

City of Moraine Economic Development Strategic Plan

January 2010

Project | **LEAP** The City of Moraine's
Leading **E**conomic **A**dvantages & **P**rograms

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Executive Summary

The goal of Project LEAP (The City of Moraine's Leading Economic Advantages and Programs) is to create and execute an economic development strategy for the City of Moraine and Greater Dayton that strengthens their ability to recover from the General Motors assembly plant closure, stay economically sustainable and integrate Moraine's actions into the goals and strategies of the region. This economic development strategic plan provides a roadmap for accomplishing the goal. By identifying Moraine's opportunities for renewal, as well as its challenges, a practical action plan was developed that can direct economic development efforts for the City in such a way as to encourage its growth and long-term stability.

MARKET ASSESSMENT

The region has a long history of high-skilled manufacturing as well as a multitude of assets that can be leveraged to stimulate economic growth. With an array of higher education institutions, a low cost of living, and significant land and workforce availability, the region has very real opportunities in spite of the significant challenges it faces with the GM Plant closure.

The market assessment examines several key areas of the local economy and provides a scan of Moraine's current economic condition and trends:

Strategic Areas	Moraine Competitive Strengths and Assets
Workforce & Education	K-12 system is generally very good. Regional higher education institutions provide high-quality graduates and research and development activities. The community college is responsive to specific training needs. The percentage of the population made up of young professionals (25-44) is declining, but in real numbers they have been increasing.
Quality of Life	Numerous natural attractions and affordability make the region attractive to young families. Cost of living is very low, mostly due to a buyer's market for housing. Commute times are competitive, with many people opting for a country or small town lifestyle due to fast highway travel. Overall crime is low, although violent crime has recently occurred with above-average frequency.
Business Climate	Department of Defense personnel, researchers, and defense contractors have a significant impact on the local economy. Other significant sectors include advanced manufacturing, education, and health care. Taxes are high nationally but competitive regionally and are improving.
Sites & Infrastructure	Recent business closures have left many industrial sites and buildings vacant regionally and throughout the Midwest. Lease rates are therefore becoming more competitive. The city enjoys strong transportation assets including freight rail access, multiple major interstates, and a regional airport. Utilities are accustomed to working with industrial requirements.
Economic Development & Marketing	State policy (CAT tax) fiscal challenges as well as local labor losses have weakened the State's and City's ability to attract or encourage growth through abatements, incentives, or infrastructure investments. However, local property taxes are competitive, and the region benefits from competitive utility rates. The City has a positive reputation of being collaborative with neighboring communities and supportive of businesses.

INITIAL SITE SELECTION ASSESSMENT

In order to develop an appropriate strategy to replace the jobs lost from the GM plant closure, Angelou Economics partnered with Foote Consulting to conduct an industrial market assessment and preliminary site selection assessment of the Moraine GM plant.

The Moraine site has numerous strengths. It has rail service, good access to Interstate 75 and Midwest markets. Environmentally, little to no remediation will be required to make the site reusable. Water, sewer, electric, and telecommunications infrastructure leading into the site are very good. The sale price will likely be very low.

From a facility perspective, the General Assembly Plant is an excellent industrial facility that should be retained. It comprises the “best space” available to attract future investment which totals approximately 1.24 million square feet. However, the site was developed for very specific purposes that are hard to retrofit to new, non automotive-related industries. Most purposes will likely require at least partial demolition. Increasing the challenge is the availability of approximately two dozen other large, vacant transportation facilities within the region.

TARGET INDUSTRY ANALYSIS AND RECOMMENDATIONS

While the GM Plant closure creates significant challenges for Moraine, it does present very real opportunities to recruit industries into the region that will allow Moraine to stay economically vibrant. **Through the target industry analysis, the following six industries along with specific market niches were recommended as targets for the region: renewable energy and energy efficiency, aerospace, health services and technology, advanced materials and manufacturing, logistics and distribution, and business and professional services.**

The Moraine Region's top 6 industry clusters:

Renewable Energy and Energy Efficiency – With concern over oil prices and reserves depletion, as well as environmental concerns, renewable energy research and technology development has boomed over the past decade. With increasing political support and government funding opportunities, this industry is only expected to increase. As a central logistics location with strong manufacturing expertise and industrial space, there are significant opportunities for Moraine and the region within this sector.

Aerospace — The Dayton MSA has a 1.58 location quotient for aerospace, which does not include the non-civilian employment at Wright-Patterson Air Force Base. Additionally, the Air Force Office of Scientific Research (AFOSR) is headquartered on WPAFB, marking the region as the home of the key decision makers for aerospace research and funding in the country.

Health Services and Technology — As baby boomers begin to retire, health services will continue to grow as an important employment sector within the United States. The region has a strong health services and technology presence already. The presence of strong health training programs such as the one at University of Dayton and significant medical technology businesses, such as CompuNet, show the region is positioned well for continued growth.

Advanced Materials and Manufacturing – New materials are continuously being developed to improve technology, medicine, and manufacturing. With the region's National Composite Center, an industry leader in composite research and company incubation, and its longstanding history of materials manufacturing, the Moraine area has a strong competitive advantage in cultivating this industry.

Logistics and Distribution — With major rail and road access, as well as a location central to the Midwest and Northeast, Moraine and the surrounding region hold a competitive location for logistics and distribution companies or operations.

Business and Professional Services — Moraine and the region has slightly less people employed in business and professional services than the national average on a per capita basis. However, the region has shown strong growth within this sector and has opportunities to build upon existing office space to attract additional business and professional services operations.

REVERSE SITE SELECTION ANALYSIS

While Moraine is a competitive place to do business, companies must be able to recognize this fact based on public data as well as information provided by the city and region. In order to gauge how well the city compares (through a site selector's eyes), AngelouEconomics conducted a reverse site selection exercise. Moraine and competitor cities in the 4-state region were sent Requests for Information (RFIs) for a fictitious wind turbine project. Each community was scored both by the information it provided as well as the information available through public databases.

Compared to the other cities, Moraine performed very favorably, coming out clearly on top. While it did not rank better than second in any individual category, overall it scored 8 percent higher than the closest competitor:

Based on these results, AE recommends that the City of Moraine consider the following:

- **Develop a freight/logistics model for manufacturing projects.** This should be designed to help you to understand and compare freight costs and therefore understand where other costs could be adjusted in order to compete more effectively for projects.
- **Conduct a detailed engineering cost analysis of the GM facility.** This should be focused on the needs of target industries, such as wind turbine manufacturing.
- **Conduct a detailed skills matching analysis for wind turbine industry.** This should build on the results of CEDS study and other recent local efforts.
- **Promote the positive aspects of this analysis in your economic development marketing.**

ACTION PLAN

The *Economic Scan* and *Target Industry Analysis* reports shed light on the Moraine region's greatest economic development opportunities. **To be competitive the City of Moraine and the Dayton region must work collaboratively to leverage existing strengths towards a knowledge-based economy that supports innovative industry clusters where entrepreneurship, production capabilities and highly skilled workers will be the driving forces of the economy.**

The Moraine Action Plan comprises a set of strategies that support this collaborative strategy. It sets a framework for connecting, networking and leveraging important economic development, education, workforce and industry assets to attract new employers, strengthen existing companies, encourage entrepreneurship and foster community collaboration all while making the region more competitive for industries. Just as the closure of the GM plant has affected the entire Dayton region, effective economic repositioning and recovery will require close teamwork of the entire region.

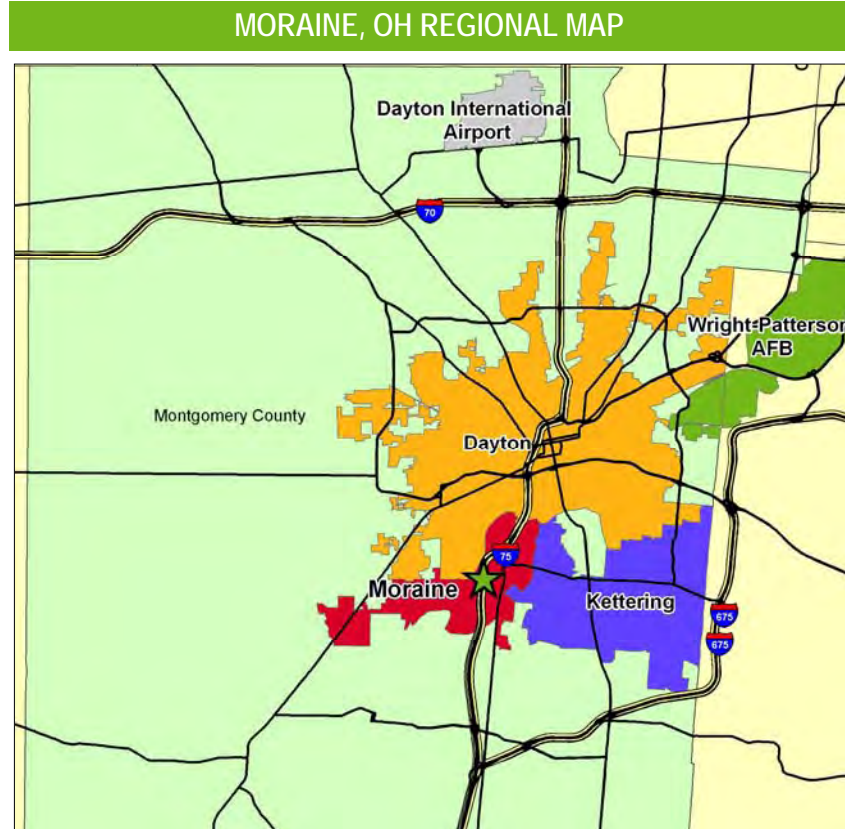
This action plan focuses on five core strategy areas:

1. Implementing an aggressive target industry marketing program
2. Expanding support to existing industries and entrepreneurs
3. Putting appropriate real estate options and infrastructure in place to meet industry requirements
4. Ensuring the proper alignment of workforce skills
5. Strengthening the business climate

Market Assessment

MORAINE AT A GLANCE

The following section presents an analysis of the demographic and economic trends shaping Moraine and the surrounding region. The City is described here against benchmark areas that have similar economic, demographic, and historical characteristics. These include **Wixom, MI, Georgetown, KY, Lafayette, IN, and Janesville, WI**. Each of these has either experienced the closure of an automobile production facility or is still heavily reliant upon one. Additionally, Moraine was compared to Dayton MSA, Ohio state, and national trends. When possible, the city or MSA was used. Otherwise, county level data was utilized. All charts and tables note the municipal boundaries that were used.



Source: AngelouEconomics

AT A GLANCE								
	Moraine, OH	Wixom, MI	Georgetown, KY	Lafayette, IN	Janesville, WI	Dayton, OH MSA	Ohio	USA
Population (2008 Estimate)	7,105	13,952	22,643	56,468	63,069	832,480	11,511,691	301,621,159
Population Growth ('90-'08)	7.9%	63.1%	77.1%	14.2%	18.6%	-1.4%	6.1%	22.8%
Unemployment Rate, March 2009*	11.3%**	11.7%**	10.2%**	8.7%	13.6%	11.1%	10.1%	9.0%
Labor Force Growth ('90-'08)	13.5%	49.8%	87.9%	12.4%	21.5%	0.2%	12.1%	24.4%
Median Household Income (2008)	\$42,646	\$54,478	\$55,585	\$45,144	\$56,809	\$52,160	\$51,270	\$52,599
% Bachelor's Degree + (2008)	9.91%	42.9%	21.84%	27.49%	22.8%	24.46%	23.52%	27.8%
% in 25-44 Age Group (2008)	29.9%	30.6%	31.4%	33.8%	28.8%	25.5%	26.2%	27.3%

* Not Seasonally Adjusted

** Unemployment rates are for the counties in which Moraine, Wixom, and Georgetown are located

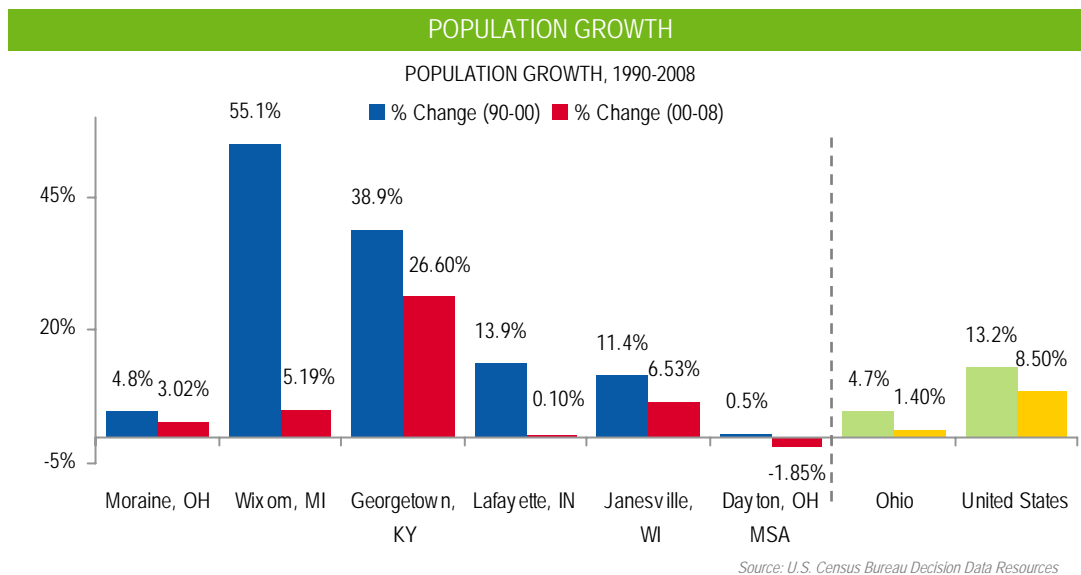
Source: U.S. Census Bureau, Bureau of Labor Statistics, Decision Data Resources

DEMOGRAPHIC PROFILE

This assessment of Moraine's demographic trends serves as a snapshot of the population dynamics shaping the region. Indicators highlighted include migration, populace by race and ethnicity, age distribution, and income levels.

POPULATION GROWTH

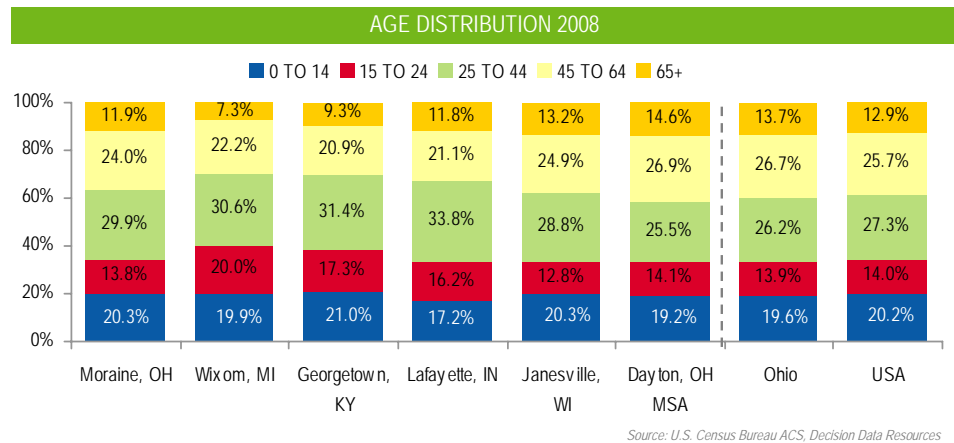
- Moraine's 2008 population estimate was **7,105**.
- Between 1990 and 2008, the city population **increased by nearly 8 percent**. Growth has remained fairly consistent over this time period, growing roughly 0.43 percent per year.
- Note that while growth through annexation of additional areas is not unusual, almost all of Moraine's growth came through boundary expansion and the addition of some multi-family housing along Cobblegate.
- While Moraine grew more slowly than most benchmarks over this entire period, the City showed stronger growth relative to the Dayton MSA as well the State of Ohio.



AGE DISTRIBUTION

An aging population is a nationwide challenge with significant economic and workforce development implications. Since 1990, Moraine has experienced a decrease in the percentage of its population comprised of young professionals (ages 25-44). This age group, often part of a community's "creative class" and almost always the engine of innovation, is extremely important for economic growth. While the actual number of young professionals within Moraine has grown, this demographic has grown slower than older ones.

- Age distribution in Moraine aligns closely with national, state, and most benchmark norms.



- Cohorts age 25-44 years old constitute a smaller portion of the population than benchmarks, but are **competitive at the local, state, and national levels**.
- Even though Moraine has experienced young professional gains in actual numbers, they are decreasing as a percentage of total population.
- While the national median age has risen by 12.2 percent since 1990, **Moraine's median age has increased by only 6.2 percent**. This suggests the City's workforce is being replenished through retention or attraction of young people at a rate nearly twice the national rate
- Along with slower aging that is taking place in Moraine, the average worker is fairly young, at 34.7. This is nearly 10 percent younger than the Ohio State average and more than 6 percent younger than the nation as a whole.

MEDIAN AGE 2008	
Georgetown, KY	31.5
Lafayette, IN	31.8
Wixom, MI	32.0
Moraine, OH	34.7
Janesville, WI	36.7
Dayton, OH MSA	38.6

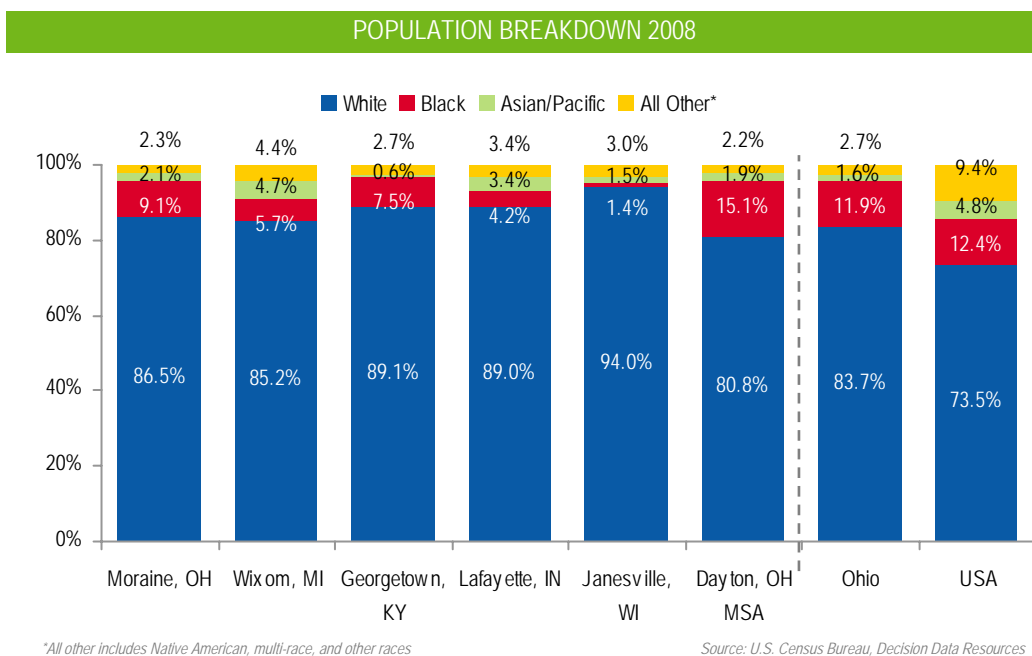
Ohio	38.1
United States	36.9

Source: U.S. Census Bureau

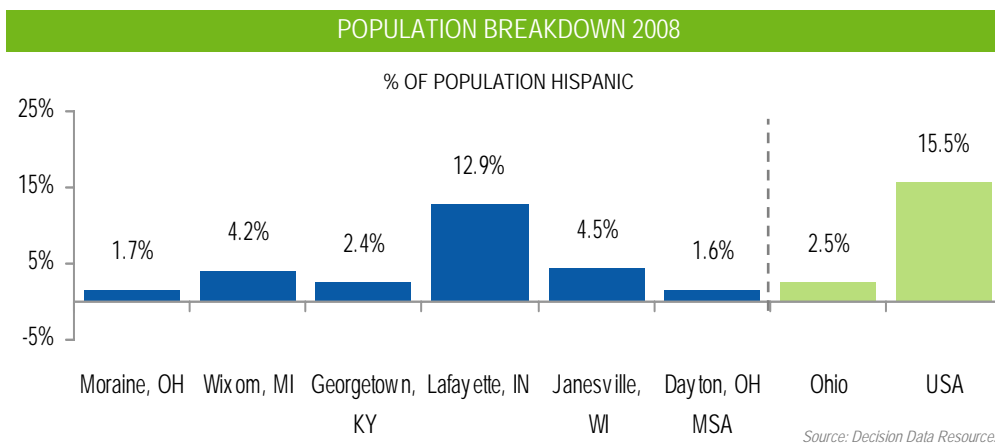
DIVERSITY

Workforce diversity can provide a competitive advantage as creative and innovative firms increasingly seek out locations with pools of diverse, creative people. Businesses have found that homogenous communities are less attractive to an innovative and creative workforce.

- Moraine is less diverse than the nation as a whole, with **13 percent more people reporting as white than the national average.**



- While more diverse than Moraine alone, the Dayton MSA is still less diverse than the nation. **However, it does have greater diversity than the state.**

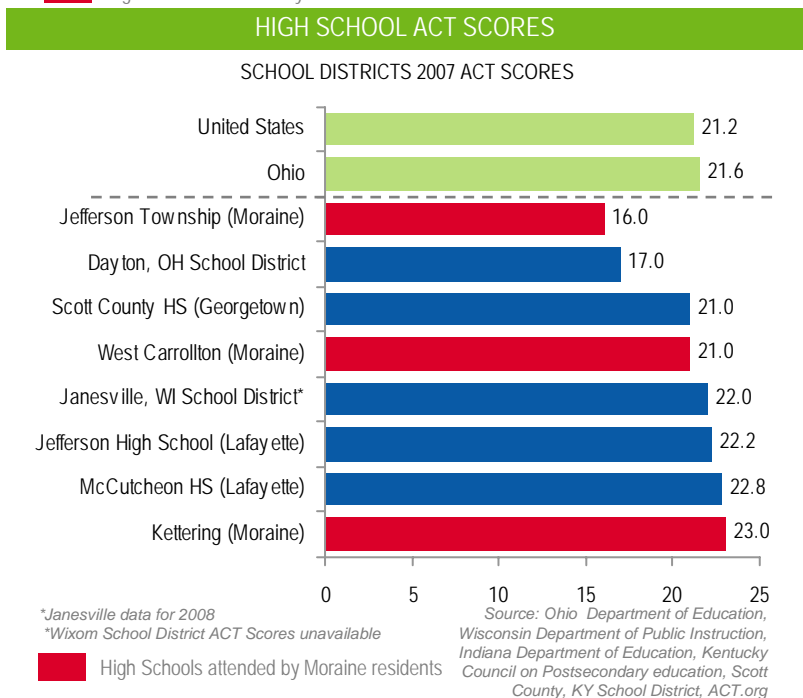
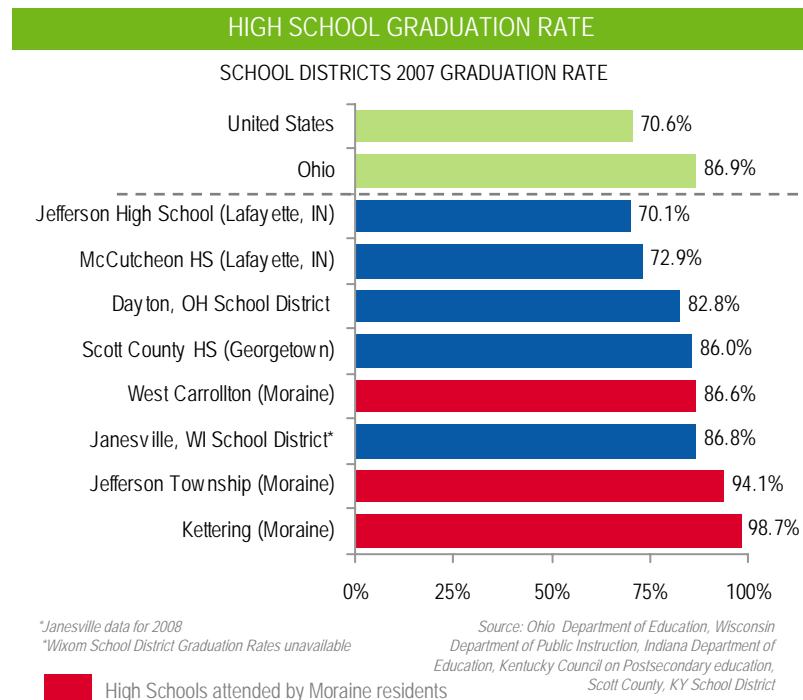


- The US Census considers Hispanic descent to be an ethnicity rather than a race. This allows survey respondents to claim both race and ethnicity, such as a person reporting to be a white Hispanic. For this reason, Hispanic ethnicity must be examined independently of racial population distribution.
- The Hispanic population in Moraine, while similar to many benchmark metro areas, is well below the national average.

HUMAN CAPITAL

This section assesses Moraine's base of available and skilled professionals to support an innovation-driven economy. Educational attainment – the number and percentage of residents receiving an advanced degree – is one indicator, as is the type of degree received. Regions with an established pipeline of young professionals with advanced degrees in science, technology, engineering and math programs, for example, will provide a deep talent base upon which to recruit and nurture high-impact and competitive industries. In addition, the quality of K-12 systems that provide young people foundational skills and expose them to different career options is critical to developing the region's overall human capital.

- All three school districts serving Moraine – West Carrollton, Kettering, and Jefferson Township – **have graduation rates that match or exceed benchmark, state, and national averages.**
- The school district with the lowest graduation rate still surpasses all but one benchmark and only lags by 0.2 percent.
- While graduation rates are fairly consistent for all Moraine school districts, ACT scores do not correspond. Performance varies widely between school districts.

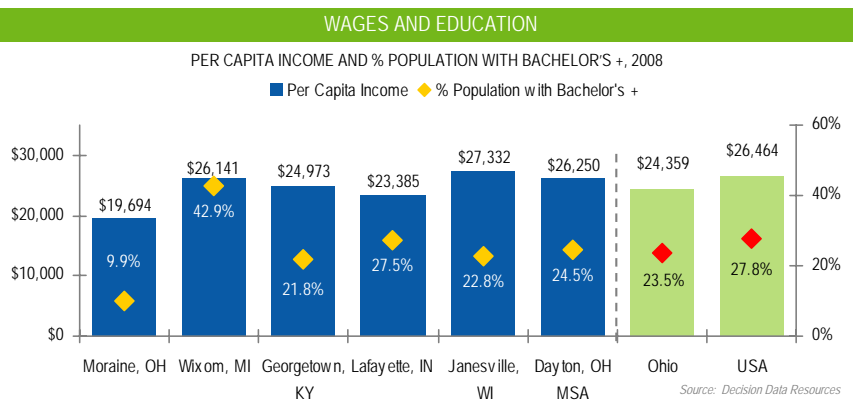
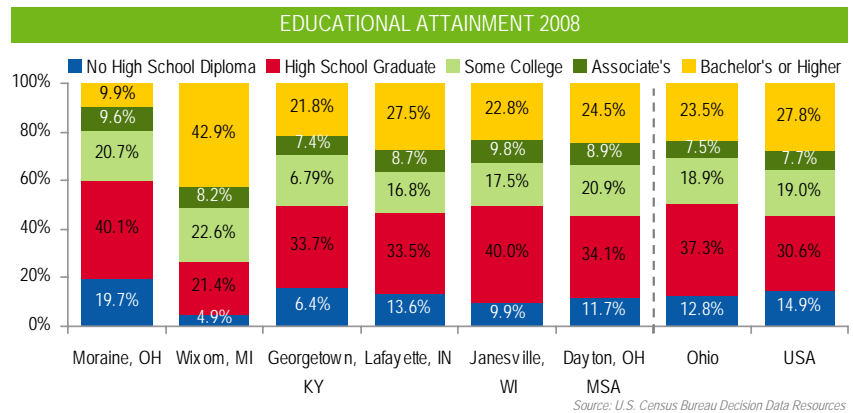


- Moraine faces challenges related to the educational attainment of its workforce. High levels of education are essential for moving workforce up production value chains.

- Less than 10 percent of residents 25 and older have a Bachelor's or higher, less than any benchmark and nearly 20 percent less than the national average.

- While postsecondary educational attainment presents a challenge for Moraine, over 80 percent of residents have a high school education or greater.

- Typically, there is a strong correlation between educational attainment and per capita income. Moraine workers enjoy high income relative to education, although the recent GM closure is expected to substantially change these figures.

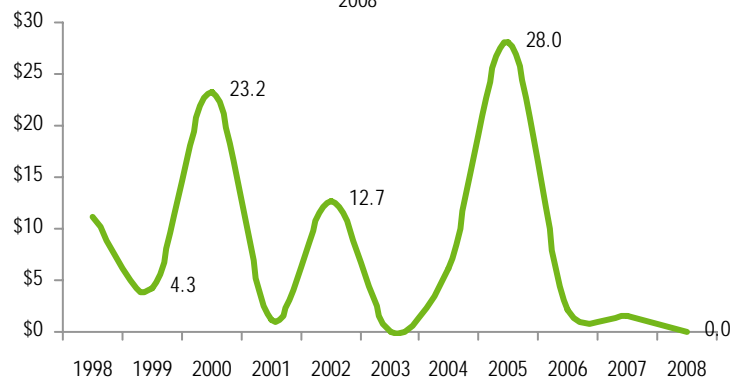


INNOVATION

- The existence of venture capital (VC) investment in a region is a good indicator of the community's technological innovation and of the existence of start-up companies.
- The Moraine area experiences sporadic investment, usually to support only a few deals that typically come from startups at University of Dayton and technologies from Wright Patterson Air Force Base.
- The Moraine area compares very favorably to all benchmarks, having similar funding cycles and outperforming all areas except Lafayette, IN, which benefits from the presence of Purdue University.
- While Moraine VC funding was substantial in 2005, there has been limited funding since then.
- VC funding is not an indicator of whether or not firms are likely to locate in the area. Rather, VC indicates that an area is home to start-up technology companies and entrepreneurial activity. **Cities with major universities and research centers cultivating new ideas and attracting federal research dollars help to improve a community's ability to attract VC.**
- In 2006, Moraine had four regional institutions that received local, state, and/or federal research and development funding: University of Dayton, Wright State University, Air Force Institute of Technology, and Central State University.

VENTURE CAPITAL FUNDING

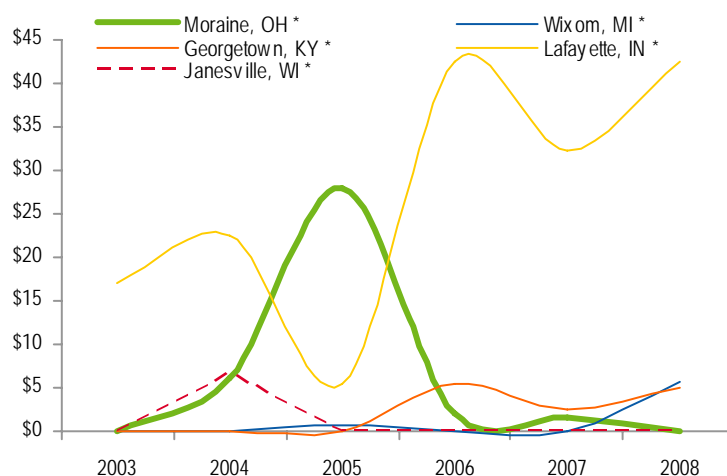
VC FUNDING, MORaine, OH, CONGRESSIONAL DISTRICT 8 (\$ MILLIONS), 1998-2008



Source: PWC Money Tree

VENTURE CAPITAL FUNDING

VC FUNDING BY CONGRESSIONAL DISTRICT (\$MILLIONS), 2003-2008

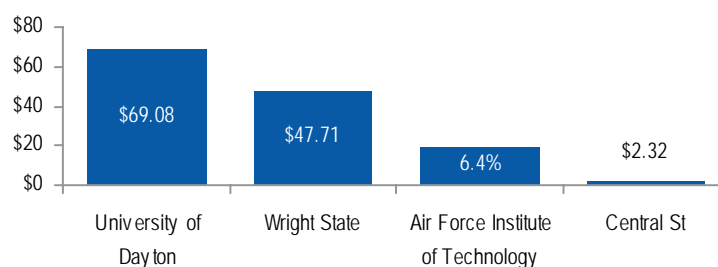


*Data represents the Congressional District encapsulating the City

Source: PWC Money Tree

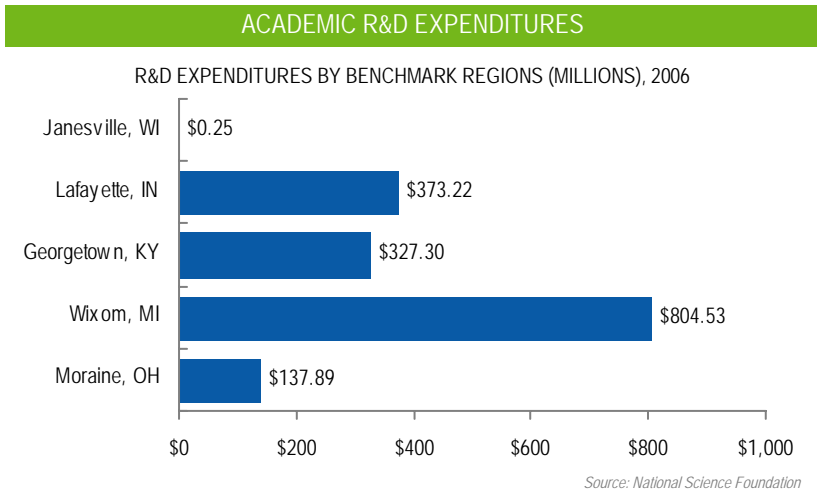
ACADEMIC R&D FUNDS

R&D EXPENDITURES BY DAYTON MSA INSTITUTION (MILLIONS), 2006

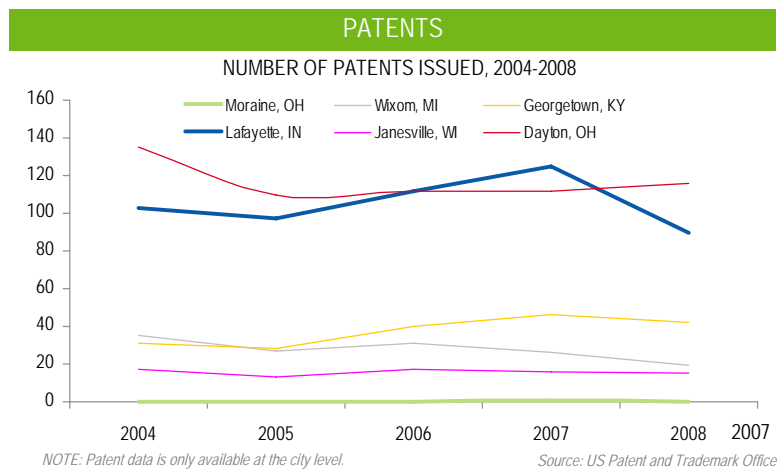


Source: National Science Foundation

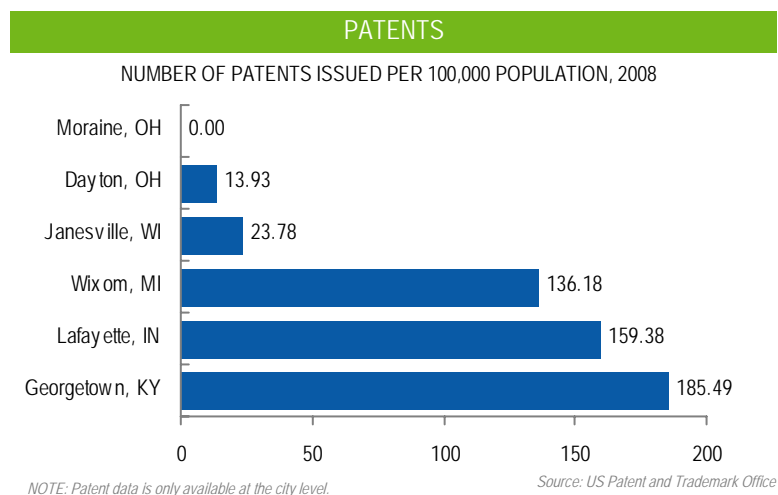
- The most R&D expenditures occurred at the University of Dayton, with nearly \$70 million.
- While the Moraine region has substantial R&D expenditures of nearly \$140 million annually, it is significantly less than all benchmarks but Janesville, WI.



- It is important to note that in addition to academic research and development and the expenditures for innovation by the private sector, the Dayton region has significant spending on research through the Air Force laboratory at Wright Patterson Air Force base, which equals approximately \$4 billion in annual spending.

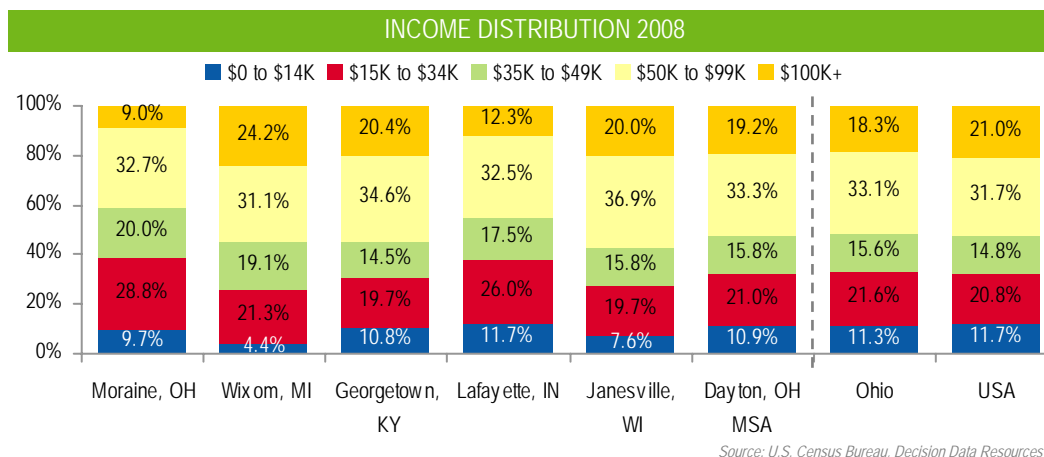


- While Moraine has almost no patent activity, it enjoys significant patent activity through proximity to Dayton.
- For the past five years, Dayton inventors have received an average of 117 patents per year, more than all benchmarks but Lafayette, IN.
- While patent issues to the City of Dayton are higher than all benchmarks in real numbers but Lafayette, the region is not as competitive on a per capita basis.

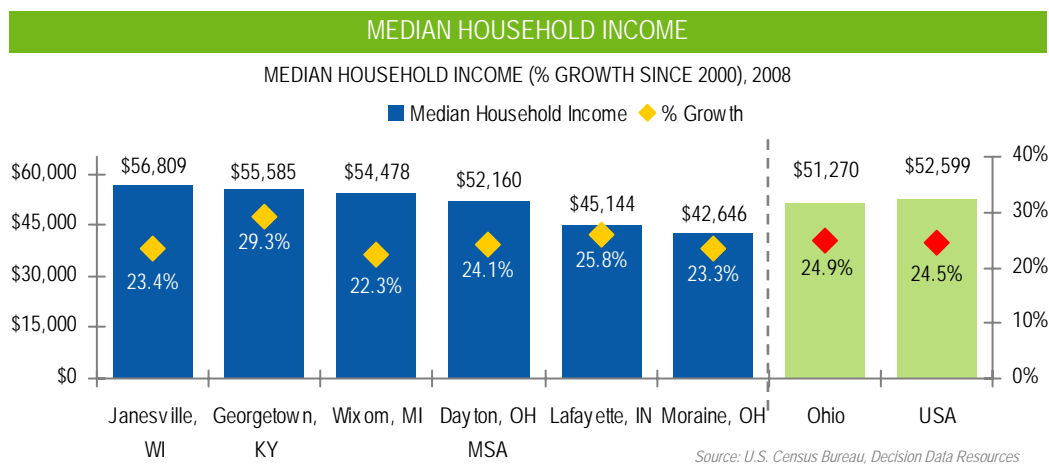


INCOME

- Moraine's income distribution in 2008 shows that nearly 42 percent of households earn \$50,000 or more.



- Neither the benchmarks nor state and national income distribution have as many households making between \$35,000 and \$99,000. There are fewer people in Moraine making less than \$15,000 than nation and state averages. However, the percentage of households making more than \$100,000 is also less than half the national and state averages.
- **Moraine's median household income was \$42,646 in 2008**, lower than all benchmarks, the state median, and national income levels.
- Median household income is lower in Moraine than with any benchmark and the growth rate since 2000 has been slightly slower.



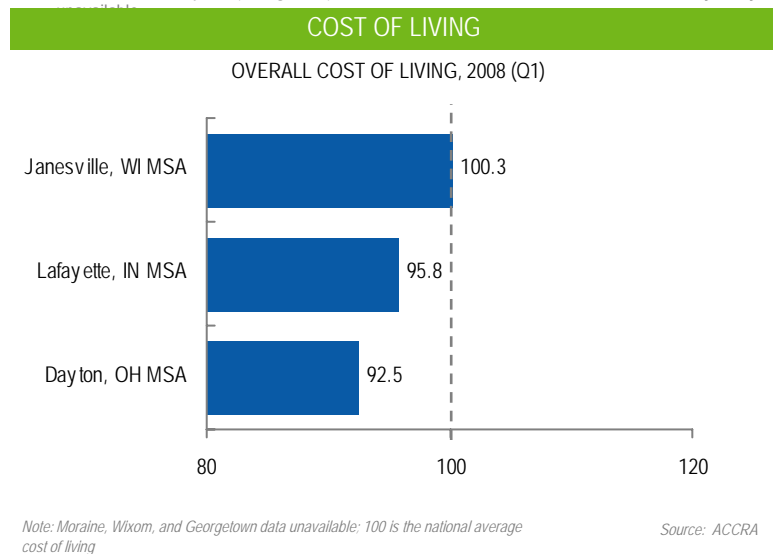
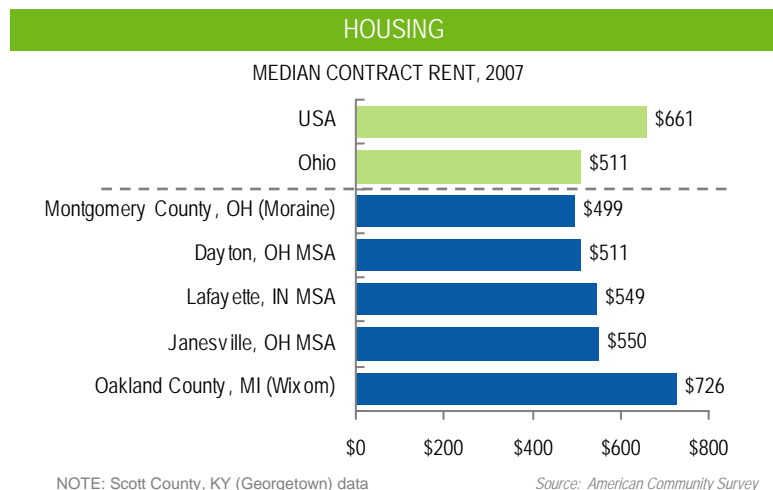
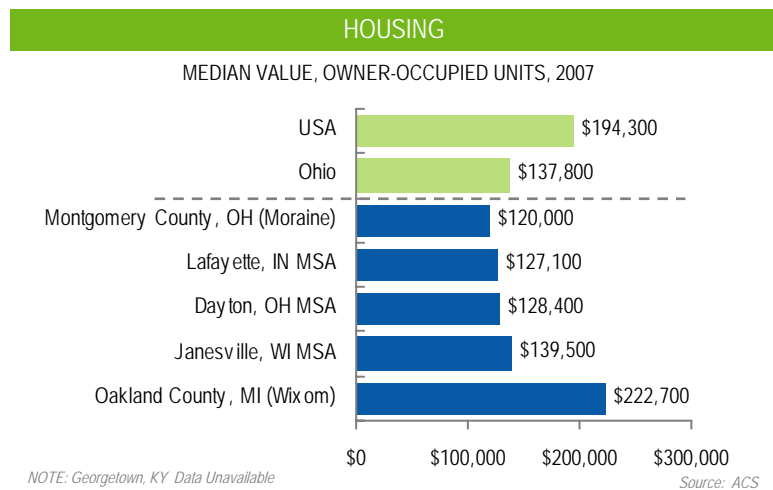
QUALITY OF LIFE

Quality of life indicators are a combination of many factors, some that are quantifiable and some that are not. Taken together they provide a picture of how attractive a place is to both live and work – a critical factor for attracting and retaining both industry and talent.

HOUSING AND COST OF LIVING

Businesses and site selectors value communities that provide a high quality of life with a relatively low cost of living for their employees. The region is attractive in this regard when compared to benchmarks and the country. A low cost of living is desirable to site selectors unless it comes with high vacancies, foreclosures, and dilapidated housing.

- Housing, one of the most regionally variable costs, is also one of the largest determinants of cost of living.
- In the 2007 American Community Survey, Montgomery County (Moraine) residents reported median home values to be \$120,000, 38 percent less than the national median.
- Housing is less expensive for people living in Montgomery County than it is for any benchmark.
- Moderate median home sales prices demonstrate an affordable environment that encourages home ownership.
- Typically, rent prices reflect the affordability of the housing market. Moraine follows this trend, having the lowest rent of any benchmark in accordance with its low housing prices.

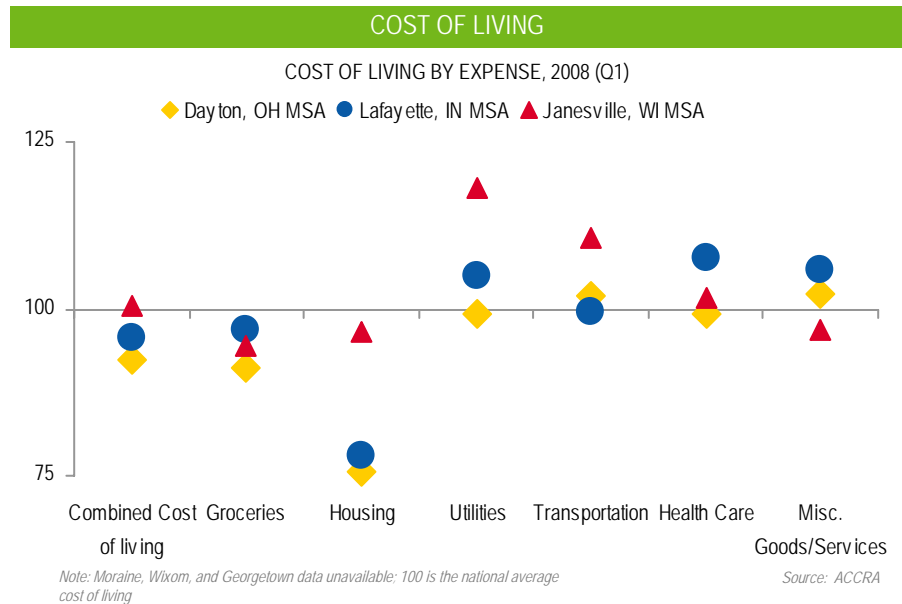


- A cost of living score of 100 equals the average cost of living for the entire United States. Cost of living data is only available at the MSA level.

- According to ACCRA, Dayton MSA residents enjoy an 8 percent lower cost of living than the nation as a whole and the lowest cost of all benchmarks.

- Cost of living is determined by compiling consumer prices for certain goods within each metropolitan area.

- Moraine's low cost of housing is the most significant contributor to its low cost of living relative to competitors.



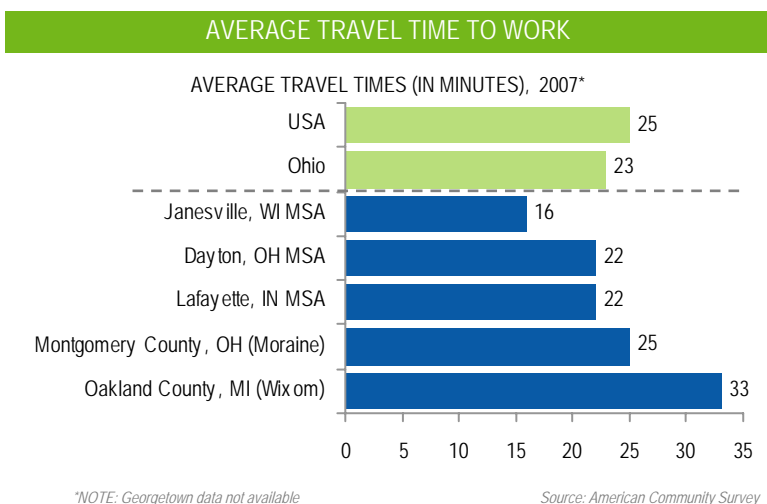
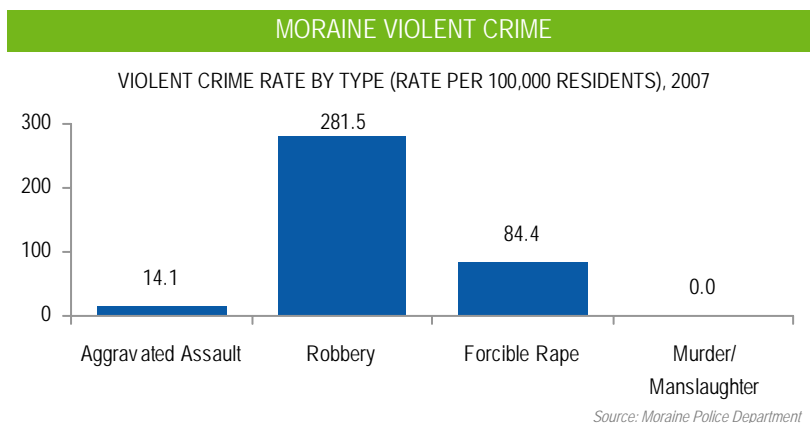
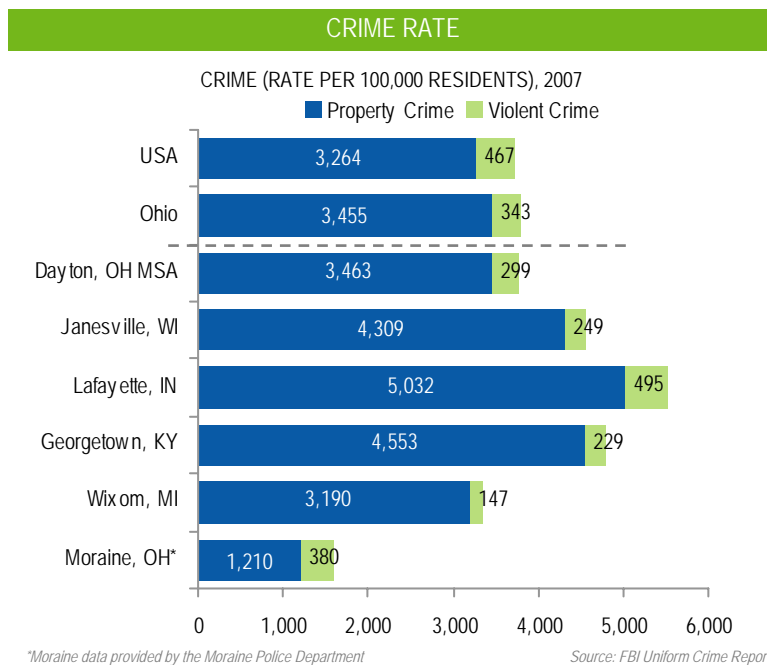
CRIME

Safety is a significant indicator for site selectors, and businesses want to locate in areas that are considered safe.

- Moraine crime data were unavailable from the FBI Uniform Crime report, but information was obtained from the Moraine Police Department
- Since crime data for Moraine were obtained from a different source, counting methodologies may be different for the City relative to the benchmarks.
- **Moraine has very low overall crime rates**, with less than half the total crime per capita than all benchmarks communities, the state, and the nation.
- While overall crime is low, **Moraine experiences more violent crime per capita than any other region examined except Lafayette, IN, and the nation.**
- Most violent crime in Moraine is due to robbery, which may have increased due to recent layoffs within the region.

COMMUTER PATTERNS

- Commutes for Montgomery County residents are on par with national norms. While somewhat high relative to benchmarks, this is mainly due to driving long distances rather than facing rush-hour traffic challenges.



BUSINESS CLIMATE AND INFRASTRUCTURE

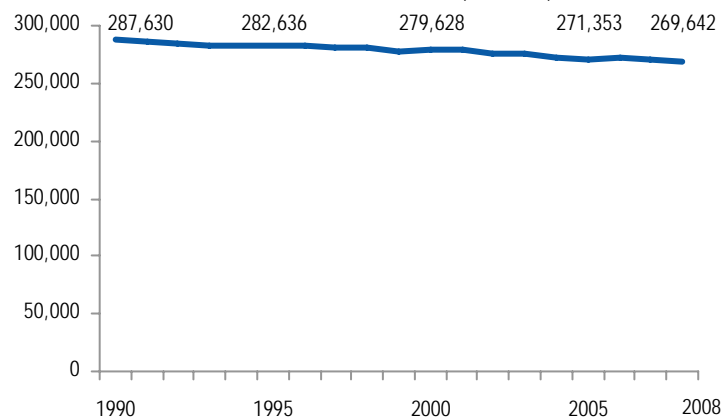
Business climate and infrastructure measure the capacity of the region to support business expansion and development opportunities. It identifies factors (outside of workforce development) most critical to small, medium, and large employers in deciding where to locate or expand operations, such as labor, taxes, utility rates, and availability of land.

LABOR COSTS AND STRUCTURE

- Labor force and business establishment data over time is unavailable at the city level for Moraine.
- Since 1990, Montgomery County's labor force population has declined 6.3 percent.
- Since 2000, Montgomery County labor force population has declined 3.6 percent. Over the same period of time, Ohio labor force shrunk by 2.8 percent and the overall national labor force grew by 4.3 percent.
- Over the last five years, Montgomery County has lost 1.81 percent of its total establishments. This does not include losses since December 2008.

LABOR FORCE

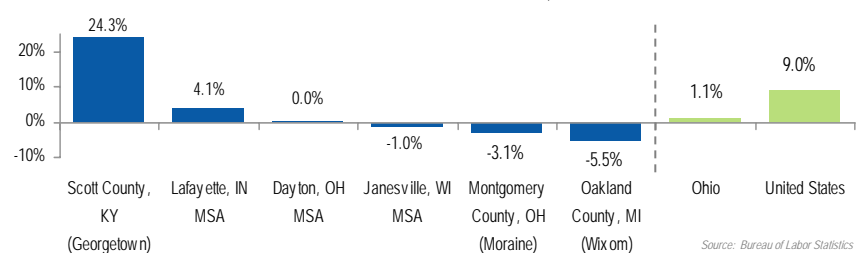
LABOR FORCE, MONTGOMERY COUNTY, OH (MORAINES), 1990-2008



Source: Bureau of Labor Statistics

BUSINESS ESTABLISHMENT GROWTH

% GROWTH IN NUMBER OF ESTABLISHMENTS, 2003-2007



Source: Bureau of Labor Statistics

BUSINESS ESTABLISHMENT GROWTH

CHANGE IN NUMBER OF MONTGOMERY COUNTY, OH BUSINESS ESTABLISHMENTS BY INDUSTRY SECTOR 2004-2008

	2004	2008	--% Change-- Local	National
Business & Professional Services	2,233	2,200	-1.48%	13.96%
Trade	2,954	2,884	-2.37%	3.76%
Financial Activities	1,412	1,409	-0.43%	10.34%
Education & Health Services	1,492	1,525	2.21%	13.83%
Information	229	217	-3.45%	2.07%
Manufacturing	918	855	-9.98%	-2.67%

Source: Bureau of Labor Statistics

were sectors that experienced fewer losses, such as financial services and business and professional services, and education and health services actually grew.

- The greatest employment reductions were in the manufacturing sector, which is an important sector within Montgomery County
- In spite of losses in the number of businesses in Montgomery County, job growth did occur in select sectors, such as education and health services and information.

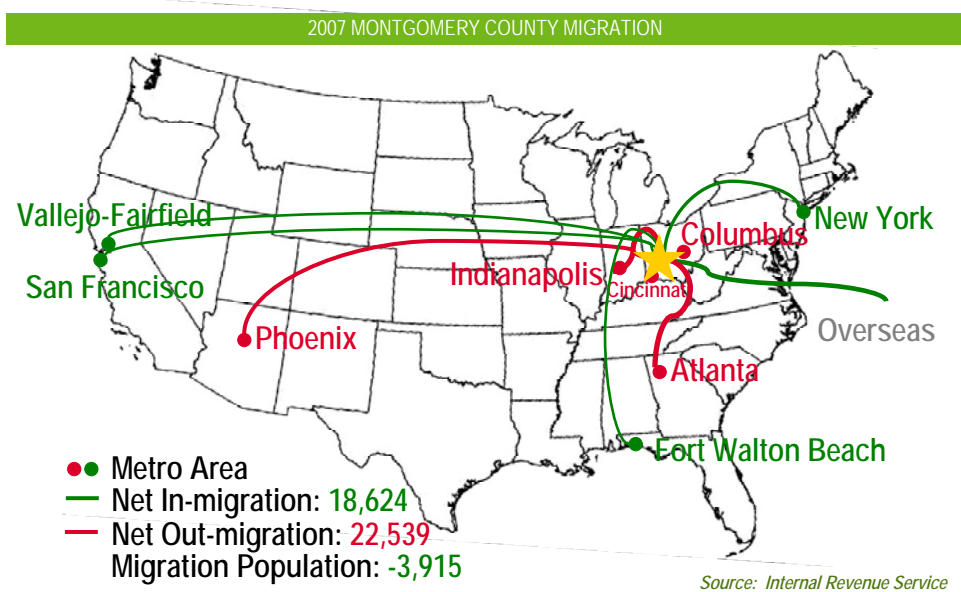
EMPLOYEE GROWTH				
CHANGE IN NUMBER OF MONTGOMERY COUNTY, OH EMPLOYEES BY INDUSTRY SECTOR 2004-2008				
	2004	2008	--% Change-- Local	National
Business & Professional Services	39,798	34,493	-13.33%	8.66%
Trade	49,361	43,396	-12.08%	3.22%
Financial Activities	14,077	14,021	-0.40%	0.97%
Education & Health Services	47,425	51,890	9.41%	11.62%
Information	9,303	9,968	7.15%	-3.58%
Manufacturing	41,956	31,427	-25.10%	-6.13%

Source: Bureau of Labor Statistics

- Montgomery County lost almost one fourth of its manufacturing employment between 2003 and 2007.

MIGRATION

- IRS migration data is only available at the county level.
- In 2007, Montgomery County had 18,624 people move into the region and 22,539 leave, totaling a net loss of 3,915 residents.
- The majority of people leaving Montgomery County moved to neighboring or nearby competing regions, such as Cincinnati, Columbus, and Indianapolis.
- The most substantial gains in new residents are most likely attributable to military migration. Many of the biggest gains – overseas, Fort Walton Beach, FL, and Vallejo-Fairfield – were located in cities or areas with a significant military presence.



2007 MIGRATION: LARGEST GAINS/LOSSES Montgomery County, OH

City	Net Migration
Overseas	131
New York	52
Fort Walton Beach, FL	50
Vallejo-Fairfield, CA	43
San Francisco	25
Cincinnati	-810
Columbus	-497
Other Dayton MSA Counties	-218
Indianapolis	-209
Atlanta	-169
Phoenix	-133

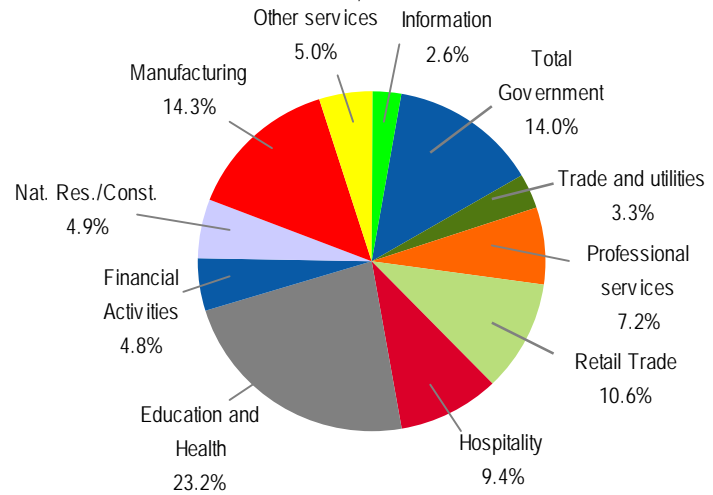
Source: Internal Revenue Service

EMPLOYMENT

- Employment data is only available at the MSA and county levels for the City of Moraine.
- By far, the **largest employment sector for Montgomery County is education and health** Over 23 percent, or nearly 63,000 people, are employed by the education and health sector.
- Half of all employment in Montgomery County is concentrated within three sectors: **education and health (23.2%)**, **government (14.0%)**, and **manufacturing (14.3%)**.
- Notably, Montgomery County enjoys significant **professional services and health care sectors**, which are both high wage, high growth sectors.
- The Dayton region has a number of large employers, but the largest by far is **Wright Patterson Air force Base**, which employs over 25,000 people.
- Five of the top ten employers in the region are health or education related institutions, including Premier Health Partners, Kettering Health Network, Miami University, Wright State University, and the Dayton Public Schools.
- **Three of the ten largest employers are governmental organizations.**
- Due to recent mass layoffs at local businesses, **Montgomery County unemployment is significantly higher than the national rate and somewhat higher than the state rate.**

INDUSTRY EMPLOYMENT

% OF TOTAL EMPLOYMENT BY PRIVATE SECTOR, MONTGOMERY COUNTY, OH RESIDENTS, 2007



Source: American Community Survey

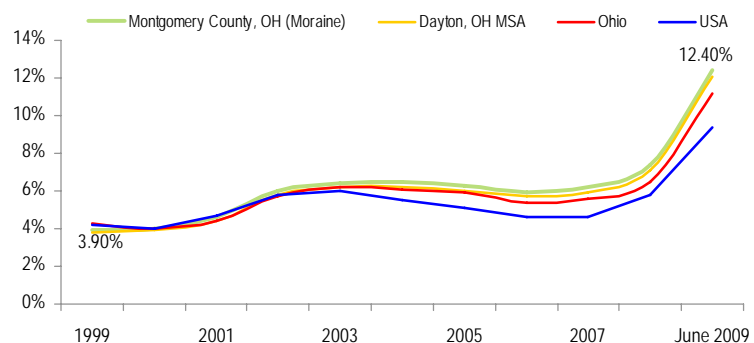
TOP DAYTON REGION EMPLOYERS

1	Wright Patterson Air Force Base	25,000
2	Premier Health Partners	14,269
3	Kettering Health Network	8,317
4	Montgomery County	4,989
5	Miami University	3,565
6	Wright State University	3,300
7	The Kroger Company	3,000
8	LexisNexis	3,000
9	Honda of America Manufacturing, Inc.	2,800
10	Dayton Public Schools	2,650

Source: Dayton Area Chamber of Commerce

UNEMPLOYMENT RATE

UNEMPLOYMENT RATE, 1999-JUNE 2009



Source: BLS Local Area Unemployment Statistics

TAXES AND UTILITIES

- Ohio has a 5.5 percent sales tax rate. Local authorities have the ability to levy their own taxes, making the **effective sales tax rate for Montgomery County 7 percent**.
- Property tax in Moraine is very low, trumping all benchmarks on a per capita basis. This is due to the very high employment within the City relative to the number of citizens it serves and significant legacy incentives that are still phasing out.

MORaine, OH TAX STRUCTURE

State Sales Tax Rate	.055
Transit Authority Sales Tax Rate	.005
County Sales Tax Rate	.01
City Income Tax Rate	.02
State Income Tax Rate (Variable)	.005879(min)-.05925(max)

Source: Ohio Department of Taxation

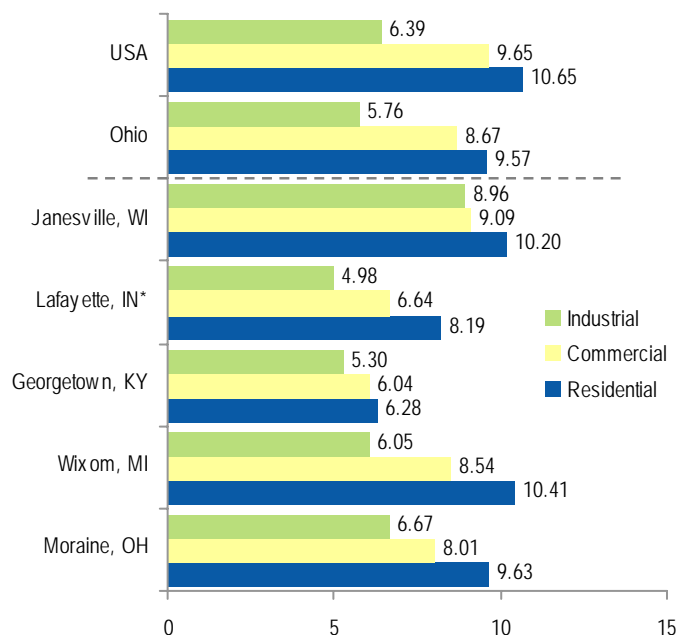
PER CAPITA PROPERTY TAX COLLECTIONS BY CITY 2008					
	Moraine Montgomery County, OH	Wixom, MI	Georgetown Scott County, KY	Lafayette Tippecanoe County, IN	Janesville, WI
City Property Tax Per Capita	\$201.69	\$351.93	\$302	\$202.15	\$314.67
Sales Tax Rate	7.00%	6.00%	6.00%	6.00%	5.00%
State Rank*	7	27	25	28	9

*Higher ranking indicates higher overall tax burden on a per capita basis
*Source for State Ranks: TaxFoundation

Source: Montgomery County, OH Auditor, City of Wixom, Kentucky

UTILITIES

AVERAGE ELECTRICITY RATE (PER KILOWATT HOUR), 2007



*Rates apply to the majority of either the MSA or the City, whichever is specified
*Lafayette, IN 2006 electricity rates; 2007 not available

Source: EIA

- The Tax Foundation publishes an annual report analyzing the total tax cost for each state, ranking them from the least expensive state to do business in tax-wise to the most expensive.
- According to the Tax Foundation, Ohio has the 7th highest tax burden in the country.** However, Ohio has actively engaged tax policy over the past year to make it much more competitive.
- Overall, Moraine is on par with benchmark electricity prices, but slightly more expensive than average state and national rates.
- Both industrial and commercial electricity rates in Moraine are competitive with benchmarks, the state, and the nation.

BUILDING PERMITS

- Site selectors may also be interested in the scale and type of development in a potential location. This provides them with general development trends in the market.
- While there was only a slight decrease in the number of residential permits issued from 2007-2008, the value of residential permits dropped nearly 34 percent. **This was a loss of almost \$130 million in residential construction.**
- Commercial permitting also experienced double-digit decline, both in value and in the number of permits issued.
- It should be noted that these declines in permitting are very strongly tied to national recession trends, which have affected housing and commercial space demand and have significantly reduced available capital for initiating and completing construction projects.

Dayton, OH MSA BUILDING PERMITS

VALUE OF PERMITS (IN MILLIONS) AND PERCENT CHANGE, 2007-2008

	2008	2007	Growth
Residential	\$255.2	\$384.4	-33.6%
Commercial*	\$65.5	\$119	-44.9%

Source: US Census Bureau and Real Estate Center at Texas A&M; City of Dayton

*Commercial Building Permit Data for the City of Dayton only

Dayton, OH MSA BUILDING PERMITS

NUMBER OF PERMITS AND PERCENT CHANGE, 2007-2008

	2008	2007	Growth
Residential	1,343	1,396	-3.79%
Commercial*	325	438	-25.8%

Source: HUD State of Our Cities Database; City of Dayton

*Commercial Building Permit Data for the City of Dayton only

INDUSTRY BASELINE

AngelouEconomics utilizes an employee and business based methodology to identify economic clusters that exist within Moraine. These clusters are the industry groups that support the current economic landscape. To assess the strength of a cluster in Moraine's economy, AngelouEconomics calculated location quotients for each employment sector within the region. These factors are calculated by comparing the sector's share of total local employment to the cluster's national share. This location quotient typically yields a value between 0 and 3, where a result of 1 demonstrates that the cluster commands a share of the local economy equal to the cluster's share of the national economy. Cluster location factors greater than 1.5 indicate a strong cluster agglomeration, while those less than 0.5 indicate locally weak clusters.

- Moraine has a number of sectors that have a higher concentration than is typical. This is unusual; typically, only a few industries within a region have location quotients greater than 2.
- Moraine has relatively high employment within biotechnology and software/information technology, highly desirable and much sought-after sectors.
- Many of the high location quotient sectors within Moraine are sectors that support automotive manufacturing, such as general services, industrial machinery, and electronics. With the recent GM closure, it is essential that Moraine work to preserve these businesses that are most in danger to follow suit.

2008 MORaine INDUSTRY CONCENTRATION: TEN STRONGEST INDUSTRIES (BY LOCATION QUOTIENT)			
Industry	Employees	Businesses	LQ
Transportation Equipment	1,371	4	12.03
General Services	3,303	66	4.18
Industrial Machinery	209	7	3.75
Biotechnology	338	10	2.72
Software & IT Services	528	7	2.29
Electronics	165	8	2.07
Communication Services	222	3	1.99
Industrial Supplies	405	24	1.80
Mass Media	386	24	1.65
Wholesale	924	78	1.36

Source: Duns & Bradstreet

STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS (SWOT)

The process of assessing the positive and negative aspects of the business and economic climate in the City of Moraine is an important component of the entire economic development planning process. It allows regional leaders to make an objective assessment of those characteristics or factors that can be used to build the economy and those that it will have to address or overcome to make economic development efforts successful.

Findings from the quantitative baseline demographic and economic data in the previous section are combined with the qualitative baseline data (focus groups and interviews) collected during Phase I to identify the strengths, weakness, opportunities, and threats (SWOT) in the community. Focus groups were held in the following subject areas: Existing Businesses, Real Estate and Development, Education and Workforce Development, and Utilities. In addition, over 30 subject matter experts were interviewed.

We define the four aspects of “SWOT” in these terms:

- **Strengths**: Issues or characteristics that can be built upon to advance current and future economic growth opportunities in Moraine.
- **Weaknesses**: Issues or characteristics that, if not addressed effectively, could limit current or future growth opportunities.
- **Opportunities**: Assets, events, or trends that offer Moraine the potential for economic growth and attraction of new industry.
- **Threats**: Obstacles, events or trends that, if not addressed effectively, could threaten the City's economic potential and its ability to attract new industry.

Before we begin a discussion regarding the feedback we received from the community, it is important to make a few comments regarding the issue analysis. The process of honestly assessing the positive and negative aspects of the business and economic climate in Moraine is an important component of this entire economic development planning process. It allows the City to make a clear-eyed appraisal of those characteristics it can use to build the economy and those that it will have to acknowledge or overcome to make economic development efforts successful. This process is *not intended* in any way to serve as a vehicle to simply criticize, nor does it place blame. That is counter-productive. Rather, the process of issue identification and SWOT summary gives us a realistic inventory of assets or limitations that we can use to develop realistic, effective recommendations.

The findings presented in this report reflect the collective effort and input of numerous individuals representing the public and private sectors. We thank them for their time, their valuable insights, and their commitment to this project.

CRITICAL ISSUES

The remainder of this report identifies the key, critical issues facing the economic development efforts of Moraine. We focus on points that will influence location and expansion decisions of residents, businesses, and site selection consultants, such as the ability to attract and retain a qualified workforce, incentive packages, infrastructure, and marketing efforts.

MORaine, OH SWOT ANALYSIS	
<p><u>Strengths</u></p> <ul style="list-style-type: none"> • Strong capacity for distribution – air, rail, and interstate highways • Extensive manufacturing experience • City perceived as “business-friendly” • Competitive utility rates • Low cost of living • High quality of life • High K-12 graduation rates • Low crime • Large labor pool of semi-skilled workforce • Strong regional educational institutions and training programs • Many innovative companies start up in the region • Ample water • Low business operating cost structures 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> • Limited startup capital • Few major corporate headquarters • Undeveloped entrepreneurial culture and support networks • Limited state and local incentives • Aging real estate inventory • Workforce skills often misaligned with growing industries • Relatively few “upper level” jobs • Absence of cohesive regional message • High-skilled labor is difficult to find/recruit • Some regional players perceived as business-unfriendly • State tax rates are perceived to be high (although improving) • Heavy reliance upon traditional industries
<p><u>Opportunities</u></p> <ul style="list-style-type: none"> • Strong capacity for advanced manufacturing and distribution • Ample institutional expertise/funding for job skills retraining • Former GM site re-use • Improved R&D collaboration between universities, incubators, and businesses • Creation of common vision and stronger teamwork • Enhanced regional brand and identity • Linkages with Wright Patterson Air Force Base programs and needs • Abundant fresh water to serve water-intensive industries • Large available workforce with manufacturing acumen 	<p><u>Threats</u></p> <ul style="list-style-type: none"> • Declining young professional (25-44) demographic • Perceived “union town” image • Many newly unemployed workers will relocate if they cannot find jobs quickly • “Rust Belt” perception • Many innovative companies that start up in the region move out • GM closure and bankruptcy threatens to cause additional business closures • Numerous large industrial spaces available within the Midwest • Trend of manufacturing leaving the United States • Reduced city services due to substantial tax base reduction

We do not intend for this analysis of issues to be all-inclusive. Rather, we focus on those areas that will have the most direct impact on future economic development efforts of the region.

This issues analysis is a quantitative and qualitative study of opinions and perceptions of the area’s stakeholders on conditions in the region. By receiving input from a broad base of individual residents, business representatives, and regional leaders, we are able to better understand how the factors listed above are perceived. It is important to examine the self-perceptions that are prevalent in the region because they directly relate to economic development, business retention and recruitment, and overall quality of life. Understanding the region’s assets and weaknesses will allow us to form recommendations that accentuate the positive aspects and address the negative perceptions of the region.

Initial Site Selection Assessment Moraine GM Assembly Plant

INTRODUCTION

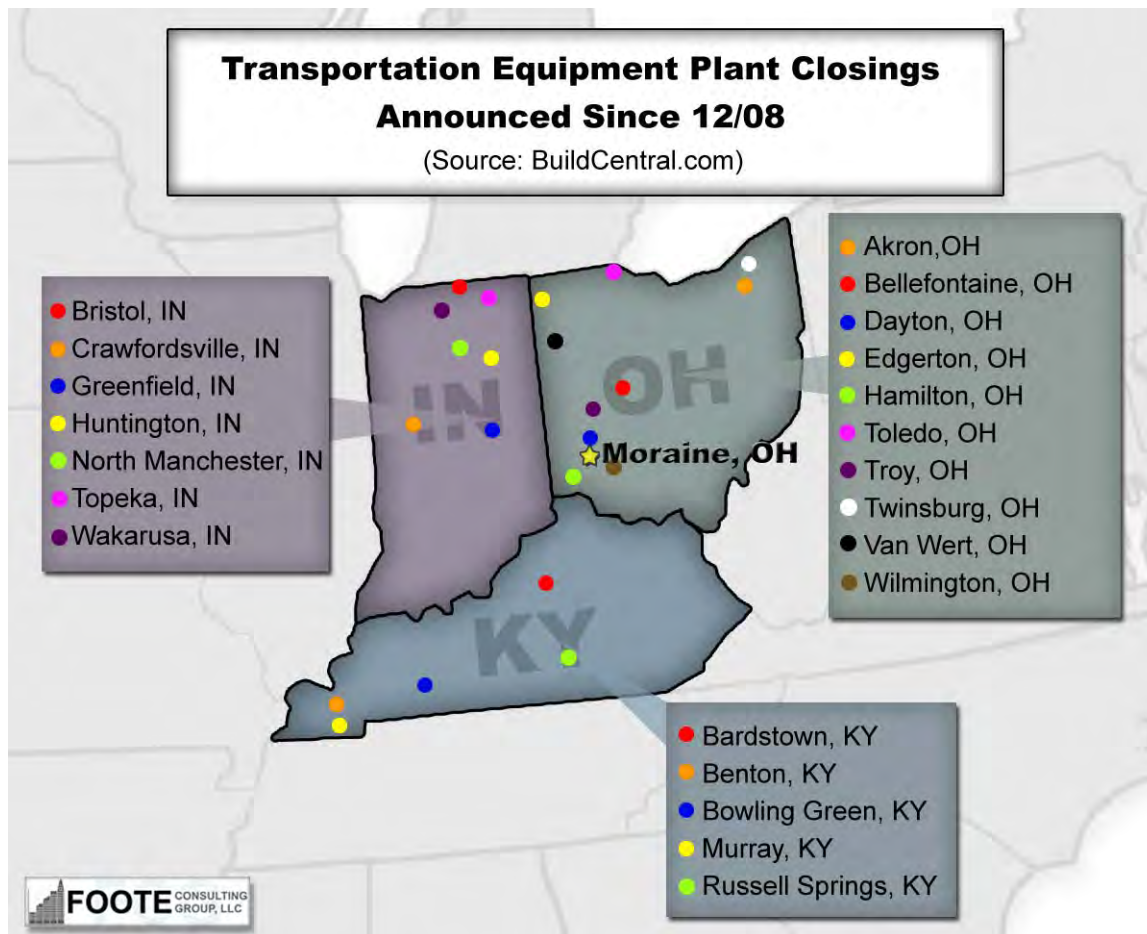
Angelou Economics conducted an industrial market assessment and preliminary site selection assessment of the Moraine GM plant in order to help to determine potential new uses for the plant in the future. The results of this assessment will be incorporated later into the target industry analysis.

The New GM has recently exited from bankruptcy. It now appears that many assets of the Old GM, including the Moraine Plant, will be turned over to a third party disposition company, Alix Partners. Due to these recent changes and related market uncertainties this assessment should be considered preliminary.

INDUSTRIAL BUILDING MARKET ASSESSMENT

The broader regional market (Ohio, Indiana and Kentucky) continues to have a glut of large industrial buildings. We estimate over 41 million square feet of industrial space (minimum 250,000 square feet; 30' clear span) is currently on the market: Ohio – 14,123,000 sq.ft.; Indiana- 22, 502,000 sq.ft.; Kentucky – 4,523,000 sq.ft.

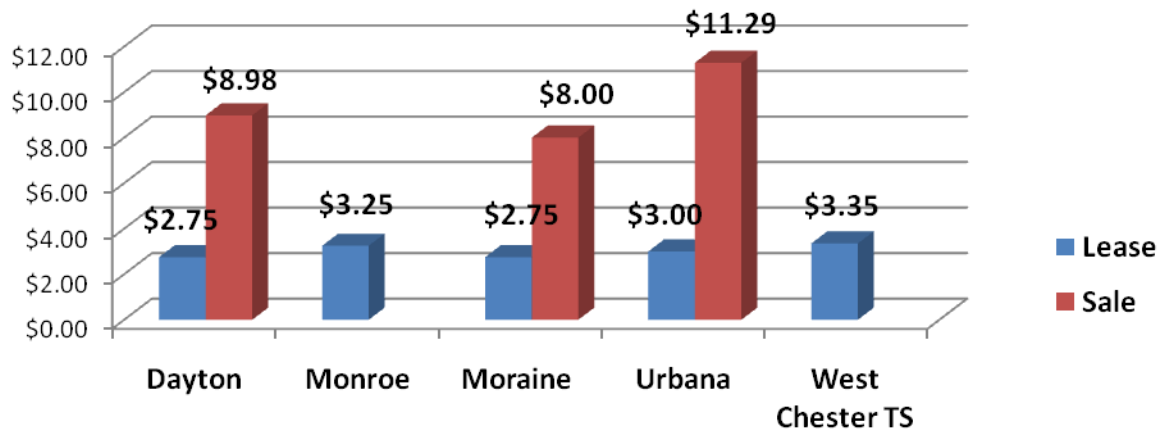
More space is coming on line every week as the automobile market continues to contract. According to BuildCentral.com, 22 transportation equipment plant closings have been announced since the time of the Moraine plant closing (December 2008) totaling tens of millions of additional square footage. Four of these announcements are in the Moraine local market (Delphi in Dayton; NN, Inc in Hamilton; Faurecia in Troy; and Kautex Textron in Wilmington).



Although there is a glut of industrial building space on the Moraine local market, the number of specialized industrial buildings, comparable to the GM General Assembly (GA) plant (minimum 250,000 square feet and 30' clear), is relatively small. According the Ohio Department of Development's Ohio InSite web page, there are five facilities available totally almost 2.7 million square feet, excluding the GM property.

- Average lease (NNN) price: \$3.02 psf
- Average sale price: \$9.42 psf

Large Industrial Building Asking Prices in the Moraine Region - July 2009



\$ per sq ft price; Min 250,000 sq.ft.; 30' clear
Source: Ohio InSite

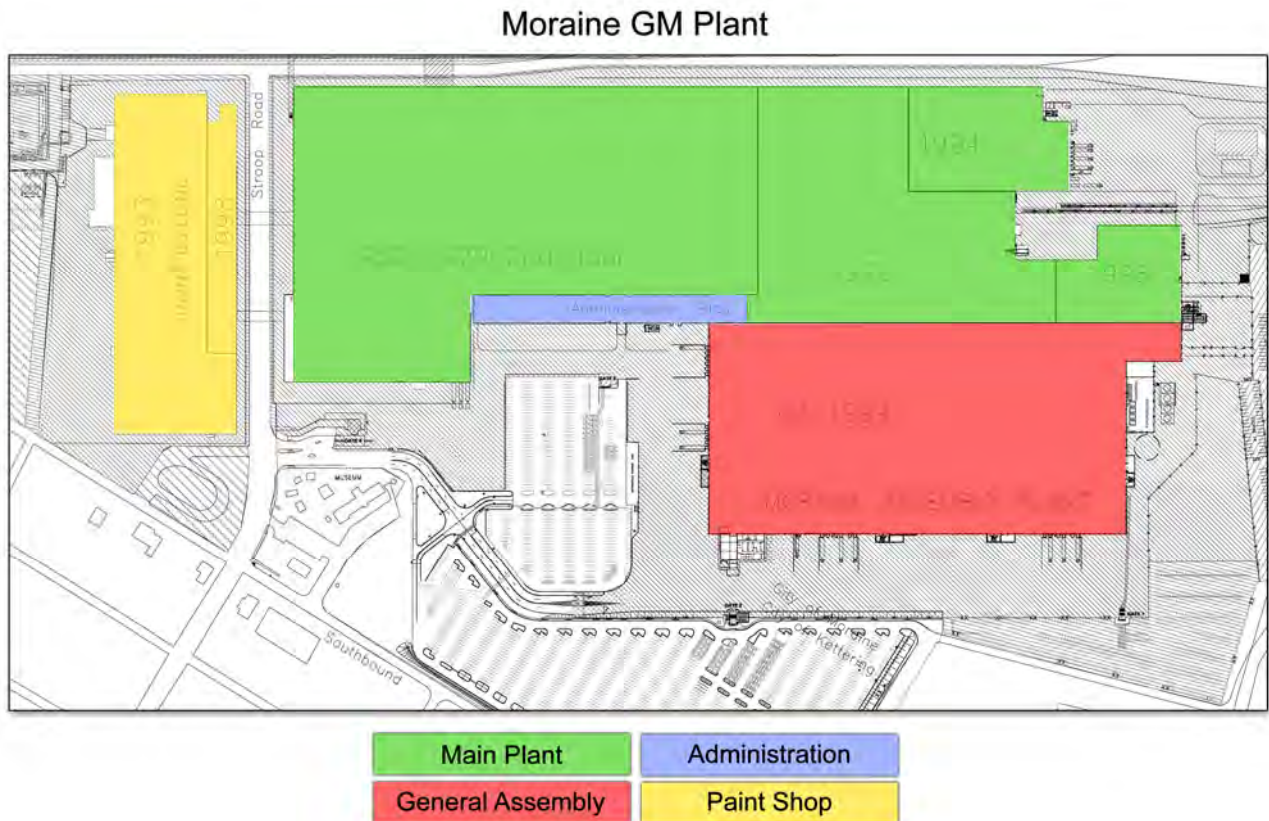
MARKET CONCLUSIONS

Availability of large industrial buildings will continue to rise and prices will fall as supply outpaces demand due to the sluggish economy. Specialized facilities (minimum 250,000 square feet with 30' clear) that are properly priced, match growth target company needs and are in good shape will have the best potential for sale or lease in this difficult market.

MORAINE PLANT ASSESSMENT

Angelou Economics conducted a site selection assessment of the Moraine plant. Jim Colson and Deane Foote conducted a plant tour on June 4, 2009 with William Groves of GM. Follow-up calls were conducted with GM real estate officials and GM's real estate consultant, CBRE.

The entire plant is approximately 2.9 million square feet in size. It is divided into several sections (see below).



The following represent the results of the assessment:

OVERALL PLANT SITE	
Strengths	Weaknesses
<ul style="list-style-type: none"> • 386 acres for industrial park development • Good access to I-75/Midwest markets <ul style="list-style-type: none"> ○ Exit 47 has 60% improvement funds committed; Tier 2 category project ○ Ample parking • Good rail service – N&S to site/CSX near • Environmentally clean • Potential building price: \$1-\$2 per square feet – ground floors only • Sprinkler system throughout • 6" rebar reinforced floors • Multiple cranes from 2 ton to 10 ton; all stay • Electric power (69 KV; 330 MVA transformers; multiple feeds; 2 loops; 18 substations per building; feed into NW corner) • Telecommunications adequate – fiber/redundancy • Chillers/compressors serve entire complex; all stay • Sewer – local system has excess capacities Water – 20" service; local system has excess capacities; wells on site 	<ul style="list-style-type: none"> • Water – some minor service line issues • Exit 47 is not a full access interchange • Single feed electric will be challenge for multiple tenants/meters
Conclusions	
<ul style="list-style-type: none"> • Site and plant is a unique regional asset for large manufacturing operations, due to sheer size. • Much of the older portion of the main plant is not conducive to modern manufacturing/distribution operations. • The excellent location and numerous amenities of the site offer a unique opportunity to develop/redevelop a modern industrial park that can be competitive at attracting new manufacturing, distribution, and related R&D/office uses. 	

GENERAL ASSEMBLY (GA) PLANT	
<u>Strengths</u>	<u>Weaknesses</u>
<ul style="list-style-type: none"> • 800,000 square feet (sqft) • 30' clear span • Built in 2000 • 2 million gal chilled water storage tank • Power generators all stay • 26 dock doors; 2 conveyor docks; 3 drive-in doors. 	<ul style="list-style-type: none"> • Racking systems must be removed • No electric power feed into this space (main plant, west side) • No rail goes into the GA plant, would need to be reconfigured • Not good cross-dock set-up for distribution • Pits must be filled
<u>Conclusions</u>	
<ul style="list-style-type: none"> • GA plant is an excellent industrial facility best used for manufacturing and related warehouse/distribution purposes, assuming modifications that would include reconfiguring of walls, utilities and rail service. • Redevelopment Options: <ol style="list-style-type: none"> 1. Retain GA plant, but dismantle the entire main plant; redevelop site to include a new industrial facility with rail access tied directly into GA plant. 2. Retain GA plant and the newer portion of main plant in NW corner (approx 300,000 sqft; and tire plant – 56,000 sqft) to allow rail access (inside and out) and serve the GA plant; maintain options for new space to fit client needs. <p><u>Option 2 is the best option to explore future.</u></p>	

MAIN PLANT	
<u>Strengths</u>	<u>Weaknesses</u>
<ul style="list-style-type: none"> • 766,000 sqft main level • 17 dock doors • Rail spurs; one into facility, one outside west wall and 2 to north side (one rail dock). 	<ul style="list-style-type: none"> • Mezzanine above most of main level for conveyor systems/compressors leaves little potential of raising roof heights; space is of limited use • Only 21'-24' clear span throughout • Age - Built in phases between 1952 and 1979 • Needs new roof • Pits must be filled
<u>Conclusions</u>	
<ul style="list-style-type: none"> • Main plant is an antiquated facility and unsuited for most modern industrial uses unless configured to enhance the GA plant. • Redevelopment Options: <ol style="list-style-type: none"> 1. Dismantle entire main plant to make way for modern industrial facilities with tie into GA plant. 2. Retain newer space in NW corner (approx 300,000 sqft; and tire plant – 56,000 sqft) to allow rail access (inside and out) to GA plant and dismantle the rest; new south wall would be required. Maintain options to rebuild dismantled portion. 3. Retain entire plant. <p><u>Option 2 is the best option to explore.</u></p>	

PAINT SHOP	
<u>Strengths</u>	<u>Weaknesses</u>
<ul style="list-style-type: none"> • 766,000 sqft on three floors • Built in 1994 - 1997 • Modern paint booths and all equipment stay. 	<ul style="list-style-type: none"> • 2nd story and penthouse for equipment • 24' clear span maximum • No rail access • Specialized paint use for SUVs.
<u>Conclusions</u>	
<ul style="list-style-type: none"> • Paint shop is a very specialized facility and unsuited for most alternative industrial uses. • Redevelopment Options: <ol style="list-style-type: none"> 1. Maintain and attract specific paint use. 2. Dismantle to make way for alternative industrial uses. 3. Convert to incubator-type industrial space at substantial cost. <p><u>Option 2 is the best option to explore.</u></p>	

ADMINISTRATIVE OFFICE	
<u>Strengths</u>	<u>Weaknesses</u>
<ul style="list-style-type: none"> • 83,000 sqft on two floors • Broad band and fiber optics • Separate chiller system from plant • Attached directly to plant 	<ul style="list-style-type: none"> • Antiquated office uses, would require major retrofit • Attached directly to plant
<u>Conclusions</u>	
<ul style="list-style-type: none"> • Although old the administrative offices offer office-related and or incubator opportunities. • Redevelopment Options: <ol style="list-style-type: none"> 1. Dismantle the offices. 2. Maintain "as is" as office space for new plant use. 3. Redevelop into incubator-type and/or back office uses. <p><u>Option 3 is the best option to explore.</u></p>	

FINAL CONCLUSIONS

Based on these building conclusions, the “best space” available (see below) to attract future investment totals approximately 1.24 million square feet. It includes the GA plant, the newer rail-served portion of the main plant and the administration building.



“Best Space” GM Moraine Plant
(Approximately 1.24 million square feet)

With the right redevelopment plan, an attractive 386 acre industrial park with numerous site selection advantages will be available in the future. Plan guidelines will be presented in a later report.

Target Industry Analysis and Recommendations

With its long history of manufacturing and the abundance of transportation equipment manufacturers and suppliers, Moraine has a very unique set of assets. However, Moraine cannot be considered independently from the region. It reflects the Dayton metropolitan statistical area's (MSA) strong manufacturing workforce and infrastructure presence. While the City of Moraine had more labor concentrated in automotive manufacturing (due mainly to its massive GM production facility), the skill sets and infrastructure requirements mirror the regional makeup.

Moraine faces significant challenges with the loss of General Motors, but they are not insurmountable. Many businesses within standard industries require labor with the skills of this lost labor force as well as facilities similar to those occupied by GM. Many cutting-edge industries also require these skill sets and spaces.

While working to grow existing businesses and attract new ones that match current labor force skills is essential, it is also important for Moraine to start expanding its portfolio of businesses. When a city like Moraine has such a strong concentration of its labor force and tax base within a single industry (transportation equipment), it creates a "feast or famine" economy. When that industry does well, Moraine receives a disproportional benefit. When that industry suffers, Moraine suffers more greatly than other cities with greater industry diversity. For Moraine (and the Dayton region) to increase the stability of the local economy, steps must be taken into industries that are not as common to the area, but which show strong growth potential and good fit with local assets. Fortunately, an array of employers within these industries already exists locally and regionally.

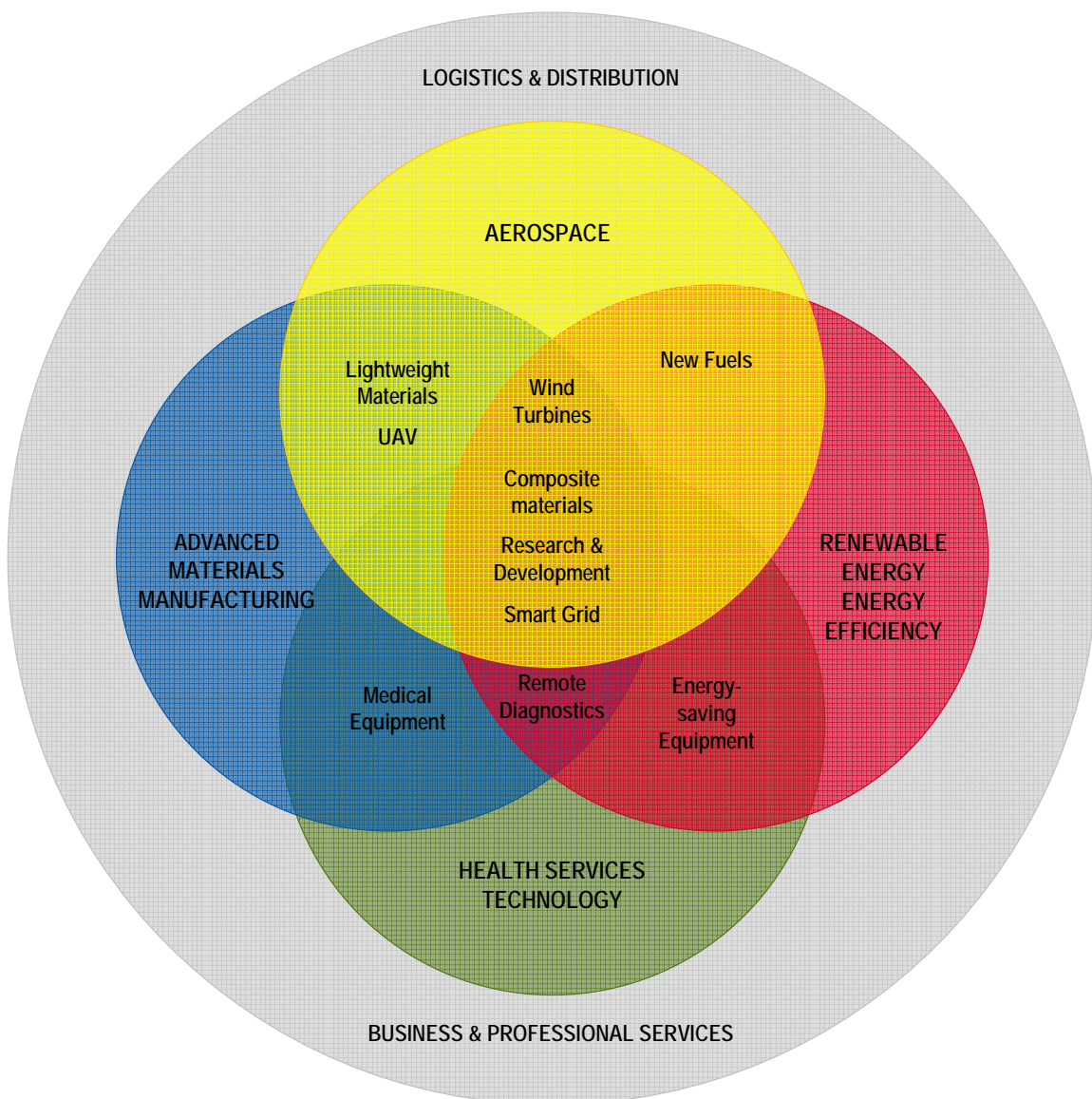
The first Moraine Project LEAP report (*Market Assessment*) identified the unique characteristics of Moraine and the Dayton MSA. The Market Assessment provided a baseline understanding of regional strengths, weaknesses, opportunities, and threats. Using that market information, this report (*Target Industry Analysis*) examines Moraine and the region's workforce and industry assets in light of national industry growth trends.

KEY FINDINGS

The *Target Industry Analysis* provides an in-depth analysis of key strengths, opportunities, and areas for improvement in Moraine as it attempts to build strong industry clusters in the six target areas. They represent both traditionally strong industries (Health Services) as well as important emerging opportunities (Renewable Energy) that can help Moraine become a much more competitive location.

Through supplier connections, shared workforce requirements and mutual business activities, these six target industries share a synergistic relationship. They all have autonomous operations but can also act as a supplier to one another. For example, advanced materials manufacturing may develop a material that can be used for better aerospace fuselage materials. The science of both industries could then be applied to renewable energy applications to create blades that are more effective at lower wind speeds. Additionally, logistics and distribution as well as business and professional services operations are important to all the industries.

INTERRELATIONSHIP OF MORAINÉ PROFILED SECTORS

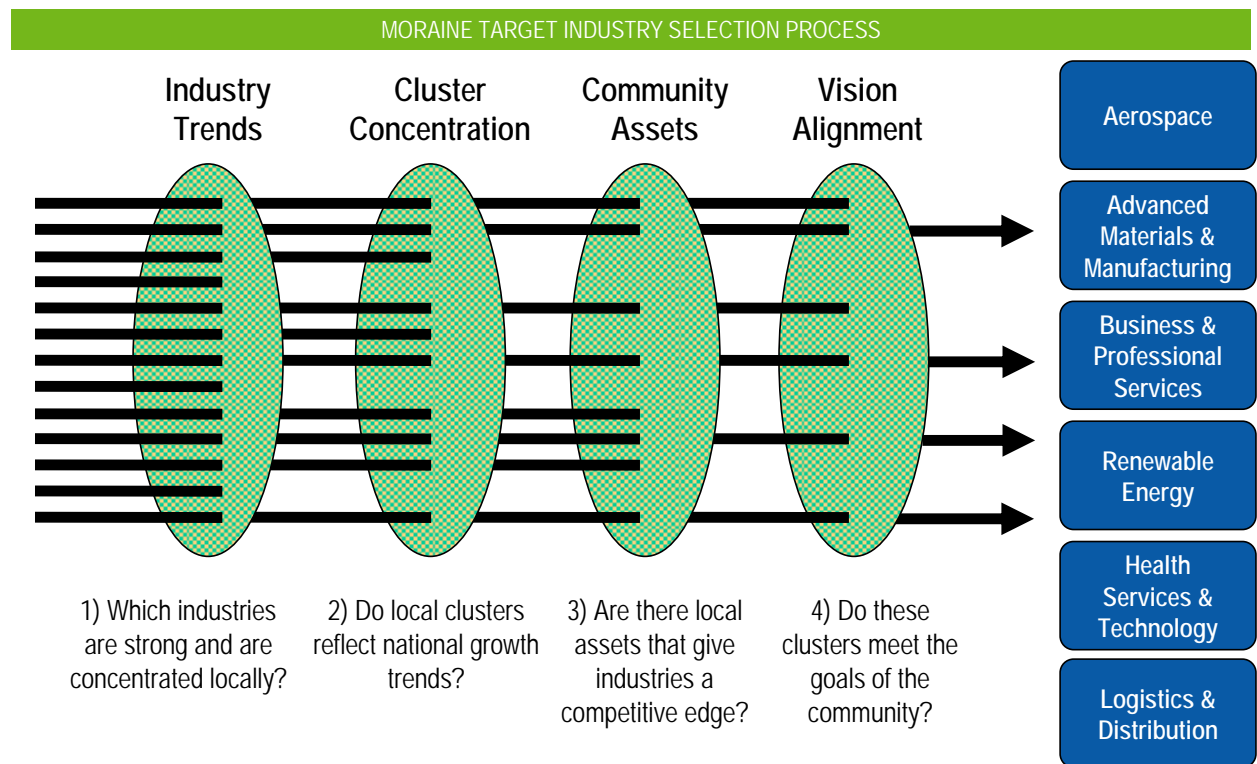


TARGET INDUSTRY ANALYSIS

Targeting Approach

Determining industry clusters that are appropriate for the region involves a four-step screening process: 1) industries must **reinforce or, when appropriate, transform** current strengths into value-added industries that engage in activities most likely to flourish; 2) industries must **reflect regional and national growth trends**; 3) the community **must have the necessary assets** to successfully grow or recruit these industries into the region; 4) industries must **align with the vision and goals** of the community. For Moraine, this means reinforcing some existing industries, such as advanced materials manufacturing, health services and technology, business and professional services, and logistics and distribution, as well as encouraging new industries, like aerospace and renewable energy.

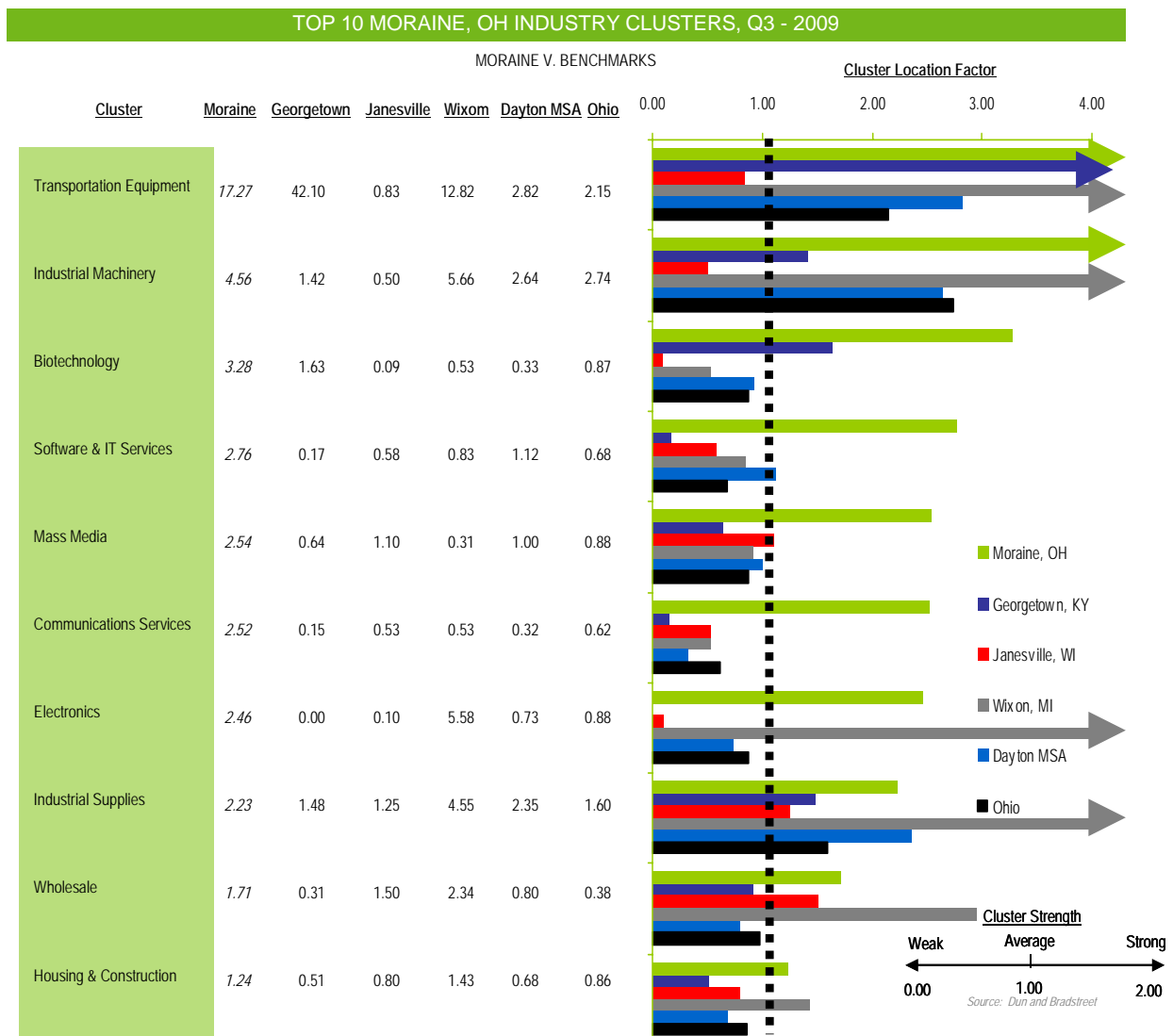
Throughout the process, we examine both Moraine and Dayton MSA data. However, we present Dayton MSA employment and wage data rather than Moraine because the entire labor shed needs to be taken into consideration when determining targets.



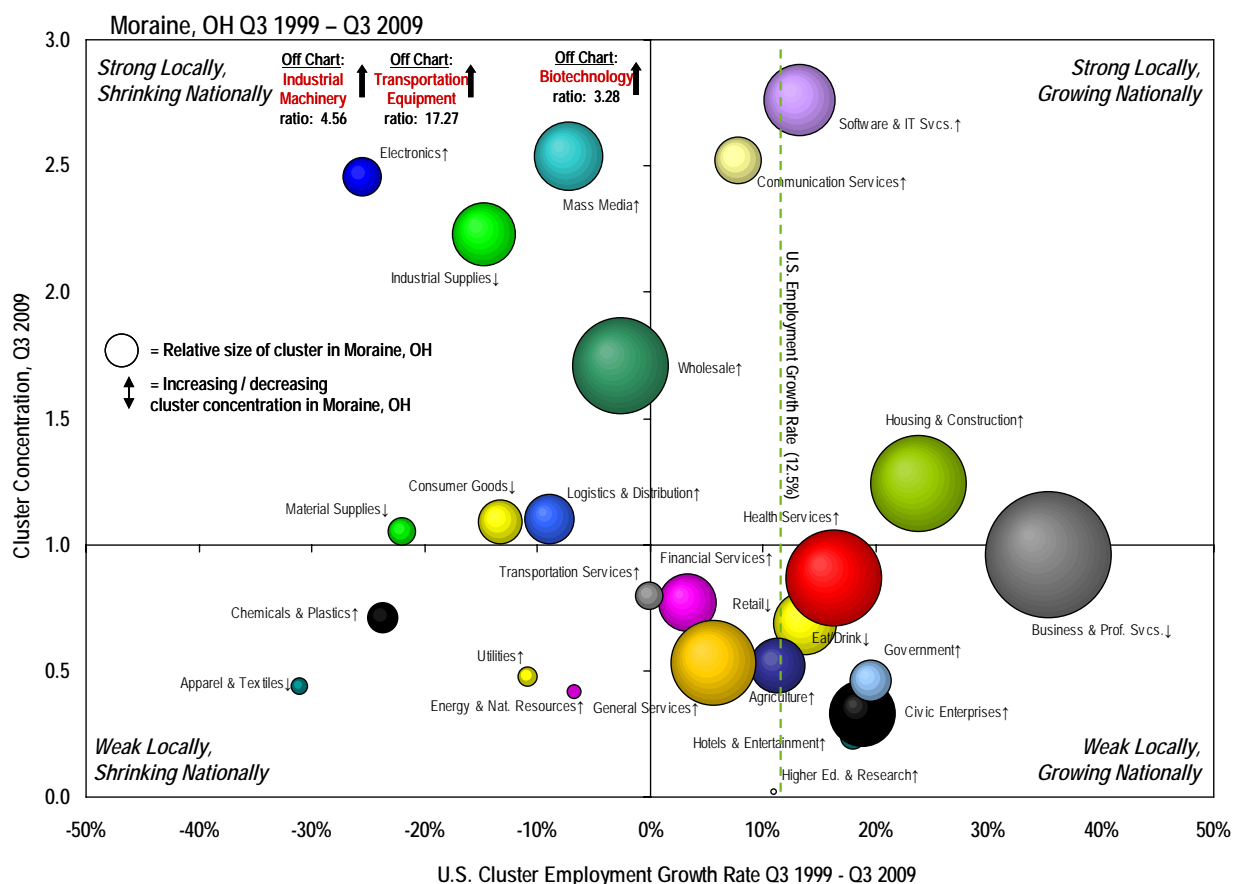
Informed by a series of interviews and community surveys, and information gathered through the *Market Assessment*, AngelouEconomics examined industry trends and regional assets in an effort to identify the most promising target industries for Moraine.

The first step was to consider industry strengths within Moraine and the region. Unsurprisingly, relative to the nation, Moraine and the region have many more people employed within transportation equipment than a typical community. While it has lost significant numbers within this sector, it is still very strong and brings many opportunities to redirect the available workforce. This location quotient will yield a value generally between 0 and 2, where a result of “1” demonstrates that the cluster commands an average (expected) share of the local economy.

While Moraine clearly has strength in transportation equipment manufacturing even after the loss of GM, it is important to note how many industries have at least twice the normal employment of a community its size. This is rare for cities with a single industry dominating the landscape and provides a greater diversity of businesses to provide resilience to the economy than one might assume.



To gain a more accurate picture, Moraine location quotient numbers were applied to a shift-share analysis. The figures below displays the results from a shift-share analysis conducted to determine the strength of local industry clusters relative to the national economy. Cluster location factors greater than 2 indicate a strong cluster agglomeration, while those less than .5 indicate extremely weak clusters. This analysis reinforces Moraine's base strengths in advanced manufacturing, health services and technology, and business and professional services:



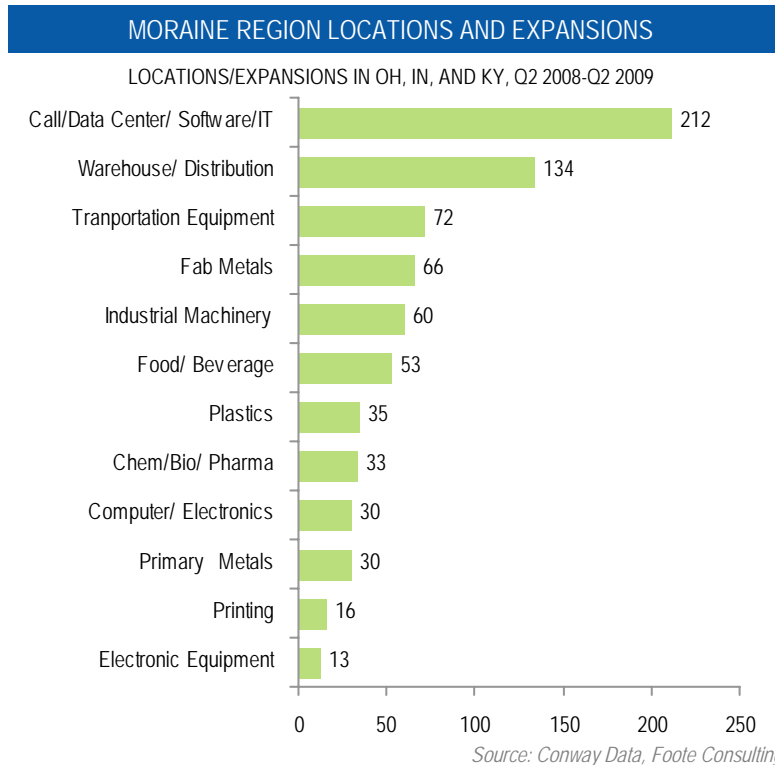
While important to understanding industry specializations, the shift-share analysis provides only a historical, quantitative snapshot of Moraine. This information must be further combined with an understanding of regional economic strengths, broad industrial trends and potential, and synchronization with the vision identified through community surveys and interviews. This process assisted in establishing economic development targets that truly match Moraine's capacities and desires.

After developing a set of preliminary sectors to pursue, they were vetted against regional market activity over the past year. By looking at locations/expansions activity that occurred between Q2 2008 and Q2 2009 short –mid term growth trends were developed that confirmed our sectors. This assessment has proven effective because it represents actual physical building (construction and renovation) and economic development (capital investment and jobs) activity. This location and expansion information is also helpful because:

- Locations/expansions are driven by recent market conditions and these conditions will generally continue into the near future.

- Companies (and site selection consultants) select regions first and then communities within these regions with the best business climates. This may mean, for example, a good labor climate, good market proximity, good transportation, the availability of incentives, all positive business conditions. This will result in clustering, a concentration of like companies due to favorable business conditions.
- Clustering is a “green light” for other similar companies to take a look. But they will only locate if the good business conditions remain. For example, they may find the labor market for select skills depleted due to too much location/expansion activity. This is why we conduct careful fieldwork interviews with local companies for our site location clients, in order to help them to thoroughly understand the local business conditions.

We screened location/expansion data to identify which industries (by NAICS Code) located/expanded the most facilities in a multi-state region (Ohio, Indiana, and Kentucky) during 2008-09 (2nd Quarter 2008-2nd Quarter 2009; 5 quarters). This activity supported industry selection.

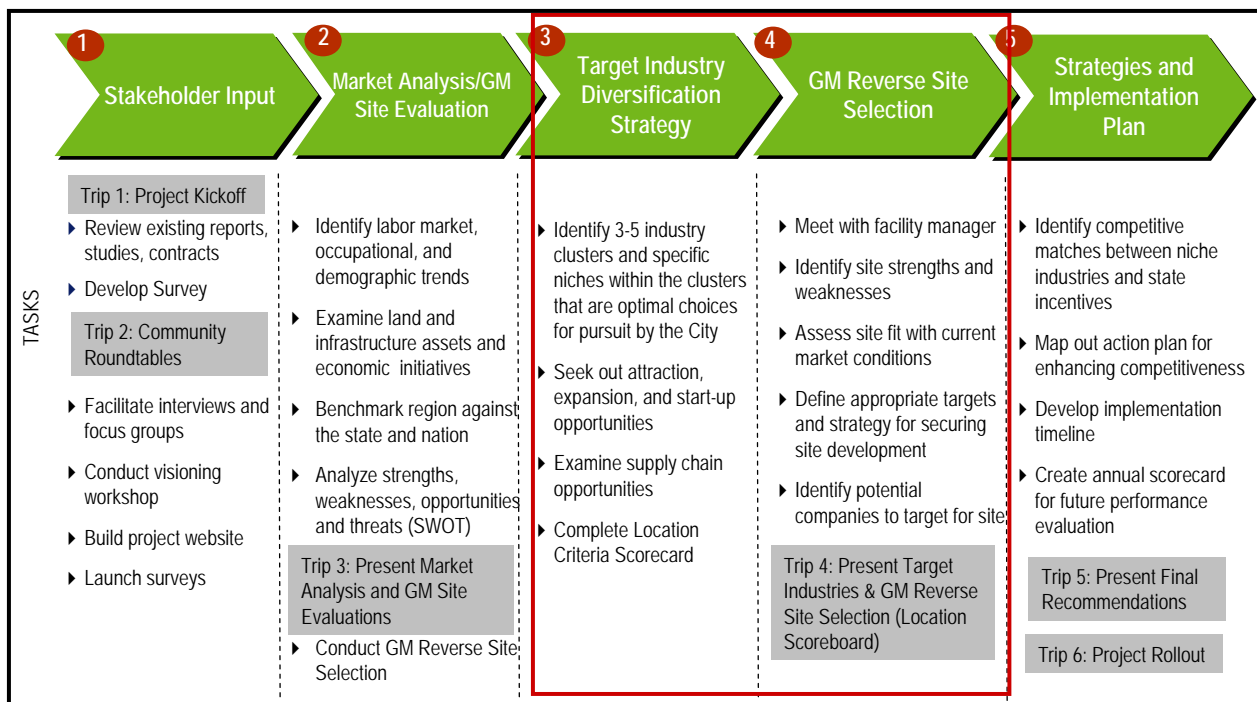


PROJECT PHASES

With input from public and private leaders throughout Moraine and the Moraine Region, the *Target Industry Analysis* report (report #2) provides an understanding of the region's assets and key opportunities for creating jobs within high value industries.

The report identifies the strengths that lend to the region's competitiveness as well as the challenges it will need to address in order to improve. For each sector, a summary of national and regional trends is provided, as well as its ability to grow and attract businesses. Due to the unique GM site within Moraine, a Site evaluation is also being conducted to understand that specific facet of the Moraine community.

Ultimately, the *Target Industry Analysis* and the *GM Site Evaluation* provide the basis for developing a *Strategies and Implementation Plan*. The purpose of this plan is provide regional leaders with a roadmap that restructures Moraine's economy and redevelops the GM site into a site of job activity and productivity for the region.



TARGET INDUSTRY ANALYSIS – RENEWABLE ENERGY AND ENERGY EFFICIENCY

INDUSTRY DEFINITION

The renewable energy and energy efficiency industry, in the tradition of electronics, biotechnology, and other technology-driven investment waves, is the newest industry to attract the attention of investors and economic developers worldwide. The industry is broadly defined by technologies and services that reduce or eliminate the environmental impact of primary energy production, energy consumption and electricity generation.

The industry can be divided into two broad subsectors, each focused on complementary but distinct areas: renewable energy and energy efficiency.

The renewable energy industry is focused on the production of energy forms that are environmentally sustainable and that reduce the environmental impacts of energy production. Companies in this subsector focus on several key areas of the energy infrastructure, including manufacturing of clean energy production equipment like solar panels, wind turbines and components, and biofuels, providing cost-effective, non-polluting machinery for electricity production or cleaner transportation fuels. While this emerging industry has traditionally been analyzed in terms of energy production technologies, energy efficiency's importance to the overall industry has risen dramatically.

The energy efficiency industry is driven by advances in green building and energy and water conservation technologies, battery technologies and energy storage, smart grid technologies, superconducting electrical transmission lines, and a wide variety of electronic, mechanical, and industrial processes and services.

Because of the distributed nature of the industry across the U.S. and its start-up status, attempts to define renewable energy through traditional government employment statistics are outlines of a broad group of industries related to renewable energy and energy efficiency. Many companies within these sectors, however, do not produce renewable energy technologies or services, while some renewable energy companies may fall outside of this definition.

NATIONAL GROWTH TRENDS

Renewable energy and energy efficiency are long-term growth industries. As the American economy continues to grow over the long term, energy consumption will rise, although recent trends indicate that U.S. energy consumption has temporarily plateaued as higher oil prices have driven demand for energy conservation. The

RENEWABLE ENERGY AND ENERGY EFFICIENCY

NAICS Description

2211	Electric Power Generation, Transmission & Distribution
2371	Utility System Construction
2382	Building Equipment Contractors
3251	Basic Chemical Manufacturing
3336	Engine, Turbine, and Power Equipment Manufacturing
3344	Semiconductor & Other Electronic Component Manufacturing
3353	Electrical Equipment Manufacturing
3359	Other Electrical Equipment and Component Manufacturing
4236	Electrical and Electronic Goods Merchant Wholesalers
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers
5413	Architectural, Engineering, and Related Services
5416	Management, Scientific, and Technical Consulting Services
5417	Scientific Research and Development Services

NATIONAL RENEWABLE ENERGY AND ENERGY EFFICIENCY



Source: Bureau of Labor Statistics QCEW

United States lacks the domestic fossil fuel resources to meet projected energy demand, and renewable energy sources are being developed rapidly to step into the breach. In many cases, renewable energy has become a commercially viable alternative to traditional polluting energy sources such as coal and other fossil fuels, and is widely available domestically. Falling costs for renewable energy technologies combined with rising or unstable prices for conventional fuels have made many of these technologies economically feasible today. For these reasons, renewable energy sources have emerged as a solution for many of our energy related problems. Although, in the final quarter of 2008, oil prices dropped drastically, the recent energy crisis has brought alternative energy to the forefront of political policy and is a top priority of the current presidential administration, positioning the industry for exponential growth in the coming decade.

The traditional energy and utility industries face many uncertainties and challenges, including responding to higher energy prices, competition for customers in deregulated markets, meeting state and national government mandates for renewable electricity and clean fuels production, and reducing risk in the face of anticipated restrictions on emissions of global warming gases. As oil and natural gas prices have risen, excess capital available to traditional energy companies will be poured into company-level venture capital funds, which are investing in a variety of traditional and renewable energy technologies. Energy companies must manage these myriad changes with an eye toward new technological innovations.

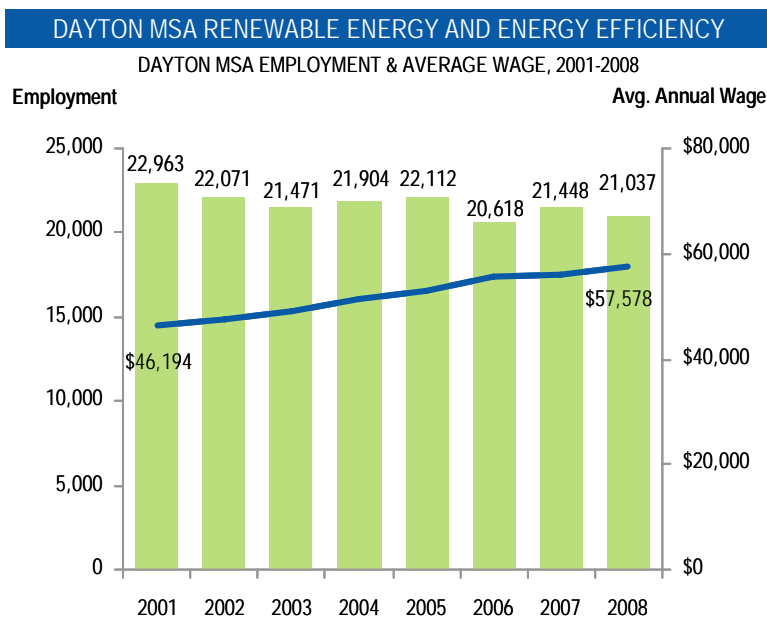
These fundamental changes in the constraints of energy production and consumption all drive the growth of the renewable energy industry. Renewable energy is now the fastest growing segment of the energy industry; with market size in its four primary sectors (biofuels, wind, solar, and fuel cells) expected to increase from \$77 billion in 2007 to \$254 billion over the next decade. While the reduction in available capital poses a problem for all new ventures, renewable energy is still being buoyed by federal stimulus dollars.

LOCAL GROWTH TRENDS

Moraine's renewable energy competitiveness stems from the region's control systems, aerospace, and fabrication expertise. Engineers, scientists, and electrical/mechanical technicians are all needed for this evolving industry.

At nearly \$58,000, average wages in the alternative energy industry in the region are very competitive with national wages. As these jobs move out of more traditional industries and into the renewable energy sector, they will increase significantly. Employment has been choppy within this sector recently as federal and state funding has ebbed and flowed, and as other industries that employ people within these sectors have struggled.

Many entrepreneurial and R&D activities within the region have the potential to make Moraine and Dayton national leaders in renewable energy, particularly in the area of biofuel and wind turbines. For instance, researchers at the von Ohain Fuels and Combustion Center are developing ways to commercialize a bio-jet fuel and recently received a \$10 million grant from the Air Force to continue its research.



Source: Bureau of Labor Statistics QCEW and US Census QWI

OCCUPATIONAL EMPLOYMENT

As a fledgling field, labor is being pulled from sectors, from chemical engineering and architecture to sheet metal workers and surveyors. While most innovation occurs with PhD or master's expertise, energy efficiency retrofitting and technician work require workforce with an associate's or moderate to long-term training on the job.

Key Occupations in the Renewable Energy and Energy Efficiency Industry							
Occupation	Employment		Average Wage			Occupational Information	
Title	Dayton MSA	10-year U.S. Growth Projection	US	Dayton MSA	Wage Differential	% with Bachelor's Degree+	Education
Helpers-electricians	510	4.0%	\$24,670	\$23,980	-2.9%	2%	Short-term on-the-job training
Architects, except landscape and naval	180	17.3%	\$68,560	\$61,130	-12.2%	86%	Bachelor's degree
Helpers-pipelayers, plumbers, pipefitters, and steamfitters	100	16.6%	\$24,630	\$27,390	10.1%	2%	Short-term on-the-job training
Architectural and civil drafters	260	4.6%	\$42,110	\$39,530	-6.5%	22%	Postsecondary vocational award
Surveyors	**	15.9%	\$48,950	\$50,130	2.4%	82%	Bachelor's degree
Surveying and mapping technicians	160	9.6%	\$33,390	\$32,660	-2.2%	11%	Moderate-term on-the-job training
Plumbers, pipefitters, and steamfitters	1,640	15.7%	\$44,850	\$45,380	1.2%	5%	Long-term on-the-job training
Electricians	2,000	11.8%	\$45,630	\$48,600	6.1%	6%	Long-term on-the-job training
Electrical power-line installers and repairers	270	2.5%	\$49,200	\$48,090	-2.3%	5%	Long-term on-the-job training
Heating, air conditioning, and refrigeration mechanics and installers	480	19.0%	\$38,770	\$37,930	-2.2%	3%	Long-term on-the-job training
Electrical and electronics drafters	130	1.2%	\$48,410	\$39,930	-21.2%	22%	Postsecondary vocational award
Civil engineers	580	16.5%	\$69,480	\$60,360	-15.1%	87%	Bachelor's degree
Environmental engineers	370	30.0%	\$70,720	\$72,240	2.1%	87%	Bachelor's degree
Pipelayers	320	9.9%	\$32,290	\$33,320	3.1%	5%	Moderate-term on-the-job training
Electrical engineers	520	11.8%	\$76,060	\$69,750	-9.0%	83%	Bachelor's degree
Earth drillers, except oil and gas	**	7.9%	\$35,770	\$37,710	5.1%	3%	Moderate-term on-the-job training
Chemical plant and system operators	90	-17.7%	\$46,900	\$38,050	-23.3%	8%	Long-term on-the-job training
Sheet metal workers	520	12.2%	\$39,570	\$46,580	15.0%	2%	Long-term on-the-job training
Civil engineering technicians	240	14.1%	\$40,780	\$36,030	-13.2%	18%	Associate degree
Environmental science and protection technicians, including health	100	16.3%	\$38,520	\$34,280	-12.4%	47%	Associate degree
Mechanical engineering technicians	640	12.3%	\$46,520	\$37,430	-24.3%	18%	Associate degree
Chemical engineers	90	10.6%	\$79,230	\$78,070	-1.5%	92%	Bachelor's degree
Electrical and electronic equipment assemblers	1,430	-6.4%	\$27,150	\$28,910	6.1%	6%	Short-term on-the-job training
Physicists	90	7.0%	\$91,480	\$88,250	-3.7%	92%	Doctoral degree
Chemical technicians	90	4.4%	\$40,120	\$35,910	-11.7%	27%	Associate degree
Environmental scientists and specialists, including health	350	17.1%	\$57,470	\$51,690	-11.2%	93%	Master's degree
Security and fire alarm systems installers	300	21.7%	\$35,480	\$30,290	-17.1%	8%	Postsecondary vocational award
Electro-mechanical technicians	90	9.7%	\$45,670	\$33,850	-34.9%	18%	Associate degree
Chemists	240	7.3%	\$63,470	\$52,210	-21.6%	94%	Bachelor's degree
Mathematicians	50	-1.3%	\$81,150	\$86,290	N/A	74%	Doctoral degree
Electrical and electronic engineering technicians	880	9.8%	\$48,710	\$44,820	-8.7%	18%	Associate degree
Engineering managers	1,050	13.0%	\$105,470	\$96,520	-9.3%	84%	Bachelor's or higher degree, plus work experience
Mechanical drafters	470	5.5%	\$45,490	\$50,440	9.8%	22%	Postsecondary vocational award
Mechanical engineers	1,130	11.1%	\$70,000	\$65,010	-7.7%	80%	Bachelor's degree
Electronics engineers, except computer	1,190	9.7%	\$79,990	\$84,560	5.4%	83%	Bachelor's degree

** Data is non-disclosed

Source: BLS Occupational & Employment Statistics

INDUSTRY LOCATES/EXPANSIONS

As Renewable Energy continues to develop the market, investors are looking for Midwest regions that can draw on manufacturing expertise, infrastructure and transportation access. Recent activity has often required large-scale operations with over \$100 million in investment and hundreds of workers.

RENEWABLE ENERGY AND ENERGY EFFICIENCY – AT LEAST 12 PROJECTS, INCLUDING:						
City	State	Company	Size (SqFt)	Jobs	Investment (\$ millions)	Type
Yorkville	IN	VAT		120	3	Wind Tubines
Pikeville	KY	Agresti Biofuels		250	200	Biofuels Mfg
Perrysville	OH	Williard & Kelsey	252,000	400	105	Solar Panels Mfg
Muncie	IN	Brevini	150,000	455	62	Wind Turbines
Perryville	OH	First Solar	500,000	134		Solar Modules
Indianapolis	IN	EnerDel		855	120	Batteries

Source: Conway Data

RECOMMENDED NICHE TARGETS

While the renewable energy industry is still becoming established, several distinct subsectors have been identified based on particular energy-generating technologies, energy-efficiency products, and professional services. Moraine has the potential to compete in several sectors within the renewable energy and clean technology industry, with specific strengths in smart grid technologies, fuel cells, energy storage and energy services.

State-level public policy support for the industry, local access to available natural resources, strong transportation infrastructure, the availability of a skilled, technology-driven workforce, strong research and development assets from local universities where start-up companies could have access to lab space, and tax advantages all work in unison to make the region an attractive location for the following niche sectors:

Smart Grid

In 2009, President Barack Obama signed legislation that included doubling alternative energy production in the next three years and building a new electricity smart grid. The basic concept of Smart Grid is to add monitoring, analysis, control and communication capabilities to the national power generation and transmission system in order to maximize the output of the system while reducing energy consumption. Smart Grid will also allow homeowners and businesses to utilize electricity as efficiently and economically as possible.

Smart Grid technologies can improve the reliability, security, and efficiency of the electrical grid. Intelligent devices can automatically adjust to changing conditions to prevent blackouts and increase capacity. While currently available, a lack of standards and increased upfront cost hinder the deployment of smart grid technologies. Uniform standards will simplify new equipment selection and installation. Several financial mechanisms under consideration, such as Department of Energy matching funds, rate recovery incentives and accelerated depreciation, will help manufacturers and utilities finance new investments.

Fuel Cells

Fuel cells, one of the most hyped early technologies associated with the renewable energy industry, continue to evolve toward commercial availability. Fuel cells produce electricity through an electrochemical process, and produce only water as emissions. Fuel cells currently have only niche applications in the renewable energy industry, and the fuel cells industry as a whole and virtually all fuel cell companies have yet to turn an annual profit in any given year. As fuel cell technologies move from military and remote telecommunications applications to mainstream energy applications, this technology should provide on-site electricity generation with virtually no emissions, enabling distributed electricity production and reducing losses from electricity transportation.

Energy Storage

Energy storage may provide the missing link to catapult renewable energies from niche contributors to electricity production and transportation energy to becoming the full-scale basis for the U.S. electrical grid and transportation industries. Because many renewable energy resources (particularly wind, which is approaching acceptable levels of commercial viability) cannot provide energy on demand, but produce energy whenever the resource is available, electric utilities find some difficulty in scheduling power production and may have to forego renewable energy production to stabilize the electric power grids during times of high wind or solar production and low electricity demand. In addition, while gasoline can be stored virtually indefinitely, automobiles using electrical power are hamstrung by their ability to store electrical power in heavy, bulky battery technologies.

Through advanced technologies such as flywheels, advanced battery technologies, and others still being developed, advances in energy storage can provide solutions tied to other platforms. In combination with renewable energy technologies, vehicle systems, or fuel cells, energy storage technologies can ensure that the timing of energy production matches the timing of energy consumption. These technologies aim to enable electricity storage so that wind farm electricity production can be stored until it is needed, and automobiles can possibly use electricity for energy instead of liquid fuels.

Energy Services

Energy services companies provide a wide variety of services related to the renewable energy industry, with an emphasis on renewable energy project development, energy conservation auditing, energy conservation services, and energy finance. Energy services companies tend to focus on reducing energy consumption for commercial users, and thus require highly skilled industrial and mechanical engineers to determine process improvements for energy efficiency. Additional growth comes from the ties between these companies and green building services, where energy services companies can help traditional buildings consume less energy and can help construction companies build and design buildings for reduced energy consumption. These energy service companies are growing at nearly 22% annually, with U.S. industry revenues expected to exceed \$5 billion in 2008.

INDUSTRY LOCATION CRITERIA

Successful renewable energy and energy efficiency companies rely on the local availability of four primary factors when making a location decision:

- **Workforce** – The industry requires highly paid scientists, technicians, and professionals with a range of skills from chemistry, biology, physics, engineering, management, and other technical and scientific backgrounds. In addition, manufacturing operations require highly-skilled technical backgrounds in computer-assisted machine operation, and manufacturing backgrounds. The access to an adequate workforce has rapidly emerged as perhaps the most important site selection criteria for start-up and manufacturing operations. Due to the nature of the industry, an entrepreneurial spirit is necessary as many employees transfer from high tech companies familiar with a start-up environment.
- **Structural Assets** – Many of these companies are little more than small labs that typically require flex industrial space with an office component. Access to area research facilities can be important to firms within the clean energy industry. Experience in renewable energy financing, contract structuring, and other legal and financial areas within the law and finance sectors of the industry must be in place to aid up-and-coming companies. In addition, having supportive local policies, including local green-building programs, electric utilities willing to provide access to the grid for testing, and supportive incentives at the state level all provide renewable energy companies with opportunities for growth and expansion at lower than average cost.
- **Cost of Doing Business** – Companies will look for areas with a low overall recurring cost base. Due to the high salaries of scientists and technical workers and extensive research and testing, general operating costs must be low. Renewable energy firms will closely analyze state and local energy policies. Large-scale

generators will look to states with renewable portfolio standards and other renewable incentives. Manufacturers will typically search for locations with large amounts of available electricity. Generally, companies prefer states that have an active retail market for electricity, giving consumers the choice to use renewable sources of energy.

Due to the challenge of transporting some renewable equipment, such as wind turbines and blades, companies also prefer locations that are close to their end market. Some of the largest markets at the moment are in western Texas, the Midwest, and the great lakes region.

- **Research & Development** – Outside the largest industry firms such as GE Wind Power and Vestas, industry firms are typically very small, averaging fewer than 10 employees, and have limited resources. Companies face significant hurdles to design, test, and deploy products that meet a variety of governmental standards. Because of these demanding research needs and lack of funds, having available lab space within an area university or incubator is increasingly important. Firms also want to be near areas that work as testing ranges; a solar firm wants to be located in an area with abundant sunlight. Access to public utilities for real-world testing provides a leg up on competitor companies.

Much of the industry's research is extremely high-risk and could take years to reach commercialization. The majority of this research takes place in federal labs tasked with clean energy research. These labs are located in a handful of states, including California, Colorado, and New Mexico. Industry firms in need of outside expertise, access to research facilities, and a potential workforce will cluster around these labs and other similar research assets.

TARGET INDUSTRY ANALYSIS – AEROSPACE

INDUSTRY DEFINITION

Aerospace is a broad industry that can include the design and manufacturing of civilian and military aircraft, space vehicles, and missiles. Aerospace instrument manufacturing and space research and technology provide large portions of the industrial employment across the industry. Logistics and control systems software is made to manage mechanical and other hardware components involved with flight, air traffic control, and communications. Additionally, aircraft suppliers provide parts and machinery for aircraft assembly and maintenance. These parts include engines, interior components, avionics, and aircraft hardware such as landing gear. Suppliers are important for both the assembly and maintenance of aircraft. The industry's customers include the military, commercial airlines, and general aviation.

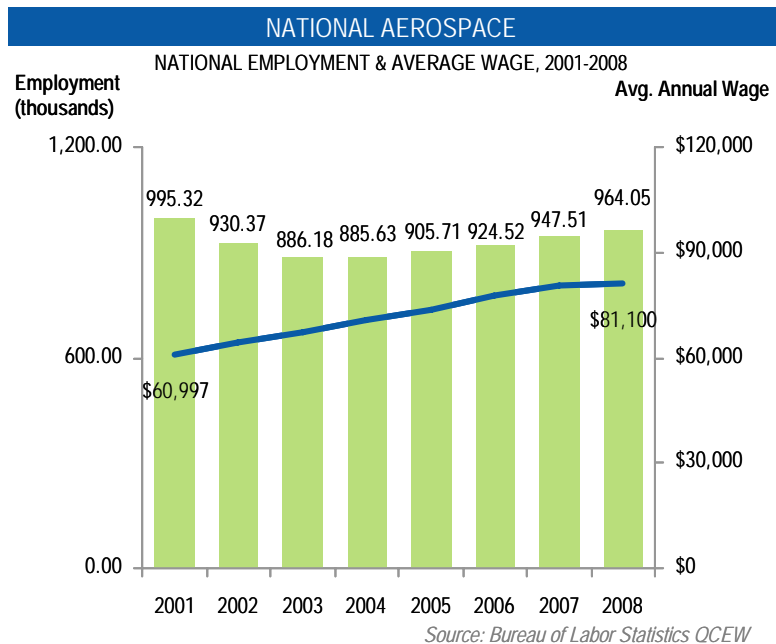
AEROSPACE	
NAICS Description	
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
3364	Aerospace Product and Parts Manufacturing
9271	Space Research and Technology

NATIONAL GROWTH TRENDS

After a short time of decline in employment at the turn of the century, employment in the aerospace industry has steadily increased. This is due to significant backorders for airplanes, increased space exploration activity, and growing interest in renewable energy production, especially in relation to wind power.

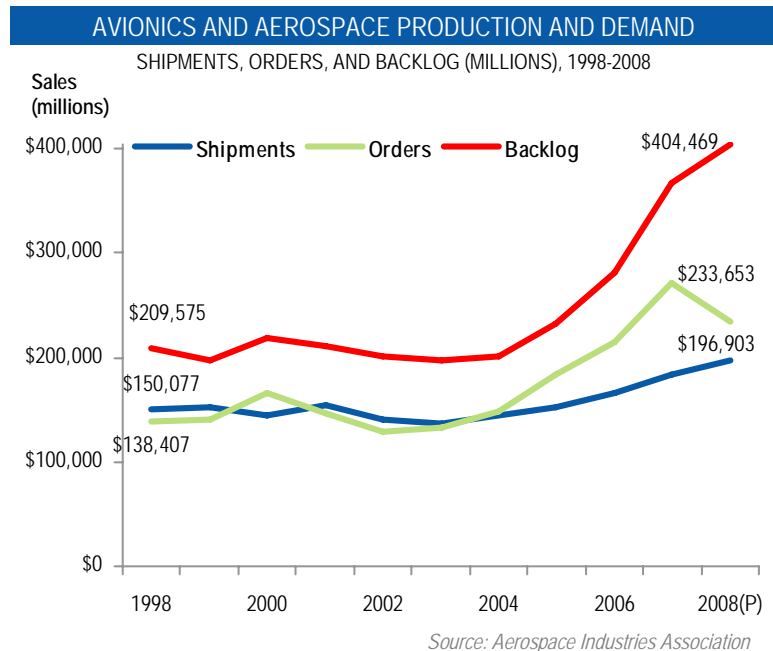
Despite the fluctuations in employment at the beginning of the decade, average wages for the industry maintained a steady growth trend. Average wages have increased nearly 25 percent from \$68,000 per year in 2000 to nearly \$85,000 per year in 2008.

Likewise, sales have steadily increased since 2003, increasing nearly 40 percent to close 2008 with \$204.4 billion, according to the Aerospace Industries Association (AIA). In spite of the recent economic challenges facing the world, sales in this sector are forecasted to increase to \$214.3 billion for 2009. While historically the largest customer segment, government has declined by proportion of all sales to equal less than 50 percent. Large backorders for commercial airlines as well as significant private investment in space flight commercialization accounts for the significant increase in private-sector avionics sales.



In 1998, there was an industry backlog equal to less than 5 months of production. With recent increases in production demand, the backlog has increased to almost 13 months. While the global economic recession has extremely curtailed orders, they still exceed production capacity. Additionally, with the current backlog, industry leaders would have to have 6-9 months of substantial order reductions before supply outstripped demand.

The aerospace industry is expanding out of traditional areas of aircraft, space vehicles, and defense manufacturing and into newer, expanding areas such as renewable energy. Wind turbines and aircraft engines are in many ways similar, and aerodynamic windmill blades require precise manufacturing processes developed for aircraft. Other avionics applications include materials research, where new composite materials promise to revolutionize the construction of aircraft, with satellite construction and commercial space technology also providing new outlets for avionics growth.

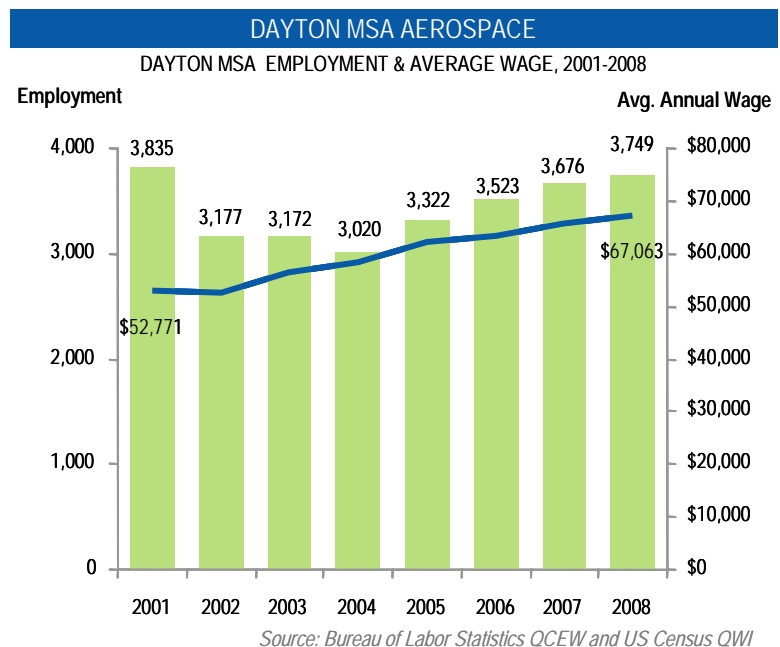


LOCAL INDUSTRY OVERVIEW

To assess the aerospace industry relative to Moraine accurately, it is essential to examine the regional context.

The Dayton MSA is the true birthplace to aerospace and plays a key role in the development of aerospace technology to this day. Wright-Patterson Air Force Base (WPAFB) gets part of its name from the Wright brothers, the famous early inventors of aviation and aviation-related technology.

Just as Microsoft's innovations are transforming Redmond and the Seattle MSA into a software center, the Wright Brothers' invention transformed Dayton into the aviation capital. After successfully demonstrating their heavier than air design could maintain sustained flight to both the French and American military, they won significant contracts to produce aircrafts. These aircraft were built in Moraine under the name of the Dayton-Wright Airplane Company. Flight tests took place at nearby Huffman Prairie. This start as the home to the first aviation production drew the military presence. WPAFB is still the home of the Air Force Office of



Scientific Research (AFOSR) and the Air Force Research Laboratory, which oversees all research and development funding as well as aeronautical procurement for the Air Force. This budget, well over \$500 million annually, includes research into sensors, space exploration, air vehicles, directed energy, and advanced materials, to name a few.

While Moraine is some distance from WPAFB, there is significant infrastructure in place to handle manufacturing within this sector. Combined with the fact that this industry is already strong locally and is expected to grow steadily, this industry aligns well with the entire region.

OCCUPATIONAL EMPLOYMENT

Unsurprisingly, the aerospace industry requires strong regional workforce availability within engineering, materials science, machining, and computer software. Due to WPAFB and the long history of aviation within the region, the University of Dayton has one of the preeminent programs for mechanical and aerospace engineering. However, while some of the occupations most needed by this field require a bachelor's or more, many only require on-the-job training or an associate's degree.

Key Occupations in the Aerospace Industry							
Occupation	Employment		Average Wage			Occupational Information	
Title	Dayton MSA	10-year U.S. Growth Projection	US	Dayton MSA	Wage Differential	% with Bachelor's Degree+	Education
Aerospace engineers	770	8.3%	\$85,450	\$84,320	-1.3%	84%	Bachelor's degree
Aerospace engineering and operations technicians	40	8.5%	\$54,720	\$48,550	-12.7%	18%	Associate degree
Electromechanical equipment assemblers	130	-13.9%	\$28,520	\$28,470	-0.2%	6%	Short-term on-the-job training
Avionics technicians	70	9.1%	\$46,940	\$43,190	N/A	14%	Postsecondary vocational award
Electro-mechanical technicians	90	9.7%	\$45,670	\$33,850	-34.9%	18%	Associate degree
Aircraft mechanics and service technicians	270	13.4%	\$49,260	\$42,610	-15.6%	11%	Postsecondary vocational award
Electrical and electronic equipment assemblers	1,430	-6.4%	\$27,150	\$28,910	6.1%	6%	Short-term on-the-job training
Industrial engineering technicians	280	10.5%	\$49,220	\$42,550	-15.7%	18%	Associate degree
Materials engineers	330	12.2%	\$71,390	\$85,930	16.9%	68%	Bachelor's degree
Industrial engineers	1,740	16.0%	\$68,500	\$67,810	-1.0%	70%	Bachelor's degree
Electrical engineers	520	11.8%	\$76,060	\$69,750	-9.0%	83%	Bachelor's degree
Mechanical engineers	1,130	11.1%	\$70,000	\$65,010	-7.7%	80%	Bachelor's degree
Engineering managers	1,050	13.0%	\$105,470	\$96,520	-9.3%	84%	Bachelor's or higher degree, plus work experience
Engineers, all other	1,840	15.4%	\$77,570	\$77,350	-0.3%	81%	Bachelor's degree
Mechanical engineering technicians	640	12.3%	\$46,520	\$37,430	-24.3%	18%	Associate degree
Logisticians	290	13.2%	\$63,010	\$68,710	8.3%	52%	Bachelor's degree
Electrical and electronic engineering technicians	880	9.8%	\$48,710	\$44,820	-8.7%	18%	Associate degree
Electrical and electronics repairers, commercial and industrial equipment	230	9.7%	\$44,350	\$46,430	4.5%	6%	Postsecondary vocational award
Engineering technicians, except drafters, all other	470	12.3%	\$52,400	\$36,280	-44.4%	18%	Associate degree
Electronics engineers, except computer	1,190	9.7%	\$79,990	\$84,560	5.4%	83%	Bachelor's degree
Electrical and electronics drafters	130	1.2%	\$48,410	\$39,930	-21.2%	22%	Postsecondary vocational award
Machinists	3,010	4.3%	\$35,350	\$36,250	2.5%	4%	Long-term on-the-job training
Milling and planing machine setters, operators, and tenders, metal and plastic	200	-5.3%	\$32,120	\$32,440	1.0%	2%	Moderate-term on-the-job training
Purchasing agents, except wholesale, retail, and farm products	1,600	8.1%	\$52,560	\$58,400	10.0%	45%	Work experience in a related occupation
Industrial production managers	790	0.8%	\$81,960	\$75,290	-8.9%	45%	Work experience in a related occupation
Numerical tool and process control programmers	130	-1.1%	\$43,990	\$41,980	-4.8%	6%	Long-term on-the-job training
Metal workers and plastic workers, all other	1,460	-13.6%	\$37,380	\$38,810	3.7%	3%	Moderate-term on-the-job training
Grinding and polishing workers, hand	150	-8.7%	\$25,010	\$28,230	11.4%	4%	Moderate-term on-the-job training
Computer software engineers, systems software	1,010	43.0%	\$84,310	\$76,280	-10.5%	83%	Bachelor's degree
Purchasing managers	340	7.0%	\$81,440	\$82,010	0.7%	58%	Bachelor's or higher degree, plus work experience
Computer hardware engineers	90	10.1%	\$87,170	\$73,000	-19.4%	69%	Bachelor's degree
Computer-controlled machine tool operators, metal and plastic	840	-1.2%	\$32,060	\$33,020	2.9%	6%	Moderate-term on-the-job training
Grinding, lapping, polishing, and buffing machine tool setters	**	0.2%	\$36,150	\$48,080	24.8%	1%	Short-term on-the-job training
Inspectors, testers, sorters, samplers, and weighers	2,330	-2.6%	\$32,250	\$36,810	12.4%	14%	Moderate-term on-the-job training
Sales engineers	440	14.0%	\$79,370	\$65,850	-20.5%	86%	Bachelor's degree

** Data is non-disclosed

Source: BLS Occupational & Employment Statistics

INDUSTRY LOCATES/EXPANSIONS

Ohio clearly dominates the region in terms of location/expansion within the aerospace industry. Of the more than 15 projects occurring within the region in the past year, half of them occurred within the state. These companies varied in location needs, from manufacturing and R&D space to office and headquarters locations.

AEROSPACE – AT LEAST 15 PROJECTS, INCLUDING:						
City	State	Company	Size (SqFt)	Jobs	Investment (\$ millions)	Type
Wilmington	OH	Airborne		430	6	Aircraft Mfg
Troy	OH	Precision Aero	33,000	40	4	Aircraft Parts Mfg
West Chester	OH	GE Aviation	202,000			Office
Hilliard	OH	Star Dynamics	40,000	50		R&D
Columbus	OH	Flight Safety Intl	100,000	75	122	Office
Columbus	OH	NetJets, Inc.	415,000	735	73	HQ
Crane	IN	ITT	15,000	220	10	Avionics Mfg

Source: Conway Data

RECOMMENDED NICHE TARGETS

Aerospace Manufacturing

While there is already significant aerospace manufacturing taking place locally, mainly in component production, GM's recent closure has provided the region with available labor for assembly and metal fabrication. This can include activities from fuselage and wing construction to assembly of entire aeronautical vehicles. This is a real opportunity to transition part of the Moraine workforce into a higher value-added industry.

Some companies within the area already create navigational, measuring, electro medical or control instruments, which can be useful for aerospace and other local industries. Some examples of local companies include Acutemp, American Thermal Instruments and P2SI.

UAV Manufacturing

One of the strongest opportunities for Moraine relative to vehicle assembly is in the arena of unmanned aerial vehicles (UAVs). Proximity to WPAFB, abundance of local workforce acumen in transportation equipment assembly, and the large space available with the GM plant closure makes the location very competitive.

Engineering Services

Much of the region's strength in the aerospace industry is reflected in engineering and production methods knowledge. Given the increasing need for product development of aerodynamic and technically challenging products in a variety of industries, the region should expand the reach of its army of skilled engineers to consult on technical challenges in a variety of industries.

Research & Development

The Moraine region has distinct advantages in basic aerospace research as compared to other locations in the country. With WPAFB, UD, and significant research and development already taking place, regional leaders should seek to capture more research funding.

INDUSTRY LOCATION CRITERIA

Structural Assets

Aircraft and aircraft parts manufacturers are typically medium to large-scale operations requiring a sizable tract of land. Proximity to a large, international airport is desirable, but small regional airports will still allow for flight service. Air traffic congestion can also be a major detriment to testing and getting product in and out the door. A land buffer or a limit to residential growth nearby helps prevent public complaints of noise that could threaten future operations. Facilities range in size from several hundred thousand square feet to the millions. Any facility will require ample access to electricity, natural gas, water, and wastewater. An excellent transportation system including both interstate and rail access, in addition to a commercial airport, will also be required. Perhaps more important to space technology and research than available land or airport access is access to NASA contracts, expertise, and technology.

Costs of Doing Business

Aircraft parts manufacturing companies are large-scale, low-margin operations whose profitability is greatly influenced by recurring costs. They are large users of electricity and natural gas and pay large amounts of property taxes. Any location decision will be heavily influenced by tax rates, utility costs, and prevailing wage rates. Due to the number and diversity of employees, these operations are fiercely sought after and command large amounts of incentives. Increasingly these operations are being located overseas, and components are shipped to the U.S. for assembly. Space research is more concerned with the costs of R&D equipment, and companies often seek tax incentives for purchasing equipment or expanding operations.

Research & Development

R&D activity in the aircraft manufacturing industry abounds, though it generally focuses on product development rather than later-staged manufacturing processes. Major funding sources for underlying aerospace technologies come from the Air Force Office of Scientific Research, Department of Defense, and NASA. The majority of industry research is conducted in-house at private research and design facilities. Networks for collaboration between the aerospace industries and research labs and commercialization of research into viable products are necessary to grow the capacity of the aerospace industry.

Economic Conditions

A sizeable aerospace industry cluster benefits from end-producer demand and a local pool of skilled workers. Technical and trade schools are needed to educate and train workers. Maintenance facilities can draw aircraft across large regions due to relative short flight times. A region needs strong university programs for engineering and design services.

Workforce

Skilled workers are required for aircraft parts manufacturing, including many engineers and drafters. While not all skilled positions require a bachelor's degree, many of the positions require at least a technical degree. Skilled machinists are required to make parts that are not mass-produced. As with automotive suppliers, an aircraft manufacturing facility will desire both a four-year engineering university, as well as a good technical college. Technical colleges should provide a strong aviation program with courses in airframe and power plant technology. Companies also seek workers with standard industry certifications, and with the aging workforce, are seeking employees who can rapidly absorb knowledge from retiring workers.

TARGET INDUSTRY ANALYSIS – HEALTH SERVICES AND TECHNOLOGY

INDUSTRY DEFINITION

Health services and technology is made up of all health care-related services, including preventative treatment, surgery, and hospital care, as well as the technology associated with health services, including electromedical, diagnostic, and control instruments manufacturing as well as medical equipment and supplies manufacturing.

HEALTH SERVICES AND TECHNOLOGY

NAICS Description

- 3345 Navigational, Measuring, Electromedical, and control Instruments Manufacturing
- 3391 Medical Equipment and Supplies Manufacturing
- 5413 Architectural and Engineering Systems
- 6215 Medical and Diagnostic Laboratories

NATIONAL GROWTH TRENDS

Despite worldwide economic turmoil, the global industry of health services and technology is one of the few sectors demonstrating growth or stability throughout 2008. Publicly traded biotech firms, a major component of the private arm of the health services and technology sector, grew by 12% to \$89.7 billion in 2008 at the global level.

Raised capital declined sharply in 2008 with companies in the US and Europe only raising \$16 billion, a 46% decline from 2007, and IPO funding falling 95% to \$116 million. However, biotech venture financing, remained relatively strong falling only 19% from 2007's all-time record.

Health services and technology is considered the fastest growing economic development sector in the United States and is only expected to rise. Seventy percent of the national economy is based on consumer spending and the largest single demographic, the baby boomers, is about to retire. Although there is some speculation that should President Obama's universal health care initiative pass into law, there would be less long-term spending in this arena, the general consensus is this reduction in spending would take decades and would mainly arise out of slowed growth. Numerous states are leveraging university systems and pouring millions into research in order to attract this business.

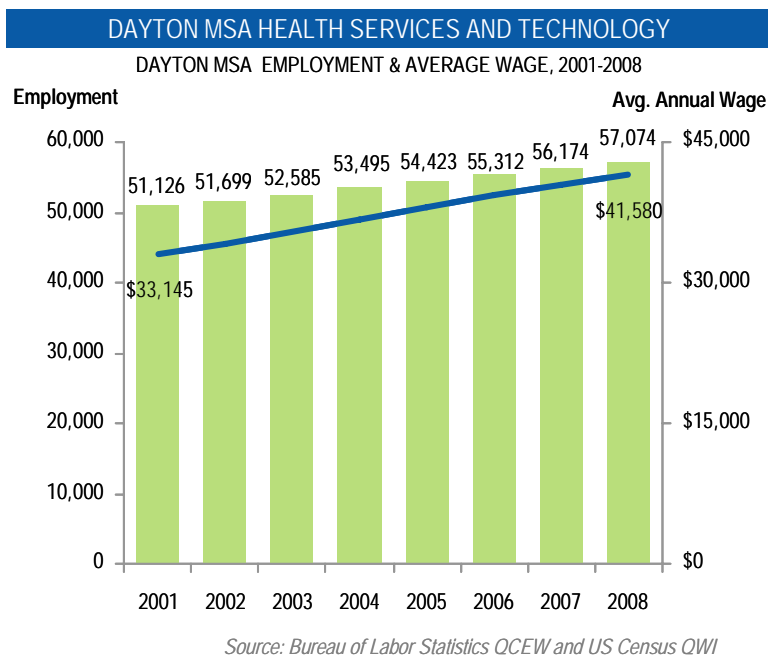
LOCAL INDUSTRY OVERVIEW

Regional health services and technology trends reflect national trends. Between 2001 and 2008, employment within this sector grew 11.6 percent and wages grew 25.4 percent. Wages only slightly lag the nation, reflecting the lower cost of living that the Moraine region enjoys.

NATIONAL HEALTH SERVICES AND TECHNOLOGY



Ohio is considered a biotechnology leader. *Business Facilities*, ranked states based on more than 20 criteria, including number of bioscience facilities, research and development funding, venture capital investments, employment, university grant funding and bioscience-targeted tax exemptions. In 2008, Ohio was ranked 4th, tied with Texas, as being one of the strongest states in biotechnology initiatives. In other specialized biotech employment categories, Ohio ranked fifth for agricultural feedstock and chemicals. It was ranked seventh for bioscience research funding, with \$50 million appropriated for research in fiscal years 2007 and 2008. As of December 2008, there were approximately 820 bioscience firms with capital investment over \$1 billion within the state.



The Center for Tissue Regeneration and Engineering at Dayton (TREND) houses major research activities in very specific health technology; particularly, they focus on studying how tissues and organs regenerate to develop methods to engineer this process. Some examples of their research include developing carbon parts that can be attached to broken bones to facilitate faster bone healing and using oysters to produce pearl-like coating on metal components as a way to provide protection from corrosion. These “pearls” could be used in anything from aircraft components to biocompatible medical devices.

OCCUPATIONAL EMPLOYMENT

When one hears health care services and technology, they typically think of doctors, nurses and hospitals. While these are indeed essential to growth within this sector, the technology development aspect of the field requires engineers, technicians, and assemblers. In fact, these are some of the most important occupations for health technology success. The table below demonstrates some of the most essential workforce needs for success within this industry.

Key Occupations in the Health Services and Technology Industry							
Occupation	Employment		Average Wage			Occupational Information	
Title	Dayton MSA	10-year U.S. Growth Projection	US	Dayton MSA	Wage Differential	% with Bachelor's Degree+	Education
Dental laboratory technicians	320	7.6%	\$34,260	\$38,570	11.2%	15%	Long-term on-the-job training
Electromechanical equipment assemblers	130	-13.9%	\$28,520	\$28,470	-0.2%	6%	Short-term on-the-job training
Electro-mechanical technicians	90	9.7%	\$45,670	\$33,850	-34.9%	18%	Associate degree
Aerospace engineers	770	8.3%	\$85,450	\$84,320	-1.3%	84%	Bachelor's degree
Electrical and electronic equipment assemblers	1,430	-6.4%	\$27,150	\$28,910	6.1%	6%	Short-term on-the-job training
Electrical engineers	520	11.8%	\$76,060	\$69,750	-9.0%	83%	Bachelor's degree
Mechanical engineering technicians	640	12.3%	\$46,520	\$37,430	-24.3%	18%	Associate degree
Aerospace engineering and operations technicians	40	8.5%	\$54,720	\$48,550	-12.7%	18%	Associate degree
Industrial engineers	1,740	16.0%	\$68,500	\$67,810	-1.0%	70%	Bachelor's degree
Industrial engineering technicians	280	10.5%	\$49,220	\$42,550	-15.7%	18%	Associate degree
Electrical and electronic engineering technicians	880	9.8%	\$48,710	\$44,820	-8.7%	18%	Associate degree
Mechanical engineers	1,130	11.1%	\$70,000	\$65,010	-7.7%	80%	Bachelor's degree
Electronics engineers, except computer	1,190	9.7%	\$79,990	\$84,560	5.4%	83%	Bachelor's degree
Engineering managers	1,050	13.0%	\$105,470	\$96,520	-9.3%	84%	Bachelor's or higher degree, plus work experience
Electrical and electronics drafters	130	1.2%	\$48,410	\$39,930	-21.2%	22%	Postsecondary vocational award
Engineers, all other	1,840	15.4%	\$77,570	\$77,350	-0.3%	81%	Bachelor's degree
Electrical and electronics repairers, commercial and industrial equipment	230	9.7%	\$44,350	\$46,430	4.5%	6%	Postsecondary vocational award
Materials engineers	330	12.2%	\$71,390	\$85,930	16.9%	68%	Bachelor's degree
Computer hardware engineers	90	10.1%	\$87,170	\$73,000	-19.4%	69%	Bachelor's degree
Industrial production managers	790	0.8%	\$81,960	\$75,290	-8.9%	45%	Work experience in a related occupation
Team assemblers	9,530	7.3%	\$26,000	\$34,200	24.0%	6%	Moderate-term on-the-job training
Medical equipment repairers	50	14.8%	\$41,680	\$37,380	-11.5%	17%	Associate degree
Avionics technicians	70	9.1%	\$46,940	\$43,190	-8.7%	14%	Postsecondary vocational award
Computer-controlled machine tool operators, metal and plastic	840	-1.2%	\$32,060	\$33,020	2.9%	6%	Moderate-term on-the-job training
Purchasing managers	340	7.0%	\$81,440	\$82,010	0.7%	58%	Bachelor's or higher degree, plus work experience
Logisticians	290	13.2%	\$63,010	\$68,710	8.3%	52%	Bachelor's degree
Computer software engineers, systems software	1,010	43.0%	\$84,310	\$76,280	-10.5%	83%	Bachelor's degree
Inspectors, testers, sorters, samplers, and weighers	2,330	-2.6%	\$32,250	\$36,810	12.4%	14%	Moderate-term on-the-job training
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	1,620	-9.5%	\$26,680	\$26,230	-1.7%	2%	Moderate-term on-the-job training
Purchasing agents, except wholesale, retail, and farm products	1,600	8.1%	\$52,560	\$58,400	10.0%	45%	Work experience in a related occupation
Technical writers	290	23.2%	\$57,720	\$42,000	-37.4%	73%	Bachelor's degree
Multiple machine tool setters, operators, and tenders, metal and plastic	290	0.3%	\$31,550	\$37,490	15.8%	6%	Moderate-term on-the-job training
Sales engineers	440	14.0%	\$79,370	\$65,850	-20.5%	86%	Bachelor's degree
Machinists	3,010	4.3%	\$35,350	\$36,250	2.5%	4%	Long-term on-the-job training
Grinding and polishing workers, hand	150	-8.7%	\$25,010	\$28,230	11.4%	4%	Moderate-term on-the-job training

** Data is non-disclosed

Source: BLS Occupational & Employment Statistics

INDUSTRY LOCATES/EXPANSIONS

Ohio continues to have a strong presence in a variety of health related industries, from medical R&D to pharmaceutical medical device manufacturing. Most activity within this industry required more than 100 jobs and significant floor space.

HEALTH SERVICES AND TECHNOLOGY – AT LEAST 40 PROJECTS, INCLUDING:						
City	State	Company	Size (SqFt)	Jobs	Investment (\$ millions)	Type
Columbus	OH	Battelle		200	90	Medical R&D
Dayton	OH	Norwood Tool	53,000	50	5	Implants
Beechwood	OH	GammaStar		35	4	Medical Instruments
Perrysburg	OH	Westhaven		225	4	Medical Office
West Chester	OH	Humana	140,000	400	23	Call Center
New Albany	OH	PharmaForce		200	35	Pharma Mfg
West Lafayette	IN	MED Institute		250		Clinical Trials

Source: Conway Data

RECOMMENDED NICHE TARGETS

Biotechnology & Pharmaceutical Manufacturing

The biotechnology and pharmaceutical manufacturing industry combines innovative technical problem-solving and increasingly scientific knowledge of genetic, molecular, and cellular processes to create pharmaceuticals or improve products outside the area of healthcare, including alternative energy and agriculture. Although companies in both fields are engaging in the research, development, testing, and manufacturing of drugs, pharmaceutical industry employs chemically-based solutions while biotechnology is based on a cellular perspective. As such, the biotechnology industry also includes scientific research related to environmental cleanup and services, genetic data mining, and neuroscience work, along with biomedical applications including pharmaceutical manufacturing, medical device and equipment manufacturing, and research and development.

The pharmaceutical industry is currently undergoing a significant period of realignment. The introduction of wildly popular and profitable pharmaceuticals in the late 1980s and early 1990s ushered in an incredibly successful era for pharmaceutical companies. Many of these same drugs, however, will soon lose their patent protection; drugs representing over \$60 billion in combined annual U.S. sales will soon face competition with generic counterparts. Additionally, many of the pharmaceutical industry's fastest growing markets, such as China and India, are located outside of American borders. As a result, new pharmaceutical research and manufacturing facilities may be increasingly sited overseas.

Medical Device Manufacturing

The medical device manufacturing subsector complements the pharmaceutical industry in that both prolong and improve life. As with most other subsectors of the life sciences industry, the medical device manufacturing sector is expected to greatly benefit from the world's aging population. These demographic changes will greatly increase the demand for medical devices, such as heart pumps and prosthetic joints that can treat disease and injuries.

Medical device firms design and manufacture surgical and diagnostic equipment for the healthcare field. As with most life sciences fields, medical device manufacturing is closely regulated, research intensive, and has comfortable operating margins. Most inventions occur in research hospitals and universities before being spun off for commercial development. Technology transfer programs and the availability of human and financial capital are paramount in bringing a product to market. As a result, the industry is heavily represented in locations such as California and Massachusetts that feature a compelling mix of venture capital financing and large research universities.

Health Care Services

With America's elderly population projected to grow much faster than the overall population for the next forty years, the demand for health care services will undoubtedly sustain prolonged health care expansion over the coming decades. Currently, individuals ages 65 and older represent more than 12% of the country's total population. The size of this cohort has a profound impact on the demand for healthcare services, as more than half of an individual's lifetime expenditures on health care occur after the age of 65. By 2050, this group will represent more than 20% of America's population, creating an explosion in demand for healthcare services, including home health programs, regional medical centers, and rehabilitation.

Regional medical centers provide inpatient and outpatient hospital services for multi-county areas. A subset of hospitals, these facilities offer comprehensive medical care including diagnostics, surgery, and ongoing nursing care, and typically have a presence in virtually every type of medicine. In addition, regional medical centers often have specializations in multiple areas, from cancer care to women's health, cardiovascular, pediatrics, and neuroscience. Because of their acute care focus, medical centers utilize the most advanced technologies in treatment and diagnostics in their service provision. Regional medical centers may also host research centers, teaching hospitals, or drug studies. As regional medical centers continue to specialize, many have become destinations for specific care, where people from across the U.S. and the world seek care from the most knowledgeable medical staff in a particular health-care area.

Rehabilitation centers cater to the recovery of individuals whose health has been impaired through injury, congenital illness, drug and alcohol use, or other condition. The industry includes both medical rehabilitation services and services for the treatment of drug and alcohol addiction. Rehabilitation centers utilize physical, occupational, and speech therapy to return patients to productive activity at home or work. Services are offered in both inpatient and outpatient environments, including hospital settings, divisions of hospitals, nursing facilities, ambulatory centers, and others. Medical rehab programs address such conditions as stroke, surgical recovery, orthopedic care, sleep disorders, spinal cord injury, and numerous other ailments. The rehabilitation industry promises to experience continued growth with the aging of the population and coming retirement of the baby-boomers.

Finally, home health care remains a fast growing segment of health care services. An increasing number of elderly, convalescent, or disabled persons decide to live in their own homes instead of in a health facility. Under the direction of nursing or medical staff, home health aides provide health-related services, such as administering oral medications.

INDUSTRY LOCATION CRITERIA

Structural Assets

Health services and technology real estate needs typically run the gambit from small to large-scale operations. Proximity to a large, international airport is desirable, but not essential. Facilities range in size from several hundred square feet to the hundreds of thousands. Some wet lab space is needed for research and testing facilities. Indoor air quality is important for keeping instruments sterile and patients healthy. Any facility will require access to electricity, broadband, natural gas, water, and wastewater. In the case of hospitals, continuous electricity is essential for life-sustaining operations.

Costs of Doing Business

Health and technology services face high insurance costs in case of malpractice or lawsuits due to technology failure. Labor and supplies are also very expensive due to shorter careers (doctors require more education and consequently less time in practice) and short expiration dates for equipment, test chemicals, and other technology. Technology is typically very expensive to design and manufacture, as well.

Research & Development

R&D activity in health and technology services is usually stronger than almost all industries but defense. Major funding sources for underlying aerospace technologies come from numerous federal and state programs, as well as many charitable organizations, foundations, and trusts.

Economic Conditions

There is very strong demand for health services and health service related technologies. As baby boomers reach retirement age, the demand is only expected to increase. Even with current federal activity to restructure health care in the United States, the most modest estimates put the sector as a trillion dollar industry over the next ten years.

Workforce

A variety of workers are needed for this industry. Beyond the intuitive need for doctors, nurses, and administrators, health and health related technologies requires engineers, production workers, and chemists, to name a few.

TARGET INDUSTRY ANALYSIS – ADVANCED MATERIALS AND MANUFACTURING

INDUSTRY DEFINITION

The advanced manufacturing sector is defined by a set of high-tech industries that focus on the design, manufacturing, and assembly of the chemicals, electronic, and mechanical parts, machinery, and products that provide the basis of modern telecommunications, transportation, health care, and energy supply. The sector includes the highly-diverse industries of chemical manufacturing and oil-based energy supply; machinery and metal product manufacturing; computer, electronics, and electronic equipment and components manufacturing; composites manufacturing; transportation equipment manufacturing; and medical supplies and devices manufacturing. While these industries diverge in the products they create, they are defined by the design, manufacturing, and assembly process as well as a common set of workforce requirements, including a dependence on technically trained workers with computer-aided and highly-technical manufacturing and machinery operation skills.

Advanced manufacturing companies can further be defined by their productivity factors, continued reliance on technical upgrades, a commitment to research and development to refine their products, as well as the highly-specialized production lines that are required to knit these firms and their suppliers together in global webs. Because of the specialization within the industry, a complementary industrial focus in logistics and distribution often accompanies advanced manufacturing firms, ensuring that high-quality, competitively-priced parts are sourced from around the world and delivered just in time for final assembly.

ADVANCED MATERIALS AND MANUFACTURING

NAICS Description

326	Plastics and Rubber Products Manufacturing
332	Fabricated Metal Products
3333	Commercial and Service Industry Machinery Manufacturing
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Machinery Manufacturing
3335	Metal Working Machinery
3339	Other General Purpose Machinery Manufacturing
3353	Electrical Equipment Manufacturing
3359	Other Electrical Equipment and Component Manufacturing
3336	Engine, turbine, and Power Equipment Manufacturing
334	Computer and Electronic Product Manufacturing
335	Electrical Equipment, Appliance, and Component Manufacturing
336	Transportation Equipment Manufacturing
327	Nonmetallic Mineral product Manufacturing
339	Miscellaneous Manufacturing

NATIONAL GROWTH TRENDS

Historically, manufacturing has been a primary driver of economic development in America. Propelled by the prospect of high paying jobs and the subsequent spin-off of jobs to suppliers and services, cities and states across the country competed fiercely with one another to attract manufacturing firms, especially megaprojects.

In recent years, however, advances in technology and the removal of global trade barriers have unleashed the twin forces of increased domestic productivity and foreign competition. As a result, while U.S. manufacturing output has consistently increased in value over the last half-century, the number of manufacturing jobs has steadily declined. In the past five years alone, the U.S. has lost over one million

NATIONAL ADVANCED MATERIALS AND MANUFACTURING



Source: Bureau of Labor Statistics QCEW

manufacturing jobs. In the advanced manufacturing sector, more than 400,000 jobs have been lost since 2002. Increased productivity, however, has helped fuel significant wage increases in the advanced manufacturing sector; since 2001, average wages in advanced manufacturing have risen by 20%. The simultaneous rise in wages and decline in employment has only increased the competition for jobs in this industry.

The current challenges facing the domestic industrial market do not signal the end of U.S. manufacturing. America remains the world's leading manufacturer; the recent decline of the value of the dollar against a host of currencies has only increased the competitiveness of domestic manufacturers. Many export categories, including industrial supplies and aircraft, continue to experience growth (as measured by the value of exports).

In the face of these evolving competitive dynamics, American manufacturing continues to undergo a profound transformation as the industry adapts to the current realities of the global marketplace. Specifically, domestic manufacturers increasingly rely on massive investments in research and development to maintain their competitive advantage against foreign competitors.

As the country's economy becomes increasingly knowledge-based, formerly clear divisions between industries have been replaced by mutually reinforcing interconnections. Pure production can no longer be divorced from pure research; manufacturing firms currently fund 60% of private sector research and development each year.

LOCAL INDUSTRY OVERVIEW

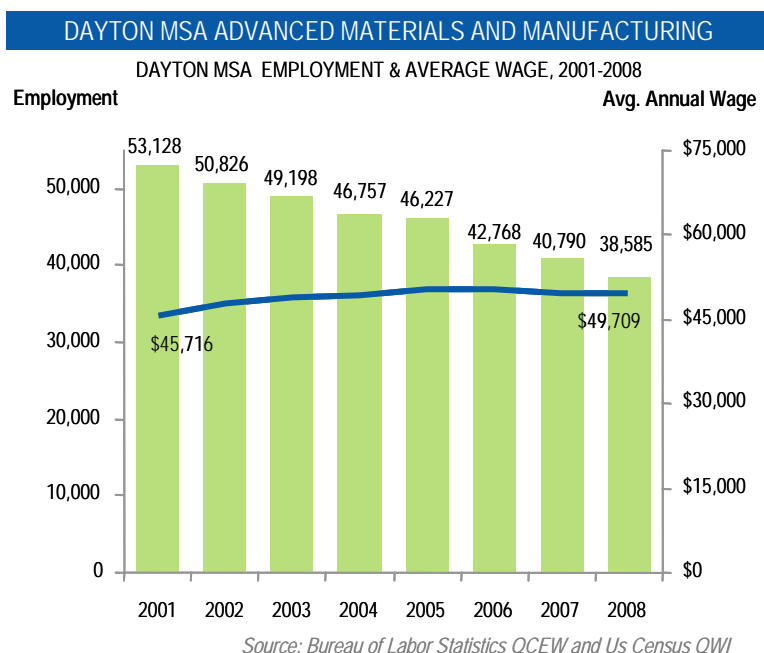
Reflecting national trends, advanced manufacturing jobs have been declining significantly over the past decade. At the same time, wages have not increased on par with national wage growth rates.

While data reflects losses of over 2,000 jobs within this industry in 2008, it does not demonstrate recent losses due to the GM plant closure and businesses that supplied it. While these high job losses can present a short term challenge, the high numbers of available workforce within this sector provides a long-term opportunity to recruit businesses requiring these skills that are higher up the value-added food chain.

Additionally, the region enjoys significant strength in manufacturing infrastructure and research initiatives. The National Composite Center, for example, is the industry leader in promoting and applying composite applications to numerous industries, including ground transportation and aerospace.

OCCUPATIONAL EMPLOYMENT

Most occupations within the sector do not require significant formal education beyond a high school degree, but many require moderate to long-term on-the-job training. Most fill typical manufacturing occupations, including tool and die makers, welders, industrial engineers, and assemblers.



Key Occupations in the Advanced Materials Industry							
Occupation	Employment		Average Wage			Occupational Information	
Title	Dayton MSA	10-year U.S. Growth Projection	US	Dayton MSA	Wage Differential	% with Bachelor's Degree+	Education
Electrical and electronic equipment assemblers	1,430	-6.4%	\$27,150	\$28,910	6.1%	6%	Short-term on-the-job training
Electromechanical equipment assemblers	130	-13.9%	\$28,520	\$28,470	-0.2%	6%	Short-term on-the-job training
Tool and die makers	970	-2.6%	\$44,940	\$47,180	4.7%	7%	Long-term on-the-job training
Lathe and turning machine tool setters, operators, and tenders, metal and plastic	770	-9.0%	\$32,750	\$37,890	13.6%	1%	Moderate-term on-the-job training
Drilling and boring machine tool setters, operators, and tenders, metal and plastic	1,770	-8.4%	\$30,610	\$42,920	28.7%	4%	Moderate-term on-the-job training
Lay-out workers, metal and plastic	100	-4.6%	\$34,440	\$34,020	-1.2%	2%	Moderate-term on-the-job training
Computer-controlled machine tool operators, metal and plastic	840	-1.2%	\$32,060	\$33,020	2.9%	6%	Moderate-term on-the-job training
Forging machine setters, operators, and tenders, metal and plastic	400	-4.6%	\$30,220	\$26,380	-14.6%	3%	Moderate-term on-the-job training
Numerical tool and process control programmers	130	-1.1%	\$43,990	\$41,980	-4.8%	6%	Long-term on-the-job training
Welding, soldering, and brazing machine setters, operators, and tenders	510	0.4%	\$32,350	\$30,660	-5.5%	2%	Moderate-term on-the-job training
Multiple machine tool setters, operators, and tenders, metal and plastic	290	0.3%	\$31,550	\$37,490	15.8%	6%	Moderate-term on-the-job training
Plating and coating machine setters, operators, and tenders, metal and plastic	360	-4.0%	\$28,420	\$25,160	-13.0%	5%	Moderate-term on-the-job training
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	1,620	-9.5%	\$26,680	\$26,230	-1.7%	2%	Moderate-term on-the-job training
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	820	-10.0%	\$29,600	\$34,370	13.9%	2%	Moderate-term on-the-job training
Dental laboratory technicians	320	7.6%	\$34,260	\$38,570	11.2%	15%	Long-term on-the-job training
Molders, shapers, and casters, except metal and plastic	50	-7.0%	\$25,640	\$24,570	-4.4%	7%	Moderate-term on-the-job training
Extruding and drawing machine setters, operators, and tenders, metal and plastic	370	-21.3%	\$28,790	\$27,930	-3.1%	7%	Moderate-term on-the-job training
Structural metal fabricators and fitters	350	2.9%	\$31,390	\$30,690	-2.3%	1%	Moderate-term on-the-job training
Engine and other machine assemblers	**	0.2%	\$36,150	\$48,080	24.8%	1%	Short-term on-the-job training
Milling and planing machine setters, operators, and tenders, metal and plastic	200	-5.3%	\$32,120	\$32,440	1.0%	2%	Moderate-term on-the-job training
Heat treating equipment setters, operators, and tenders, metal and plastic	240	-0.4%	\$31,130	\$32,660	4.7%	2%	Moderate-term on-the-job training
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	1,910	-17.2%	\$27,310	\$27,140	-0.6%	2%	Moderate-term on-the-job training
Machinists	3,010	4.3%	\$35,350	\$36,250	2.5%	4%	Long-term on-the-job training
Aerospace engineers	770	8.3%	\$85,450	\$84,320	-1.3%	84%	Bachelor's degree
Aerospace engineering and operations technicians	40	8.5%	\$54,720	\$48,550	-12.7%	18%	Associate degree
Coating, painting, and spraying machine setters, operators, and tenders	210	-3.4%	\$28,080	\$30,010	6.4%	3%	Moderate-term on-the-job training
Grinding and polishing workers, hand	150	-8.7%	\$25,010	\$28,230	11.4%	4%	Moderate-term on-the-job training
Industrial engineers	1,740	16.0%	\$68,500	\$67,810	-1.0%	70%	Bachelor's degree
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	210	-2.2%	\$29,420	\$32,340	9.0%	3%	Moderate-term on-the-job training
Team assemblers	9,530	7.3%	\$26,000	\$34,200	24.0%	6%	Moderate-term on-the-job training
Welders, cutters, solderers, and brazers	1,540	5.0%	\$32,280	\$29,460	-9.6%	2%	Long-term on-the-job training
Rolling machine setters, operators, and tenders, metal and plastic	300	-3.9%	\$31,240	\$32,870	5.0%	0%	Moderate-term on-the-job training
Furnace, kiln, oven, drier, and kettle operators and tenders	**	-4.2%	\$31,940	\$27,000	-18.3%	11%	Moderate-term on-the-job training
Industrial engineering technicians	280	10.5%	\$49,220	\$42,550	-15.7%	18%	Associate degree
Tool grinders, filers, and sharpeners	**	-7.7%	\$32,530	\$42,080	22.7%	6%	Moderate-term on-the-job training

** Data is non-disclosed

Source: BLS Occupational & Employment Statistics

INDUSTRY LOCATES/EXPANSIONS

Even though the automotive industry has struggled recently, inventories are low within the sector and companies are still developing new plants or expanding existing operations. Much of this work focuses on advanced manufacturing methods related to new car materials, hybrid transmissions, and auto sensor equipment.

ADVANCED MATERIALS AND MANUFACTURING – HUNDREDS OF PROJECTS, INCLUDING:						
City	State	Company	Size (SqFt)	Jobs	Investment (\$ millions)	Type
Louisville	KY	GE		420	69	Hybrid Device Mfg
Jefferson	IN	CLS Air/Clarco	450,000	425	14	Air Equipment Mfg
Mansfield	OH	Gorman-Rupp	390,000		52	Pump Mfg
Columbus	IN	Cummings		500	12	Auto Mfg
Franklin	KY	Integrity Auto	1,000,000	4,000	176	Auto Mfg
Lexington	OH	Hi-Stat	55,000	225	4	Auto Sensor Mfg
Glasgow	KY	Akebono Brake	85,000	100	7	Brake Mfg

Source: Conway Data

RECOMMENDED NICHE TARGETS

Automobile Manufacturing

While there are significant challenges within the automobile market, there are opportunities for Moraine to capitalize on its GM plant closure and available workforce. Traditionally, the industry has revolved around the integrated management of an extensive supply chain network, with Tier I and Tier II automobile parts manufacturers focused on providing OEM parts to major automakers for assembly. The automakers, in turn, operate assembly plants and part-manufacturing plants with emphases in highly technical brake, transmission and engine manufacturing. Over time, though, the automobile manufacturing industry has evolved from an industry based in Michigan and Ohio to a diversified industry spanning the entire globe, with assembly plants in 17 states and numerous countries.

Most automobile manufacturing companies are experimenting with radically different power trains, with an emphasis on plug-in gas-electric hybrids and eventually other technologies, such as fuel cell and hydrogen vehicles. Because of this market focus, automobile manufacturing will become increasingly intertwined with emerging technologies such as smart-grid technology, traditionally electronics-oriented batteries and energy-storage technology, and advanced consumer electronics.

Other Advanced Manufacturing

Because of the overlaps in the advanced manufacturing, renewable energy and energy efficiency, aerospace, and health services and technology industries, other advanced manufacturing sectors are covered in depth in those industry profiles. Significant areas for renewable energy manufacturing include new wind turbine composites and assembly, wind turbine manufacturing, energy saving home appliances and materials, and renewable fuel technologies. Aerospace areas include aerospace manufacturing and composite development for aeronautical purposes. Health services and technology encompasses medical devices manufacturing and biotechnology and pharmaceutical manufacturing.

Other advanced manufacturing opportunities are strong opportunities for Moraine, too. With the City's experience in the automotive industry, engine, turbine and power equipment manufacturing as well as electrical equipment manufacturing are strong matches. Related to electronics, semiconductor and other electronic components manufacturing has local potential as well, though not as strong.

INDUSTRY LOCATION CRITERIA

Advanced manufacturing depends to a large extent on the availability of a highly skilled workforce; educated communities that possess these workers enjoy a significant competitive advantage for corporate attraction, retention and expansion. For smaller supplier firms and contractors, the presence of a large manufacturer may be a driving location decision factor. Additional location criteria include available and inexpensive land, solid transportation infrastructure, low-cost utilities, and advanced telecommunication infrastructure. Successful industries rely on the local availability of four primary factors:

- **Competitive Cost Environment** – Advanced manufacturing facilities represent major capital investments typically costing several million dollars, with investments occasionally reaching more than one billion dollars. These companies are large users of electricity and natural gas and pay large amounts of property taxes. Any location decision will be heavily influenced by tax rates, utility costs, prevailing wage rates, and incentives. Although each industry has different cost structures and subsequent site selection priorities, based on the rise of corporate global footprinting strategies and the increased competitiveness and viability of many international locations, many component and assembly operations are being located outside of the U.S.

- **Workforce Availability** – Advanced manufacturing firms require large numbers of skilled workers and often experience difficulty attracting and retaining qualified talent. According to a Deloitte study sponsored by the National Association of Manufacturers, 80% of employers reported a shortage of qualified employees. Many of these jobs require formal education and specialized skills and experience. While not all skilled positions require a bachelor's degree, many of the positions require at least a technical degree. Skilled machinists are required to make parts that are not mass-produced. As with automotive suppliers, an aircraft manufacturing facility will desire both a four-year engineering university as well as a good technical college. Companies have to compete for talent and are willing to pay higher wages for these workers. Local workforce development groups play an important role in helping companies find and develop the skilled workers they require. Availability of a skilled workforce is often the number one site selection criteria.
- **Structural Assets** – While the site selection criteria of advanced manufacturing companies are rather varied according to the product or part being manufactured, several standard structural requirements apply across companies. Advanced manufacturers are typically medium to large-scale operations requiring a sizable tract of land. Proximity to a large, international airport is desirable, but small regional airports often provide suitable substitutes. A land buffer or a limit to residential growth nearby helps prevent public complaints of noise that could threaten future operations. Facilities range in size from several hundred thousand square feet to one million plus.

An excellent transportation system including both a major interstate and an airport are critical. The advanced manufacturing sector also benefits from end-producer demand. Major relocations often occur so a company can be closer to customers or position itself in a high growth area with the right image and demographics for its business. For example, automotive suppliers locate near major automotive assembly plants to reduce transport time. Prominent research universities also help ensure the continued availability of a workforce educated in the most advanced techniques used in the advanced manufacturing sector.

- **Research & Development** – Research and development remains a crucial element of advanced manufacturing. Although the majority of industry research is conducted in-house at private research and design facilities, public funding sources such as universities or federal agencies remain attractive to firms. Prominent research universities also help ensure the continued availability of a workforce educated in the most current advanced manufacturing processes.

TARGET INDUSTRY ANALYSIS – LOGISTICS AND DISTRIBUTION

INDUSTRY DEFINITION

Logistics is the process of planning, implementing, and controlling the efficient flow of goods and services through the supply chain from producer to consumer. Distribution includes all freight carriers (air, sea, trucking, and intermodal) and warehousing. Until recently, most manufacturing firms took responsibility for the warehousing and coordination of their flow materials. Now these services are often outsourced to develop advanced just-in-time (JIT) delivery systems. The integration of international trade, logistics, and distribution into one continuous and extensive supply chain driven by global free trade has put this industry at the forefront of economic growth.

NATIONAL GROWTH TRENDS

The national economic slowdown in 2001 resulted in fewer goods being shipped throughout the country and produced a sharp decline in demand for distribution services through 2003.

Although industry revenues and profits fell considerably during this period, growth returned in 2004 and has continued ever since. Growth has been driven largely by increased imports from overseas, particularly from China and other Asian countries. National distribution and logistics employment declined by 150,000 from 2000 to 2003, but 2004 through 2006 saw an aggressive period of growth in which 230,000 jobs were added.

With the dramatic rise in international trade and a resulting rise of the logistics and distribution industry, long-term trends within the industry are shifting as a result of five macroeconomic trends. These trends are shifting mode shares of cargo transportation on trans-national and international routes, and are rewriting the rules of just-in-time manufacturing.

As virtually every product sold in America moves through trade, logistics, and distribution channels, the industry is responsible for transporting a third of the nation's GDP. As the U.S. economy adjusts to higher energy prices and recovers from the broader housing decline, imports from China and other global manufacturing and commodity centers will continue to grow. In the U.S., international trade will increasingly drive investment, with global destination airports and ports across the Gulf of Mexico benefiting greatly from long-term growth in U.S.-Asia trade.

LOGISTICS AND DISTRIBUTION

NAICS Description

- 481 Air Transportation
- 482 Rail Transportation
- 483 Water Transportation
- 4841 General Freight Trucking
- 4881 Support Activities for Air Transportation
- 4882 Support Activities for Rail Transportation
- 4883 Support Activities for Water Transportation
- 4885 Freight Transportation Arrangement
- 4889 Other Support Activities for Transportation
- 4921 Couriers and Express Delivery Services
- 493 Warehousing and Storage
- 5416 Management and Technical Consulting Services

NATIONAL LOGISTICS AND DISTRIBUTION



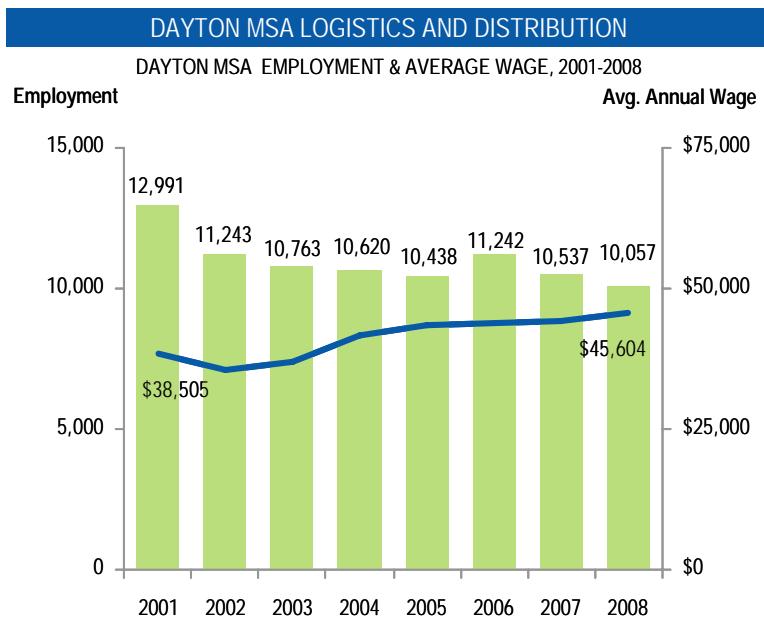
Source: Bureau of Labor Statistics QCEW

Logistics and distribution companies that can capture small and medium sized businesses entering global trade will have above average growth. Trade will grow along several fronts, with primarily high tech products and apparel being imported from Asia to the U.S., while capital equipment and high-tech component parts will be exported to meet the manufacturing needs of China. There will continue to be a movement to “storage en route,” with a corresponding growth in less than truckload and small package delivery. Warehousing will continue to promote value-added services to ensure that supply chain issues are resolved prior to distribution. Other growth areas will include fruits, vegetables, and flowers being imported from Latin America. Air cargo growth will come almost exclusively from the domestic portion of intercontinental trips.

LOCAL INDUSTRY OVERVIEW

Average annual wage for this sector in 2008 in the Dayton MSA was \$45,604, or 18% less than the national average. This is at least in part due to the moderate decline in employment within this sector in the region, increase labor supply and reducing labor costs.

While income figures are less than the national average and employment numbers fluctuate with a downward trend, Moraine and the Dayton region is ideally located for logistics and distribution. It is centrally located to multiple major regional markets. Located within five hours of Chicago, Cincinnati, Columbus, Cleveland, Detroit, Lexington, Louisville, and Pittsburgh, Dayton is ideally located to reach much of the Midwest and Mid-Atlantic population within less than a day.



Source: Bureau of Labor Statistics QCEW and US Census QWI

In addition to its centrality, the region enjoys intermodal transportation options (rail, road, and air). With the current recession, railroads have shown more willingness to develop spurs or make stops for smaller amounts of cargo. Additionally, if the I-75 exit 47 interchange adjacent to Moraine was adjusted to allow more direct north and south access, this would greatly strengthen the area's ability to attract distribution centers.

OCCUPATIONAL EMPLOYMENT

Most employment within logistics and distribution require a special license (CDL) and some experience on the road. The majority of the jobs deal with physical movement of goods, which may also require certifications to operate special equipment within the warehouses.

Key Occupations in the Logistics and Distribution Industry							
Occupation	Employment		Average Wage			Occupational Information	
Title	Dayton MSA	10-year U.S. Growth Projection	US	Dayton MSA	Wage Differential	% with Bachelor's Degree+	Education
Cargo and freight agents	50	-5.6%	\$37,380	\$33,390	-11.9%	14%	Moderate-term on-the-job training
Aircraft cargo handling supervisors	50	17.4%	\$41,030	\$36,950	-11.0%	15%	Work experience in a related occupation
Reservation and transportation ticket agents and travel clerks	**	2.4%	\$30,050	\$31,460	4.5%	23%	Short-term on-the-job training
Aircraft mechanics and service technicians	270	13.4%	\$49,260	\$42,610	-15.6%	11%	Postsecondary vocational award
Commercial pilots	40	16.8%	\$65,560	\$81,120	19.2%	78%	Postsecondary vocational award
Truck drivers, heavy and tractor-trailer	7,560	12.9%	\$35,460	\$38,010	6.7%	5%	Moderate-term on-the-job training
Baggage porters and bellhops	60	14.0%	\$20,870	\$15,670	-33.2%	15%	Short-term on-the-job training
Transportation inspectors	**	11.4%	\$53,230	\$21,910	-142.9%	20%	Work experience in a related occupation
Transportation, storage, and distribution managers	150	12.7%	\$75,130	\$69,710	-7.8%	24%	Work experience in a related occupation
Dispatchers, except police, fire, and ambulance	430	5.7%	\$33,590	\$28,530	-17.7%	11%	Moderate-term on-the-job training
First-line supervisors/managers of transportation and material-moving machine and vehicle operators	660	15.3%	\$51,230	\$48,920	-4.7%	15%	Work experience in a related occupation
Management analysts	1,810	20.1%	\$75,000	\$69,500	-7.9%	76%	Bachelor's or higher degree, plus work experience
Truck drivers, light or delivery services	3,520	15.7%	\$27,020	\$30,270	10.7%	5%	Short-term on-the-job training
Environmental science and protection technicians, including health	100	16.3%	\$38,520	\$34,280	-12.4%	47%	Associate degree
First-line supervisors/managers of helpers, laborers, and material movers, hand	720	8.1%	\$41,210	\$44,490	7.4%	15%	Work experience in a related occupation
Couriers and messengers	230	-8.6%	\$22,460	\$20,370	-10.3%	12%	Short-term on-the-job training
Environmental scientists and specialists, including health	350	17.1%	\$57,470	\$51,690	-11.2%	93%	Master's degree
Bus and truck mechanics and diesel engine specialists	1,380	14.4%	\$37,360	\$34,440	-8.5%	3%	Postsecondary vocational award
Industrial truck and tractor operators	1,720	7.9%	\$28,830	\$26,560	-8.5%	3%	Short-term on-the-job training
Environmental engineers	370	30.0%	\$70,720	\$72,240	2.1%	87%	Bachelor's degree
Laborers and freight, stock, and material movers, hand	9,610	10.2%	\$22,460	\$25,110	10.6%	5%	Short-term on-the-job training
Avionics technicians	70	9.1%	\$46,940	\$43,190	-8.7%	14%	Postsecondary vocational award
Employment, recruitment, and placement specialists	490	30.5%	\$48,470	\$54,140	10.5%	57%	Bachelor's degree
Crane and tower operators	90	8.2%	\$40,860	\$33,030	-23.7%	1%	Long-term on-the-job training
Logisticians	290	13.2%	\$63,010	\$68,710	8.3%	52%	Bachelor's degree
Shipping, receiving, and traffic clerks	2,410	3.7%	\$26,620	\$25,850	-3.0%	7%	Short-term on-the-job training
Sales representatives, services, all other	780	18.7%	\$54,230	\$52,380	-3.5%	48%	Moderate-term on-the-job training
Market research analysts	610	19.6%	\$64,370	\$61,830	-4.1%	79%	Bachelor's degree
Mathematicians	50	-1.3%	\$81,150	\$86,290	6.0%	74%	Doctoral degree
Production, planning, and expediting clerks	1,000	7.7%	\$38,920	\$37,390	-4.1%	29%	Short-term on-the-job training
Technical writers	290	23.2%	\$57,720	\$42,000	-37.4%	73%	Bachelor's degree
Packers and packagers, hand	3,890	10.1%	\$18,990	\$18,730	-1.4%	4%	Short-term on-the-job training
Occupational health and safety specialists	150	12.4%	\$55,800	\$51,040	-9.3%	78%	Bachelor's degree
Training and development specialists	600	20.8%	\$49,060	\$42,190	-16.3%	57%	Bachelor's degree
Weighers, measurers, checkers, and samplers, recordkeeping	130	-11.3%	\$27,030	\$27,590	2.0%	12%	Short-term on-the-job training

** Data is non-disclosed

Source: BLS Occupational & Employment Statistics

INDUSTRY LOCATES/EXPANSIONS

As a central location, many logistics and distribution centers have opened within the Midwest. Ohio, Indiana, and Kentucky have had over 134 projects occur within the past year, many over 400,000 square feet. Some tie into the automotive market, but many others are retail or wholesale parts for other industries.

LOGISTICS AND DISTRIBUTION – 134 PROJECTS, INCLUDING:						
City	State	Company	Size (SqFt)	Jobs	Investment (\$ millions)	Type
Troy	OH	Komyo America	400,000	102	8	Auto Parts DC
Monroe	OH	Home Depot	677,000	500	35	Retail DC
Murray	KY	Schwartz Supply	817,000	70	2	DC
Plainfield	IN	Amazon.com	950,000	350		Retail DC

Source: Conway Data

RECOMMENDED NICHE TARGETS

Freight Forwarders – logistics management

Freight forwarders provide logistics services to companies of all sizes, routing shipments through third-party transportation modes, including intermodal rail operations, trucking lines, passenger air carriers and air freight lines, and oceangoing container lines,. Freight forwarders dominate the international air transportation markets, controlling more than 85% of the volume of trade flows. This subsector has grown particularly quickly over the past ten years because of its ties to international trade as well as from subsequent growth in U.S. exports resulting from the weak dollar.

Trucking

The trucking subsector is composed of both traditional full container transport (FTL) and less-than-truckload (LTL) trucking. Full container trucking is the key link in the manufacturing and retail supply chains, providing ultimate product distribution to customers and retail outlets across the world. Trucking firms interact with every other subsector of the logistics and distribution industry across the supply chain, providing direct door-to-door service for medium- and long-haul loads, and providing last-mile service from intermodal yards, container ports, and airport cargo facilities. The full container trucking subsector is growing slower than the economy as a whole because of the movement of manufacturing from the U.S. to Asia. In addition, higher fuel prices have prompted a mode switch for long-haul trips from truck to intermodal rail.

Less than truckload firms are organized very differently from full container haulers; instead of point-to-point service, LTL firms are organized in hub and spoke systems much like small package air cargo carriers. Less than truckload firms grew more quickly than trucking as a whole over the last ten years. With the spread of just-in-time manufacturing and dramatically reduced inventory in retail, smaller loads have become more appropriate for many firms' supply chain strategies. In addition, because of the structure of this subsector, fuel costs comprise a smaller percentage of overall costs, reducing the impact of higher fuel.

Warehousing

While a relatively small part of the total logistics and distribution industry, warehousing has grown substantially since 1997. Traditional warehouse services of product receipt, storage, and distribution have grown to include repacking, quality control, light assembly, packaging, sorting, and third-party inventory management to help companies manage supply chain issues. This subsector looks to continue its growth due to additional services offered to companies.

ADDITIONAL NICHE TARGETS

Rail Transportation

With multiple lines running within Moraine, the City is well positioned to act as a small rail hub for the multi-state region. Encouraging rail transportation would also encourage growth of rail support activities.

INDUSTRY LOCATION CRITERIA

The logistics, and distribution industry depends to a large extent on the transportation infrastructure of any particular location. Containerized port facilities, intermodal transfer yards, excellent highway, rail, and airport access, along with cheap access to industrial land, access to large regional and national markets, and a lack of inventory taxes are essential to logistics and distribution firms.

- **Structural Assets** – Transportation infrastructure is extremely important to logistics, and distribution firms. Companies require well-maintained, un-congested roads, and proximate port and rail access. Dedicated airport freight facilities further support this industry, with international air freight continuing to experience dramatic growth. Overnight carrier hub proximity is viewed favorably. Affordable land for large distribution centers is another key criterion for distribution center locations, which have increasingly located in rural

areas to avoid high costs for land and building construction. As industries increasingly shift to just-in-time manufacturing, more distribution operations and international trade and logistics companies will be required within close proximity to service regional manufacturing operations and large metropolitan markets.

International trade, logistics, and distribution firms continually seek out locations close to their end customers, avoiding airports where unions are prevalent, and continuing to seek out easy access to large regional and national markets. Regional economic growth is important as well. Logistics and distribution companies' revenue comes largely from area firms and regional consumer needs, with the exception of large national distribution centers focused on major airports. International trade companies must be able to serve a large, growing market. In either case, companies desire a growing regional economy that expands their potential client base. Large companies typically locate near mid-size to large metros with a strong international trade and an airport with U.S. Customs freight facilities.

- **Cost of Doing Business** – Advanced international trade, logistics, and distribution companies invest primarily in warehouses, trucks, equipment, and IT infrastructure. Inventory taxes are aggressively avoided and many distributors look for special incentives such as reduced taxes on fuels. Areas with low taxes, competitive wages, affordable utilities, and available land are ideal. Those large operations require massive land tracts at low prices, and generally make minimal building improvements. Recent expansions have received tax abatements, tax credits, infrastructure improvements, and industrial revenue bonds.
- **Research & Development** – Local research institutions do not significantly affect the location of international trade, logistics, and distribution firms. Although companies utilize inventory tracking and logistics software, the development of these technologies are not location sensitive. Of course, areas with significant investments in educational programs for the international trade, logistics, and distribution industry will gain from their production of a quality workforce.
- **Workforce** – International trade, logistics, and distribution firms need a blue-collar workforce; manufacturing workers have proven to be excellent fits for the industry. Relatively few employees in this industry require a bachelor's degree, though international trade and finance require many more educated employees. Recruitment for this industry should prove to be relatively easy as the highest growth occupations are labor-intensive.

TARGET INDUSTRY ANALYSIS – BUSINESS AND PROFESSIONAL SERVICES

INDUSTRY DEFINITION

The business and professional services sector is comprised of primary services including legal, architectural, engineering and consulting and real estate firms, as well as secondary services such as back-office support operations, accounting and payroll services, and processing facilities. Together, these services provide not only highly technical and specialized support services for virtually every sector of the U.S. economy, but also services to handle the routine, day-to-day activities of other companies. Business and professional services firms exist both as subsidiary operations for parent firms as well as outsourced third-party service providers. Back office operations, which interact primarily via electronic communication, often integrate a variety of functions such as customer relations, centralized accounting, and administrative services under one roof, while legal services, real estate, and technical consulting services are often located in independent branch offices.

NATIONAL GROWTH TRENDS

The business and professional services sector is one of the largest sectors in the nation and is dispersed throughout the U.S., with particularly strong concentrations in large metropolitan areas in the South and Southwest. The back-office and support services portion of this sector tends to prefer lower-cost locations in proximity to major metropolitan areas and has seen significant movement in recent years toward these lower cost locales. The professional services portion of the sector tends to be located in urban areas close to major clients. The fact that some back office operations still exist in high cost areas such as New York and Phoenix illustrates the potential for lower-cost communities to recruit these facilities.

The business and professional services sector has proven to be quite resilient to national and global economic swings. Even with the rise and fall of the technology sector in 2000, employment remained on a growth path. Following the peak of the tech boom in 2001, employment in the business and professional services sector continued above 7 million and, as the economic recession began to take its toll on the U.S. economy, employment in the sector remained stable. While it has been hit in the latest recession, it is expected to recoup these losses more quickly than most sectors. Already, many industry watchers are noting job growth within the financial sector, the heart of the current recession.

BUSINESS AND PROFESSIONAL SERVICES

NAICS Description

- 517 Telecommunications
- 518 Data Processing, Hosting, and Related Services
- 52 Finance & Insurance
- 531 Real Estate Services
- 533 Lessors of Nonfinancial Tangible Assets (except Copyright Works)
- 5411 Legal Services
- 5412 Accounting and Bookkeeping
- 5413 Architectural and Engineering Services
- 5415 Computer Systems Design and Related Services
- 5416 Management and Technical Consulting Services
- 5511 Management of Companies and Enterprises
- 5611 Office Administrative Services
- 5612 Facilities Support Services
- 5613 Employment Services
- 5614 Business Support Services

NATIONAL BUSINESS AND PROFESSIONAL SERVICES



Source: Bureau of Labor Statistics QCEW

LOCAL INDUSTRY OVERVIEW

Business and professionals presents perhaps the greatest recruitment challenge for Moraine. Class A office space is currently being built elsewhere in the Dayton MSA and there is already limited availability within Moraine proper.

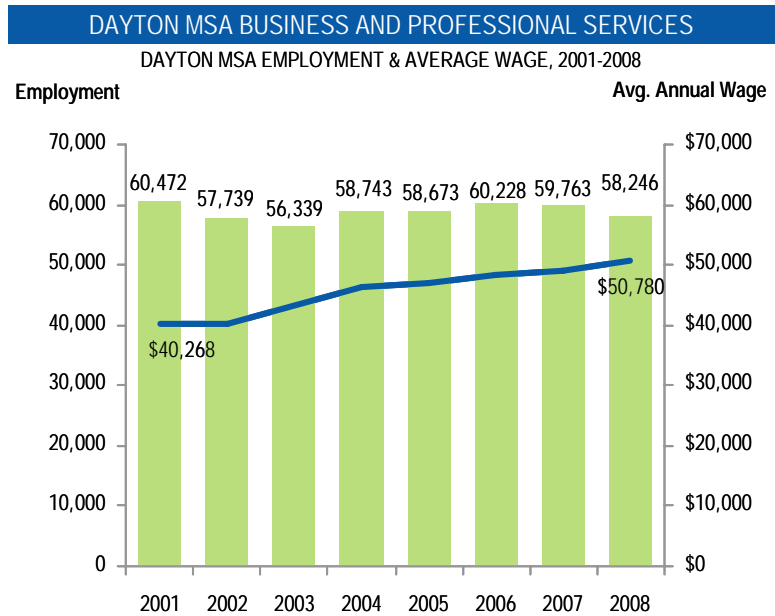
However, since wages are positive (currently over \$50,000), employment is expected to continue, and it would strongly diversify Moraine's economy, the industry can bring great benefit to the City. By leveraging current space and recruiting more back office operations of existing businesses, Moraine has a competitive opportunity to build this industry.

While there is some challenge in attracting business and professional services operations to Moraine, most of them have to do with limited office space. Some does exist, such as the Beerman Office Building, but it is limited, and little of it is able to compete with new development occurring.

However, new shoots appear to be taking root in the area. The Point West Office Park (175,000 SqFt) within the City of Moraine is currently in transitional ownership and is aggressively improving the facility. Moraine's proximity to the strong office workforce in Kettering combined with its relatively low redevelopment costs position it well for continued growth within this sector.

OCCUPATIONAL EMPLOYMENT

Key occupations within business and professional services require financial, administrative, and customer service skills. These skills can require on the job experience, certifications, bachelors, or masters. Most require at least an associate's.



Source: Bureau of Labor Statistics QCEW and US Census QWI

Key Occupations for the Business and Professional Services Industry							
Occupation	Employment		Average Wage			Occupational Information	
Title	Dayton MSA	10-year U.S. Growth Projection	US	Dayton MSA	Wage Differential	% with Bachelor's Degree+	Education
Tax preparers	190	10.6%	\$31,000	\$25,740	-20.4%	50%	Moderate-term on-the-job training
Legal secretaries	790	17.4%	\$39,070	\$32,760	-19.3%	18%	Postsecondary vocational award
Architects, except landscape and naval	180	17.3%	\$68,560	\$61,130	-12.2%	86%	Bachelor's degree
Real estate brokers	**	7.8%	\$76,930	\$65,750	-17.0%	43%	Work experience in a related occupation
Architectural and civil drafters	260	4.6%	\$42,110	\$39,530	-6.5%	22%	Postsecondary vocational award
Real estate sales agents	240	14.7%	\$52,090	\$64,920	19.8%	43%	Postsecondary vocational award
Paralegals and legal assistants	360	29.7%	\$43,510	\$38,110	-14.2%	42%	Associate degree
Property, real estate, and community association managers	70	15.3%	\$50,570	\$80,650	37.3%	36%	Bachelor's degree
Surveyors	**	15.9%	\$48,950	\$50,130	2.4%	82%	Bachelor's degree
Telecommunications equipment installers and repairers, except line installers	510	-4.9%	\$49,330	\$45,230	-9.1%	13%	Long-term on-the-job training
Surveying and mapping technicians	160	9.6%	\$33,390	\$32,660	-2.2%	11%	Moderate-term on-the-job training
Lawyers	960	15.0%	\$110,520	\$79,720	-38.6%	98%	First professional degree
Telecommunications line installers and repairers	580	10.8%	\$42,970	\$36,210	-18.7%	8%	Long-term on-the-job training
Telemarketers	1,000	-10.0%	\$23,500	\$23,050	-2.0%	16%	Short-term on-the-job training
Employment, recruitment, and placement specialists	490	30.5%	\$48,470	\$54,140	10.5%	57%	Bachelor's degree
Civil engineers	580	16.5%	\$69,480	\$60,360	-15.1%	87%	Bachelor's degree
Computer software engineers, systems software	1,010	43.0%	\$84,310	\$76,280	-10.5%	83%	Bachelor's degree
Network systems and data communications analysts	460	54.6%	\$64,970	\$60,940	-6.6%	60%	Bachelor's degree
Title examiners, abstractors, and searchers	130	0.9%	\$40,070	\$29,080	-37.8%	37%	Moderate-term on-the-job training
Computer programmers	1,420	2.0%	\$67,400	\$55,100	-22.3%	72%	Bachelor's degree
Environmental engineers	370	30.0%	\$70,720	\$72,240	2.1%	87%	Bachelor's degree
Office machine operators, except computer	330	-21.9%	\$25,460	\$23,560	-8.1%	12%	Short-term on-the-job training
Management analysts	1,810	20.1%	\$75,000	\$69,500	-7.9%	76%	Bachelor's or higher degree, plus work experience
Civil engineering technicians	240	14.1%	\$40,780	\$36,030	-13.2%	18%	Associate degree
Law clerks	230	7.7%	\$36,980	\$33,470	-10.5%	37%	Bachelor's degree
Environmental science and protection technicians, including health	100	16.3%	\$38,520	\$34,280	-12.4%	47%	Associate degree
Appraisers and assessors of real estate	90	22.8%	\$49,830	\$48,320	-3.1%	44%	Postsecondary vocational award
Technical writers	290	23.2%	\$57,720	\$42,000	-37.4%	73%	Bachelor's degree
Computer and information scientists, research	150	25.6%	\$94,030	\$89,270	-5.3%	66%	Doctoral degree
Data entry keyers	1,040	-0.7%	\$24,910	\$23,630	-5.4%	16%	Moderate-term on-the-job training
Network and computer systems administrators	1,200	38.4%	\$63,210	\$53,800	-17.5%	51%	Bachelor's degree
Computer support specialists	1,390	23.0%	\$43,380	\$40,180	-8.0%	41%	Associate degree
Database administrators	550	38.2%	\$65,590	\$66,810	1.8%	72%	Bachelor's degree
Bill and account collectors	1,330	21.4%	\$29,860	\$28,220	-5.8%	15%	Short-term on-the-job training
Accountants and auditors	3,510	22.4%	\$58,020	\$54,240	-7.0%	75%	Bachelor's degree

** Data is non-disclosed

Source: BLS Occupational & Employment Statistics

INDUSTRY LOCATES/EXPANSIONS

Much of the activity within the region in the business and professional services sector has fallen within call centers. These facilities typically require hundreds of workers and take up a sizable footprint. While initial investment is lower, continued use of services like broadband and electricity is high.

BUSINESS AND PROFESSIONAL SERVICES – AT LEAST 60 PROJECTS, INCLUDING:						
City	State	Company	Size (SqFt)	Jobs	Investment (\$ millions)	Type
Hilliard	OH	Verizon	84,000	300	13	Office
Barbourville	KY	Infinity	49,000	183	1	Call Center
Covington	KY	Fidelity	360,000	408	12	Finance Office
Cincinnati	OH	American Financial	530,000		322	HQ
Mansfield	OH	StarTek		503	5	Call Center
Zanesville	OH	Time Warner	42,000	185	5	Call Center

Source: Conway Data

RECOMMENDED NICHE TARGETS

Back Office Operations

Support staff perform a variety of record-keeping duties. They track revenues coming into and leaving organizations, provide human resources and accounting support, and provide customer support. The growing financial services and health care industries will require increasing levels of back-office support. Both industries will continue to move these support functions off-site or even outsource the operations to third party vendors. The fact that some back-office operations still exist in high cost areas such as New York and California illustrates the potential for lower-cost mid-size communities to recruit these facilities. Back office and accounting services firms are interested in affordable Class B office space, will invest in updating communications and IT equipment, and will create a significant number of well-paying jobs.

Technical Support Centers

Technical support centers provide call center services for high-level customers. Technical support customer service representatives require significant training in order to help with technical questions related to various software and complicated mechanical devices. Midwest populations are often desirable due to the competitive labor costs and fairly neutral accent of the workforce.

ADDITIONAL NICHE TARGETS

Regional Offices

Multiple professional services firms have an existing local presence, which builds a pool of labor to attract other firms. Both Colliers International and Miller Valentine have a local presence in commercial real estate and multiple law offices are set up within the region. Numerous engineering firms operate within the area, including Edge and Tinniey and Roll and Associates. There are also multiple accounting firms in Moraine, including Battelle & Battelle, Offenberger & Root.

Telecommunications

Strong telecommunications presence within Moraine makes it a strong sector to pursue. Berry, AT&T, WagnerSmith, and Cincinnati Bell all have significant offices.

INDUSTRY LOCATION CRITERIA

- **Structural Assets** – Business and professional service operations serve as hubs for many other vital functions. Therefore, it is essential that power, telecom, and other ISP services be reliable and affordable. These operations are light users of utilities, with the exception of power. Airport access is also vital for managers and executives in back office operations and professional services firms, as extensive travel is often part of the job description.
- **Cost of Doing Business** – Primary costs of doing business are few: electricity and wage rates make up more than 70% of the typical operating costs of business and professional services firms. Low utility and wage rates are the key decision drivers in site selection for the business and professional services sector.
- **Research & Development** – Universities serve the sector by providing a trained workforce. Some local software research can help firms stay competitive. Overall, however, research and development are less important in location decisions.
- **Workforce Availability** – Business and professional services companies require a wide range of worker demographics. Financial service support centers require workers with high school diplomas and employees with some specialized accounting knowledge, while other occupations require higher educational attainment. Many mutual funds and brokerage call centers require college degrees and specific sector

certifications. Many companies seeking to lower their costs through back office services and business support services look to areas with high underemployment rates among younger demographics. Competitive wage rates are the most important selection criteria for workforce. Professional services companies, however, require significantly higher levels of education, with many consulting firms, law firms, and engineering firms requiring professional or master's degrees in each firm's area of specialty. The availability of high-quality, professional education is of the utmost importance in building professional services firms.

Reverse Site Selection Analysis

Introduction

One of the most important aspects of economic development is the attraction of new target companies to the Moraine area, particularly those that could utilize a portion of the GM site. In order to help the City to better prepare for actual site selection projects, Angelou Economics (AE) conducted a “reverse site selection analysis.”

The reverse site selection analysis involved conducting a mock site selection exercise based on a hypothetical manufacturing project, **Project Gust**. The AE team is **very** experienced in locating projects and approached this analysis “from a site selector’s viewpoint” in order to make the exercise as real to life as possible.

AE toured the community/GM plant, collected, and analyzed key information from Moraine and the four competitor communities, the same ones used in the Market Assessment:

- Wixom, MI
- Georgetown, MI
- Lafayette, IN
- Janesville, WI

Each benchmarked community has a strong association with automobile assembly - either current or closed assemble plants.

AE combined the results of the analysis into a “weighted” rating of communities in order to determine their rank order, best to last, thereby determining the best location for Project Gust. Much of the data had already been collected in the Market Assessment, while other information was collected specifically for this analysis.

Project Gust Criteria

The hypothetical project chosen was Project Gust, a wind turbine manufacturer that would employ 600 workers. The following are the detailed criteria of the project:

Project “Gust”
Wind Turbine Facility

Purpose: The machining, repair and/or manufacturing of wind turbine nacelle units (gearbox, generator, and transformer components) and blade assembly for distribution to Midwest markets.

Hours of Operation: 3 shifts; 7 days per week

Labor: 600 total

- 10 – managerial/engineering
- 30 – clerical
- 30 – technical; CAD design
- 150 – skilled workers, welders, machinists
- 200 – semiskilled, machine operators (CNC)
- 100 – electronics technicians/assemblers
- 50 – unskilled machine helpers
- 30 – unskilled warehouse workers

Utilities: Electric Power – Demand: 1,000 KW; Energy: 1,500,000 Kwh/month (average)

Building: 725,000 square feet (700,000 of manufacturing space; 25,000 square feet of office space); 30’ clear span; 6-10 dock doors; cranes for large equipment, and blades.

Transportation: rail and direct interstate access

Machinery and Equipment: \$50 million

Other Critical Factors:

- Good access to reasonably priced, skilled workforce
- Good labor/management relations in region
- Reliable and economical electric power supply
- Access to good supplier network
- Training — college offering mechanical and electrical engineering degrees plus machining and electronics
- Incentives and positive state/local policies; and
- Affordable housing.

Project Gust Analysis

Based upon AE's site selection experience, key site selection criteria were assigned "weights" based on importance. This is similar to what is done in an actual project based on meetings with the corporate client. Weighted criteria are as follows:

Access to market – 10	Incentives – 8
Skills availability – 10	Education (HS grad rate) – 7
Building availability – 10	Taxes (per person liability) – 7
Wages – 10	Cost of living (housing) – 6
Electric power (industrial) – 9	Crime – 5
Lease cost – 9	Commute time – 4

Each community was assigned a score (5 being highest and 1 lowest) for each criteria depending on how they rated for each. The following are details regarding the top weighted factors (9-10) and select others.

Labor Availability (weighted – 10)

In this case, AE made some availability assumptions based solely on: 1) current unemployment rates, and 2) employment growth (*high rates mean better availability*, see below and Market Assessment).

- **Based on our local workforce assessment, we found that Moraine has "good" availability of skilled machine and technicians skills.**

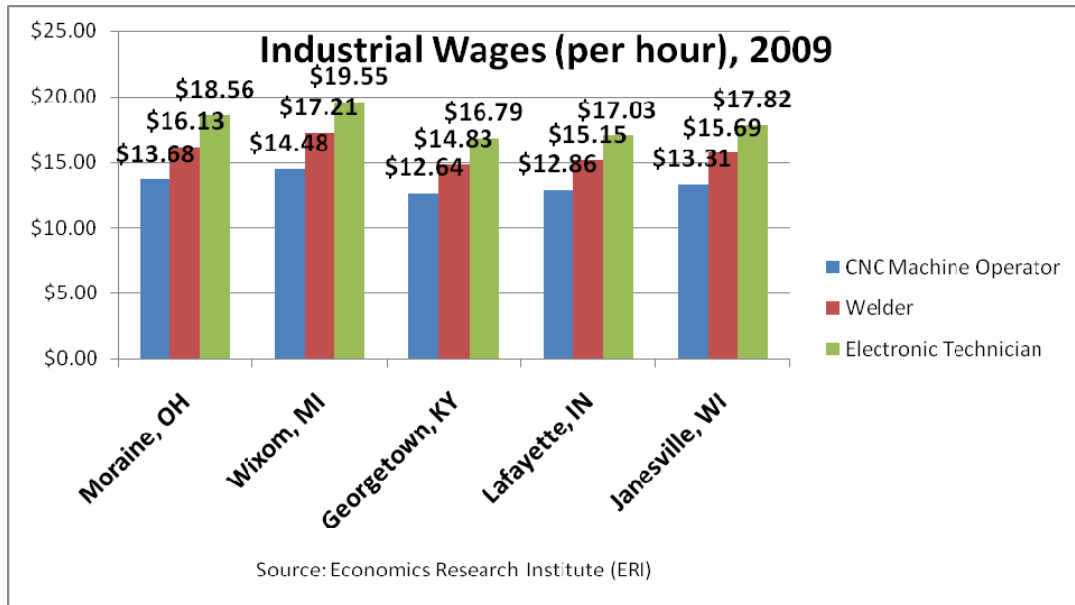
Skills Availability Factors	<u>Moraine</u>	<u>Wixom</u>	<u>Georgetown</u>	<u>Lafayette</u>	<u>Janesville</u>
Unemployment Rate, 3/09	11.30%	11.70%	10.20%	8.70%	13.60%
Labor Force Growth (90-08)	13.50%	49.80%	87.90%	12.40%	21.50%

Based solely on above factors, scores are as follows:

Georgetown – 5
Wixom – 4
Janesville – 3
Moraine – 2
Lafayette – 1

Wages (weighted – 10)

In this case, we compared wages in the communities drawn from our national wage data source, Economics Research Institute (ERI).



- Moraine wages are second highest.

Based on these wages, scores are as follows:

Georgetown – 5

Lafayette – 4

Janesville – 3

Moraine – 2

Wixom – 1

Building Availability (weighted – 10)

Some 80% of site searches start out looking for an available building, however less than 50% of these searches actually find the right building and end up constructing a new building instead. Existing buildings attract more lookers and the availability of the right sized building will bring more prospects to town.

An available building with rail was important for this project. AE did an internet building search much like we would have for a real client. If the 725,000 square-foot-with-rail requirement was satisfied the community was given a score of 5. If no building of this size was found a score of 0 was given.

- **The GM facility in Moraine matches the requirement as do closed GM facilities in Janesville and Wixom.**

Scores were as follows:

Moraine – 5

Janesville – 5

Wixom – 5

Georgetown – 0

Lafayette – 0

Access to Markets (weighted – 10)

Access to market assumptions were made here based on the map of wind zones (below) in the U.S. Locations further west were given better scores due to better outbound access to high wind zones.

- **Moraine access to markets appears slightly below average.**

Scores were as follows:

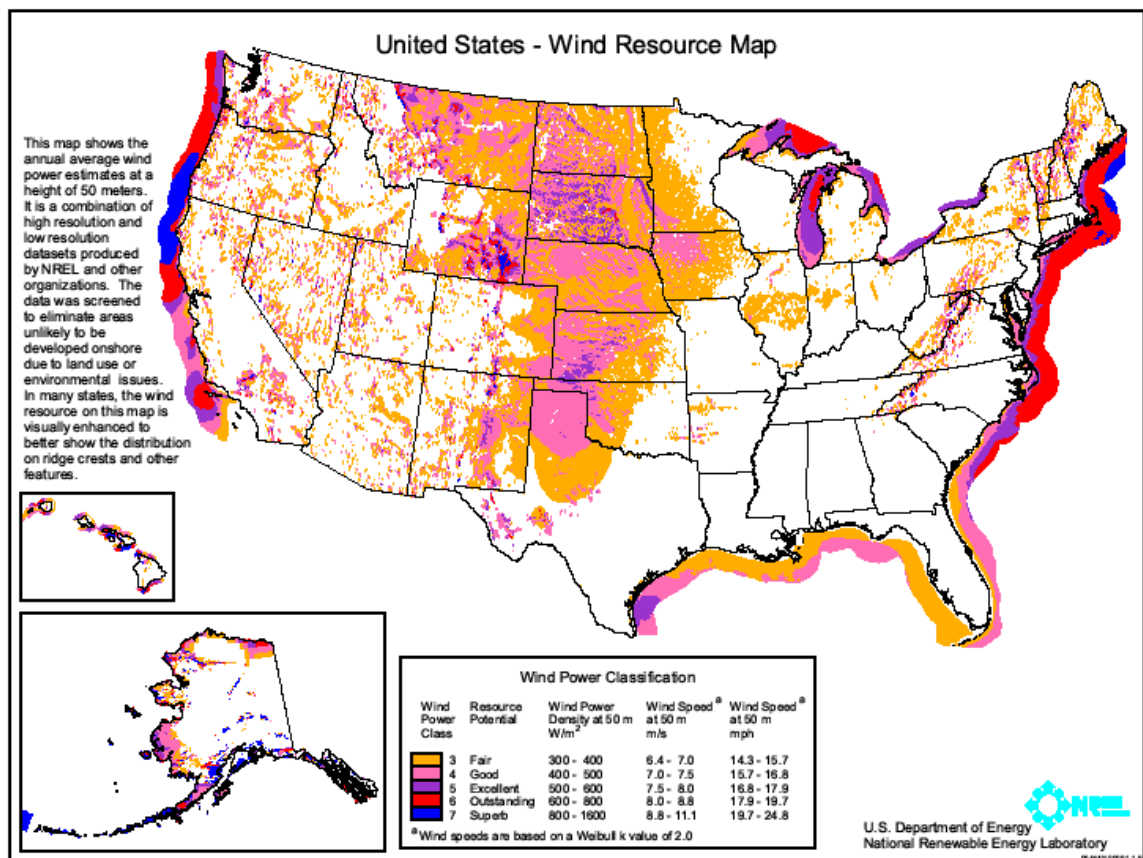
Janesville – 5

Lafayette – 4

Wixom – 3

Moraine – 2

Georgetown – 2



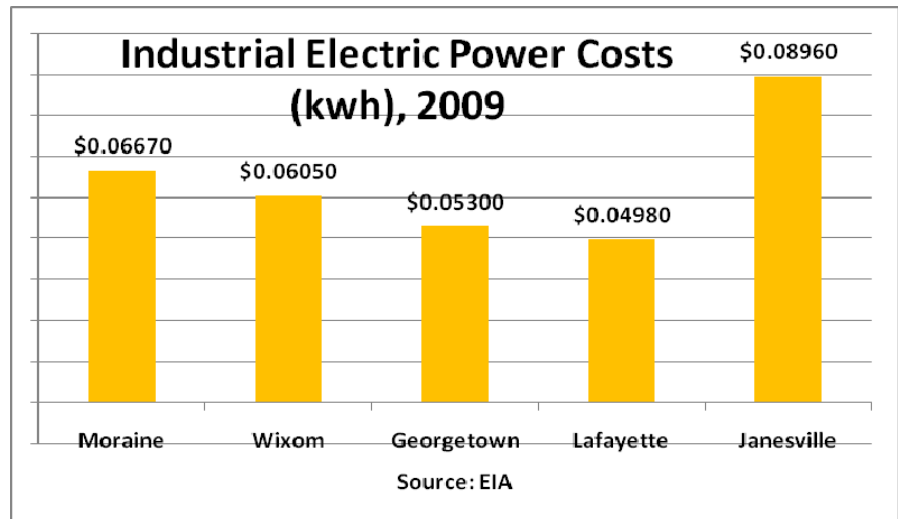
Electric Power (weighted – 9)

The project has a significant electric power load; therefore, the weight of this factor is high. AE compared average electric power rates for this analysis (see below and the Market Assessment).

- Moraine area rates are second highest.

Scores were as follows:

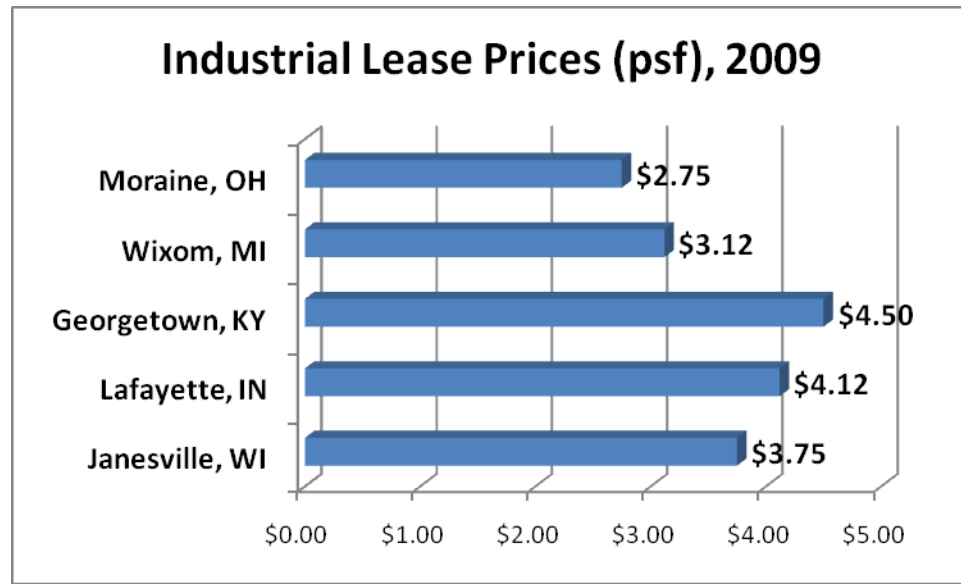
Lafayette – 5
Georgetown – 4
Wixom – 3
Moraine – 2
Janesville – 1



Lease Costs (weighted – 9)

As reported in the GM Assessment, prices continue to drop as more and more industrial space flows onto the market. AE conducted an online assessment of current industrial building prices.

- Moraine area lease prices are lowest.



Scores were as follows:

Moraine – 5
Wixom – 4
Janesville – 3
Lafayette – 2
Georgetown – 1

Incentives (weighted - 8)

Incentives have traditionally been the “icing on the cake,” and used to determine the winner after all other key criteria are equal. However, in recent years, incentives have carried more weight and are often among the top criteria (here it is weighted an 8).

All communities would likely put together an attractive incentive package for a project of this magnitude. AE prepared an incentive review in order to compare the availability of important standard incentives (see below). Based on this review, scores were as follows:

Wixom – 5
Georgetown – 4
Moraine – 3
Lafayette – 2
Janesville – 1

Incentive	Benchmark Communities				
	<u>Moraine</u>	<u>Wixom</u>	<u>Lafayette</u>	<u>Janesville</u>	<u>Georgetown</u>
Employee training	X	X	X	X	X
Enterprise zone	X	X	X	X	X
Industry specific sales tax abatements	X	X	X	X	X
Green businesses incentives		X			X
Tax credits	X	X	X		X
Venture capital tax credits		X			
Property tax abatements	X	X	X	X	X
Sales tax abatements	X	X	X	X	X
New job credits	X	X	X	X	X
Tax increment financing (TIF)	X	X	X	X	X
Low/No interest loan programs	X	X	X	X	X
Capital investment tax credits	X	X	X	X	X
Utility incentives	X	X	X	X	X
Municipal bonds		X			

Cost of Living (weighted – 6)

The successful relocation of important employees and their families is often critical to the success of a new location. Cost of living is therefore an important site selection criteria depending on how many employees are relocated. In this project only a handful of managers/engineers would require relocation, therefore this factor is weighted a 6.

- **Moraine has the second lowest cost of living** (see chart below).

Scores are as follows:

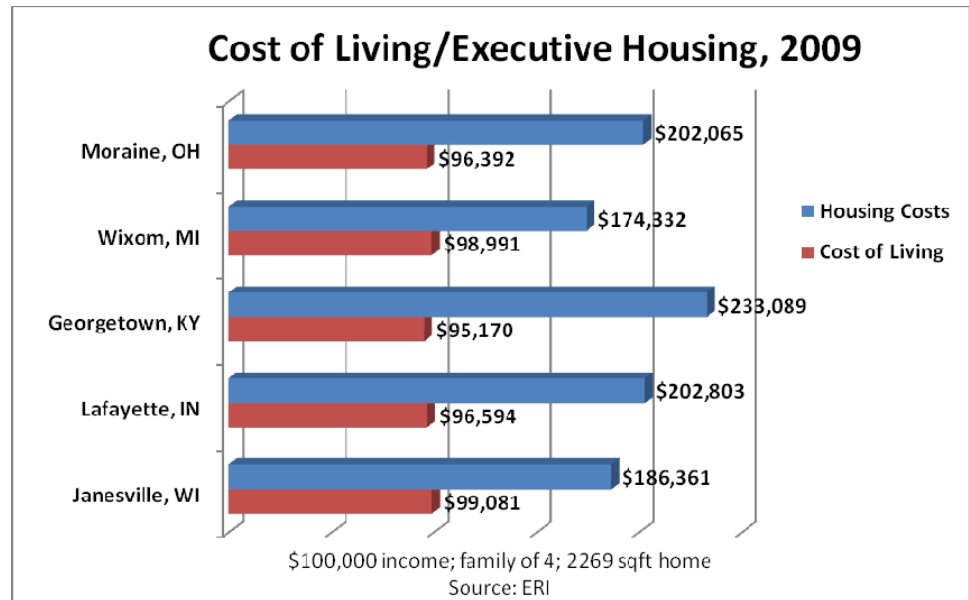
Georgetown – 5

Moraine – 4

Lafayette – 3

Wixom – 2

Janesville – 1



Conclusions

AE prepared a *scoring matrix* based on the results of all 12 factors (see below).

Project Gust Site Selection Ratings - September, 2009

Key Criteria	<u>Moraine, OH</u>		<u>Wixom, MI</u>		<u>Georgetown, KY</u>		<u>Lafayette, IN</u>		<u>Janesville, WI</u>		Wt
	Score	Wt	Score	Wt	Score	Wt	Score	Wt	Score	Wt	
Access to market	2	20	3	30	2	20	4	40	5	50	10
Building Availability	5	50	5	50	0	0	0	0	5	50	10
Commute time	2	8	1	4	5	20	3	3	5	20	4
Cost of living - housing	4	24	2	12	5	30	3	18	1	6	6
Crime	5	25	4	20	2	10	1	5	3	15	5
Education (HS grad rate)	5	35	1	7	3	21	2	14	4	28	7
Electric Power-industrial	2	18	3	27	4	36	5	45	1	9	9
Incentives	3	24	5	40	4	32	2	16	1	8	8
Lease cost	5	45	4	36	1	9	2	18	3	27	9
Skills Availability	2	20	4	40	5	50	1	10	3	30	10
Taxes (per person liability)	5	35	1	7	3	21	4	28	2	14	7
Wages	2	20	1	10	5	50	4	40	3	30	10
Weighted Rating Totals		324		283		299		237		287	

Final location rank order:

1. Moraine
2. Georgetown
3. Janesville
4. Wixom
5. Lafayette

- **Moraine received the highest overall weighted score.** AE would recommend to our client that Moraine be selected for the new plant and that they should proceed with final property and incentive negotiations. Key conclusions:
 - Regional economic development cooperation is excellent.
 - Work force skills availability is good.
 - Wages are on the high end, but competitive based on skill needs.
 - GM facility meets the requirement a potentially low price.
 - Access to market appears acceptable, pending a detailed freight analysis.
 - Industrial electric power rates are competitive.
 - Good incentives are available.
 - The cost of living is low.

Recommendations

Based on the results of the reverse site selection analysis, AE recommends that the City of Moraine consider the following:

- **Develop a freight/logistics model for manufacturing projects.** This should be designed to help you to understand and compare freight costs and therefore understand where other costs could be adjusted in order to compete more effectively for projects.
- **Conduct a detailed engineering cost analysis of the GM facility.** This should be focused on the needs of target industries, such as wind turbine manufacturing.
- **Conduct a detailed skills matching analysis for wind turbine industry.** This should build on the results of CEDS study and other recent local efforts.
- **Promote the positive aspects of this analysis in your economic development marketing.**

Action Plan

EXECUTIVE SUMMARY

ACTION PLAN INTRODUCTION

The *Economic Scan* and *Target Industry Analysis* reports shed light on the region's greatest economic development opportunity: **To be competitive the City of Moraine and the Dayton region must work collaboratively to leverage existing strengths towards a knowledge-based economy that supports innovative industry clusters where entrepreneurship, production capabilities and highly skilled workers will be the driving forces of the economy.**

The Moraine Action Plan comprises a set of strategies that support this collaborative strategy. It sets a framework for connecting, networking and leveraging important economic development, education, workforce and industry assets to attract new employers, strengthen existing companies, encourage entrepreneurship and foster community collaboration all while making the region more competitive for industries. Just as the closure of the General Motors plant has affected the entire Dayton region, effective economic repositioning and recovery will require close teamwork of the entire region.

This action plan focuses on five core strategy areas:

6. Implementing an aggressive target industry marketing program
7. Expanding support to existing industries and entrepreneurs
8. Putting appropriate real estate options and infrastructure in place to meet industry requirements
9. Ensuring the proper alignment of workforce skills
10. Strengthening the business climate

MORaine PROJECT WORK TO DATE

The first project report (*Economic Scan*) examined the common and unique characteristics of Moraine and the Dayton region, identifying the underlying economic factors that define it as a viable economic "region." It identified a series of demographic and labor market trends and challenges and laid the framework for which to examine new target industry opportunities. Additionally, AE conducted 5 focus groups, more than 30 interviews and received input from online community and business surveys.

Report Two - *Target Industry Analysis* report examined five target industry opportunities for Moraine: Advanced Materials and Manufacturing, Logistics and Distribution, Renewable Energy and Energy Efficiency, Health Services and Technology, and Professional and Business Services. For each target industry, the report describes the industry and its national growth trends; regional strengths and potential as related to broader trends and specific industry niches; relevant regional economic and workforce development assets; and occupations and skill sets required within the industry and available in the region.

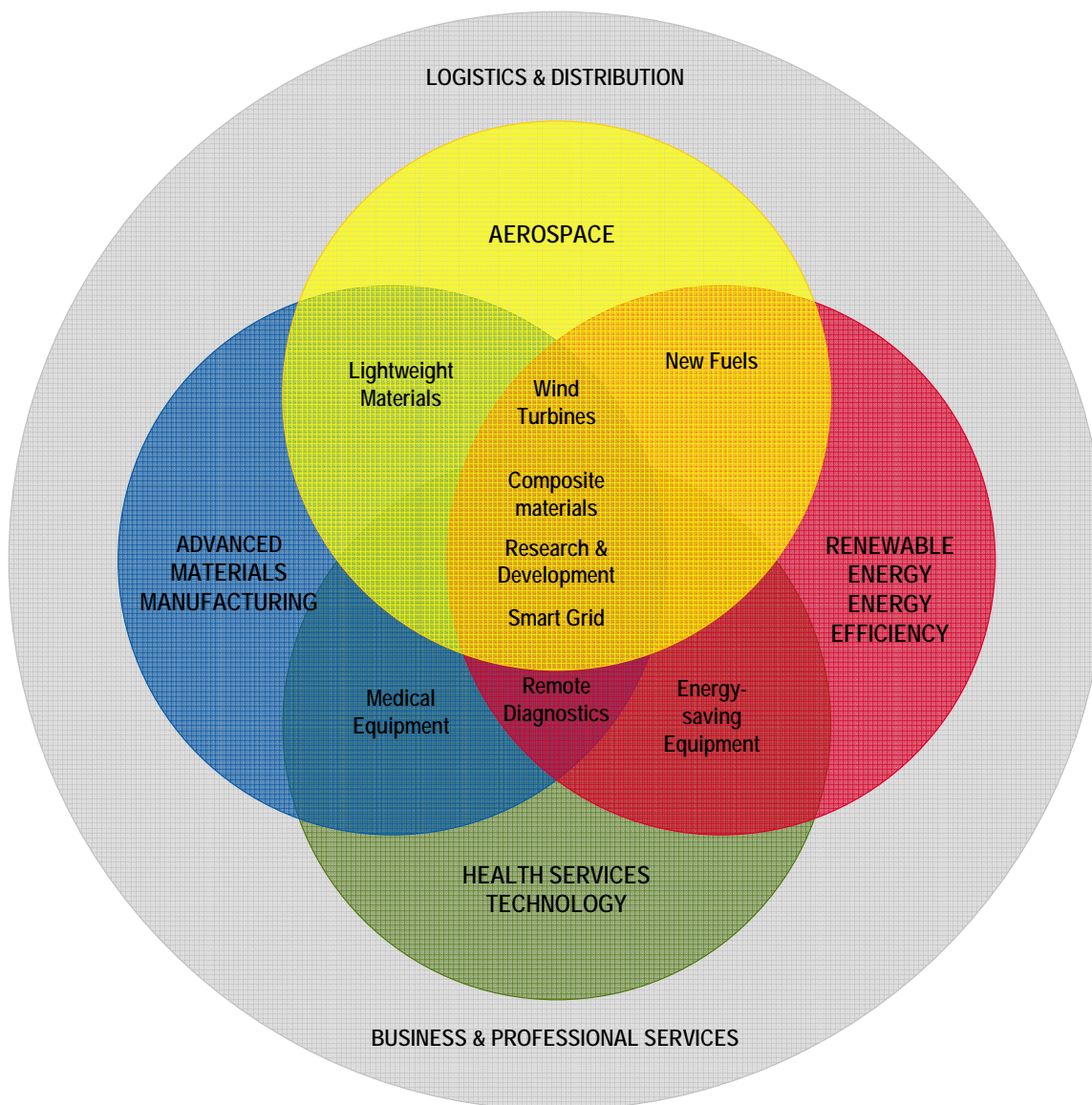
Report Three – General Motors Site Evaluation included an initial assessment of the GM properties and site redevelopment concepts.

This document serves as the City of Moraine *Action Plan* that aims to help the region recover from the GM plant closure and other economic impacts by transforming the area into a more competitive region.

TARGET INDUSTRY SUMMARY

The *Target Industry Analysis* report provides an in-depth analysis of key strengths, opportunities, and areas for improvement in the region as it attempts to build strong industry clusters in five target areas. Through supplier connections, shared workforce requirements and mutual business activities, these target opportunities, and specific niches, share a symbiotic relationship. They represent both traditionally strong regional industries (Advanced Manufacturing and Logistics and Distribution) as well as important emerging opportunities (Renewable Energy and Health Services and Technology) that can help the region become a much more competitive location.

INTERRELATIONSHIP OF MORAINE PROFILED SECTORS



MORaine REGIONAL CHALLENGES AND OPPORTUNITIES

As the region positions itself to take advantage of these industry opportunities, foster innovation, and build a pipeline of skilled workers, it must address critical issues – represented here as both challenges and opportunities for the region.

- **Strong potential exists with Moraine and the Dayton area to aggressively and effectively recruit advanced manufacturing and logistics operations as well as businesses in the other targeted sectors. Yet, the level of competition is intense.**
Significant industrial recruitment and expansion assets exist such as a workforce experienced in manufacturing, an excellent location astride Interstate 75, and utilities and city government with excess capacity and experience in working with industry requirements. However, there are fewer industrial projects nationally and intense competition for them.
- **Negative perceptions of the Dayton region**
The issue of “Rust Belt” image and perception arose in most focus groups and was a major challenge identified in the community and business surveys. Such negative perceptions both inside and outside of the region can have major ramifications for business recruitment efforts. Our experience in Moraine, the Dayton region and Ohio revealed many positive attributes and successes. These assets and successes are not widely communicated.
- **Misalignment of workforce skills**
Areas of strength exist such as the availability of a large workforce with manufacturing acumen. Yet, workers’ skills are often misaligned with the current and projected demand by industries. The lack of appropriate types of employment opportunities increases the risk of loss of young skilled workers.
- **Aging real estate inventory**
Many of the industrial facilities including the former GM plant are older facilities and not configured well to modern market requirements. This disparity presents additional challenges in attracting replacement employers. There are also a large number of large, vacant buildings throughout the Midwest which will compete for attention with Moraine facilities.
- **Enhancing regional innovation and commercialization**
During economic downturns the opportunity costs of innovation are dramatically lower. With some of the nation’s most cutting edge advances in technology and defense driven innovations being developed within the Greater Dayton region through institutions such as University of Dayton and Wright-Patterson Air Force Base, there is tremendous opportunity to capitalize on innovations. Much of the success of the region lies in the ability of firms and entrepreneurs to receive the necessary support and services to facilitate the transfer of such technologies and take innovations to market. However, gaps have been identified in this support system.
- **Potential diminishment of city services**
Focus groups, interviews and survey responses were consistently positive about the City of Moraine’s services quality and responsiveness. This strong competitive advantage could erode in the future as the tax base declines due to closures of key employers.

MORaine VISION FOR ECONOMIC DEVELOPMENT

Moraine will again become an industrial leader in the Midwest by building on its entrepreneurial and manufacturing heritage to attract, expand and start a new generation of cutting-edge companies and by retaining the workforce required to sustain these new industries.

GOAL ONE: IMPLEMENT AN ENHANCED, COLLABORATIVE TARGET INDUSTRY MARKETING CAMPAIGN

The recruitment/attraction of new businesses within the targeted economic clusters is extremely important to the region's economic vitality and was the number one need mentioned by survey respondents. Given the vast importance of replacing jobs lost to closures, the City of Moraine needs to escalate its efforts to identify and build relationships with companies within the targeted industries that best match with the unique assets that the region provides, and then refine the strategies to recruit those companies to the area. Moraine has to closely collaborate with county, regional and state programs and adjoining communities in order to fully leverage benefits of those efforts.

External marketing efforts should include participation at selected target industry association events, specialized trade shows, symposiums or events to personally promote the area to prospects and site selectors. Efforts should include well-planned, regional prospecting missions to areas where target companies reside. Cooperative missions should be planned that coincide with trade shows, etc. in order to take price advantages due to economies of scale. Leverage existing opportunities occurring in the region including Wright-Patterson events. EDC should also join appropriate industry organizations and attend industry events supported by targeted decision-makers. In addition, Moraine should continue to build upon relationships with site selection consultants. These executives are valuable partners when conducting business attraction activities.

Moraine should consistently engage key community stakeholders during prospect visits. Moraine representatives should continue to participate in regional and state sales missions to key geographies with a heavy concentration of target industry businesses that could likely relocate to the area. Finally, host national site selectors who have strong relationships with the area's target industry businesses.

Strategy 1.1: Focus on the targeted industries of Advanced Materials and Manufacturing, Logistics and Distribution, Renewable Energy and Energy Efficiency, Health Services and Technology, and Business and Professional Services

- 1.1.1 Identify and be visible and active at selected target industry association events and tradeshow such as Renewable Energy World Conference & Expo, Unmanned Systems North America, Manufacturing Week and BIO in collaboration with regional/state organizations.
- 1.1.2 Participate in key sales trips to meet with company executives in targeted clusters.
- 1.1.3 Collaborate with adjoining communities, Montgomery County, Greater Dayton Coalition and Ohio Department of Development where feasible in external marketing and business development in order to fully leverage resources. Because of the importance of close collaboration on these initiatives, it is imperative that frequent, close communication be maintained between the various partner entities.

- 1.1.4 Consider joining and active participation in key trade associations, particularly the Industrial Asset Management Council (IAMC).
- 1.1.5 Continue successful relationship building activities with key site selection consultants.
- 1.1.6 In conjunction with the property owner of the GM site, carry out an aggressive direct mail and e-mail campaign to lists of corporations with large facility requirements within the targeted clusters
- 1.1.7 Update collateral materials and develop succinct pieces on advantages Moraine offers for companies within the respective target clusters.
- 1.1.8 Develop a freight/logistics model tied to the attraction of logistics/distribution and other manufacturing targets. The model is designed to educate prospects on the freight cost advantages of locating in Moraine and to help local officials understand the cost differentials that might be overcome by adjusting other project costs and/or adding incentives.
- 1.1.9 Develop cost/condition comparison reports for your top targets. These reports will depict cost/condition advantages of doing business in Moraine versus select competitors.

Strategy 1.2: Establish an Economic Development Advisory Group and include representatives of each of the target industries

As outlined within this report, AE has developed and outlined specific target industries for the region to focus upon to achieve the maximum results for economic development and the creation of high quality jobs. In order to become the most successful in attracting these targeted industries, AE recommends tapping into the vast knowledge and resources of regional business leaders within these industries to help identify opportunities and further define specific messages and activities that could attract these industries.

- 1.2.1 Engage business leaders representing the target industries whose main purpose is to supply trend information, identify possible target companies, develop strategies for attracting industry, and develop key messages concerning each industry.
- 1.2.2 The Economic Development Advisory Committee should meet quarterly to discuss industry strategies while focusing on specific outcomes for targeted industry initiatives, value chain opportunities and other industry intelligence.

Strategy 1.3: Elevate international recruitment efforts leveraging the resources of existing state and regional programs

International business development cannot be overlooked in today's economy – particularly given the nature of Moraine's target economic clusters. Because it is a long-term, expensive proposition such activities need to be linked to existing regional and state programs. The State of Ohio has a successful, well-established foreign investment program with a network of 11 overseas offices.

- 1.3.1 Leverage existing assets by establishing and strengthening relationships with foreign-owned companies and regional and state international investment organizations such as the State of Ohio Department of Development and the Greater Dayton Coalition. Seek out collaborative opportunities in cooperation with existing companies, regional organizations, universities, and international organizations. Provide local executives who interact with foreign executives, such as those in their vendor networks, with the information and print materials to help promote the Moraine area.
- 1.3.2 Upgrade the City's website to include at least one section that provides information about foreign-based companies and assets in Moraine and the Dayton region, and provides links to international organizations throughout the state.
- 1.3.3 Presence at selected trade shows in target industries can help establish the Moraine region as a player in the international sector. The State of Ohio represents economic development entities at large international trade shows. The "Ohio Global Summit" is one example of an international event

held within the state. Ensure availability of your collateral materials at key events including information about the former GM facility.

- 1.3.4 Recognize international business milestones. Acknowledging an international company's accomplishments and demonstrating an understanding of their services, products, and economic impact on the community are often-overlooked ways to recognize a company's contributions and also create community awareness of the importance of international business. Creating an "International Business Award" as part of an annual business awards program would allow for wider recognition of international business in the community.

Strategy 1.4: Strengthen the economic development section of the City of Moraine website

Businesses consult websites more than any other source of site selection information. An upgrade to the City of Moraine website is recommended.

- 1.4.1 Include information specifically pertaining to the identified target industries, including a list of local companies within those sectors.
- 1.4.2 Include real estate options including material about the former GM site.
- 1.4.3 Update demographic and incentives data.
- 1.4.4 Include links to regional and state economic development organizations.
- 1.4.5 Include a "site selectors" tab/section with specific information that pertains to your target industries and site selector needs.

Strategy 1.5: Utilize the retention and expansion program to help identify suppliers and related companies for possible recruitment

Many communities successfully use their retention and expansion programs to help identify suppliers and other related firms for possible recruitment. Area industries often know of companies that are candidates for relocation and they themselves would often benefit from having connected businesses in closer geographic proximity.

- 1.5.1 The City of Moraine and Montgomery County should expand the Business First program to include questions identifying suppliers and other related firms that could be recruitment candidates.
- 1.5.2 Marketing materials should be sent to these companies.

Strategy 1.6: Promote and leverage recent success

The business image of the Dayton region was pointed out as a leading negative by survey respondents and focus group participants with 42% of business survey respondents calling the image "negative" and another 37% labeling it as "mixed". It is much more difficult to successfully recruit new industries with such a perception. Yet, there are numerous success stories with the community, region and state. For instance, the State of Ohio has been the recipient more times than any other state of Site Selection magazine's Governor's Cup award for attracting or expanding the most new businesses.

- 1.6.1 Collaborate with county, regional and state economic development groups to publicize economic success stories and assets.
- 1.6.2 Utilize websites, newsletters, and local media.

Strategy 1.7: Seek additional economic development resources

Given the scope and severity of the economic challenges facing the Moraine community, additional human and financial resources need to be identified to help with rebuilding the economy and tax base. This may be extremely

challenging as Moraine's tax base has declined dramatically resulting in recent layoffs in other city departments. Although the current one person economic development staff is highly productive, the critical importance of growing the economy and tax base and the range of tasks to be carried out necessitates the dedication of additional staff.

- 1.7.1 Explore federal and state resources such as the Economic Development Administration for programs to assist communities faced with major economic disruptions.
- 1.7.2 Consider use of retired volunteers or loaned executives with industry experience to bolster staffing.

GOAL TWO: EXPAND SUPPORT TO EXISTING INDUSTRIES AND ENTREPRENEURS

Many local businesses remain at risk due to the recent closures and the weak state of the national and global economy. There are also numerous businesses with the capability to expand and add employment opportunities if provided with additional support. The City of Moraine and Montgomery County have good programs which can be broadened to connect with more companies. It is particularly important during this challenging time that the reach of the community's and region's business contact and support programs be elevated.

Strategy 2.1: Expand outreach to existing industries

It is critical that more Moraine businesses be contacted by City and County officials.

- 2.1.1 Utilize Montgomery County's Business First program as the principle platform to call on an increased number of companies.
- 2.1.2 Continue the relationship building aspect of the program but also include a more formalized set of core questions.
- 2.1.3 Improve tracking of business trends and periodically report findings.

Strategy 2.2: Improve local and regional support to entrepreneurs

Entrepreneurship is critical to helping to pull the city and region out of the current economic decline. Just as it has demonstrated many times within Dayton's history, innovation and risk taking will help position the region to take advantage of new products and market opportunities. A solid group of small business support groups is in place yet feedback from interviews points out that some needs remain.

- 2.2.1 A user-friendly web portal that includes an inventory of all regional entrepreneurial assets (venture capital firms, SBDCs, technology alliances, incubators, training programs, loan programs, funding sources, etc.) within the region would help clarify the complex list of resources. The portal should serve as an online one-stop shop providing direct access to service providers that can help navigate local, state, and national systems.
- 2.2.2 A mentoring program that provides start-ups with experienced mentors would increase entrepreneurs' chances of success. This program can also be expanded for more advanced entrepreneurs and small businesses to match them with larger corporations within the region who agree to become early trial adopters of the start-up company's technology, product or service.
- 2.2.3 Sinclair Community College and university training programs can be expanded so additional entrepreneurs can receive training around aptitudes related to establishing and running a business (e.g. developing a business plan, leasing office space, product research and development, and computer software skills). Once training is received, entrepreneurs can get referred back to additional providers for further assistance.

Strategy 2.3: Augment existing financing programs for area businesses

There is consensus from employers, economic developers and entrepreneurs that more can be done to assist financing of small businesses. The City of Moraine and CityWide have discussed ways to fill some of these gaps.

- 2.3.1 Utilizing the financial acumen of CityWide, develop a revolving loan fund to assist with area businesses' needs.
- 2.3.2 Use the Business First program to help identify other unmet financing needs.

Strategy 2.4: Actively participate in and encourage business participation in programs intended to increase the volume of Wright-Patterson contracts performed by local companies

Wright-Patterson Air Force Base offers tremendous contracting opportunities for area businesses. The Air Force Research Lab alone manages over \$3 billion a year in science and technology research and manufacturing contracts. Many of Wright-Patterson's purchasing requirements are consistent with Moraine's existing industrial base capabilities as well as overall targets.

- 2.4.1 Help connect more businesses to opportunities through communication of procurement fairs, reverse trade shows, etc.
- 2.4.2 Monitor procurement opportunities to help scan for capabilities that could be provided by area industries.
- 2.4.3 Build a data base of business capabilities through the expanded Business First program.

Strategy 2.5: Increase recognition of local business success stories

Positive recognition of worthy endeavors is particularly important during periods of economic turbulence. Recognition helps restore faith in the future and provides role models for other businesses. It also confirms the genuine interest of local governments in business support.

- 2.5.1 Carry out a City of Moraine business and entrepreneur recognition program on a quarterly basis.
- 2.5.2 Publicize recipients through City newsletters and the website.

Strategy 2.6: Encourage entrepreneurship from a young age through regional K-12 programs

Seven out of ten high school students want to start their own businesses, according to the national Gallup Poll on entrepreneurship education. The lowest ranking of workforce skills by Moraine area employers was in the entrepreneurial skills area. These two statistics illustrate why it is important to encourage and nurture innovative entrepreneurial ideas from a young age. The Dayton region has a long history of innovation and entrepreneurship including the Wright Brothers. Innovation will continue to be of paramount importance in the future.

- 2.6.1 Convene area K-12 leaders to share ideas and common challenges as a means to expand entrepreneurial programs throughout the region.
- 2.6.2 Expand offering of entrepreneurial project initiatives at middle and high schools, similar to Junior Achievement or the Entrepreneurship Week.

STRATEGY 2.7: Spur innovation through the connection of existing businesses

Opportunities exist for understanding existing industry and R&D connections more deeply and strategically aligning resources and partnerships to take advantage of shared networks. In addition to connecting current firms, this strategy aims to better channel the significant amount of innovation occurring within the region by enhancing technology transfer between the inventions emanating primarily from Wright-Patterson Air Force Base, University of

Dayton, and Wright State University with the local companies containing workforces with the skills necessary to help construct and utilize these cutting edge technologies.

- 2.7.1 Develop a regional “SMART” supplier initiative to more deeply understand industry competencies and supply chains and regional innovations. Develop a database that matches regional business’ core competencies with innovations that are available for licensing. Companies can search the database for technologies that could replace or supplement their own existing products and services.
- 2.7.2 Utilize the program to serve as a critical feedback loop where businesses communicate technological gaps or innovative ideas back to the university and incubator for further exploration.

Strategy 2.8: Conduct in-depth analysis to assess utilization of a portion of the former GM facility for an incubator facility

- 2.8.1 Meet with area incubators to gauge capacity and any unmet demand.
- 2.8.2 Conduct an engineering analysis of the GM facility to determine the facility’s viability in meeting any areas of need.

GOAL THREE: ENSURE APPROPRIATE REAL ESTATE OPTIONS AND INFRASTRUCTURE ARE IN PLACE TO MEET INDUSTRY REQUIREMENTS

A major real estate challenge is that many of the industrial properties within Moraine are older and do not possess some of the characteristics, such as sufficient clear height, currently desired by industries. Assistance with building modifications will be important to updating properties.

The City of Moraine finances are severely impacted due to the declining tax base due to business closures and the economic slowdown. As a result, the City recently had to lay off 28 full-time workers. In order to remain attractive to new and expanding industries, a significant challenge will be to continue to provide services at a high level with the reduced tax base and smaller staff size.

To assist the development of these strategies, please refer to the GM Initial Site Assessment Report for site selection guidance.

Strategy 3.1: Align City of Moraine objectives with those of the GM site owner/developer

One survey comment stressed the need to aggressively “Shop the GM buildings.” Although re-use of the former GM property is by no means the only key to success it is certainly a critical path to economic revitalization. It is imperative that an aggressive and sustained marketing and business development campaign be undertaken in conjunction with the property owner and regional allies.

- 3.1.1 Discuss in detail with the property owner the objectives of the City regarding re-use of the property including the types of projects eligible to receive financial support. Seek to understand the property owner’s objectives as well.
- 3.1.2 Determine a collaborative strategy to market the property. Emphasize the importance of quality employment opportunities to city assistance programs.

Strategy 3.2: Investigate utilization of the former GM site as an Advanced Manufacturing and Materials Center of Excellence linked to renewable energy and national defense applications, including unmanned aerial vehicles

The Dayton region possesses immense production and development assets within the Advanced Manufacturing arena as the nation's 4th largest tooling and machining center. The University of Dayton is the 2nd largest materials research institution in the U.S. Wright-Patterson Air Force Base is the Air Force's Center of Excellence for unmanned aerial vehicles research and manufacturing and also has a core area of research within the alternative energy field.

The City of Moraine can capitalize upon these resources and the need to better connect area and state research and production. Alternative energy/clean tech applications were the #1 area of interest among community and business survey respondents as well as in focus group suggestions.

- 3.2.1 Investigate availability of U.S. Department of Energy and State of Ohio Department of Energy grants to assist with transformation.
- 3.2.2 Investigate U.S. Department of Defense funds to assist with UAV development center.
- 3.2.3 Investigate availability of Ohio Third Frontier program funding – particularly the Wright Centers of Innovation, Targeted industry Attraction Grants and Innovation Ohio Loan programs.

Strategy 3.3: Utilize the Ohio Job Ready Sites program and advocate for its extension.

- 3.3.1 The well-renowned Ohio Job Ready Sites program is in its final year of funding. Support future project funding for one the best "shovel-ready" programs in the country.
- 3.3.2 Seek up to \$5 million in funding for park/plant planning and improvements.

Strategy 3.4: Building upon the strong relationships that exist with the commercial real estate community, collaborate with neighboring cities and Montgomery County on an annual joint market update event program to the Dayton regional commercial real estate community

- 3.4.1 Showcase regional sites and buildings to elevate familiarity with inventory.
- 3.4.2 Incorporate panels of commercial real estate experts on key trends.

Strategy 3.5: Continue to push for full funding and completion of Interchange #47

- 3.5.1 Working with West Carrollton and other partners on the project, continue to monitor and push for grant funding for full interchange improvements.
- 3.5.2 Attempt to accelerate completion.

Strategy 3.6: Work with the developer and railroad to modify rail access consistent with facility changes.

- 3.6.1 Once ownership is determined convene a meeting with the railroad and property owner to discuss necessary rail modifications to the site.
- 3.6.2 Solicit railroad input on current market requirements that could be addressed.

Strategy 3.7: Ensure roads are maintained at levels appropriate to industry needs

Inclusion of distribution and logistics as a targeted sector requires continuing attention to transportation infrastructure. This can be challenging given declining tax revenues and other pressing budget priorities.

- 3.7.1 Prioritization should be placed on maintenance of roadways into Moraine.
- 3.7.2 Utilize the Business First calling program to help identify roads requiring improvement.

Strategy 3.8: Develop a memorable brand for the GM site that depicts a “green” innovative manufacturing center, such as the “Moraine Ecoassembly Park”.

- 3.8.1 Determine a brand that helps highlight the unique strengths of the site and specific targeted opportunities.
- 3.8.2 Build on and promote this brand in all marketing efforts.



Strategy 3.9: Conduct an engineering analysis of the GM facility to determine the viability of accommodating target industry needs.

- 3.9.1 An in-depth assessment of the plant is needed relative to targeted industry facility and infrastructure requirements.
- 3.9.2 Consider engaging the Austin Company (Cleveland) to assist as they are currently conducting an engineering assessment of the GM facility paint plant.

Strategy 3.10: Study the Wixom, MI Energy Park, a successful plant conversion.

Ford Land is a partner in a successful conversion of the Ford four-million square foot assembly plant into a renewable energy project. The project has attracted Xtreme Energy, an auto-related battery storage company and Clairvoyant Energy, a Swiss solar manufacturing company. The project has attracted State of Michigan incentives, including \$100 million in available tax credits, and Federal Department of Energy funding for redevelopment.

- 3.10.1 Do an in-depth investigation of incentives associated with the project that may be applicable to the Moraine site.
- 3.10.2 Contact Roger Gaudette, Director, Asset Management; FordLand; 313-323-2333; rgaudette@ford.com for more details.

GOAL FOUR: PUT APPROPRIATE WORKFORCE SKILLS IN PLACE

Strategy 4.1: Conduct in-depth research to determine occupations and skill sets most in demand by the targeted industries.

Refer to the Moraine Market Assessment in order to become familiar with the lists of specific target industry occupations that will be required to attract these targets. Rely on the regional workforce community's advanced skill matching capabilities already in place in order to:

- 4.1.1 Determine top 10 occupations for each of the five targeted clusters
- 4.1.2 Match requirements with recent research on existing skill sets
- 4.1.3 Work with the Workforce Investment Board and educational institutions to address any areas of deficiency
- 4.1.4 Continue to train (and/or relocate) new skilled workers that will match target industry needs.

STRATEGY 4.2: Proactively focus on talent retention and recruitment for major employers

Talent attraction/retention was identified as a critical issue in the local employer and workforce development focus groups with one-half of employers rating recruitment from outside of the region very difficult or difficult. Yet the ability to retain a skilled workforce is essential to the ability to recruit and expand businesses within the target clusters.

- 4.2.1 Engage major employers as an ad hoc group to meet at least twice/year to discuss labor force and talent retention issues. Invite workforce training provider participation, as well.
- 4.2.2 Charge the major employers group initially with identifying a list of specific community-based initiatives that employers would regard as helpful to their overall efforts to recruit and attract talent.
- 4.2.3 Consider such initiatives as joint attendance with employers at job fairs, preparation of community-based promotional materials and web sites, outreach to talented former residents and university alumni who might consider returning to their "hometown."
- 4.2.4 Include questions within the expanded Business First survey about employers' satisfaction with the local workforce and with local workforce development training programs.
- 4.2.5 Engage the industry representatives on the Economic Development Advisory Committee in monitoring cluster workforce issues, Report results to the Workforce Investment Board and the appropriate local educational institutions.
- 4.2.6 Expand "basic skills" and "soft skills" training programs.
 - 4.2.6.1 Create a Basic Manufacturing Skills "Boot Camp". This would offer "basic skills" training (shop math, blue print reading, tape measure reading), as well as "soft skills" for potential job applicants.
 - 4.2.6.1.1 Solicit support from major area manufacturers
 - 4.2.6.1.2 Design a certification program
 - 4.2.6.1.3 Consider making it mandatory for applicants to attend if they want a job from participating manufacturing partners

STRATEGY 4.3: Implement a college/university alumni attraction strategy

Consider implementing in conjunction with county, regional and state groups a targeted alumni attraction.

- 4.3.1 Identify with local colleges and universities alumni with business facility authority who might have an interest in expanding to the Dayton region.
- 4.3.2 Key on the colleges of Business and Engineering and other programs linking directly to the five target clusters.

Strategy 4.4: Elevate higher education attendance and graduation among area residents.

Many of the jobs associated with the targeted industries require higher education, yet the percentage of Moraine residents with college degrees is relatively low.

- 4.4.1 Work with area employers and education workforce development organizations to help communicate the types of skills required in new and emerging industries.
- 4.4.2 Help increase the number of internship and coop opportunities of students available within area businesses to elevate understanding of skill requirements and work environments.

Strategy 4.5: Increase local employer understanding and utilization of workforce development programs

Over 70% of area employers have never used any workforce development programs, yet most of those who had reported good experience.

- 4.5.1 Help communicate to local employers the availability of workforce development programs through the Business First program and other means.
- 4.5.2 Include a question rating experience of employers that utilize the programs. Evaluate trends in program ratings and communicate results to the appropriate agencies.

GOAL FIVE: STRENGTHEN THE BUSINESS CLIMATE

Strategy 5.1: Work with state and regional officials to publicize recent improvements to the state's tax structure affecting businesses

Ohio's tax reform package eliminated tangible personal property tax, reduced the personal income tax, and will phase out the corporate franchise fee. The package will improve competitiveness by 10-20% according to the Ohio Department of Development's "Economic Development Incentives Study". Ohio remains at a significant disadvantage in "closing funds" relative to competitor states. Such funds will be particularly important in recruiting and expanding replacement employers.

- 5.1.1 Help communicate to prospective businesses the improved environment for industries associated with the new tax reform package.
- 5.1.2 Highlight favorable aspects within marketing materials and the website.

Strategy 5.2: Help advocate for additional needed improvements

- 5.2.1 Support Ohio Economic Development Association efforts to strengthen state incentives, including closing funds, and workforce training funding.
- 5.2.2 Support efforts to eliminate legislation particularly harmful to targeted industries and redeveloped properties including the state requirement to pay "prevailing wages" on projects utilizing state grant monies.

Performance Measures

AngelouEconomics has identified several data sets that we believe will be good measures of economic performance. These data are good indicators of the overall economic health of the community and its citizens. Performance metrics for the Moraine Action Plan are listed below:

Economic Development & Marketing

- Number of new primary jobs
- Number of new primary jobs within targeted clusters
- Total investment
- Average salaries of new primary jobs
- Local, state, and national media positive mentions relating to economic development
- Prospect activity
- Changes in web traffic on City website

Business Climate

- Net firm creation
- Businesses served through the Business First program

Entrepreneurship & Innovation

- Patents per capita
- Seed and venture capital flow
- Start-up companies assisted

Workforce and Education

- Average wage growth
- Local employers' ratings of workforce
- Changes in educational attainment
- Utilization of workforce development programs

Sites & Infrastructure

- Industrial and office vacancy rates

MARKET ASSESSMENT APPENDIX A: ACKNOWLEDGEMENTS, PROJECT BACKGROUND, AND METHODOLOGY

AngelouEconomics and the City of Moraine would like to express our appreciation to the numerous individuals and organizations that contributed to this process for their invaluable input on key issues identified in the community. We would especially like to thank the following:

Advantage Manufacturing
AT&T
CB Richard Ellis Real Estate
City Wide
Congressman Turner's Office
CountyCorp
Covington Capital
CSX
Data Ohio
Dayton Area Board of Realtors
Dayton Business Journal
Dayton Chamber
Dayton Daily News
Dayton Development Coalition
Dayton Power & Light
Dayton Tooling & Machining Association
DMAX
Emtech
GM
GM Real Estate
Greene County
Harco
Job Center
Jones Lang LaSalle
Kettering Hospital
Kettering-Moraine-Oakwood Chamber of Commerce
Lastar
MeadWestvaco
Miami Valley Hospital
Miller Valentine Real Estate
Montgomery County
NAIOP Dayton Chapter
National Center for Composites
Norfolk Southern
Ohio Department of Development
Ohio DOC

Ohio Governor's Office
Senator Brown's Office
Senator Voinovich's Office
Sinclair Community College
Steering Committee
Tech Edge
TeraData
University of Dayton
Vectren
WagnerSmith
WebCore
Workforce Investment Board
Wright Patterson Air Force Base
Wright State University

PROJECT BACKGROUND

This Market Assessment is the first phase in the development of an Economic Development Strategic Plan for the City of Moraine. It is an effort to assess the current economic climate and identify the key issues that present challenges to the community's ability to fully realize its economic development potential.

OUR APPROACH

The Market Assessment evaluates the current state of affairs in Moraine in areas that are most critical to business and industry growth and job creation. Using data that was provided by the City of Moraine, regional partners, or collected independently by AngelouEconomics, this report allows us to take a step back and evaluate trends, data, and businesses' and residents' perceptions of the community.

This report assesses the City's current economic situation and the trends that have shaped it. Specifically, we evaluate its readiness to attract and direct future economic development. We analyze the community in a range of economic and demographic variables by comparing it against a group of national benchmark communities.

BENCHMARK SELECTION

Benchmarks were selected that have economies similar to Moraine. While they differ in size, all benchmarks have the majority of their workforce tied to a single major employer.

Wixom, Michigan

Wixom, until 2007, was home to the Ford Wixom Assembly Plant. The 4.7 million square foot plant, opened in 1957, employed over 1,600 workers to assemble Lincoln Town Cars. In 2007, the plant shut down. The City is currently working with Ford as the company considers what to do with the site. Multiple proposals are being considered, including one advocating razing it and turning it into a business district for promoting green technologies with a hotel and retail component.

Georgetown, Kentucky

Georgetown, Kentucky is home to Toyota Motor Manufacturing Kentucky, the first wholly owned US Toyota plant. When built, it was the largest building in terms of acres covered under one building in the United States. With approximately 6,000 employees, this is Toyota's largest plant outside of Japan and produces most of the Camry's, Avalon's, Solara's, and Venza's.

Lafayette, Indiana

With nearly 2,800 employees, Subaru of Indiana Automotive, Inc. produces all American-made Subaru Legacy's, Outback's, and Tribeca's, as well as producing some Camry's through a collaboration with Toyota. This plant has maintained zero-landfill status since 2004 and maintains the highest international standards for environmental impact. While Lafayette enjoys another significant industry, education services through Purdue University, heavy manufacturing is a significant component of its economy, with employers such as Caterpillar, Fairfield Manufacturing, and Wabash National also operating within the area.

Janesville, Wisconsin

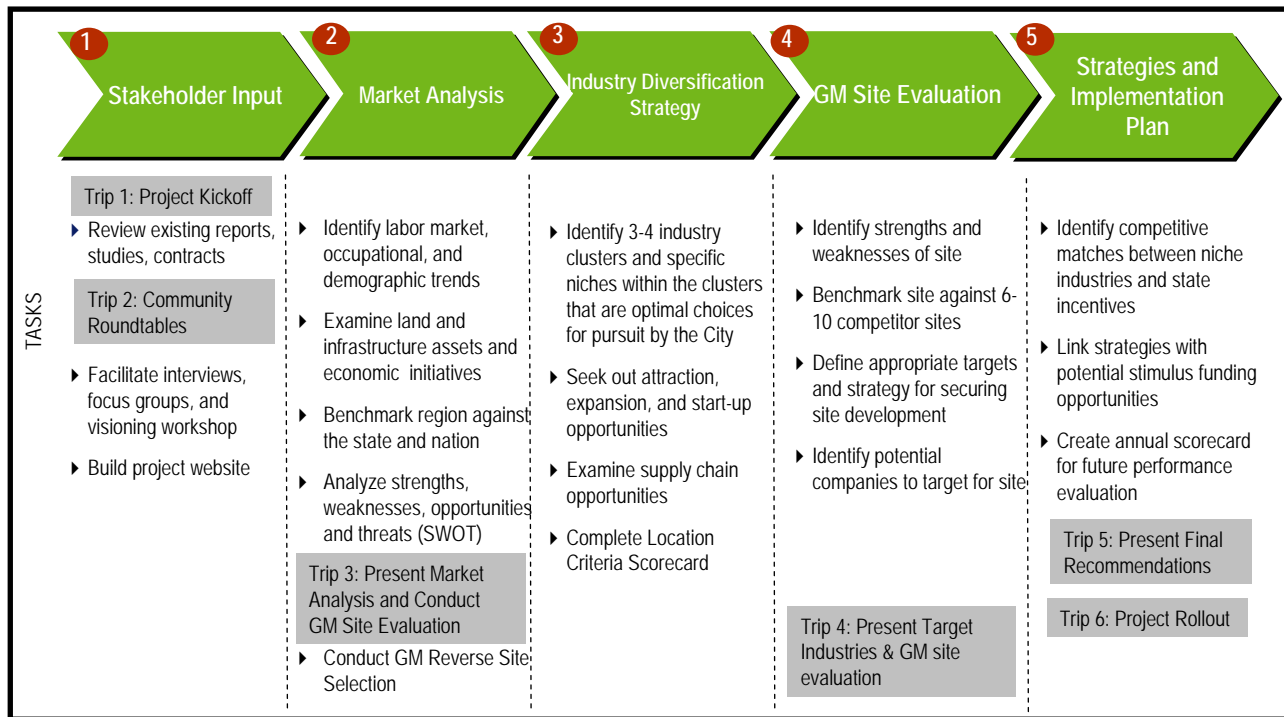
This year, Janesville saw the closure of its GM assembly plant, which employed approximately 2,600 workers. In addition to GM's bankruptcy, demand has steadily declined for large SUVs, which were manufactured here. Like Moraine, many local companies, who were major suppliers and service providers to GM, face significant challenges and tough decisions as their largest customer disappears.

The *Market Assessment* is broken down into three sections:

- An Economic Scan of Moraine that evaluates the demographic and economic trends shaping its current situation and compares it to benchmark communities
- A SWOT summary & analysis of critical issues that details the primary strengths, weaknesses, opportunities, and threats facing the City
- A summary of the results of two online surveys conducted by AngelouEconomics for the market assessment process.

This analysis will provide the necessary framework for future reports, the Target Industry Report and Economic Development Strategic Plan. In the Target Industry Report, AE will prioritize current industry clusters and identify emerging industry clusters that could be located in the Moraine region and should become the focus of the area's economic and community development activities. This Strategic Plan will provide a roadmap for the region's economic development activities over the next 5 to 10 years.

PROJECT PHASES



OUR METHODOLOGY

AngelouEconomics used a variety of sources to collect the quantitative and qualitative information used in our analysis. To begin, the consulting team collected numerous studies and plans developed for municipalities and private parties within the Dayton MSA.

Quantitative data was collected from national and state sources, including the U.S. Bureau of Labor Statistics, the U.S. Census Bureau, Decision Data Resources (Demographics Now), the National Science Foundation, the Internal Revenue Service, the National Center for Education Statistics, and numerous private sector sources. AngelouEconomics also gathered qualitative data through numerous focus groups, one-on-one interviews, and community tours.

AngelouEconomics met with community leaders representing the following groups: major employers, education and workforce development, young professionals, communications and marketing, local entrepreneurs, government and public infrastructure, real estate and development, local leadership organizations, and defense/military.

Our methodology is designed to evaluate the area from a site selector's perspective. During our research, we explore issues and datasets that will ultimately impact the location decisions made by business executives across industry sectors. "Site selection" is generally perceived to be an evaluation for the expansion of industries. We broaden this definition to include the expansion and retention of existing businesses, the recruitment of new businesses, as well as the formation of start-ups. While a business may

already exist and conduct business locally, it still chooses to stay in the region. Nurturing existing companies will make the area more attractive to newcomers and vice versa.

In order to gauge where Moraine stands relative to other globally competitive communities, **this report assesses its performance against a number of benchmark communities** selected based on similar size or economic characteristics. These benchmarks are identified in the Economic Scan.

NEXT STEPS

This Market Assessment is only the first step in the process of developing the Economic Development Strategy for the City of Moraine. The issues identified in this analysis will play a role in the next two reports we will produce for this process:

- The information in this assessment serves as a foundation for creating a tailored Target Industry Report. We will identify specific target industries that would be most appropriate given the region's assets and limitations.
- The issues identified and discussed in this assessment will also be addressed through strategies in the final Economic Development Strategic Plan. Those strategies will include specific action steps, organizations or individuals who should be responsible for implementing each strategy, a timeline for implementation, and performance measurements so that leaders in the region will be able to judge progress. This final plan will become the roadmap for Moraine's economic future.

MARKET ASSESSMENT APPENDIX B: FOCUS GROUP COMMENTS

The following pages present a summary of focus group comments. These are provided to give insights into the strengths, weaknesses, opportunities, and threats for each sector of Moraine's economy.

FOCUS GROUP: EXISTING BUSINESSES

Strengths

- Capacity for distribution activities
- Competitive taxes
- Moraine government is very collaborative/pro-business
- Strong labor pool for skilled, semi-skilled, and day labor
- Good air access
- Great cost of living

Weaknesses

- High-skilled labor is difficult to find/recruit
- Businesses must pay a salary premium over larger regional metros to attract talent
- Absence of a cohesive, regional message

Opportunities

- Strong transportation arterials for distribution
- Central for commuting purposes
- Workforce and location is ideal for distribution, advanced manufacturing

Threats

- Stigma of being a "union town"
- Concern about perceived community image
- Construction seems to never stop – "orange barrels everywhere"

FOCUS GROUP: REAL ESTATE AND DEVELOPMENT

Strengths

- Low cost of living
- Interstate access
- Strong, technically trained workforce
- Many innovative companies start up locally
- Good business reputation

Weaknesses

- Industrial space is more expensive other local municipalities
- Regional players not always business-friendly
- Real estate is older and is not the best match for current industrial/office needs

Opportunities

- Proximity to Wright Patterson Air Force Base
- Clean, abundant fresh water
- Large workforce with advanced manufacturing skills

Threats

- Declining young professional (25-44) demographic
- Losing jobs
- Ohio stigma of being business-unfriendly
- Many innovative companies that start up here move away after growing

FOCUS GROUP: WORKFORCE DEVELOPMENT

Strengths

- Excellent regional cooperation
- Strong skills and large available labor pool in advanced manufacturing
- Strong educational institutions and training programs

Weaknesses

- Workforce skills are currently misaligned
- Few "upper-level" jobs

Opportunities

- There are a lot of job training funds available for retraining
- Significant employment/demographic research being conducted (Regional Transitional Consortium)

Threats

- If the recently laid-off cannot find new jobs quickly, they will relocate

FOCUS GROUP: UTILITIES

Strengths

- Excess capacity in the system, especially for water and especially since GM shut down
- Great labor costs

Weaknesses

- Hard to attract workers
- GM plant internals were managed by GM – not always standard sizes

Opportunities

- Have a huge capacity for fresh water while many places across the country struggle with water
- Strong electricity – no rolling brownouts
- Strong fiber-optic network

Threats

- GM plant – focal point of the community – is empty

ACTION PLAN APPENDIX C: IMPLEMENTATION MATRIX

Moraine Action Plan Discover the Leap Economic Development Strategy Implementation Matrix <i>Primary responsibility with red "X"</i> <i>Supporting role with black "X"</i>		Time Frame Immediate (0-6 months) Short Term-Term (6-12 months) Long-Term (12 months +)	City of Moraine	Dayton Development Coalition	Montgomery County	Ohio Department of Development	Kettering-Moraine-Oakwood Chamber of Commerce	CountyCorp	Sinclair Community College	The Job Center	University of Dayton Research Institute	Wright State University	Wright-Patterson Air Force Base	Congressional delegation	CountyCorp	City Wide	Neighboring communities - West Carrollton, Kettering, etc.	Local k-12 districts	Other
PROJECT PHASES GOAL 1: IMPLEMENT AN ENHANCED, COLLABORATIVE TARGET INDUSTRY MARKETING CAMPAIGN																			
STRATEGY 1.1: Focus on the targeted industries of Adv. Materials and Mfg, Logistics and Distribution, Renewable Energy and Energy Efficiency, Health Services/Technology, and Business and Professional Services																			
1.1.1	Identify and be visible and active at selected target industry association events and tradeshows such as Renewable Energy World Conference & Expo, Unmanned Systems North America and BIO in collaboration with regional/state	Immediate	X	X	X	X													
1.1.2	Participate in key sales trips to meet with company executives in targeted clusters.	Immediate	X	X	X	X													
1.1.3	Collaborate with adjoining communities, county, Greater Dayton Coalition and Ohio Department of Development where feasible in external marketing and business development in order to fully leverage resources. Because of the importance of close collaboration on these initiatives, it is imperative that frequent, close communication be maintained between the various partner entities.	Immediate	X	X	X	X											X		X
1.1.4	Consider joining and active participation in key trade associations, particularly the Industrial Asset Management Council (IAMC).	Immediate	X																
1.1.5	Continue successful relationship building activities with key site selection consultants.	Immediate	X	X	X														
1.1.6	In conjunction with the property owner of the GM site, carry out an aggressive direct mail and e-mail campaign to lists of corporations with large facility requirements within the targeted clusters	Immediate	X																
1.1.7	Update collateral materials and develop succinct pieces on advantages Moraine offers for companies within the respective target clusters.	Short Term	X																
1.1.8	Develop a freight/logistics model tied to the attraction of logistics/distribution and other manufacturing targets. The model is designed to educate prospects on the freight cost advantages of locating in Moraine and to help local officials understand the cost differentials that might be overcome by adjusting other project costs and/or adding incentives.	Short Term	X																
1.1.9	Develop cost/condition comparison reports for your top targets. These reports will depict cost/condition advantages of doing business in Moraine versus select competitors.	Short Term	X	X	X	X													
STRATEGY 1.2: Establish an Economic Development Advisory Group and include representatives of each of the target industries																			
1.2.1	Engage business leaders representing the target industries whose main purpose is to supply trend information, identify possible target companies, develop strategies for attracting industry, and develop key messages concerning each	Immediate	X		X		X												X
1.2.2	The Economic Development Advisory Committee should meet quarterly to discuss industry strategies while focusing on specific outcomes for targeted industry initiatives, value chain opportunities and other industry intelligence.	Immediate	X																X
STRATEGY 1.3: Elevate international recruitment efforts leveraging the resources of existing state and regional programs																			
1.3.1	Leverage existing assets by establishing and strengthening relationships with foreign-owned companies and regional and state international investment organizations such as the State of Ohio Department of Development and the Greater Dayton Coalition. Seek out collaborative opportunities in cooperation with existing companies, regional organizations, universities, and international organizations. Provide local executives who interact with foreign executives, such as those in their vendor networks, with the information and print materials to help promote the Moraine area.	Short Term	X		X	X													
1.3.2	Upgrade the City's website to include at least one section that provides information about foreign-based companies and assets in Moraine and the Dayton region, and provides links to international organizations throughout the state.	Short Term	X																
1.3.3	Presence at selected trade shows in target industries can help establish the Moraine region as a player in the international sector. The State of Ohio represents economic development entities at large international trade shows. The "Ohio Global Summit" is one example of an international event held within the state. Ensure availability of your collateral materials at key events including information about the former GM facility.	Short Term	X				X												
1.3.4	Recognize international business milestones. Acknowledging an international company's accomplishments and demonstrating an understanding of their services, products, and economic impact on the community are often-overlooked ways to recognize a company's contributions and also create community awareness of the importance of international business. Creating an "International Business Award" as part of an annual business awards program would allow for wider recognition of international business in the community.	Short Term	X																
STRATEGY 1.4: Strengthen the economic development section of the City of Moraine web site																			
1.4.1	Include information specifically pertaining to the identified target industries, including a list of local companies within those sectors.	Immediate	X																
1.4.2	Include real estate options including material about the former GM site.	Immediate	X																
1.4.3	Update demographic and incentives data.	Immediate	X																
1.4.4	Include links to regional and state economic development organizations.	Immediate	X	X	X	X													
1.4.5	Include a "site selectors" tab/section with specific information that pertains to your target industries and site selector needs	Immediate	X																
STRATEGY 1.5: Utilize the retention and expansion program to help identify suppliers and related companies for possible recruitment																			
1.5.1	The City of Moraine and Montgomery County should expand the Business First program to include questions identifying suppliers and other related firms that could be recruitment candidates.	Short Term	X		X														
1.5.2	Marketing materials should be sent to these companies.	Short Term	X		X														
STRATEGY 1.6: Promote and leverage recent success																			
1.6.1	Collaborate with county, regional and state economic development groups to publicize economic success stories and	Immediate	X	X	X	X	X												
1.6.2	Utilize websites, newsletters and local media.	Immediate	X	X	X	X	X												
STRATEGY 1.7: Seek additional economic development resources																			
1.7.1	Explore federal and state resources such as the Economic Development Administration (EDA) for programs to assist communities faced with major economic disruptions.	Immediate	X		X	X								X					

Moraine Action Plan Discover the Leap Economic Development Strategy Implementation Matrix		Time Frame Immediate (0-6 months) Short Term- Term (6-12 months) Long Term (12 months +)	City of Moraine	Dayton Development Coalition	Montgomery County	Ohio Department of Development	Kettering-Moraine-Oakwood Chamber of Commerce	CountyCorp	Sinclair Community College	The Job Center	University of Dayton Research Institute	Wright State University	Wright-Patterson Air Force Base	Congressional delegation	CountyCorp	City Wide	Neighboring communities - West Carrollton, Kettering, etc.	Local K-12 districts	Other
<i>Primary responsibility with red "X"</i> <i>Supporting role with black "X"</i>																			
PROJECT PHASES																			
1.7.2	Consider use of retired volunteers or loaned executives with industry experience to bolster staffing.	Immediate	X																
GOAL 2: EXPAND SUPPORT TO EXISTING INDUSTRIES AND ENTREPRENEURS																			
STRATEGY 2.1: Expand outreach to existing industries																			
2.1.1	Utilize Montgomery County's Business First program as the principle platform to call on an increased number of	Immediate	X		X														
2.1.2	Continue the relationship building aspect of the program, but also include a more formalized set of questions.	Immediate	X		X														
2.1.3	Improve tracking of business trends and periodically report findings.	Short Term	X		X														
STRATEGY 2.2: Improve local and regional support to entrepreneurs																			
2.2.1	A user-friendly web portal that includes an inventory of all regional entrepreneurial assets (venture capital firms, SBDCs, technology alliances, incubators, training programs, loan programs, funding sources, etc.) within the region would help clarify the complex list of resources. The portal should serve as an online one-stop shop providing direct access to service providers that can help navigate local, state, and national systems.	Long Term		X		X			X										X
2.2.2	A mentoring program that provides start-ups with experienced mentors would increase entrepreneurs' chances of success. This program can also be expanded for more advanced entrepreneurs and small businesses to match them with larger corporations within the region who agree to become early trial adopters of the start-up company's technology, product or service.	Long Term							X										X
2.2.3	Sinclair Community College and university training programs can be expanded so entrepreneurs can receive training around aptitudes related to establishing and running a business (e.g. developing a business plan, leasing office space, product research and development, and computer software skills). Once training is received, entrepreneurs can get referred back to additional providers for further assistance.	Long Term							X		X	X							
STRATEGY 2.3: Augment existing financing programs for area businesses																			
2.3.1	Utilizing CityWide and CountyCorp, develop a revolving loan fund to assist with area businesses' needs.	Short Term	X												X	X			
2.3.2	Use the Business First program to help identify other unmet financing needs.	Short Term	X		X														
STRATEGY 2.4: Actively participate in and encourage business participation in programs intended to increase the volume of Wright-Patterson contracts performed by local companies																			
2.4.1	Help connect more businesses to opportunities through communication of procurement fairs, reverse trade shows, etc.	Short Term	X		X	X							X						
2.4.2	Monitor procurement opportunities to help scan for capabilities that could be provided by area industries.	Short Term	X		X	X							X						
2.4.3	Build a database of business capabilities through the expanded Business First program.	Long Term			X														
STRATEGY 2.5: Increase recognition of local business success stories																			
2.5.1	Carry out a City of Moraine business and entrepreneur recognition program on a quarterly basis.	Short Term	X		X			X											
2.5.2	Publicize recipients through City newsletters and the website.	Short Term	X		X			X											
STRATEGY 2.6: Encourage entrepreneurship from a young age through regional K-12 programs																			
2.6.1	Convene area K-12 leaders to share ideas and common challenges as a means to expand entrepreneurial programs throughout the region.	Long Term	X		X		X											X	X
2.6.2	Expand offering of entrepreneurial project initiatives at middle and high schools, similar to Junior Achievement or the Entrepreneurship Week.	Long Term	X		X		X											X	
STRATEGY 2.7: Spur innovation through the connection of existing businesses																			
2.7.1	Develop a regional "SMART" supplier initiative to more deeply understand industry competencies and supply chains and regional innovations. Develop a database that matches regional business' core competencies with innovations that are available for licensing. Companies can search the database for technologies that could replace or supplement their own existing products and services.	Long Term				X					X	X	X						X
2.7.2	Utilize the program to serve as a critical feedback loop where businesses communicate technological gaps or innovative ideas back to the university and incubator for further exploration.	Long Term									X	X	X						X
STRATEGY 2.8: Conduct in-depth analysis to assess utilization of a portion of the former GM facility for an incubator facility																			
2.8.1	Meet with area incubators to gauge capacity and any unmet demand.	Short Term	X																X
2.8.2	Conduct an engineering analysis of the GM facility to determine the facility's viability in meeting any areas of need.	Short Term	X																X
GOAL 3: ENSURE APPROPRIATE REAL ESTATE OPTIONS AND INFRASTRUCTURE ARE IN PLACE TO MEET INDUSTRY REQUIREMENT!																			
STRATEGY 3.1: Align City of Moraine objectives with those of the GM site owner/developer																			
3.1.1	Discuss in detail with the property owner the objectives of the City regarding re-use of the property including the types of projects eligible to receive financial support. Seek to understand the property owner's objectives as well.	Immediate	X																
3.1.2	Determine a collaborative strategy to market the property. Emphasize the importance of quality employment opportunities to city assistance programs.	Immediate	X																

[illegible]

Moraine Action Plan Discover the Leap Economic Development Strategy Implementation Matrix <i>Primary responsibility with red "X"</i> <i>Supporting role with black "X"</i>		Time Frame Immediate (0-6 months) Short Term: Term (6-12 months) Long-term (12 months +)	City of Moraine	Dayton Development Coalition	Montgomery County	Ohio Department of Development	Kettering-Moraine-Oakwood Chamber of Commerce	CountyCorp	Sinclair Community College	The Job Center	University of Dayton Research Institute	Wright State University	Wright-Patterson Air Force Base	Congressional delegation	CountyCorp	City Wide	Neighboring communities - West Carrollton, Kettering, etc.	Local k-12 districts	Other
PROJECT PHASES																			
5.1.1	Help communicate to prospective businesses the improved environment for industries associated with the new tax reform package.	Immediate	X	X		X											X		
5.1.2	Highlight favorable aspects within marketing materials and the website.	Short Term	X	X		X											X		
STRATEGY 5.2: Help advocate for additional needed improvements																			
5.2.1	Support continuing Ohio Economic Development Association efforts to strengthen state incentives, including closing funds, and workforce training funding.	Short Term	X	X			X										X		X
5.2.2	Support efforts to eliminate registration particularly harmful to targeted industries and redeveloped properties, including the state requirement to pay "prevailing wages" on projects utilizing state grant monies.	Short Term	X	X			X										X		X