal congressional delegation is relatively small, they need to be more aggressive in channeling more money to Wisconsin, especially at times when the state is a high profile campaign state.
11. Generate more federal money for new high-tech startups through Small Business Innovative Research (SBIR) and Small Business Technology Transfer (STTR) grants. Expand existing programs for submitting grants that regional counties have. Work with local faculty and industry technology officers to educate and draft grants for potential or pending new technologies. REDC administrative staff and field staff should be the primary facilitators.

Tactic IC – Instill Entrepreneurism

Rationale: Phase II data shows NEW behind the national average for proprietor income, that income derived from business ownership, and heavily dependent on wage income. CEIGS information indicated that NEW lacks in entrepreneurship and the support network that

should accompany it. This is particularly important when most employment growth comes from new businesses and high-tech jobs on average pay more and see faster earnings growth. Indicative of that situation is the fact that Wisconsin ranks 47th in new business formations and 31st in high-tech jobs. It was after all, entrepreneurship that started the major industries in the region to begin with, such as the paper industry in 1872.

Gap – NEW is behind in establishing new high-tech startup companies. As the New Economy took hold in the 1980s, NEW fell far behind in proprietor income, growing just twenty percent from 1969 to 2001, versus the U.S., of which proprietor income grew 125% during the same period. According to the Milken Institute Tech-Poles rankings of 315 metropolitan areas, Appleton/Neenah/Menasha ranks 207th, Green Bay ranks 253rd, and Sheboygan ranks 266th. Survey data shows NEW looks to big business and government to lead economic development. Most job growth is created by new businesses. High-tech businesses create higher paying jobs.

Task – Instill an entrepreneurial spirit among businesses, economic developers, educators, government, and the general populace. Risk taking and the support structure that surrounds the entrepreneur is critical in fostering the entrepreneurial climate that needs to exist for developing new businesses in the region. Not all businesses succeed. Not only should successes be championed, but the attempt to succeed should also be celebrated.

Community entrepreneurial and support industries need networks to be expanded and brought together. This includes not only the networks of entrepreneurs themselves, but the accountants, lawyers, economic developers, government, and financial entities in the region that can encourage and influence the spirit and success of the entrepreneur. There are a number of groups focused on supporting entrepreneurs, such as Entrepreneurs of Color Council, The Entrepreneurs Youth Leadership Institute, E-seed program, and WIN, along with the small business programs sponsored by UW-Extension and the Small Business Development Center. There are a number of business support groups also, like the Wisconsin Family Business Forum and the TEC groups.

However, NEW is still short of enough high-tech startup companies to grow employment and raise incomes. This fact suggests that more needs to be done to support the creation of new businesses, collaborate across existing networks, and build the entrepreneurial support structures of service industries.

Action Steps:

12. Educate students at much earlier levels about the New Economy. They must be comfortable with the concepts of innovation, entrepreneurship and risk-taking. Expand New Economy classes in high school. Educate high school guidance counselors and teachers about the New Economy and the skill sets required to succeed in the New Economy. Expand NEWERA, to reach into K-12 teacher training to instill the importance of life-long learning along with their efforts on teacher training in technology education.
13. Create intra-conference, inter-school business plan collaborations. Students from different schools form teams to develop business plans. Students use modern tools (internet) and processes (geographically challenged teams) to develop, manage and complete projects.

14. Build upon and expand the “E-seed” Entrepreneurship Training program cosponsored through the Small Business Development Center by Fox Valley Technical College and UW-Oshkosh. Consider establishing a college graduate school entrepreneurs’ program at UW-Green Bay and UW-Oshkosh, considering the Weinert Applied Ventures in Entrepreneurship (WAVE) program at the UW-Madison Business School Weinert Center for Entrepreneurship as a model.
15. Establish an annual or semi-annual NEW business plan contest through the local Wisconsin Innovation Network (WIN) chapter to generate publicity and, perhaps, viable new companies in NEW. This would also help local entrepreneurs prepare for the Governor’s Business Plan Contest.
16. Expand upon the inventors’ club in NEW and establish a formal entrepreneurs’ and inventors’ network to meet regularly to exchange ideas, support, and contacts across the established entrepreneur groups. The activities of WIN, the Entrepreneurs of Color Council, the Entrepreneurial Youth Leadership Institute, PULSE in the Fox Cities, Young Professions Network groups in Green Bay and Fond du Lac should be better networked to expand the intersections of ideas and creativity. A region-wide chamber consortium and WIN could be the coordinating agent of this activity. The network would be responsible for inviting in support resources for speakers, presenters, or sales pitches.
17. Establish one-stop shops for entrepreneur support services, including funding, accounting, managerial, legal, and marketing. These shops should have available the support resources that can be fit to the entrepreneur’s needs, not established packages that the entrepreneur must fit into. (See *The Entrepreneurial League System: Transforming Your Community’s Economy through Enterprise Development*, Thomas S. Lyons.) These one-stop shops should be networked with, if not resident in, the incubators in the region or in the job centers. REDC field staff should network with these shops.
18. Develop a program to encourage local company spin-offs utilizing new technologies from regional companies such as Giddings & Lewis, Mercury Marine, Kimberly-Clark, Kohler Company, etc. Regional companies should shed non-compete clauses and instead take equity positions in new companies that can commercialize new technologies, especially those that don’t fit the parent firm’s core competency or are currently not large enough to warrant much management attention. REDC field staff should be the primary networking agents. This action step could be combined with #7 above on centers of excellence.
19. Expand the FVWDB’s Career Changers Network to encompass the whole NEW region. The networking of personal expertise is already creating exciting collaborations coming out of this group. Three Changers have formed up a paper technology consulting firm. Local economic development professionals should work closely with groups such as this to help the participants obtain grants, locate business space, and target markets.

20. Look for ways to access more federal job training funds for entrepreneurial training and business grants and loans. This is a role for the Wisconsin congressional delegation collaborating with the REDC Research and Finance liaisons and the administrative staff. The REDC field staff would be charged with placing grants and loans with companies locally.

Tactic ID – Increase Access to Risk and Growth Capital

Rationale: Risk capital is the life blood of the New Economy. Wisconsin ranks 32nd in venture capital investment, placing under one-half of a percent of total U.S. venture capital. CEIGS data indicate that NEW is very risk averse. There is anecdotal evidence that tens of millions of dollars are locked up in low-interest, fixed rate deposits. NEW has established no formal angel investment groups in the region or venture capitalist branch offices. Angel groups offer a means to place risk capital in small startup companies and diversify risk among investors.

Venture Capital Placements

	2001	2002	2003
United States	\$41.3 Billion (4,712 Deals)	\$21.2 Billion (3,012 Deals)	\$18.2 Billion (2,715 Deals)
Minnesota	\$542 Million (93 Deals)	\$327 Million (55 Deals)	\$204 Million (58 Deals)
Wisconsin	\$94 Million (25 Deals)	\$64 Million (11 Deals)	\$45 Million (10 Deals)

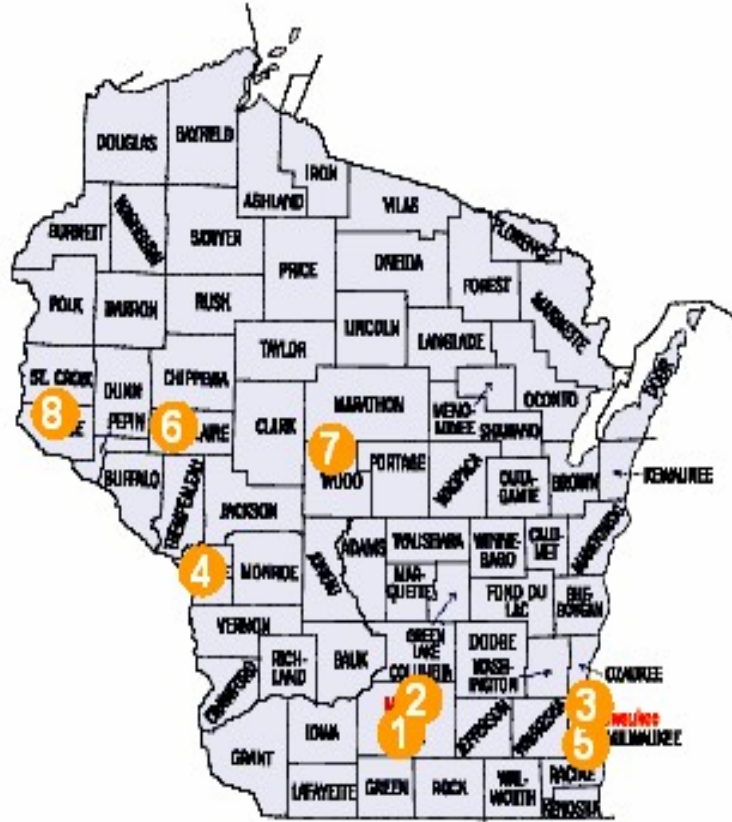
While it has always been important in business formation, never before has risk capital been as critical as it is now with technological innovation happening so rapidly. The New Economy is based upon innovation and seizing the moment. Accelerated timelines for technology transfer require visibility and liquidity in risk capital markets. Formal, visible investment networks or groups in the region need to be established to quicken the due diligence process for applying risk and growth capital and diversifying the risk among investors.

Gap – NEW is risk averse and has no formal angel groups. Part of the risk aversion in NEW may be due to the lack of understanding of risk capital markets. Knowledge of risk capital investment stages and sources needs to be understood by seeker and supplier alike.

Task – Educate the NEW populace about the need and value of risk capital in the New Economy. Establish visible risk capital groups or networks in NEW. NEW is not devoid of risk capital, in fact, quite the contrary. However, the sources of that capital are largely hidden and only accessible through tight channels controlled by relatively few stakeholders. As can be seen in the map below, NEW does not have any formal angel investor groups established. Available risk capital needs to be more transparent in NEW to those who would like to employ it. The fewer resources required in the pursuit of finding capital by an entrepreneur, the more can be applied to

product development and market roll out, accelerating the time to market and enhancing the probability of success for all involved.

Location of Wisconsin Angel Networks



Action Steps:

21. Educate capital providers and users about the different stages of risk and growth capital through the course of a product/company development lifecycle. Hold seminars at venues across the region on risk capital supply and acquisition. These seminars can be carried out by the colleges and universities in the region, Chambers of Commerce, economic development professionals, and investment offices in the region. For example, the region-wide chambers consortium could sponsor a series of seminars across the region in collaboration with the local WIN chapter and other entrepreneur groups in the region.
22. Incorporate and expand risk and growth capital concepts into high school business classes. This should be incorporated into the New Economy entrepreneurship course work listed in earlier actions steps.
23. Establish one or more angel investment networks or groups in NEW and take down a deal within a year. Stability of the network must be established by a core of capital

providers as the entrepreneur's side will be fluid as the ebb and flow of business start-ups occurs. Administration of the network(s) can be assisted by local SBDCs, such as is being done in La Crosse.

24. Connect NEW risk and growth capital networks with other capital sources, such as other angel groups in the state, banks, the tribes, and state and Midwest venture capital firms and network into the one-stop entrepreneur shops and entrepreneur groups cited in the previous set of action steps. This pools funding sources, diversifies risk, enhances the capital network, and paves the investment capital road to later stage capital providers that help successful start-up companies reach subsequent growth stages. There are venture capital firms in Wisconsin such as Mason Wells, Venture Investors, Baird Venture Partners, and Frazier Technology Ventures from Seattle, which now has a regional office in Madison. There are firms in Chicago, such as ARCH Venture Partners. There are other numerous investment capital vehicles in the state. For example, the Wisconsin Community Bankers Cap Vest Fund focuses on more traditional Wisconsin companies (non-high-tech) in smaller communities. Consider setting up something like the Wisconsin Rural Enterprise Fund, a fund that focuses on rural areas and was formed through partnerships with rural cooperatives, local economic development organizations, and financial institutions and is managed by the Northwest Regional Planning Commission and Wisconsin Business Innovation Corporation. The Fund invests primarily in early stage science-based agriculture and high-tech wood products. There is a veritable alphabet soup of state and federal investment funds that could be tapped. See the Wisconsin Guide to Growth and Venture Capital. The REDC Finance liaison and administrative staff would be charged with this task. REDC field staff would work with local start up companies in conjunction with the REDC liaisons and administrative staff.
25. Encourage existing private businesses to invest in spin-off companies or independent start-ups, perhaps supplying capital and management for equity. Some of this is going on in NEW, but under the premise that the region is falling behind in the New Economy, efforts need to be expanded. Talented management is probably the most important factor for a new start-up company.
26. Network the capitalists mentioned above with the research centers of excellence that are discussed earlier and later in this report. It is the combination of product development and capital that accelerates the technology transfer to the market. This is part of the work done by the NEW REDC Finance and Research liaisons discussed in Tactic IIC below.
27. Promote media coverage of venture capital and angel networking in the regional print and broadcast press. Get the word out to potential angel investors and entrepreneurs.

Tactic IE – Install State-of-the-Art Communications Technology

Rationale: *Wisconsin and NEW have a relatively good traditional infrastructure of roads, rail, sewerage, etc. However, Wisconsin ranks 32nd in broadband access. While nearly 100%*

of schools and libraries have high-speed internet access, according to the Wisconsin Public Service Commission, survey data registered communications infrastructure as below average. While broadband access in Wisconsin rural communities is above the U.S. average, the goal should be 100% access for all, rural and urban. Other New Economy infrastructure needs, such as advanced education and risk capital supply were addressed previously.

The New Economy is about the exchange of knowledge and ideas. The facilitation of that exchange is embodied in the internet. The internet is one of the primary tools for information exchange in the world today. From the exchange of knowledge and ideas, to business supply networks, to retail transactions, to entertainment, the internet is becoming the default first choice information source. Echo Boomers (those born to Baby Boomers) spend as much time on the internet as they do watching TV.

Gap – Only 65% of customers within an exchange that provides DSL have access. CEIGS information indicated that many businesses and particularly rural areas don't have adequate broadband and high-speed internet access.

Task – Make NEW 100% accessible to broadband and high-speed internet. Broadband technologies are becoming more sophisticated and more widespread. Broadband access can now be obtained through telephone lines, electrical wiring, cable, and wireless modes. Wireless technology is growing rapidly and offers incredible mobile access for communication. Wireless internet access and cell phone technology are making great gains in accessibility and security.

Internet access is a New Economy driver of the exchange of ideas, network collaborations, and commerce. Giving all businesses, citizens, and government bodies access to the internet will increase efficiency in daily activities and increase the number and velocity of market transactions, whether business-to-business, business-to-person, or person-to-person. It gives access to global markets by businesses and local citizens, dampening the need to leave NEW to pursue business or lifestyle choices. It also allows the world to find NEW as a supplier of goods and services.

Action Steps:

28. Increase broadband access to businesses, homes, and open areas. Goal should be 100% access. Use community property taxes to fund wireless internet access across entire cities in the region. Work to change impediments (cable contracts or municipal utility contracts) for wireless public access. Other cities in the nation are already taking this initiative, including large cities such as Philadelphia. Don't burden the user with an overabundance of commercial traffic (advertising).
29. Supply schools with enough computers and instructional resources to make all secondary students fluent in computer software and internet access technology. Have teachers make widespread use of the technology in their class assignments. Grants, gifts and private funding should be sought to pay for the bulk of these resources as they will be the biggest and most immediate benefactors through more skilled future workers and greater economic commerce.

30. Increase the resources available for teaching computer skills to elementary school students, setting achievement levels for all fifth graders.

STRATEGY II – MOVE TO A COLLABORATIVE ECONOMIC DEVELOPMENT CONSTRUCT

Wisconsin has been in the top five states in terms of state and local tax burden for most of the past twenty years, according to the Tax Foundation of Washington, D.C. and U.S. Department of Revenue figures. Even if you claim eighteen or twentieth in total government burden, the fact that government resources are stretched increasingly tight leaves, as experienced presently with huge state budget deficits and cuts in local services, no room for unnecessary spending.

Local control and parochial self-interests need to succumb to the concept of collaboration. These issues permeate the entire state as illustrated in the SAVE Commission, the Kettle Commission, and others and are felt acutely in region. NEW must move to a regional, collaborative mindset for economic development activities.

The concept presented here is an active process for moving NEW from passive cooperation through willing coordination to proactive collaboration. The endeavor touches essentially every entity involved in economic development, including business, labor, education, government, and the general populace. Its level of importance in the overall strategy is second to moving into the New Economy only because it needs to be focused around that concept. Abundance theory, the concept that sharing a bigger pie is advantageous for all, must be actively pursued. A NEW Vision must be developed and applied. Finally, the issues that separate stakeholders based upon historical rivalries must be overcome.

Old Economy

In the Old Economy, business recruitment was a precursor to employment growth. In a cost race to the bottom, communities competed with each other to attract companies that would bring with them jobs and workers. Incentives on infrastructure, taxes, and regulations were bid down to attract the companies. Communities would actually market how low their labor costs were.

Government regulators acted as command and control entities, in many cases putting up barriers to progress. In many cases, rules and regulations were disparate across local entities. Government regulations were often in conflict with business attraction packages.

New Economy

Now the competition is for skilled labor. However, the tax burden has shifted to workers to pay for community services. It has placed the region in an uncompetitive position for attracting labor. Demographics dictate the urgency of action. By about the year 2015, NEW's percentage of the population in the workforce will begin to decrease. (See demographic information earlier in the report.) Businesses and government entities must understand fully well that inherent demographics will have them competing for labor with other regions in the state, U.S., and even globally.

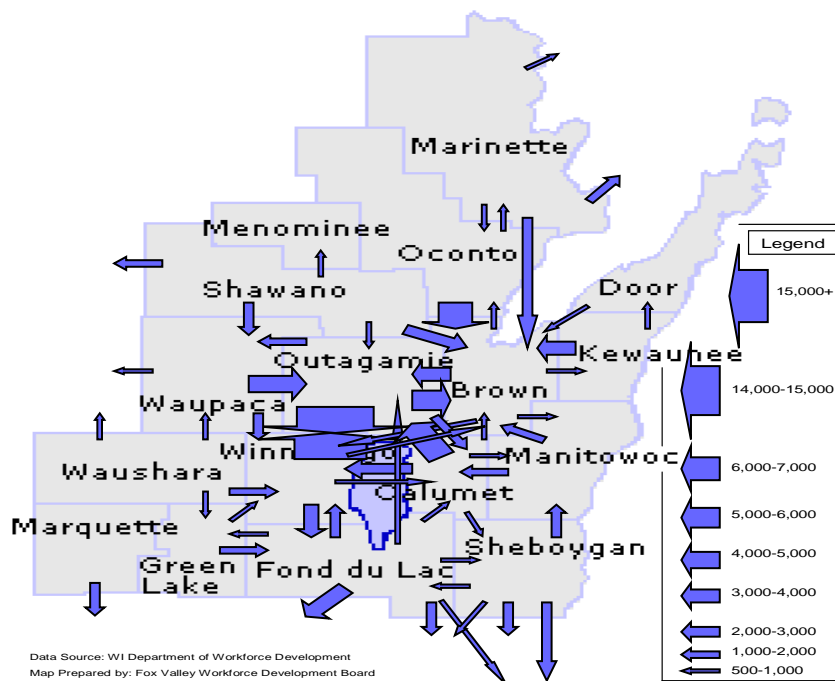
Workers will live where they can get the “best deal” on lifestyle, of which work is now a subcomponent. Workers have shifted their ethics from work to lifestyle. No longer do workers put the company before personal concerns for uncertain career rewards as a firm may fail or move the job abroad. Modern workers value family and lifestyle over work and will locate in an area that offers employment options and life quality. That is why it is becoming harder to shift labor dislocations.

The cost of labor will rise on two accounts. On one account, competition for skilled labor will mean that to attract the workers, companies will need to offer higher wages. On the other account, the skilled workers required to create new high-value-added products and services will command higher wages.

However, higher wages are not enough to attract creative and skilled workforce talent. Dr. Florida’s data support this statement. Talented people want to live in communities that provide access to other talented and creative people. A positive externality of this inherent network is the enhancement of the creative and innovation cycles in the workforce, workplace, and community.

In many respects, workers in NEW have made some transition to the New Economy thinking about their jobs. Labor mobility, the movement of workers within and between centers in the region, is high and growing. Commuting patterns in the chart below show this. Workers understand and are willing to be mobile within the commuting region to get the desired job.

County Commuting Patterns for Northeast Wisconsin



The commuting patterns also show how the entire region is interconnected in economic terms and should work to embrace a regional economic development strategy.

Supplying public services must be economized for budget purposes. Local governments now need to collaborate on solutions that are consistent across the region. That is to say they must design practices that allow development to progress yet satisfy the maintaining of the environmental and community assets in the region.

Gap

The change in economic development competition from attracting businesses to attracting labor requires a change in management mindset on market competition. No longer can business think solely in terms of the cost race to the bottom, but rather must embrace the productivity race to the top. That race will be won by attracting the best talent and using it to maximum potential.

Governments must also change the way in which they think about assisting business and communities in NEW. Instead of subsidizing the private sector in a cost race to the bottom, government programs must work with businesses to prepare the workforce for the high-skilled jobs and enhance community environs to attract and retain the skilled workforce.

Government must also provide services in the most cost effective manner possible. Regional resources, of which NEW has an abundance, must coalesce under a common regional vision. The labor magnets NEW offers are spread across the entire region. Those attractions must be made available in concert, demonstrating the high quality of life that will attract and retain workers. Local communities will also have to work together to manage scarce community resources to supply desired services in the most cost effective manner possible.

The private sector must take an active role in workforce training and community development as they will be most in need of the vital resource to compete in the marketplace – skilled labor – and will see the largest returns on the investment through a more productive labor force.

This is no regional economic development authority in NEW. There are a number of activities going on in the region to foster cooperation among economic development entities, *e.g.*, Northeast Wisconsin Regional Economic Partnership (NEWREP), Northeast Wisconsin Educational Resource Alliance (NEWERA), and Northeast Wisconsin Chambers Coalition (NEWCC). Yet, NEW still has entirely too many layers of government, economic/business development entities, and provincial issues.

Task

Businesses, government, and communities will have to accommodate labor attraction and community attractiveness changes to be competitive in the New Economy. Fortunately, one of the benefits of NEW is the vast array of possible living/working arrangements offered in the region due to close proximity and good transportation infrastructure. NEW needs to capitalize on those assets in recruiting not only labor that looks at community appeal, but in recruiting

companies that look at the local labor market as the main decision criterion for business site selection.

Moreover, in the New Economy, the private sector must take an active role in serving the public sector. Private companies will compete for labor not only on the attractiveness of the job, but also on the attractiveness of the community and region.

The model for the economic development professional must evolve with the New Economy. Economic development professionals need to take their expertise and apply it in a New Economy construct of attracting and retaining skilled labor to meet the needs of the future industrial base. They also must openly network the support structures for entrepreneurship, risk capital, workforce education and training, and quality of life.

In order for the region to come together, NEW must have a regional development plan that can be used for guidance and monitoring of the economic development activities. The plan should be a top-down plan that fits development under the goals. The plan needs to fit the rural, urban, and suburban lifestyles amenably across the region.

Task List

- Create a NEW Vision to Broaden the Collaborative Structure
- Form Collaborative Initiatives around New Economy Assets
- Form a Regional Economic Development Authority around New Economy Construct
- Construct a Regional Land Development Plan

Tactic IIA – Create a NEW Vision to Broaden the Collaborative Structure

Rationale: CEIGS information indicated lack of a regional vision and bold leadership. One of the greatest weaknesses indicated for the region was the lack of coordination between numerous parochial entities across NEW. With public resources increasingly tight in the regions, a collaborative vision needs to be articulated throughout NEW to guide the application of NEW's assets for regional well-being.

NEW must start with a vision. The vision must be broad. The vision must incorporate the fact that the whole is greater than the sum of the parts and embrace abundance theory. There are a number of cooperative economic initiatives in NEW, such as NEWERA, NEWREP, and NEWCC. Often, however, the economic development functions in NEW are provincially targeted and not coordinated with like entities over the county or town or city border. This competition can lead to a race to the bottom, leaving all with less in the end. NEWERA should be expanded to include the private colleges and the high schools in the region. NEWCC should be expanded to include chambers from across the region.

Gap – During the project, much feedback was given that there are no leaders in the region. The problem is that there are also no followers. No critical mass for bold economic development is ever realized. Much of NEW is still focused on a cost race to the bottom of subsidies and

shifting the tax burden to the worker. Parochialism is still alive in NEW and exhausting community resources.

Task – Create a bold NEW Vision for the region. Consolidating the disparate entities would allow resources to be combined into a critical mass to give the region demonstrative labor and business attractions and garner political clout within the state.

Collaboration must be extended to public services. Governing bodies and school districts should seriously look at how they can be combined. Emergency service, public healthcare, and social service providers need to consolidate, cutting costs and raising service levels wherever possible.

Action Steps:

31. Create a NEW vision. Promote it throughout the region. This could be the first formal task coordinated by the NEW CORE (Coalition on the Regional Economy).
32. Form region-wide committees around the five strategies and select a champion (person or small consortium) to build buy-in from across the region. Obviously, the champions have to work together as the strategies are all interrelated. This task can be initiated by NEW CORE and possibly assigned at the November conference.
33. Create a region-wide working group of chambers of commerce, expanding NEWCC, to inventory and catalog all of the public and private organizations in NEW. Then determine how they can contribute to the NEW vision. The task force should work to determine how the organizations can consolidate under a common focus for their interests across the region. Study models of cooperation in Wisconsin that involve common investment by multiple governmental units with revenue flowing to each unit. Examples are the Neenah-Menasha fire department consolidation or the Fitchburg-Oregon industrial park.
34. Charge a NEW task force with consolidating governing bodies under the vision to use government resources most efficiently across the region. Serious consideration should be given to 1) dissolving some layers of government, 2) going to county-wide systems of government, 3) consolidating school districts, 4) consolidating or coordinating airport service, and 4) consolidating emergency services where yet possible. Such constructs have been suggested before in the Kettl Commission and other government organizational studies. The resource situation becomes evermore acute as time passes.
 - In order to overcome the fierce parochial loyalties that seem to be anchored at the high school level, NEW may begin the process by forming regional teams in soccer, debate, baseball, chess, basketball, forensics, ultimate, volleyball, and scholastics to travel the state during the summer to establish greater regional loyalties. Consider using area college coaches to circumvent local coach sensitivities.
 - Instead of having nearby airports competing with each other, plan their connecting flights to complement each other, providing more frequent service to major airports, and thus worldwide destinations.

- EMT, fire, and police services, especially in smaller cities and villages can be combined with county services to yield more consistent quality services. Develop emergency service dispatch plans that cover greater jurisdictions. Not every small town or village needs its own dispatch. Better coverage can be given with flexible plans across local boundaries.
35. Realign incentives that allow for economic developers to work within the NEW vision. For example, the Metro Council in Minneapolis, MN, has a revenue sharing program that allots 60% of increased revenues from local economic development for local use and 40% percent for regional (in their case five counties) use. Work with state elected officials, perhaps through the Wisconsin Economic Development Association (WEDA) to change shared revenue laws so revenues from economic development initiatives can be shared with all players.
36. Incorporate government services into the NEW collaborative vision. Charge a task force with making local rules and regulations consistent across NEW. Make government services and regulators partners in NEW economic development. Regulators and service providers should change from a command and control model to a solutions model. That is to say, work with the regulated toward finding solutions. For example, work with a housing developer to find a solution for maintaining but perhaps moving a wetland or incorporating it into the project design.

Tactic IIB – Form Collaborative Initiatives around New Economy Assets

Rationale: CEIGS demonstrated a frustration with the disparate application of known resources across NEW and a want for the resources to be combined into a critical force that could generate viable results and political clout.

NEW has an amazing set of resources to bring to the table when recruiting and retaining labor and businesses in the region. The assets of the region for economic development – labor and business attraction, retention, and expansion – are extensive and need to be promoted.

Few places in the country have the combined set of natural, human, creative, and technological resources within a figurative “stone’s throw.” Enormous water resources for recreation, great educational resources, and outstanding research centers are all within an hour of the region. In fact, within NEW, an hour’s drive will let you work, live, play, eat, and shop in almost any venue you wish. It is not New York City or Chicago, but neither is most of the country, nor does NEW aspire to be. NEW commute times to work, restaurants, recreation, and colleges compare favorably with any major city.

Gap – NEW’s rich array of assets are disparate and not combined into a consistent and comprehensive labor and business attraction and expansion package. There are a variety of local rules and regulations that frustrate and stifle collaboration across the region. Business attraction packages are limited in scope and focus on a cost race to the bottom.

Task – NEW’s assets must be coordinated to promote a full package of assets for attracting new workers and new businesses to the region. Business attraction strategies should focus NEW as a

desirable place for talented labor to locate. NEW should promote not only the workforce, geographical location, and infrastructure to prospective business, but also the educational, recreational, cultural, and commuting (time vs. distance) attributes to the labor market.

Action Steps:

37. Construct a full labor and business attraction package for NEW that brings all players to the table: economic developers, business organizations, labor, utilities, and educators, arts groups, retailers, tourism promoters, realtors, and politicians. The sales pitch must include the labor magnets discussed above. Reevaluate the materials on NEWREP and across the economic development corporation websites to focus on the region and its attractions for a skilled workforce (many links go immediately to state data). NEWCC or NEWREP should lead this initiative, but it needs to include stakeholders from across NEW communities to demonstrate all the available resources. This could be a collaborative process with NEW REDC (discussed in next tactic) as the NEW REDC field staff intersects heavily with the chamber and economic development professionals.
38. Network the incubator and industrial park offerings across the region to more effectively maximize area entrepreneurial support services without creating more competing industrial and commercial space in the market. Most communities have vacant industrial and commercial space. In the New Economy vision, the focus on incubator tenants should be on innovative, high-value added product companies. Incubator space needs to be configured to the needs of potential clients, *e.g.*, wet labs for chemical or biological research and products or secure power and high-speed broadband for information technology startups. There are eight sites in NEW listed as incubators, such as the Green Bay Advance Business Development Center (moving to a new \$5 million facility), Door County Business Development Center, City of Two Rivers Incubator, three incubators in Waushara County, one in Marquette County, and one in Menominee. Much of the space is best outfitted for light manufacturing and service industry companies.
39. Set building standards that will make high-speed broadband access available in all new construction — industrial, commercial, retail, and residential. Excellent telecommunications infrastructure will be necessary in all walks of life from here on out, from business logistics, to families downloading movies, to seniors consulting their healthcare professionals for treatment.
40. Cooperate and collaborate on infrastructure such as water and sewerage utilities. Not only does this need to be part of the regional development plan, but the funding, construction, and utilization needs to be a proactive, regional collaboration.
41. Expand tourist, traveler, and frequent visitor data base. Add to the normal spending, stay, and personal demographic data gathered every year by the Wisconsin Department of Tourism consultants to include the visitors' business demographic data such as professional position, company, nature of business, etc. This data base would help to target business recruit candidates for, say, attracting a senior vice president that might consider opening a company division in the area where he and his family spend a lot of

leisure time or have a second home. Use major attractions as tools for recruiting businesses. Make formal invitations to prospects to attend events such as a Packer game (autumn), the EAA air show (summer), golf at Whistling Straits (spring and summer), or salmon fishing on Lake Michigan (spring and summer).

Tactic IIC – Form a Regional Economic Development Authority around New Economy Construct

Rationale: *Economic development strategies, especially for states like Wisconsin with many distinct economic regions, work best at a regional level. NEW requires a region-wide entity to take the regional economic development strategy through to implementation and further to manage the initiatives over the long term. Also, the economic development model needs to evolve into the New Economy construct of open cross-horizon networking and transparent collaborative economic development activities.*

Wisconsin is unlike some neighboring states like Minnesota and Illinois that have the vast majority of their economic force concentrated in one major metropolitan area like Minneapolis or Chicago. Wisconsin has several economic sheds that are relatively close in size, but are not the juggernauts of singular economic power.

Therefore, in Wisconsin, a regional economic development structure works best. Regional economic development initiatives in Wisconsin should be established around regional economic sheds. NEW is one of these sheds. Local economic development initiatives don't have enough critical mass or political clout to muster sufficient resources. Indicative of the success of the regional approach was the creation of NEWREP to secure a tax favored technology zone in the region.

Gap – NEW has many small economic development constructs that lack business and political clout. Often the local economic development entities compete with one another in the region and are focused on business subsidies. Some local economic development entities are passively cooperative, but not actively collaborative. A visibly successful exception is NEWREP that was awarded the technology zone in NEW. Small economic development entities can also be bid off against each other in a cost race to the bottom.

Task – Create a modern region-wide economic development entity to actively network and coordinate the economic development activities in the region. The economic development model must evolve with the New Economy. Economic development is now dependent on the combination of workforce talent and innovation, entrepreneurship and risk capital, and private and public partnerships. The new economic development entity should be a regional collaboration of networks that brings together the building blocks of New Economy economic development, education, research, entrepreneurship, risk capital, skilled labor, and quality of life into a critical mass of resources to be applied in attracting and retaining workers and businesses. Moreover, a combined regional approach can muster the numerous resources to present to prospective businesses.

The NEW REDC

A NEW Regional Economic Development Corporation (NEW REDC) should be created and take a proactive approach to its duties of organizing, coordinating, and implementing region-wide economic development initiatives under the New Economy construct.

The policies REDC sets and the programs it initiates should follow the New Economy concepts of education, research, entrepreneurship, risk capital, workforce talent, and quality of life. NEW REDC should be the focal point for regional business attraction, expansion, and start-up initiatives. NEW REDC would be the repository of the NEW asset inventory. By design (see below), NEW REDC is the nexus of economic development initiatives across NEW.

Note: NEWREP is already an established 501(c)3, not-for-profit corporation, and it may well serve as the legal body under which the NEW REDC is configured. However, we do not see NEWREP in its present form as being the NEW REDC. The NEWREP board does not have quite the right expertise or areas of concentration for the proposed NEW REDC. The NEWREP board consists of either economic development professionals or planners. While some of them should undoubtedly sit on the NEW REDC board, there is no representational expertise on the NEWREP board for education, business, labor, research, or finance, upon which the critical layer of NEW REDC activity is built – the liaisons (see below). The NEW REDC liaisons are to be experts in their fields. The expertise in NEWREP and other organizations in the region is an excellent fit for the field staff component of NEW REDC, which is vital to making the construct work.

NEW REDC Construct

REDC should have a board of directors representing all sectors to direct activities, an executive director, a full-time staff to administer initiatives, economic development sector liaisons for ongoing discussions and networking across sectors and geographies, and a field staff to gather information from economic development entities across the region for the staff and liaisons and to help distribute regional resources back out to promising entrepreneurs.

The board should represent all stakeholders across NEW: business, labor, education, workforce development, economic development, community, and government. The director should be hired by the board. The liaisons should be experts in their fields and active interdisciplinary collaborators hired by the director and approved by the board. The administrative staff should be hired by the director. The field staff should consist of shared resources of local economic developers, chambers' staff, UW-Extension agents, and possibly other local economic development actors. They are the links to local activity. The field staff should be funded by the REDC on a prorated basis.

The liaison layer of the REDC is the most critical layer of the organization. The liaisons should be experts in their fields and committed to proactively working across disciplines and with the other layers in NEW REDC. There should be about six liaisons representing the following areas of concentration:

Education
Business
Finance

Research
Labor
Government

The liaisons will be the primary facilitators and active honest brokers for discussions around generating cross-discipline activities, melding complementary initiatives and networking the contributors to economic development in the region. For example, the Research liaison would be informed about the research activity that is going on in the state, both public and private. The Research liaison collaborates with fellow liaisons to find cross-discipline opportunities for new product and service initiatives, programs, or companies. (See hypothetical case below.)

The liaisons should be focused on specific regional goals and projects set by the board and should meet frequently (weekly, semi-weekly, or monthly) to exchange input gathered from their respective focus area contacts. Seldom, if ever, should only one liaison be involved in any initiative, program, or new company. Furthermore, all liaisons would be closely networked with the field staff to place opportunities (actual business activities) in communities across NEW.

The REDC field staff would consist of NEW chamber staffs, economic development professionals, workforce development professionals, UW-Extension personnel, and integrate organizations such as NEWCC, NEWREP, NEWERA, and others that are active in economic development activities. REDC field staff should gather, inventory, catalog, and distribute knowledge of local resources. They should serve as the local “boots on the ground.” The REDC field staff would meet with the liaisons in groups and singularly at high frequency to provide input and take information back out to their constituents – consisting of chamber boards, economic development boards, workforce development boards, entrepreneurs, angel investment groups, businesses, etc. in NEW.

REDC administrative staff are the primary economic development initiative administrators. They should work closely, in an array fashion, with the liaisons and field staff to help implement initiatives, obtain funding, sponsor events, and support field staff activities.

It is proposed that REDC should have eight to twelve full-time equivalents. Annual budget proposed is \$1.5 million per year. REDC funding should come evenly from the state, NEW private sector, and NEW public sector stakeholders. Initial commitments should be for 5 years.

Hypothetical Case Study

The Research liaison comes across knowledge of a new portable power generator run on wood chips from sawmills, from contacts being made at the research center of excellence or an individual inventor who has approached the field staff. Working with the inventor, Finance, Business, and Government liaisons begin to draft a business model that raises risk capital, business management expertise, and government grants to begin a new company to develop and market the generators.

REDC administrative staff works with the liaisons and entrepreneurs to finalize the business plan and arrange to present the plan to potential investors in one of the local angel networks. The administrative staff also works with the field staff to write grant applications for government funding. The administrative staff works with the REDC field staff to find sites that would house the start-up company.

As the company shows promise and expands, the Education and Labor liaisons get actively involved in working with the local colleges, universities, and workforce training centers to teach the science and manufacturing process so the new firm has trained workers to manufacture, market, and sell the product. Meanwhile, the REDC field staff has been working with the company to tap expertise in the area.

(The REDC will not be concerned with overcoming, for example, wetland preservation issues or highway interchanges, as now those issues are being handled and solved with the collaborative government regulator and regional land use plan presented, respectively, in Tactic IIA above and IID below.)

Action Steps:

42. Convene a conference of economic developers, post-secondary educators, workforce developers, business and financial people, community leaders, and other interested parties in NEW to establish the REDC. The REDC organizational construct should integrate the NEW vision within the REDC mission statements, organization chart, goals, and achievement measures. Assign tasks to do the subsequent action steps listed here.
43. Secure funding for REDC from state and local government and the private sector. Also enlist resources from the local area stakeholders – economic development corporations, chambers, counties, etc. Federal grants should be pursued to augment REDC. REDC may also want to consider an equity fund for start up companies in NEW as a means for long-term funding support for REDC.
44. Have REDC up and running within a year, perhaps with only an acting or interim director that will set up the organization and then turn it over to a groomed successor.
45. Promote REDC throughout NEW.
46. Identify two or three regional projects that have a high probability of success and that demonstrate the power of the collaborative effort and implement them to show NEW REDC accomplishments.

Tactic IID – Construct a Regional Land Development Plan

Rationale: *CIEGS and survey data were adamant about the parochial problems and cross community competition in even basic needs, such as water supply. The current land use process is a bottom up approach to planning, often dictated locally. The process should be*

turned to a top down approach that maintains the quality of life assets of the region, among the most cherished assets in NEW. CEIGS information indicated a lack of knowledge of regional assets beyond what was known locally.

Few other places in the nation offer the resources and amenities found in NEW. Graced with rich and varied natural resources coupled with a solid economic foundation and high quality of life, NEW allows one to choose from a vast array of working and living opportunities. Not many areas in the U.S. let you literally work (or live) in the city and live (or work) in the country all within a 30 minute commute or less, while also allowing for great recreation on land or water (of all kinds) and a spectrum of entertainment so close at hand. NEW and its 1.2 million population has ready access to just about all of the big city amenities without the metropolitan demands.

The range of lifestyles NEW offers means that citizens of varying tastes need to accommodate each other. Balancing mega-farms with quiet bedroom communities is not an easy task. Siting urban residences near factories is no longer desirable either. Regional plans may clash with private ownership rights, but the alternative is uncontrolled sprawl, costly infrastructure improvements, degradation of the region's attractiveness, and a decline in the quality of life in the region, all the scourge of what now exists and what will attract people to the area.

Gap – NEW's current land use process is fragmented and a bottom up approach. Local plans can conflict and don't often mesh with a regional focus and can be inconsistent across the region. CEIGS information showed a lack of knowledge of regional assets beyond what was known locally and there were requests to inventory and publish NEW's assets.

Task – Develop a regional land use plan that imparts a top-down approach for community development. Local planners and regional planning commissions need to collaborate to view where the plans mesh and where they conflict. State mandated Smart Growth Plans, Comprehensive Economic Development Strategies, and regional planning commission plans offer excellent input into the regional development plan.

Inventory and catalog NEW's assets so citizens and economic development stakeholders are knowledgeable of the assets available across NEW.

Action Steps:

47. Inventory all:
 - natural resource assets in the region –
lakes, rivers, streams, land, parks, campgrounds, trails, etc.

 - educational and training assets in the region –
universities, colleges, workforce training centers, craft centers, art studios and galleries, etc.

 - economic development organizations –
chambers, economic development corporations, CEO groups, public action groups, realtors associations, etc.

 - civic groups –

citizen groups, volunteer organizations, social organizations, faith-based organizations, arts support boards, etc.

financial/business resources –

industrial parks, financial institutions, investment capital, loan programs, business organizations, small business agencies, entrepreneurial support groups, mentoring groups, etc.

knowledge assets –

research centers and parks, incubators, research and development funding, etc.

technology assets –

energy supplies, bandwidth, developing and applied technologies, etc.

and catalog them in a central location for internet access across the region. The regional planning commissions, chambers, and economic developers in NEW should collaborate on the task. The task should be coordinated by the region-wide chambers consortium and the regional planning commissions.

48. Hold a conference around each inventory set within twelve months to network and generate a vision among the participants that is consistent with the NEW vision. The focus of the conferences should be on how these assets can be used to attract and retain skilled labor and businesses. This could be coordinated by the region-wide chambers consortium and the regional planning commissions.
49. Network each inventory set group with the appropriate NEW REDC liaison(s).
50. Publish a webpage on the NEW REDC website for each inventory set through a “resource” page off the homepage.
51. Establish a region-wide land use plan that makes urban, suburban, and rural uses compatible. Explore models to share tax revenues to compliment NEW growth, such as the Minneapolis Metro Council model that, with statutory authority, dictates where development will take place in a five county area. The regional planning commissions should continue to take the lead on this, but possibly expand their role into regional comprehensive land use planning. The plan should highlight opportunities to infill urban development sites consistent with high density live, work, learn, and play designs, including business incubators and research centers; infill along major roadways for industrial development to make more efficient use of existing infrastructure and preserve suburban development space and agricultural uses; and seek to turn the abandoned urban waterfront properties (lakes and rivers) into mixed-use commercial and residential developments with adequate parking and public space. The condominium development plan near the UW-Oshkosh is a representative example of building near and upon the existing attractive venues of a waterfront and college campus.

52. Develop infrastructure to lead development. Plan and expand roads for commerce and recreation in conjunction with regional land use plan, not vice versa. While rural counties have more to offer NEW than just land, land is something they bring to the table. The expansion of Highway 29 from Green Bay west allows for workers to access more job opportunities with reasonable commuting time and safety. NEW should consider lobbying the state transportation board for expansion of Highway 41 to Marinette, Highway 141 north of Abrams, Highway 151 north of Fond du Lac and Highways 21 and 10 west of Oshkosh and Appleton, respectively. These projects have to be balanced with the desire for economic development in the affected outlying areas and the issue of urban sprawl.
53. Restructure property taxes so new developments pay the total cost of infrastructure expansion instead of the marginal cost. In other words, the total cost of, say, a sewage treatment plant expansion should be borne by a new housing development, instead of the expansion being averaged across all users. (See also development revenue sharing of Metro Council in Tactic IIA.)

STRATEGY III – CHANGE SOCIAL AND CULTURAL MINDSET TO RISK AND COLLABORATION

One of the factors identified in the Community Economic Information Gathering Sessions (CEIGS) as both a NEW strength and weakness was the conservative culture of the region. Many good things are attached to that culture. People in NEW have a sense of family, place, and traditions that bind communities together.

The success of the early pioneers was low-keyed and the notion of “quiet money” became standard in the region. Even though the region was developed by farmers and entrepreneurs who took enormous risks in settling the area, low tolerances for risk taking have become the norm as the economy of the region strengthened through successful agriculture and manufacturing. NEW now depends upon the major companies in the region and government as the primary drivers of the economy.

The conservative nature served the region well during the heyday of the industrial expansion and the focus on conformity, mass production lines, and increasing economies of scale. It is, however, now at odds with many of the free-market drivers of the New Economy. While the culture of hard work is necessary in both economic structures, the culture of risk aversion is not.

Another critical point in NEW is that local residents either take the resources available in the region for granted, e.g., the lakes, the universities and colleges, the industries and government services, or they are not knowledgeable of those resources (see Tactic IID above). While this is not a uniquely NEW phenomenon, it explains why newcomers to the region don't understand why those assets aren't maximized and promoted for attracting talent and businesses to the region, particularly when quality of life is such an important magnet. Locals worry that their quality of life will suffer if more people move into the region. As a result, it is critical to plan NEW's development in a way that will allow for growth without destroying NEW's cherished quality of life (see Tactic IID).

Old Economy

There is agreement in NEW that quality of life and quality of workforce are key factors for future economic development and prosperity. Survey information gathered in NEW, which backs up the CEIGS data, indicates that the most highly ranked ingredients for attracting fast growing businesses and talented people in the area are, 1) Quality Workforce, and 2) Quality of Life. These two items are, indeed, vital for robust economic growth in the New Economy.

Many in the region cling to the notion that major industries in the region and government support will generate economic progress. Survey data indicates that the perceived best way for the NEW to prosper in the future is to rely on 1) major industries in the region and, 2) government support.

However, with the decorporatization of regional businesses, slow employment growth in mature industries, and the strains on government services, those two economic development vehicles may be the least suited for the New Economy, particularly considering small businesses create seventy-five percent of new jobs across the U.S., and old businesses are growing slowly or not at all.

New Economy

The new engines of economic growth in the New Economy – risk capital, entrepreneurship, technology, and innovation – are all free market based. However, the item that ranked last on the list for mechanisms to guide and boost economic development in NEW, and by quite a margin, was Market Determination. In order to be successful in the New Economy, NEW will need to do what the pioneers and immigrants to the region did in the past – take risks.

The new reality is that capital will flow to where the returns on investment are highest, anywhere in the world. Moreover, government is becoming overburdened with providing public services.

Other essential ingredients such as diversity, image, and government collaboration are imperative in the New Economy. These ingredients were ranked well down the list of important talent and business magnets by CEIGS and survey respondents. There is not widespread recognition and acceptance in NEW of the need for these ingredients as important factors for future growth.

Gap

Survey data shows NEW looks to big business and government to lead economic development. Most job growth is created by new businesses. High-tech businesses create higher paying jobs. According to the Milken Institute Tech-Poles rankings of 315 metropolitan areas, Appleton/Neenah/Menasha ranks 207th, Green Bay ranks 253rd, and Sheboygan ranks 266th.

This information suggests that the NEW mindset for economic development is diametrically opposed to the tools and techniques of the New Economy. Therefore, it is imperative that NEW

instill the risk taking, entrepreneurial spirit and develop support systems to increase the odds of success plus heralding setbacks as the first steps in the move toward success.

Task

NEW must develop the collaborative *modus operandi* across the region in government, private enterprise, public/private partnerships, and community actions and embrace the theory of abundance to lead the economic development plans for the region.

Changing the social and cultural mindset in NEW will require promoting the vision developed through NEW CORE and embracing of the concept by all NEW stakeholders. Understanding the reasons why the mindset must change will bring greater acceptance of the initiative and knowing how it will be accomplished will garner more and continued support for the change.

Task List

- Instill a Risk Taking Culture
- Instill a Collaborative Culture
- Accept and Embrace Diversity

Tactic IIIA – Instill a Risk Taking Culture

Rationale: *Survey information indicated that NEW looks to large established businesses and government to lead economic development in the region. However, the building blocks of the New Economy are free-market based and most employment growth is generated by new companies. Indicative of that situation is the fact that Wisconsin ranks 47th in new business formations and 31st in high-tech jobs. According to the Milken Institute Tech-Poles rankings of 315 metropolitan areas, Appleton/Neenah/Menasha ranks 207th, Green Bay ranks 253rd, and Sheboygan ranks 266th. There are no formal visible angel networks in NEW.*

Survey data shows NEW looks to big business and government to lead economic development. Most job growth is created by new businesses. High-tech businesses create higher paying jobs. In order to shift the *modus operandi* (MO) for economic development in NEW from looking to large, established businesses and government supports to an MO of sustained growth from new, innovative, fast growing companies of the future, NEW needs to construct an information package, a communications package, and an entrepreneurship support network.

Gap – NEW looks to big business and government to lead economic development and ranks low in the new high-tech business startups. Most job growth is created by new businesses.

Task – NEW needs to instill a risk taking culture among its businesses, investors, citizens, and government partners. NEW needs to understand and apply the building blocks of the New Economy, creativity, risk-taking, and collaboration.

Action Steps:

54. Educate the public about the New Economy building blocks through classes, seminars, and/or town meeting forums. Incorporate risk and growth capital concepts into high

school business and economics classes. Educate local capital providers and users about the different stages of risk and growth capital through the course of a product/company development lifecycle. Demonstrate the need for risk capital as a necessary input to business innovation and progress. This can be done in partnership with NEWERA, NEWCC, UW-Extension agents, and economic developers.

55. Tie into the state-wide Entrepreneur Support Network that is being developed by the Wisconsin Department of Commerce. The leads on this would be the NEW REDC Business, Finance, and Government liaisons.
56. Hold NEW business plan contests. Award the top five or ten finishers in these business plan contests. Support local entries in the Governor's Business Plan Contest. Celebrate the outcomes of previous business plan winners.
57. Contact winners of the Governor's Business Plan Contest and host a seminar where they can present their business plans and strategies and talk about their journeys. Perhaps they will start their business in NEW.

Tactic IIIB – Instill a Collaborative Culture

Rationale: CEIGS information shows NEW is fragmented on economic development issues. Many economic development initiatives are in direct conflict with other nearby programs.

Referring back to Tactic IIB, the collaborative spirit that must be instilled in NEW will also permeate the collaborative and diversity aspects of the social and cultural mindset change that must come about in NEW.

Gap – NEW is fragmented on economic development issues. The New Economy is dependent on networks and partnerships.

Task – Instill a collaborative spirit throughout NEW. Working through and across established institutions in the region, permeate a collaborative spirit into the general populace to embrace the exchange of ideas and acceptance of new ideas into process solutions.

Action Steps:

58. Hold informational gathering sessions or town hall meetings throughout NEW demonstrating the current state of affairs and why the status must change. Several of the CEIGS groups expressed interest in continued meetings to further explore how they can address regional challenges. This is probably at least a two-year commitment to sufficiently address the issues' breadth and depth. Perpetuating these meetings may find them working toward collaborative solutions. Many of these sessions were originated by local economic developers and UW-Extension agents.
59. Create inter-conference, inter-school New Economy collaborations. Students from different schools form teams to develop regional community service plans. Students use modern tools (internet) and processes (geographically challenged teams) to develop,

manage, and complete projects. This collaborative process will model cross-regional teamwork and help build a regional identity and demonstrate the power of combining region-wide talent.

- 60. Have NEW REDC report frequently (quarterly or semi-annually) on the progress of regional collaborative economic development initiatives. The report must also present regional trends of key economic metrics to show if real progress is being made. This would be a collaborative effort by the REDC administrative and field staffs.
- 61. Hold an annual NEW economic conference. The conference will allow for reporting on the progress of regional economic development initiatives and serve as a way to promote the collaborative construct of NEW resource allocations. It will also be the forum to further present and discuss regional economic development initiatives. The REDC, chambers, workforce development boards, and UW-Extension should coordinate and hold the conferences. Private industry in the region should sponsor the event.

Tactic III C – Accept and Embrace Diversity

Rationale: *NEW has a largely homogenous demographic – white European ancestry. CEIGS information indicated that minorities and newcomers (regardless of race) felt unwelcome in the region and found it difficult to assimilate into their communities. Professor Florida’s construct for the New Economy talks of Talent, Technology, and Tolerance. The Tolerance aspect is the accepting of new and different ideas, lifestyles, and cultures and incorporating those attributes into the local culture.*

NEW Ethnicity Profile

Race	Percent of Population
White	94.1%
Native American	1.5%
African American	0.7%
Asian	2.1%
Hispanic	2.3%
Other	1.0%
<i>Source: U. S. Census Bureau</i>	

NEW must welcome outsiders, both to increase the flow of new ideas into the region and to welcome new people to the area that will be critical to future labor force needs. If outsiders feel unwelcome, they will not stay and their families will not establish the roots that will keep future generations in the area.

From its very beginning, NEW was built on a diverse and continuous mix of newcomers of German, Polish, Irish, Belgian, and other European immigrants. In recent years, new immigrants, Hmong, Hispanic, and African Americans, have moved into the region. As previous immigrants to the region, these people have taken great risks to leave their homes and move to an

area of promising opportunity. The cultural mixing has never been without tensions, but new talent and cultures must be embraced and their best ideas incorporated into the region's culture.

Newcomers from backgrounds and ethnicities similar to those already in NEW also see opportunity in the region and value the quality of life. However, not being from "around here" has made their acceptance into the community less than effortless. They bring new ideas and successful experiences from other areas that should also be incorporated into the region's culture.

Moreover, young people love diversity and always have. From their music to their clothes to their speech, being cool necessitates being different. Those seeking diversity will move to areas that offer it. At the risk of losing that homegrown talent forever, NEW must promote the new melding of cultures.

This diversity mindset challenge will take time as people, especially well established people, are slow to change. A short-term vision for this shift is neither helpful nor encouraged.

Gap – There is a lack of diversity in the region. Educated workers prefer rich cultural environments. Other cultures and regions can offer solutions to area challenges and spark creative ideas.

Task – NEW needs to attract talented labor. Talented workers are drawn to and innovation is often borne out of the mixing of cross-cultural and interdisciplinary thought. Tolerance and embracement of diversity also makes for a higher quality of life, in the absence of conflict.

Action Steps:

62. Hold diversity roundtables. Several of the CEIGS groups expressed interest in continued meetings to further explore how regional diversity can be advanced. This is probably at least a two-year commitment to sufficiently further the diversity discussions and achieve actionable items. See the ethnic discussion groups held in Madison as a model. Workforce Development Boards, UW-Extension, chambers, or labor organizations could coordinate these sessions.
63. Recruit the top global minority talent to the area and provide support systems for them and their families. Institute a local welcoming package for newcomers in the area. Realtors and company human resource departments could be the first line of action.
64. Create a "NEWComers Club". Establish a network and social organization for any and all NEW residents that weren't born in the region and those locals that want to meet and mix with new area residents. The club can help newcomers integrate into the local scene. NEWComers should host activities that show the attributes of areas from which newcomers came.

STRATEGY IV – CHANGE Regional IMAGE

NEW suffers from two image problems: internal and external. Internal to the region is this sense that NEW is “good enough”. The area’s populace knows they aren’t Hollywood, nor do they aspire to be; it’s too frivolous. They are aware of their heritage of hardworking rural and manufacturing folks. On the whole, the region would probably grade itself an A for trustworthiness, but at best a C for glamour. It regards itself as kind of a sensible place to live. There is, however, a side to the region that portrays a bit of an inferiority complex. Locals wonder why anyone would move to the region. The feeling rubs off on people in the area, including the youth that are moved (figuratively and literally) to explore more fascinating locations, draining the area of its future workforce.

Externally, the region is lumped in with the Wisconsin image of cheeseheads and the Midwestern rustbelt, both of which carry negative connotations in Hollywood and on Wall Street. In state, the region is overshadowed by southeastern Wisconsin and Milwaukee as well as Madison. NEW is often invisible as Wisconsin deals with the challenges facing Milwaukee and celebrates the successes of Milwaukee and Madison. Even promotion of the IQ Corridor from Chicago to Minneapolis leaves NEW out.

The silver lining in the challenge is that NEW knows it must create its own initiatives. NEW is coming to realize that only by working together as a region can it command enough clout before state government to attract attention. NEWREP, for example, was an excellent collaboration, convened to attract a technology zone credential.

Old Economy

Workers were attracted to where the jobs were. The lifestyle emphasis was on work. Labor was abundant for good paying manufacturing jobs. Relatively little education could land you in a unionized factory job for life, with good pay and good benefits. Less emphasis was placed on the living environment or the community amenities available in the area.

The Midwest Steelbelt was an attractive place to find work. It was not particularly glamorous, but the wages were good and the regional folks were practical.

New Economy

New Economy workers are more educated than their predecessors and New Economy business requires them. Skilled labor is not in abundance as is evident by the increasing spread in earnings by educational attainment. Furthermore, skilled workers’ lifestyles are relatively less employment-orientated and more community environment-orientated. Educated workers want a culturally rich environment to live, work, learn, and play.

The Midwest Steelbelt became the Rustbelt as major heavy manufacturing lost out to global competition, changes in the demand for products, and the shift to rapidly advancing technology.

Gap

The Midwest is still viewed by many as an agricultural and manufacturing based area that is neither glamorous, culturally rich, or offers high rates of return on investment. This image permeates Hollywood and Wall Street. There are no “Real World” TV shows set in Wisconsin and there are no major venture capital firms in the state.

While NEW does a pretty good job of retaining its college educated population, it does not attract them very well. Educated and skilled workers are not attracted to NEW, partly because it is associated with the dull image of the greater Midwest. And equally important is the fact that many of the area’s best and brightest leave the region to pursue opportunities that can fully utilize their skill sets. Those educated in marketing, the arts, computers, finance, science, engineering at the major state campuses see more opportunities elsewhere.

Task

To attract and retain labor, NEW needs to enhance its image as an area that supplies good jobs and a high quality of life. For the New Economy worker, one that is well educated, NEW must become viewed as a region that offers a cluster of high-tech job opportunities and a culturally rich living environment.

To attract capital, NEW need to enhance its image as an area that supplies new innovative products with high returns on investment. For the New Economy, those products are high value-added products that lead the industry and offer breakthrough technologies applicable to large national and global markets.

Task List

Roll Out an Internal NEW Image Campaign
Roll Out an External NEW Image Campaign

Tactic IVA – Roll Out an Internal NEW Image Campaign

Rationale: CEIGS information indicated an under-appreciation of the assets in NEW.

NEW must raise its own level of self-awareness and self-worth. A new attitude and mindset needs to be instilled throughout the region, both in geographic terms and demographic terms. The goal is to make people want to stay in the area, so that 1) the senior wealth doesn’t leave the area, 2) the labor force stays intact, and 3) the youth in the region value the area and either stay or come back.

NEW is filled with natural and cultural amenities that many locals take for granted and outsiders see as attractions to the region. Within NEW is access to urban areas, country sides, recreational and cultural event venues, and education centers all within short commutes. The combination of working, living, learning, and recreational venues all within 30 or 60 minutes and across all seasons yields a lifestyle theater that is uncommon in the nation.

Where else in the U.S. can you fish for your choice of salmon, walleye, or trout before work, then play soccer or ride a horse after work, and still get back to your home in the country or downtown in time for dinner, classes or a play? Where else can you play golf at some of the finest courses in all the world, sail a schooner on a Great Lake, see an international traveling dance troupe, and camp all in the same weekend simply by driving across a one hundred mile area? Where else can you have a need for ready access to bicycles, sailing gear, hiking boots, a snowmobile, and a kayak? These are the myriad of activities resident within NEW.

Professor Richard Florida's recent visit to the region has focused on the importance of "place" in the economic development of an area. NEW appeals to active people of all ages, but it is an especially good place to raise a family. NEW is a "cool and safe" place and a regional effort to market it as such can help to draw in well-educated, family people.

Gap – NEW is not viewed as a region that offers appealing work/life opportunities to the region's best and brightest. Agriculture and manufacturing do not capture the imagination of talented workers and investors. Many in the area don't know of or don't appreciate the resources available in NEW.

Task – Convince regional residents that NEW is in fact a hot spot of economic and lifestyle activity. The focus should be on coupling great jobs with great communities. This cannot be the traditional images of idyllic dairy farms and national European costumes. It must be more edgy, coupling high-energy activities in the work place and entertainment venues with tranquil getaway places and culturally rich environs. It is the availability of it all that provides the attraction of ready access to surroundings that meet your current mood.

Action Steps:

65. Build awareness throughout NEW of the need to change the region's image. Hold workshops or town meetings to portray the state of NEW's economy in comparative terms to the state and nation. Gather support and resources from the business, government, economic development, and education communities to get the word out.
66. Create a NEW image-revision public relations campaign to show the assets and opportunities available in the region. This needs to be an ongoing project. It should last for years to instill and then reinforce the concept thoroughly throughout the region and across generations.

Tactic IVB – Roll Out an External NEW Image Campaign

Rationale: External views of NEW are congruent with the external images of the Midwest: wholesome but dull, stodgy and uninspiring, perhaps even a bit backward. Wall Street also sees NEW and much of the Midwest as an agricultural and manufacturing holdout of low returns on investment.

NEW has a current external image/reputation that is tied in with that of Wisconsin and the greater Midwest of "beer, brats, and cheeseheads" reinforced by local and regional press,

Monday night football broadcasts, and others. Knowing that it is harder to overcome a reputation than it is to get one, there is much work to be done.

The assets of the region are plentiful. NEW needs to take its message out. The assets of the region must be marketed nationally and globally. Wisconsin has nationally and internationally recognized businesses, education system, attractions, recreation locations, and technology centers. These assets could be used in a major campaign to reposition NEW.

Gap – The external image of NEW is not one that will attract skilled labor and capital investment. The New Economy is based on skilled workers and risk capital.

Task – NEW must change its external image to show that it is, indeed, a progressive economic force with a rich cultural environment. There is a lot to draw from.

One theme could center around technology and include high-tech services (Schneider Logistics and others), high-tech equipment (Manitowoc Co cranes, Oshkosh Truck vehicles), homeland security and defense technology (FWD/Seagrave and Pierce fire engines, Marinette Marine high-speed Navy vessels, Oshkosh truck military vehicles, Bay Ship naval projects). These concepts should be expanded to include information technologies and life sciences.

NEW can enhance its reputation as the home of education excellence. An educational image displaying the myriad of resources available such as the public school system; the University System campuses at Oshkosh, Green Bay, Fond du Lac, Marinette, Manitowoc, and Sheboygan; the fifteen technical college campuses throughout NEW; the private universities and colleges in the area; plus the workforce development agencies, and how the K-Gray system of learning prepares citizens for work and personal development throughout their life spans would attract businesses seeking a quality labor force.

Other images that should be portrayed include the time vs. distance concept. That is to say you can live ten or twenty miles from work, yet be there on time in under a half hour as opposed to a metropolitan area where a twenty mile commute may take you an hour and a half. The same can be said for any recreational or cultural setting.

NEW can enhance its reputation as the birthplace and home of world-class businesses. A business image promoting major corporations such as Kimberly Clark, Manitowoc Co., Oshkosh Truck, Schneider Trucking, Schreiber Cheese, KI, FWD/Seagrave, Oshkosh B'Gosh, Mercury Marine, Menasha Corporation, Thrivent, Shopko, Kohler Co., Georgia Pacific, Palmer Johnson, Burger Boat, Acuity Insurance, Carver Boats, the Green Bay Packers, etc. would position the NEW region as a major national business player.

NEW is also the home of world-class tourist attractions. An attractions image should include a string of internationally known venues including Whistling Straights/Black Wolf Run golf complexes, the Experimental Aircraft Museum and Aircraft Show, Door County, and Lambeau Field to demonstrate the fine and varied venues for business development opportunities.

NEW should build an image around the abundance of freshwater resources. Few places in the world have the abundance of water assets of lakes, streams, rivers, bays, and a Great Lake. A recreational destination image around the vast and varied water resources of NEW (numerous streams, the Fox River, the Wolf River, Lake Winnebago, Green Bay, Lake Michigan, and other smaller lakes), supplemented by the cluster of marine businesses and activities built on these resources (Carver Boat, Bay Ship, Cruisers Boats, Marinette Marine, Mercury Marine, Burger Boat, Palmer Johnson) would attract people from around the world to sample the wealth of recreational resources in NEW. Maybe some of them would stay and bring their businesses with them.

Not only does this demonstrate the bevy of assets in the region, it also shows how one county alone does not have the assets to convey as powerful a message as can a united region. The key to the external image is the combination and integration of all NEW's assets. The image that should be portrayed is that access to and application of all these resources are seamless, powerful, and simply a matter of fact.

Imagine a commercial that shows a person eating breakfast as the sun rises, followed by a bit of trout fishing, then off to work, with the day ending on a soccer game, then a horseback ride to be followed by dinner at home with the family and homework just as the sun sets. Where else can you have access to all that within a typical day's travel? Or picture a farmer, factory worker, doctor, and engineer meeting for golf in the morning on the shores of Lake Michigan, at a little league game in the evening, and taking a class together at night. Alternatively, envision young people from all walks of life meeting in third spaces (places that are neither work nor home) to study together who then reconvene for ultimate Frisbee and then head off to a dance club. Intergenerational intersections should be conveyed as well, for example, young and old playing chess in the park, with a tablet computer sitting on the table logged on to the internet via a wireless connection so the senior can check his financial portfolio.

Action Steps:

67. Inventory NEW's assets. (See Tactic IID.) This is a comprehensive undertaking that should span all asset categories. It will serve as the basis for developing the image vision.
68. Develop a sustained external marketing message and campaign that cross sells the world-class attractions in NEW. This initiative will take a serious commitment of resources, both time and money. An underdeveloped promotional campaign is an ineffective use of resources. The message must come through clearly and be sustained long enough to establish the desired reputation.
69. Buy commercial time during the Monday night football broadcasts to present to the country the image NEW wants seen, much like colleges portray their institutions on commercials during bowl games.

STRATEGY V – PROMOTE INDUSTRY CLUSTER DEVELOPMENT

For readers that are starting their review of this economic development project with this strategy, you should make sure that implementation of the items listed below fall under the vision and New Economy construct presented above.

The structure of this strategy is a bit different from those above. The task list is somewhat removed from traditional economic development practices. Instead, the cluster development action steps focus on particular clusters, but in the context of the New Economy ingredients. The first cluster discussed, Paper, is given as an example of how the cluster can be expanded in the region. Not all the latest technologies for all the region's clusters are known to the authors. That task is left to the NEW REDC staff and regional economic development stakeholders. It should become clear in the Paper cluster example below why the REDC was constructed in the fashion it was.

There are some very specific items in the Paper cluster example that should translate to the other clusters listed. Development of clusters in NEW will depend upon the development of the previous four strategies as most New Economy technologies and industries are too complex to be accomplished without collaboration and multi-faceted partnerships.

Industry cluster development is the concept that regional economies are built upon a core of related industries and areas of expertise. According to the Cluster Mapping Project by Michael Porter at the Harvard Business School (the data set upon which this section is based), a cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, including product producers, service providers, suppliers, universities, and trade associations. Clusters arise out of the linkages or externalities that span across industries in a particular location. That has been the case in the past and probably will be in the future.

Clusters usually form over a sustained period of time and are often the result of a single breakthrough technology developed by a local entrepreneur that then draws in talent and spins off new businesses and support businesses. That is how the paper industry in NEW got started in the 1870s. That is how the supercomputer industry got started in northwest Wisconsin.

The problem in NEW is that there have been few major breakthrough technologies of late. Lack of entrepreneurial support, capital, and research and development has stifled the generation of new disruptive applications.

Old Economy

Old Economy clusters usually formed around available raw materials. Bulk raw materials were expensive to ship and pricing was done at production site. The wood products and paper industry in Wisconsin formed up around the timber and water resources in the area. The energy cluster in Texas formed up due to the concentration of oil and gas in the area. The textile mills in New England formed up from water power and the availability of southern cotton.

Labor came to where the jobs were. As the industries grew, so did the supporting industries and technology expertise of researchers, designers, marketers, supply chain, etc. Before long, a concentration industry formed up and perpetuated the comparative advantage of the industry.

New Economy

Products are now priced on a delivered basis. If it is cheaper to send raw materials half way around the world and finished products back at a lower delivered price, then so be it. The major change that has allowed this to occur is the much cheaper cost of labor elsewhere.

New Economy industry clusters will develop based upon New Economy resources – brain power and capital. Capital is mobile globally. Brain power will develop the new value-added products and services. New Economy industry clusters will develop around talented labor clusterings. The talent clusters will develop around creatively and culturally rich environments that attract talented labor. There are no silicon deposits in California. Software has no raw materials. Biological resources are everywhere.

Few can predict what the new products and services of the future will be, especially now that they will be based more on brain power than natural resources. It will be easier to predict where new clusters will form based upon the amount of New Economy ingredients in the area – brain power, capital, technology, research and development, and collaboration. It is the spark of an idea that will ignite the breakthrough technology of tomorrow. It is, therefore, imperative to develop and attract more talent to NEW.

Cluster development will work if the essential cluster ingredients of brain power, capital, technology, research and development, and collaboration are present in the region. Then it becomes a task of marrying the essential ingredients together to produce a clutch of supporting product producers, service providers, suppliers, universities, and trade associations around new high value-added technologies, products and services.

Cluster industries must be willing to look to breakthrough technologies that may even alter the focus of their industries. The oil industry was about to go bust in the early 1900s with the advent of electricity. Kerosene for lighting was the bulk of industry's market. On the horizon was a new technology – the automobile.

Gap – The major clusters in NEW are not growth-oriented and don't have the tools in place to develop breakthrough technologies and high growth markets. New technologies, entrepreneurship, risk capital, and a desire to think collaboratively and regionally need to be employed to create breakthrough industry clusters.

Task – NEW industries must embrace new technologies and pursue new products and markets. NEW must also embrace the combination of entrepreneurship and risk-taking to spawn new technologies and new high-tech, high-growth products and services. Many future products are unknown, but many of the concepts and technologies that will create those new businesses and industries are known. Further, the newer concepts and technologies will be born of the creative talent that must reside in the region if NEW is to prosper in the future.

Task List

- Look to grow existing clusters through new technologies
- Look to create new clusters built on the latest technologies
- Look to combine New Economy building blocks for clusters of the future

Centers of Excellence

Centers of Excellence figure prominently in the NEW economic development strategy and in the following discussion of clusters as an economic development tool for the region. Innovation is the key to successful product development and market leadership in the New Economy. Any successful cluster will only remain viable in the long-term if it includes within the cluster an active research and development component. That has always been the case and will continue to be so.

Centers of Excellence focus on the applied research that transfers new science and technology to the private sector. Centers of Excellence are usually created around specific industries or clusters. Centers in NEW should dovetail with each other across clusters that intersect, such as paper and printing. For a further explanation of Centers of Excellence and the Institute of Interdisciplinary Research see *Vision 2020: A Model Wisconsin Economy*, published by the Wisconsin Technology Council.

Cluster Benchmarking

Identifying the current set of clusters in the region is based on the Cluster Mapping Project (CMP) out of Harvard University. CMP indicates that the major clusters in NEW are:

Paper Products	Processed Food	Publishing and Printing
Forest Products	Insurance Products	Tourism
Agriculture	Metal Manufacturing	Production Technologies

Only two clusters are present across all three economic areas within the region: Processed Food and Production Technology. Subclusters of the two diverge. For example, the processed food subclusters in the Appleton-Oshkosh-Neenah area are specialty products and dairy related products, whereas the food processing subclusters in the Green Bay area are process machinery and meat products, and the Sheboygan area shows subclusters in dairy, process machinery, and specialty foods. It therefore becomes important to expand the collaboration between dovetailing clusters across the region, in this case dairy and meat products, and food processing and process machinery. This is also important for the workforce as they need not move out of the region if their talents can be used elsewhere in the region. In addition, subcluster collaboration can enhance the mass of the clusters and perpetuate and strengthen the regional cluster advantage.

The following clusters should be considered for future economic development in the area. However, business as usual will not improve the relative standing of the current clusters or the economy of the region. Development of each cluster will require the integrated use of research, capital, technology transfer, and marketing and promotion.

Current Clusters

Paper Products – Paper products are still strong in the region and increasing in national share, but the industry is losing paper machinery, paper mills, and employees. There are some new products and technologies developing with non-woven paper and film coated paper. The paper products cluster already dovetails with the printing cluster and the forest products cluster.

However, the big breakthroughs in the paper industry will not come from incrementally increasing the quality of their finished product. It will come from new tangentially related products, such as new raw materials, fuels, and composite materials. The BioRefinery is the latest concept in the wood and paper products industry. The BioRefinery will take paper's raw material and generate a whole new slate of marketable products. The national paper industry is now a \$5.5 billion dollar industry. The BioRefinery industry is projected to be \$14.4 billion dollar industry, with \$3.3 coming from preprocess chemical polymers, ethanol, and acetic acid; \$5.5 billion coming from paper products; and another \$5.5 billion from post process liquid fuels and chemicals, or power generation. NEW has the highest concentration of paper mills in the world. It could reap a congruent proportion of the BioRefinery industry.

The BioRefinery uses sustainable forestry, pre-pulping value extracts, and residual products utilization. It will reduce manufacturing costs, enhance product properties, improve energy efficiency, and generate alternative revenue streams. Offshoots of the processes create a new generation of fiber products and improved building systems.

The new Paper/BioRefinery cluster will combine with the forest products cluster for chemical polymers and fuels, the agriculture cluster through biomass fuels, the plastics cluster through composite materials, and create a super-biomass energy and materials cluster.

The broad cluster offers a myriad of high-talent occupational positions: biologists, chemists, biochemists, biomechanical engineers, chemical engineers, and all the technicians that a major complex production industry requires.

Many of the major regional clusters across all of NEW can take part in this expanded cluster: timber and agriculture in the rural areas, the paper industry in the Valley, and the plastics industry in the region. Moreover, the educational institutions will be called upon to train the workers of this new industry cluster.

Business leaders must come together to support this sort of broad industry initiative. They should embrace the potential of such an industry expansion and actively collaborate to support its success. The agricultural sector should not see increased ethanol production as competition, but rather the chance to build an ethanol products cluster in the region.

Communities across the region must work together to plan the economic infrastructure across the region to support an expanding industry. Community leaders need to work together to get state government support for development. They will also need to educate the public about the possibilities so there won't be logjams arising to slow the development.

NEW REDC would be one of the primary networking and coordinating entities to pull together the stakeholders in NEW. The proposed NEW REDC has been constructed to facilitate this very combination of research, finance, education, business, labor, and government resources, drive the logistics of implementation, and prepare communities for such industry initiatives. The field staff would identify aging boilers that would be ripe for installing the new capital equipment. Administrative staff would prepare grant proposals to help further the research, subsidize installation, and training workers.

It should be apparent in this example of how the combined building blocks of the New Economy and collaborative efforts within NEW can foster great strides in economic development across the region. These efforts should be congruently applied across all the clusters presented below.

Action Steps:

To secure the Paper cluster long-term,

70. NEW must regain a research center for the development of new products and processes to perpetuate the industry innovation required for long-term success of the cluster. The BioRefinery shows what can be accomplished through the interdisciplinary approach to technological advance. In this case, the concept, the technology, and the business practices are ready to execute.
71. New product companies surrounding the BioRefinery should be spun off with local ownership. The combined assets reviewed in the strategies above need to be networked to support the entrepreneurial efforts created by the BioRefinery concept.
72. The four (or more) related clusters should collaborate more on other new and innovative technologies up and down the supply chain, enhancing the possibility of creating new breakthrough products.

Agriculture and Food Processing – Much of the food processing industry is moving to the south due to cheaper labor and longer growing seasons. NEW needs to develop specialty and organic food products, the markets of which are growing twenty percent per year, and biomass based packaging.

Food safety has become a major issue and NEW is in a position to undertake the development of food safety types of business. Food safety is both a consumer issue and a homeland security issue. Food packaging should dovetail with the plastics cluster, the production technologies cluster, and the paper products cluster.

Environmental concerns about plastic waste are also rising. In line with the environmental movements of organic food products and biodegradable packaging, the agriculture/food processing cluster has great potential. Plastics made from corn are now cost effective alternatives in everything from McDonald's coffee cups to Sony Walkmans. The process uses corn and a fermenting process similar to that for making beer. Combining specialty products and biodegradable food packaging offers a rapidly growing market for the combined agriculture/food

processing cluster in NEW. Smart packages based upon chemical spectrometry and nanotechnology could self-inspect food for quality and safety. The corn derived polymers can also be used in clothing fiber that is softer than polyester and nylon. The biopolymers can be inputs to the plastics concentration in NEW and combined with wood product derivatives for composite materials for construction and other uses.

Large farms in the region can compete with the low cost end of the commodity products assisted by the fertile land and economies of scale. It is, however, not an employment growth sector in and of itself. The large cash crop farms in NEW should look to supplying materials to the biorefineries and biopolymers.

The large farm sector should consider vertically integrating from production to the final products through the on-site use of automated manufacturing that incorporates the biomass products for energy and packaging. Such a development could occur with complementary services of mechanized equipment and implements, processing techniques, plant science research, and expanded agricultural engineering being conducted locally and at the UW-Madison to increase margins.

This broad cluster development offers a myriad of high-talent occupational positions: biochemists, physical chemists, geneticists, agricultural engineers, mechanical engineers, chemical engineers, materials scientists, computer specialists, marketers, and all the technicians that a major complex production industry requires.

Note: It becomes apparent how the spiral of entrepreneurship, capital, workforce, and innovative technologies can build on itself for attracting more of each as the clusters develop. As the critical mass of expertise develops, more of the ingredients accumulate to further expand the potential – success breeds success.

For example, the common base in the above two clusters is biomass. NEW is rich in biomass. With a concentration in biomass science and technologies, talented workers in those fields will come to develop and make products, assured that they have a number of jobs from which to choose (see discussion about not wanting to uproot the family to chase jobs). Biomass product businesses will come to develop and make products, assured the skilled labor force and supporting expertise is present.

Industry stakeholders come together to establish a biomass Center of Excellence. Business collaborates with researchers on technology transfer. Educators train people in biomass disciplines – chemists, chemical engineers, material scientists, etc. NEW markets its biomass capacity in terms of resource base and expertise. Local investors fund entrepreneurs within the biomass products industry and across product technology horizons (e.g., smart packaging, composite materials). Local and state governments secure federal funding to support biomass technologies based upon food safety, homeland security, energy security, and medical solutions. NEW economic developers seek out companies that are interested in developing and making biomass based products, be they paper companies, food companies, energy companies, clothing companies, or construction materials companies.

Action Steps:

73. Explore the development of organic food producers, processors, and distributors. Create a region-wide organic food cooperative for production and marketing.
74. Established a food institute for product development and marketing of specialty and organic food products. The markets are growing twenty percent per year and NEW has ready access to the major metropolitan areas of Milwaukee, Minneapolis, and Chicago. National and global markets for specialty crops are also growing rapidly. Most ginseng grown in Wisconsin is consumed in China.
75. Assess the potential of developing the raw materials and finished products from biomass based polymers. Explore the development of food safety products and processes. Seek out federal grants to address the issue from the consumer safety initiative and a homeland security challenge. Explore how sanitation technologies can be applied to the health care industry. Work with the Government liaison in NEW REDC and the field staff to secure grants to research the issues and apply for federal contracts.

Note: Not all the latest technologies for the region's clusters listed are known to the authors. Learning about those would be the function on the REDC liaisons and field staff. It is hoped that the examples above will illustrate how the New Economy construct works and can be applied to the suggested clusters.

Printing and Publishing – NEW has competition within the state, but should develop collaboration with those concerns for marketing and the establishment of a research center of excellence for the industry to help combat international competition. (A valiant attempt was made to relocate a center from Pittsburgh. Perhaps NEW should work with the printing and publishing industry in southeast Wisconsin to establish another center in the state.) This cluster dovetails with the paper products cluster. The industry should also develop more on-line publishing products, either as development tools or on-line products, in collaboration with the education cluster. The education cluster develops the content; the publishing cluster develops the delivery tools.

Action Steps:

76. Establish a research center of excellence for industry technology that dovetails with the paper products cluster.
77. Develop the technology for more on-line published products. This should collaborate with the education cluster.
78. Develop a marketing collaborative for regional printing and publishing businesses for regional, national, and global reach.

Maritime Vessels and Equipment – There is the potential for expanding the boat and ship building cluster along the east coast of NEW. Homeland security and environmental (double hulled vessels) issues will dictate an increase in shipbuilding. Incorporating new tools and

techniques, such as the SYNCROLIFT, will expand the economics of the shipyards. The Sturgeon Bay shipbuilding master plan needs to be implemented to secure the continued presence of this cluster in the region.

Action Steps:

- 79. Undertake collaborative efforts to expand across subclusters of search and navigation technology, materials, and production processes.
- 80. Concentrate efforts to win more federal contracts and earmarked spending, perhaps under the guise of homeland security.

Insurance Products – The insurance industry in the region will continue to face stiff competition and is now at a disadvantage as a major headquarters (Aid Association to Lutherans/Thrivent) has moved out of state. The relaxation of financial industry regulations dilutes the industry definition, but offers insurance companies an opportunity to expand their markets across other financial services. On the other hand, regional, national, and international banks and financial houses offer insurance products as part of their financial management products. Local insurance firms can either focus on niche insurance product offerings or embrace a full portfolio of financial offerings. Trust product companies are one of the fastest growing industries in the nation.

Action Steps:

- 81. Look to redefine the financial product offerings. Decide if company focus is an insurance provision niche or full financial portfolio planning and management, which is one of the fastest growing clusters in the nation, especially in the specialties of funds, trusts, and pensions.

Tourism – Tourism is only listed by CMP as a cluster in one of the three economic regions in NEW, Green Bay, for accommodations and boat related services. Tourism is important for the whole region in attracting outside consumer spending, but it is not associated with high paying jobs.

Tourism should expand its reach in several directions. Eighty percent of Wisconsin travelers come from three states: Wisconsin, Minnesota, and Illinois. Tourism must expand geographically to include more visitors from more states. It must collaborate on its approach to offerings across the region. NEW offers attractions across all socio/demographic/economic classes. It must be marketed so.

Tourism must be used more proactively as a tool to attract businesses to the region. The industry should collect more and better data on out-of-area visitors, specifically what they do professionally. The attractiveness of NEW to live, work, learn and play may be enough to attract a senior vice president to locate a company division in the area or a research engineer to join a NEW research design center.

Action Steps:

82. Establish a NEW Tourism Council that can demonstrate the collective offerings in the region that will attract visitors (business and recreational) from all walks of life for longer and more frequent stays. Work to show how NEW is a multifaceted vacation destination for long-term stays – weeks, months, and even seasons.
83. Proactively collect data on visitors to assess their professional demographics (company position, resources command, and decision making level) and inclination to possibly establish businesses in NEW.
84. Work with business attraction initiatives to demonstrate NEW as the cool place to live, work, learn, and play – a concept integral to attracting talented workers, the major input for new economy businesses.

Production Technology – Production Technology is one of the two clusters that can be found throughout NEW. Wisconsin and NEW are known for making process machinery. NEW should focus on building the production tools for the world’s manufacturing base. This will require a local university engineering program for production technology, a center of excellence for design and development of the latest production technologies, and a “clinical” entity (supplied by the technical colleges in NEW) to train in the transfer aspects of the technology for production tools and processes. The center of excellence should continue to evolve its research into developing the tools for the production technology designers. This cluster should be tightly networked with businesses and the corresponding REDC liaisons of Education, Research, Labor, and Government to foster the two-way street approach to research solving industry production challenges.

Action Steps:

85. Establish a Production Technology center of excellence to design, develop, and transfer production technologies to shop floors around the globe. This center should be tightly networked with the corresponding REDC liaisons of Education, Research, Labor, and Government to foster the two-way street approach to research solving industry production challenges
86. Develop a curriculum in the university engineering programs to focus on production technology.
87. Develop a “clinical” program at the technical colleges for the transfer and installation of production line technologies to the shop floor.

Potential New Clusters

Specialty Crops – Specialty crop markets, from mushrooms to organically raised meat and eggs, are growing at twenty percent per year. NEW is well positioned from an agricultural and geographic base to exploit these new markets, particularly with proximity to the metropolitan

centers of Chicago and Minneapolis. Higher premiums paid for organic and specialty crops have helped farmers maintain cash flow and profit margins when commodity crops' prices fall. For example, when milk prices fell to \$11 per hundredweight in late 2002, farmers of organically produced milk were receiving almost twice that price.

Action Steps:

- 88. Establish an organic food products workshop through UW-Extension to educate farmers about the benefits of specialty and organic crops.
- 89. Establish a market research cooperative to determine and monitor specialty and organic crop markets and production practices.

Nutraceuticals – The demand for Nutraceuticals is climbing with the gains in holistic and preventative healthcare attitudes. Nutraceuticals are natural, bioactive chemical compounds that have health promoting, disease preventing, or other medicinal properties. Nutraceuticals are found in products emerging from (a) the food industry, (b) the herbal and dietary supplement market, (c) the pharmaceutical industry, and (d) the newly merged pharmaceutical/agribusiness/nutrition conglomerates. Based upon the agriculture, food processing, biosciences research, and major metropolitan markets, both nearby and abroad, a potentially vibrant nutraceuticals cluster could be formed in NEW. This is another candidate for a research center of excellence. This cluster should dovetail with the food processing cluster and the health services cluster.

Action Steps:

- 90. Explore the viability of establishing a center of excellence around nutraceuticals. The center should dovetail with food processing, agriculture, specialty crops, and health care clusters. Consideration should be given to tapping into UW-Madison and other research entities. An analysis of the industry should be undertaken as the first step in the viability study.

Automated Manufacturing Technology – NEW has a strong manufacturing base. However, it is centered on lowest cost goods production. NEW's manufacturers should redouble research & development efforts to take their in-house expertise and form an automated manufacturing technology consortium and a center of excellence that would focus on developing smart production lines. These production lines could be constant production lines that use nanotechnologies and other advanced monitoring technologies to measure throughput quantity, quality, and anticipate production shutdowns. The concentration of manufacturing in NEW would serve as an outstanding laboratory for testing the tools and techniques developed. It would require risk and capital investment from these local establishments, some of which could be funded from Wisconsin Manufacturing Extension Partnership grants. NEW could be a highly visible testing region for the national initiative to enhance U.S. manufacturing.

These technologies should not necessarily be installed in NEW factories, but rather designed and produced in NEW for other manufacturing production lines around the globe. This is a race to

the top strategy that uses the expertise imbedded in the region's manufacturing base, expands it through technological innovation, and makes NEW the center of manufacturing process innovation. This cluster should involve and evolve existing technologies of radio frequency identification (which is already going on in the region), nanotechnologies, and continuous process monitoring.

Combined with the distribution logistics expertise in the region, a state-of-the-art supply/demand chain accounting system could be invented. The system could serve as a real-time financial/management tool. The active collaboration of these industries could create another industry cluster built upon financial/management solutions.

Action Steps:

91. Establish an Automated Manufacturing Technology center of excellence to design, develop, and transfer automated manufacturing technologies to shop floors around the globe. This center of excellence should intimately dovetail with the production technology and machine tool design clusters and logistics concentration.

Machine Tool Design – Again, based on NEW's manufacturing base, the region's expertise in production engineering and computer aided design tools should be refocused on developing the tools that manufacturers use. This cluster should dovetail with the production technology and automated manufacturing technology clusters creating technology horizon intersections for production innovations. Evolving this concept would be to make the tools that tool designers use, maintaining the cluster's lead in state-of-the-art production processes.

Action Steps:

92. Combine Machine Tool Design into a center of excellence with Production Technology and Automated Manufacturing. Based upon the expertise in NEW and UW-Madison engineering research and development, the center could be of international importance. Funding can come from state, national, and even foreign interests as well as local private sector investment.

Education and Workforce Training Services – Education and workforce training services are the second fastest growing cluster in the U.S., driven by the need for and desirability of a more highly educated workforce. NEW has many educational institutions, training facilities, connections with outreach centers, and on-line learning companies. While NEW lacks a tier-one research university, a center of excellence around transferring the learning technology developed at research universities to the broad education market would fill an often neglected niche – that of getting the technology disseminated to the marketplace. This cluster should develop and produce the course content and teaching and learning tools for what is a global market reinforced by the need for advanced and continuing education.

Combining universities, technical colleges, and the workforce training centers in NEW, curriculum could be continuously expanded and teaching tools continuously enhanced. This

cluster should be naturally interactive with all the other clusters in the area, particularly the publishing cluster to develop new delivery tools, but should also develop curricula and tools that can be marketed globally.

Viable educational products can be developed and sold. A corporation could be set up to develop, produce, market, and sell educational products and services. Course content on everything from walleye fishing to biomedical engineering could be offered.

Action Steps:

93. Expand the role of NEWERA to include elementary, secondary, and private educational institutions to develop a NEW region education cluster that would serve the pre-K to gray population, *i.e.*, lifelong learning concept. This should include or encompass workforce training entities such as the Workforce Development Boards. The education concept and educational offerings should permeate all businesses and households in the region.
94. Establish a center of excellence around education that focuses on transfer of tier-one research university research and technology to broad market education and training.
95. Form a corporation, either not-for-profit or for-profit, to develop, produce, market, and sell educational products. The demand for educational products and services will continue to grow as the value of education will increase with time. Profits from the corporation should flow back into the center to fund development of new products and services.

Healthcare – Healthcare is not considered a traded cluster for NEW as there is not a major medical research complex in the region. It is, however, a viable local cluster. While this is true throughout most of the country, the predicted growth in health care demand offers much opportunity for trained health care professionals. Occupations across the health care spectrum will be in high demand over the next 40 years. NEW should expand health care education and training programs. The dearth of training resources is the major bottleneck for supplying enough health care workers. Training health care professionals should dovetail with the education cluster as the need for training will be large. Through a proactive collaboration, the health care cluster, education cluster, and insurance cluster could develop on-site and on-line training for health care providers and management. They could also work on developing clinical systems that would dampen the rise in healthcare management costs.

The healthcare cluster should consider a specialization in services to active retired people – NEW's tourism council should be marketing to this segment. The aging population and the growth in retirement homes and senior tourism lends itself to establishing a broad service industry for the wellbeing of active retired people – physical, social, cultural, and recreational.

Action Steps:

96. Establish a health care service consortium among all health care providers and industry servers in the region. The collaborative should encompass clinical, management, and service industry training. The collaborative should interact with the education and insurance clusters. Private industry should help fund the consortium as a means to help develop health care cost controls.
97. The consortium should also focus on the latest health care provisions and standards to keep health care costs in NEW competitive with those outside the region.

Other Clusters – Other clusters will develop in NEW provided there is the confluence of New Economy building blocks of education, research, capital, entrepreneurship, and quality of life. These clusters will form around the integration of modern technologies in the fields of computing, chemistry, biosciences, materials science, engineering, and modern management practices.

Long-term cluster development success will depend upon continually creating state-of-the-art technology that can be applied domestically and abroad. As commodity production moves offshore and foreign countries' industries eat their way up the technology food chain, the U.S., Wisconsin, and NEW will have to revert to the mechanisms that made the areas prosper in the past – creativity and innovation.

Action Steps:

98. Establish or partner with a state Institute for Interdisciplinary Research (see Vision 2020: A Model Wisconsin Economy, Wisconsin Technology Council) to create innovative breakthrough technologies across discipline horizons.

SUMMARY

NEW has many attributes that bode the region well for its economic future. The natural, human, capital, and creative resources in the region are abundant and have led to its past economic success. However, those resources are being underutilized in the transition to the New Economy. Past economic success was built on nearby raw materials and physical labor. Mixed with some ingenuity, the area prospered.

Success in the New Economy requires a different set of inputs – risk capital, innovation, and entrepreneurship. The New Economy is built on brain power and innovation. Education plays a key role in generating the talent to research and develop new breakthrough products.

In order for NEW to prosper in the New Economy, it must raise its education level, bring more risk capital into play, support entrepreneurship, and embrace diversity. The strategic plan provided above lays out a chart to do just that. The strategies have been broken out into specific

tactical items. Each tactic carries with it a list of action steps that provide detailed items to initiate in the region.

All the strategies, tactics, and action steps work together to build the cultural environment that will generate creative activities and innovative actions. All parts and pieces of NEW must pull together in this economic development strategy. The whole is greater than the sum of the parts, but more importantly, the pieces can't do it alone.

NEW must abandon the economic strategy of a cost race to the bottom and embrace the concept of abundance theory – all benefit more from a larger pie. This is best and most efficiently accomplished through proactive collaboration across all sectors in the region – business, labor, government, education, and the general populace.

In order for disparate groups to work together, they need a common vision. NEW's vision should be bold and all encompassing. The region should develop an economic development plan that brings all facets of the region's resources together as pieces of a puzzle. Together, these pieces make NEW develop in a controlled manner that draws the best from its resources while maintaining the desirability of region as one in which to work, live, learn, and play.

This will require an opening up of the region's mindset both socially and culturally. Cultural diversity is one key to the melding of fresh ideas, best practices, and collaboration required to make the most efficient use of the region's resources. It is what has worked in this country and the region in the past and it will be what works in the future.

NEW must also develop an image both internally and externally that promotes the resource and lifestyle benefits in the region. Inventorying and promoting the richness of the region will help to retain and attract businesses and people to NEW.

Many industries in NEW are world leaders and have supported its economy for generations. That can continue to be the case if those industries adapt to the New Economy with respect to innovation and global markets. New industries should be created and grown in NEW that will lead its economy in the future. Those industries will be built on new breakthrough technologies that are generated through the vibrant mix of ideas, creativity, capital, and entrepreneurship.

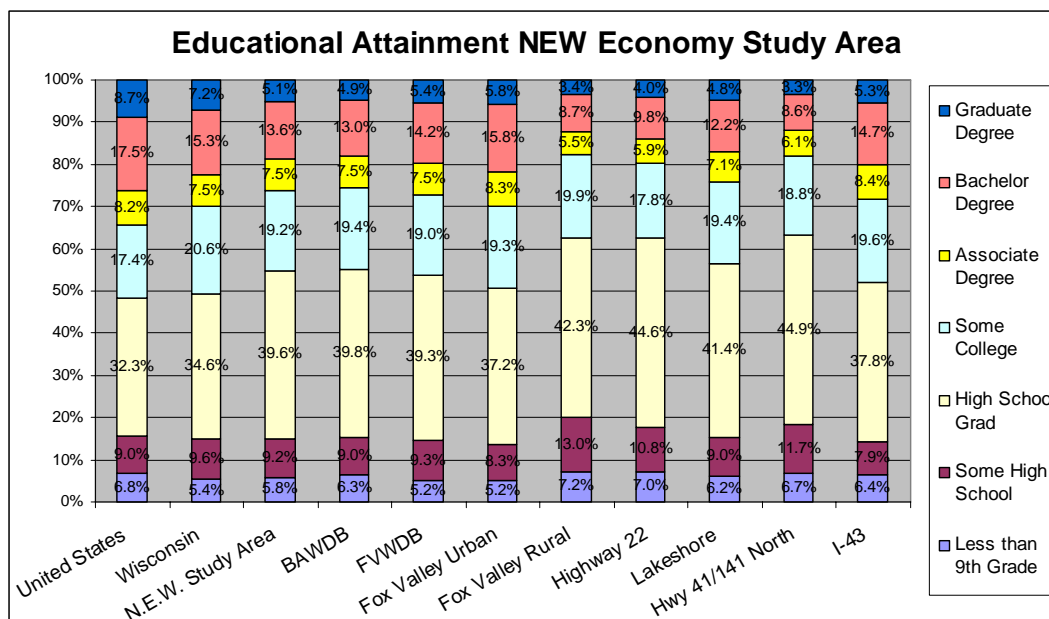
With enthusiasm and smart work mixed in with risk-taking and collaboration, NEW's best days lie ahead.

Subregional Breakouts

The subregional breakouts are based on data generated in the Phase I and Phase II analyses and from information gathered in the county CIEGS. It is evident that most of the subregions suffer from most of the shortcomings seen throughout NEW – slow population growth, low per capita incomes, and lack of educational attainment.

Per Capita Income Comparison

<u>Geography</u>	<u>Per Capita Income</u>	<u>Percent of U.S. Average</u>
U.S.	\$30,820	-----
Wisconsin	29,923	97.1
Brown	30,535	99.1
Calumet	26,200	85.0
Door	29,534	95.8
Fond du Lac	28,649	93.0
Green Lake	26,563	86.2
Kewaunee	21,888	71.0
Manitowoc	26,099	84.7
Marinette	22,603	73.3
Marquette	20,048	65.0
Menominee	16,930	54.9
Outagamie	31,274	101.5
Oconto	19,473	63.2
Shawano	21,734	70.5
Sheboygan	29,409	95.4
Winnebago	28,704	93.1
Waupaca	25,959	84.2
Waushara	19,172	62.2



There were varying, but similar concerns voiced about the parochial challenges, lack of cultural richness, and image across the subregions.

Economic development based on cluster development is difficult to achieve at a local level. Even the paper industry is a regional cluster construct of resources that spans several counties. Within each subregion, industry concentrations have a better chance of long-term success if they 1) seek to install the state-of-the-art technology, 2) support the workforce training of the workers they will need to operate that technology, and 3) explore the possibilities of spinning off new companies that augment their core competencies through collaborative cross-cluster advances in goods and services.

Phase II analysis showed disconnects in the supply chains that should be addressed, but also considered should be the technology overlaps that could be the basis of new start-up companies.

Subregional analysis is limited by the scope of the regional project and the data and information detail available. The scope of the project could not allow for the knowledge and assessment of every item and issue. There is also a matter of scale. Many subregions alone just don't have enough resources to develop major initiatives. It therefore becomes imperative that the subregions work together in a regional approach to improving their local economies, offering up their assets and reaping their share of the regional economic progress. NEW is strongest with all the parts included. This is made clear by the cluster descriptions presented in Strategy V.

Highway 22 Corridor

The Highway 22 corridor faces many of the same problems as NEW as a whole: aging population, low educational attainment, scarcity of skilled labor, and mixed community collaborations in the form of east versus west (e.g., the dividing line in Shawano County being the lake). So H22 should collaborate within the subregion and with the regional entities that will be working to solve similar problems. H22 also needs to inventory its assets so it can come to the regional table with something to offer labor and business attraction undertakings. H22 shares the region's quality of life characteristics of good schools, low crime rates, etc.

H22 industries that should be considered for advancement include dairy, food processing, metal forging, forest products, and paper products, listed in Phase II data as having subregional concentrations. Some local manufacturing companies have difficulty finding skilled labor.

Dairy farmers and food processors in the area should consider organic foods, the markets of which are growing rapidly. The forge companies have prospered in an old-line heavy industry sector by supplying products under a total quality management model. That is to say, the quality and value-added of delivered product is the most cost effective product for the customer.

The forest product and paper mill industries could collaborate to develop a biorefinery presented in the regional cluster section above. H22 should look to collaborating with H41N (see

subregion below) for developing a critical mass in a biorefinery project that would supply fuel to the foundries in the combined subregion and improved paper mill inputs.

Another industry consideration for development is homeland security and emergency response. H22 emergency vehicles industries should explore adding features to address new emergency response safety concerns, such as biological and chemical sensing and abatement. This industry may be able to support the same sensor technology that is suggested in the agriculture/food processing cluster in Strategy V above. Such a combined technology effort across applications, clusters, and parts of the region would advance the technology and lower its cost, not to mention attract workforce talent and market notoriety. Federal money should be sought to produce such technology on homeland security efforts.

H22 has land and recreational venues to offer the region. H22 can offer rural residential settings to workers commuting east, but it must develop sufficient retail to keep the commuting workers earned incomes within local communities.

The local tourism groups should be actively involved with the NEW Tourism Council to showcase H22's contribution to regional attractions. H22 should consider agri-tourism and eco-tourism as a way of augmenting farm revenues. Believe it or not, people from the city are willing to pay money to see a cow being milked.

H22 should also address the business disconnects outlined in Phase II for the subregion. See Table 10 in Phase II Highway 22 Corridor Subregion Report. For example, could more motor vehicle parts and accessories be produced locally, perhaps from creating a new company or companies?

H22 should also be actively involved in the regional land use planning. The goal would be to offer the region expansion possibilities while managing the growth to maintain the desired rural and tourism attractions.

Highway 41/141 North Corridor

The Highway 41/141 North (H41N) corridor faces some of the same problems as NEW as a whole: aging population, low per capita income, low educational attainment, parochial challenges, cultural richness, and image. H41N should collaborate with the regional entities that will be working to solve those problems. H41N also needs to inventory its assets so it can come to the regional table with something to offer labor and business attraction undertakings. H41N shares the region's quality of life characteristics of good schools, low crime rates, etc.

Like H22, H41N has agriculture, forest products, and foundries concentrations. H41N should look to collaborate with H22 in establishing an organic foods marketing coop and biorefinery to produce power and better paper mill raw materials (see regional biorefinery cluster concept above).

H41N shipbuilding is doing well with the construction of new stealth ships. However, much of the high-tech equipment in the ships is coming from outside the region. Phase II disconnect data show the shipbuilding industry imports a lot of furniture and fixtures. H41N might want to consider starting companies that can supply those components. H41N may also look to other shipbuilders in the NEW region to collaborate on jointly creating those companies.

H41N also has a concentration of computer aided design (CAD) expertise. As one CEIGS participant said, “There is more CAD in one company here than in all of Brown County.” This expertise, with the requisite broadband infrastructure and marketing, might be developed into a design cluster in the subregion that could assist other manufacturers in NEW and beyond.

The local tourism groups should be activity involved with the NEW Tourism Council to showcase 41N’s contribution to regional attractions. H41N should look at agri-tourism and forest-tourism as a way of augmenting company revenues. H41N has also shown a focus on health care for seniors. Combining senior tourism activities with health care provision, H41N should look to develop an active senior recreation/care industry. Seniors will vacation in an area that provides services that meet their recreational, social, and health care wants and needs.

Commuting patterns show a large number of H41N workers going to Brown County for work. Local business groups should explore the possibility of those workers having the combined expertise to start companies in the H41N area. The local business organizations could hold networking groups to determine who is interested in starting new companies in the area and what the available expertise is.

H22 should also be actively involved in the regional land use planning. The goal would be to offer the region expansion possibilities while managing the growth to maintain the desired rural and tourism attractions.

Lakeshore Corridor

The Lakeshore corridor faces some of the same problems as NEW as a whole: aging population, low per capita income, and low educational attainment. Lakeshore should collaborate with the entities that will be working to solve those problems. Lakeshore also needs to inventory its assets so it can come to the regional table with something to offer labor and business attraction undertakings. Lakeshore also shares the region’s quality of life characteristics of good schools, low crime rates, etc. Lakeshore has a rich mix of assets: tourism and recreation, agriculture, manufacturing, and higher education campuses.

The agricultural sector, food processing, metal ware, and plastics concentrations should look to cross cluster developments that could harness the biomass inputs for composite materials, smart food packaging and preparation products. Specialty crops and organic foods packaged in environmentally friendly containers that have embedded product quality and safety monitoring could become a vertically integrated industry cluster in the region.

Lakeshore should consider a concentration of high-tech or smart metal products, from metal ware to medical devices. The key is in the development of materials science, nanotechnologies, and composite materials. Explore the opportunity to combine food processing with sanitary metal ware for food safety and consumer products.

Lakeshore has a maritime cluster built around boat and shipbuilding. New models have increased demand for yachts. Defense, homeland security, and environmental issues have generated an upturn in the ship building industry with the development of stealth ships and double-hulled commercial vessels. However, the shipbuilding master plan for Sturgeon Bay needs to be completed and implemented to secure the cluster. New technology such as the SYNCROLIFT expands the seasonal period for ship building and repair. Retirees from the Coast Guard offer a local expertise to build upon for homeland security issues concerning ports. Workforce developers need to make sure there are enough trained workers for this activity.

Lake Michigan should be utilized more as a tourism destination area and as a recreational venue for attracting new workers. The area should work with the NEW Tourism Council to link and promote a system of traveling resort stops from Sheboygan to Washington Island that could be accessed by road, bike trail, or boat with a vast array of recreational activities along the way.

Lakeshore counties send thousands of workers to Brown County every day. The area should work with the regional land use planners to expand the residential options for Brown County workers who are attracted east for a more pastoral setting and proximity to both Lake Michigan and Lake Winnebago. The growth needs to be balanced with the desire to maintain agricultural lands and rural communities.

Lakeshore has a plastics concentration, but imports a lot of plastic products in its food processing and metal ware industries. Explore the potential for those plastic goods to be produced locally, especially those that can incorporate the local corn crop into the materials.

Fox Valley Rural

The Fox Valley Rural (FVR) corridor faces some of the same problems as NEW as a whole: aging population, low per capita income, and low educational attainment, but even more acutely. FVR should collaborate with the entities that will be working to solve those problems. FVR also needs to inventory its assets so it can come to the regional table with something to offer labor and business attraction undertakings. FVR also shares the region's quality of life characteristics of good schools, low crime rates, etc., but is missing an urban center and major highway connections from I-39 to Highway 41.

The main industry concentrations in FVR are agriculture, particularly poultry, iron & steel foundries, forest products, and tourism. FVR should explore the possibility of building a biomass refinery that could use the wood and other agricultural products to supply power to the local foundries and other users. FVR should also explore the biopolymer cluster concept discussed in Strategy V above to incorporate their major resources, land and biomass, with new technologies that could collaborate with the paper and plastics clusters in the region.

Collaborating on the food production, processing, safety, and packaging cluster would also be in FVR's interest. The potential vertical integration of the cross cluster technologies and processes could create in FVR a more comprehensive agri-business base.

Specialty and organic crops and livestock should be expanded for the farmers in the region, the markets of which are growing twenty percent per year. FVR should work with other farmers in NEW to establish a specialty and organic food cooperative and marketing organization. Agri-tourism should be expanded, showing urbanites how farms operate.

Economic growth from the northeast gives opportunities to attract commuters to FVR. Expansion of Highways 21 and 23 would allow greater access and shorter driving times to workers in Oshkosh and Fond du Lac that want a more rural residential setting. FVR must work with the regional planning commissions to balance commuter housing with rural and agricultural concerns.

Expansion of the highways would also put FVR in an advantageous location, between two major highways, for expanding warehousing and distribution. This concentration should work with the logistics firms in the region to develop and test package tracking technologies (e.g., RFID) to build a cross-concentration focus that would be part of the financial/management solutions industry cluster mentioned in the regional automated manufacturing cluster in Strategy V above.

Fox Valley Urban

The Fox Valley Urban (FVU) corridor faces some of the same problems as NEW as a whole: aging population, low per capita income, and low educational attainment. While FVU is doing better relative to the other corridors in these measures, it does not rank favorably against the U.S. averages – only Outagamie County's per capita income is above the national average, 101.5 percent. There is a large disparity between the counties in the FVU corridor. Brown and Outagamie Counties are above the state average in per capita income, and with Winnebago County have a higher educational attainment level than the state. The subregion metrics are pulled down by the low numbers from Calumet and particularly Fond du Lac Counties. However, no county is much above the state average in educational attainment and all are significantly below the U.S. average.

FVU should collaborate with the other subregions in the area as they hold the raw materials that will feed the FVU economy – land, labor, and biomass. The outlying areas also supply amenities FVU workers appreciate – quieter residential settings and recreational opportunities. Tens of thousands of workers commute to FVU every day. They value the jobs in the metro areas, but prefer other residential options. The mix of work/living venues is a regional asset to attract workers that FVU should realize and promote when attracting businesses and workers to the area.

The paper cluster is still the predominant single cluster in the region. This cluster should be expanded through the biorefinery model construct. The construct builds on the expertise in FVU and adds the expertise in the other subregions on paper industry raw materials (see paper cluster

discussion in Strategy V above). The expansion of this cluster would add products, skilled jobs and attract talented workers – chemists and engineers – to the region to increase the per capita income in NEW. FVU should look to recruit companies that are interested in forming new products from the biorefinery product slate, which include energy, fabrics, packaging, composite materials, etc.

Processed Food and Production Machinery are two other CMP clusters defined for the area. However, the subclusters for food processing diverge within the corridor. The processed food subclusters in the Appleton-Oshkosh-Neenah area are specialty products and dairy related products, whereas the food processing subclusters in the Green Bay area are process machinery and meat products. It therefore becomes important to expand the collaboration between dovetailing clusters across the region, in this case dairy and meat products, and food processing and process machinery, including the Sheboygan area that has subclusters in dairy, process machinery, and specialty foods.

The agriculture/food processing/packaging/composite materials cluster discussed above offers incredible opportunities for new products based on expertise in biomass. In addition, subcluster collaboration can enhance the mass of the clusters and perpetuate and strengthen the regional cluster advantage. This is important for the workforce as they need not move out of the region if their talents can be used elsewhere in the region.

FVU also supports clusters in printing and publishing, insurance products, and production technologies. FVU industry concentrations include internal combustion engines, plastics, and metal manufacturing. FVU should look at the cross-cluster discussion on the paper and printing/education cluster and health care/education/insurance cluster in Strategy V to expand upon the industries in the subregion.

The internal combustion engines industry is a local concentration. The internal combustion engine industry will need to incorporate new technologies and explore cross-cluster developments that will put their products at the forefront of technology for environmental solutions and perhaps emergency services.

FVU is the subregion best equipped to organize and initiate the practices to help the whole region. For example, NEWCC should expand their collaboration with other regional business groups and work with the REDC to garner the resources to identify the state-of-the-art technological innovations in the clusters presented in Strategy V. Specifically, NEWCC could work with the REDC to convene a taskforce of paper industry leaders, UW-Green Bay, the Forest Products Laboratory, and the Technology Association of the Pulp and Paper Industry to add form and substance to the paper industry research institute initiative begun by Representative Mark Green. So begins a Center of Excellence that jumpstarts the NEW BioRefinery cluster.

As the center of business and population, FVU must work very hard to collaborate and consolidate. It must take the lead on overcoming parochialism in the region. The costs of community services have become so high that they are a detriment to attracting talented labor and new businesses. NEWCC, NEWREP, NEWERA, NEWEP, and NEW CORE should come together to form a task force charged with consolidating service entities in the region.

Everything should be considered from road paving, to airport scheduling, to school district consolidation, to eliminating sub-county (if not sub-region) political jurisdictions. Reform provincial regulations so workers and businesses aren't concerned about their zip code, just their area code.

FVU has a large and central role in the regional economic development construct. FVU is in the center of this rich mix of contributing New Economy inputs and expertise. Moreover, FVU houses the brain trust of higher education institutions in NEW that train the workforce and enrich the cultural environment that attracts talent and subsequently business. FVU will continue to serve as the commercial hub in NEW, supplying the vast array of business, consumer, and community services to the region. It must embrace this role as a consortium and be the leader for the region, assuring that all NEW's resources are brought together for the prosperity of the entire region.