New Economy—Readiness Assets

The Old Economy was based largely on the transformation of raw materials into manufactured goods. The New Economy is characterized by the use of information and technology to boost efficiency in production, increase the scale of the marketplace to global proportions, redirect business activity from manufacturing to services, and reassess what is economically valuable with respect to both inputs and outputs. A key characteristic of the New Economy is that its outputs are often ideas or knowledge-based innovation. The New Economy has changed the nature of how and where businesses locate.

### Key Features of the Old and New Economy

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<thead>
<tr>
<th>Key Features of the Old Economy</th>
<th>Key Features of the New Economy</th>
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<tr>
<td>Cheap place to do business was the key.</td>
<td>Being rich in talent and ideas is the key.</td>
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<td>Attracting companies.</td>
<td>Attracting talented and educated people.</td>
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<td>Industrial sector (manufacturing) focus.</td>
<td>Sector diversity is desired, and clustering of related sectors is targeted.</td>
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<td>Fossil-fuel-dependent manufacturing.</td>
<td>Communications dependent.</td>
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<td>A high-quality physical environment was a luxury.</td>
<td>Physical and cultural amenities are key in attracting knowledge workers.</td>
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<td>Success = Fixed competitive advantage in some resource or skill.</td>
<td>Success = The ability to learn and adapt.</td>
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<td>People followed jobs.</td>
<td>Talented, well-educated people choose location first, then look for a job.</td>
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<td>Economic development was government-led.</td>
<td>Partnerships with business, government and nonprofit sector lead change.</td>
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</table>
High-tech services are growing nationally and internationally as the New Economy has emerged. High-tech services tend to concentrate in metropolitan areas, along with highly educated people.

Sources:
Though manufacturing, in general, is on the decline, high-tech manufacturing is still in high demand. High-tech manufacturing tends to cluster in metropolitan areas.

High-Tech Manufacturing Employment

Sources:
New ventures are the product of entrepreneurs and small-business people putting their talents to work. Entrepreneurship will be a key component in the transformation of Michigan's economy from Old to New. However, barriers must be overcome for this component to work optimally in the state's favor. The prevailing mindset will need to adjust to embrace and welcome entrepreneurs. New business startups include those businesses, within the New Economy sectors previously presented that started between 2000 and 2006.

Sources:
Michigan Center for Geographic Information, “Minor Civil Divisions, dissolved version 7b” (Shapefile), 2007. Available at: http://www.mcgi.state.mi.us/mgdl/.

Of the critical business clusters in this Atlas, companies that exhibit top-tier growth patterns are critical to Michigan’s economy. They show qualities such as innovation, leadership and strategy. Here again, the fastest-growing companies in Michigan are in our large metro areas, where knowledge workers and support infrastructure are most concentrated. High-growth companies include those businesses, within the sectors previously presented that had sales growth of at least 40% between 2000 and 2006.

**High-Growth Companies (2000–2006)**

Sources:
- Michigan Center for Geographic Information, “Minor Civil Divisions, dissolved version 7b” [Shapfile], 2007. Available at: [http://www.mcgi.state.mi.us/mgdl/](http://www.mcgi.state.mi.us/mgdl/).
The Advanced Energy and Storage Cluster is comprised of companies that engage in business related to the design, engineering, construction and manufacturing of energy collection, distribution and storage of advanced energy systems, including wind, solar, biofuels and advanced batteries. Renewable energy is projected to continue with strong growth patterns, and Michigan is becoming a national nexus for advanced batteries and energy storage for the transportation sector.

Advanced Energy and Storage Location Quotient (Mean 2006)

The location quotient mean compares the local economy to the national economy in a chosen business cluster. If the location quotient mean for a business cluster in a given community is greater than 1, then that community has a concentration in that business cluster that is higher than the national average. This analysis typically determines the share of the economy that is local-versus export-oriented, and identifies strengths and weaknesses within a local economy. Our methodology was adapted from Michael Porter’s work (Porter 2000).

Sources:

Formula: For cluster X,

\[
\text{Employment in Cluster X in Location Y} \div \text{National Average Employment in Cluster X}
\]
The Environmental Technology Cluster is comprised of companies that engage in business related to environmental assessments, remediation, design, engineering, compliance and analysis. Also included within this cluster are commercial financial institutions and manufacturers and wholesalers of machinery and equipment related to environmental controls and analysis. Part of Michigan’s history as an environmental leader is a strong environmental technology sector. The green economy is growing globally and Michigan has some potential if this sector is better connected to growing markets around the globe.

**Environmental Technology Location Quotient (Mean 2006)**

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**Sources:**
The Information Technology (IT) Cluster is comprised of companies that engage in business related to computer hardware or software design, engineering, manufacturing, assembly, repair, processing, management, training, wholesaling or other similar ventures. Michigan has a solid footing in the IT sector, especially in the government services arena. In the national and international competition for IT jobs, Michigan could be well-served by developing strategies to encourage entrepreneurship and creativity in this dynamic sector. Incubators, business development planning assistance and physical high-speed wireless and wired infrastructure are all things to be considered.

Sources:
The Finance, Insurance and Real Estate (FIRE) Cluster is comprised of companies that engage in business related to credit markets, commercial and residential lending, investing, property transactions, and health, medical, life and property and casualty insurance ventures.

The finance and insurance components of the FIRE sector have experienced strong growth in the last decade and are becoming nationally competitive. Connecting our strengths here to emerging industries like renewable energy and the green economy could provide huge growth opportunities.

Sources:
The next three maps of Bio-Pharmaceuticals, Life Sciences and Bio-Medical, and Healthcare form a super cluster in the health and life sciences industry. Michigan has a currently established position in two of the three sectors, and strategic planning could capture the synergies between them.

The Bio-Pharmaceutical Cluster is comprised of companies that engage in business related to the research, design and manufacturing of organically-based medicinal products. Sectors within this cluster include medical manufacturers, chemical manufacturers, lab equipment manufacturers and other related businesses. Michigan does not have a strong position in this cluster relative to the nation.

Sources:

The Life Sciences and Bio-Medical Cluster is comprised of companies that engage in business related to providing and advancing human health and well-being. This includes research, development and manufacturing of medicine, vaccines, pharmaceuticals, as well as research and development of clinical methods and procedures. In this cluster, Michigan has a strong national presence that is distributed in the populated southern part of the state. Collectively, this cluster can compete on the national stage, if integrated strategies for success are intensified.

Sources:

The Life Science and Bio-Medical Cluster is comprised of companies that engage in business related to providing and advancing human health and well-being. This includes research, development and manufacturing of medicine, vaccines, pharmaceuticals, as well as research and development of clinical methods and procedures. Here again, Michigan has a strong national presence, vis-à-vis other states.

The challenge in this super cluster is to develop the network of companies, the support infrastructure and the comprehensive strategy that can leverage our current assets into a world-class industry.

Sources:  
The Food Innovation Cluster is comprised of companies that engage in business related to agricultural production and development of new procedures and products derived from food. This cluster does not include sectors that engage in bio-pharmaceutical activities or biomass energy production. Michigan has one of the most diverse agricultural production systems in the nation. This diversity is largely untapped in the creation of new food products, innovative local processing and local distribution. A plan to bolster the relevance and profitability of Michigan agriculture could pay huge dividends for the state.

Sources:

The Supply Chain Management and Logistics Cluster is comprised of companies that engage in business related to the distribution, storage and design of systems that manage the flow of goods and resources. Business sectors within this cluster include supply chain systems consulting, transportation, cargo handling and warehousing. This is a growing cluster globally, since the advent of the New Economy.

This cluster is underdeveloped given Michigan's status as an international port state with a legacy of logistics and supply chain expertise that is well-developed in serving manufacturing businesses.

Sources:
The Flexible Manufacturing Cluster is comprised of companies that engage in business related to design, engineering or manufacturing of durable goods on a limited run or specialty series basis. Sectors within this cluster include machine shops, parts manufacturers, computer-assisted manufacturing services, foundries, tool and die operations and other manufacturers.

Flexible manufacturing differs from traditional manufacturing. Traditional manufacturing shops generally conform to a mass production manufacturing model. Flexible manufacturing shops operate under a model more similar to that of craft production in which flexible shops shift production from one good to another with relative ease. These shops rely on the adaptability, knowledge and skills of workers and flexibility of equipment, machines and industrial processes. In the southern half of the Lower Peninsula, limited-run specialty auto or truck manufacturing would be considered an example of flexible manufacturing.

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Sources:
What economic developers considered the key assets and strategies in the Old Economy have become less relevant today, although this has been a slow realization. The growing importance of New Economy assets presents a challenge for policy makers who must transition the state toward a new model. The New Economy is not only people-centric but knowledge worker-centric. Michigan needs to systematically explore the key existing New Economy infrastructure of the state and its regions and then design new strategies to attract new opportunities. Innovation, entrepreneurship, enhancement of knowledge workers, repositioning of state universities, development of new attraction points, careful investment of state resources in areas that represent emerging drivers of growth, and the development of personal capacity of leaders to understand the latest strategies—these are among the targets for building the New Economy.