

Regional Report Northwest Indiana

The Northwest Indiana data collection area was composed of Lake, Porter, LaPorte, Starke, Pulaski, Jasper and Newton counties. Local economic development officials from counties and towns in this area participated in the data collection process. NIPSCO economic development representatives coordinated the effort and served as champions for the project in Northwest Indiana.

Data Collection Process

A kick-off meeting, hosted by NIPSCO, was held in Portage, Indiana at the office of the Northwest Indiana Forum on January 24, 2008. The purpose of the meeting was to provide an introduction to the project, train users on the survey instruments and officially begin the data collection process.

Four distinct survey instruments were created to facilitate the data collection process. The surveys were targeted to:

- For-profit companies doing business in the life science industry
- Healthcare providers
- Educational institutions
- Communities

For purposes of the project, the life sciences industry was broadly defined to include healthcare delivery, medical devices and equipment, pharmaceuticals, agriculture and veterinary products, private sector and university research, and support services.

Local economic development officials (LEDOs) in each community were asked to disseminate the surveys to the appropriate parties in their community. The existing Indiana Health Industry Forum (IHIF) database was used as a starting point, although it was acknowledged that the database was incomplete. LEDOs were encouraged to add new companies to the list and remove any entities that should not be included.

The surveys were provided electronically in an Excel format and as an on-line application. Supporting documents, including an "About the Project" brochure, introductory letters, press releases and other public relations materials were provided by IHIF to support the data collection process.

Due to the overall project timeline, approximately one month was allocated for local data collection efforts.

Focus Groups

To support the data collection efforts, a focus group was held in Portage on March 5, 2008. The purpose of the focus group was to expand upon the written data gathered through the survey process and allow for discussion of the area's strengths and weaknesses as related to growth of the life sciences industry.

Attendees at the focus group included representatives of local hospitals, universities, companies, economic development organizations and local government officials.

Focus Group Findings

The focus group discussion covered a wide range of topics, including strengths and weaknesses, perceptions, education, infrastructure and business climate. Participants were asked to think about where the life science industry is going and how Northwest Indiana fits into its future development.

Proximity to Chicago emerged as one of the region's greatest assets as related to the life science industry. The large cluster of pharmaceutical and biotech firms, combined with the strong hospital systems in the Chicagoland area, provide a critical mass of educated workers. With Northwest Indiana's availability of land at a lower cost, reverse commute options for city residents, favorable malpractice insurance costs and affordable housing options, northwest Indiana should be well-positioned to capture life and health science industry growth out of the Chicago market. Interestingly, proximity to Chicago was also seen as a negative to some participants. Many feel that the area has no unique identity and is simply overshadowed by Chicago.

Hospitals in Northwest Indiana were also cited as a strength of the region. A number of hospitals have recently completed major facility investments, creating more modern facilities with the ability to support new equipment

and technologies. Many healthcare providers participate in clinical trials, which encourage the use of new patient care options in the region.

Historically, manufacturing has played a major role in the Northwest Indiana economy. The workforce is abundant, highly skilled and engineering talent is prevalent. Due to changes in the steel industry, there has been a great deal of transition in the workforce.

The transportation infrastructure in the region is well-developed, with a good highway network, a deep-water port on Lake Michigan, and access to O'Hare, Midway and Gary airports. Northwest Indiana has the most well-developed public transportation system in the state, with connections to Chicago by rail and bus. Water is abundant in the region due to the area's proximity to Lake Michigan. Electric and gas utilities have the capacity and the physical infrastructure to handle the majority of potential users. Highway congestion leading to Chicago can be a problem for both passenger and freight traffic, especially on the toll road.

The diversity of the area is attractive to many life science companies which strive to attract highly educated workers from all over the world. These individuals typically feel more comfortable in diverse communities with a variety of cultural offerings.

Support for the life sciences industry is needed in the areas of lab space, venture capital and entrepreneurship support. Perhaps because of the rich manufacturing heritage in the area and number of very large companies operating in the region, entrepreneurship is not as prevalent as in many areas of the country. Participants believe that the local colleges and universities can be good sources of innovation, but need to create more technology transfer opportunities in the short run.

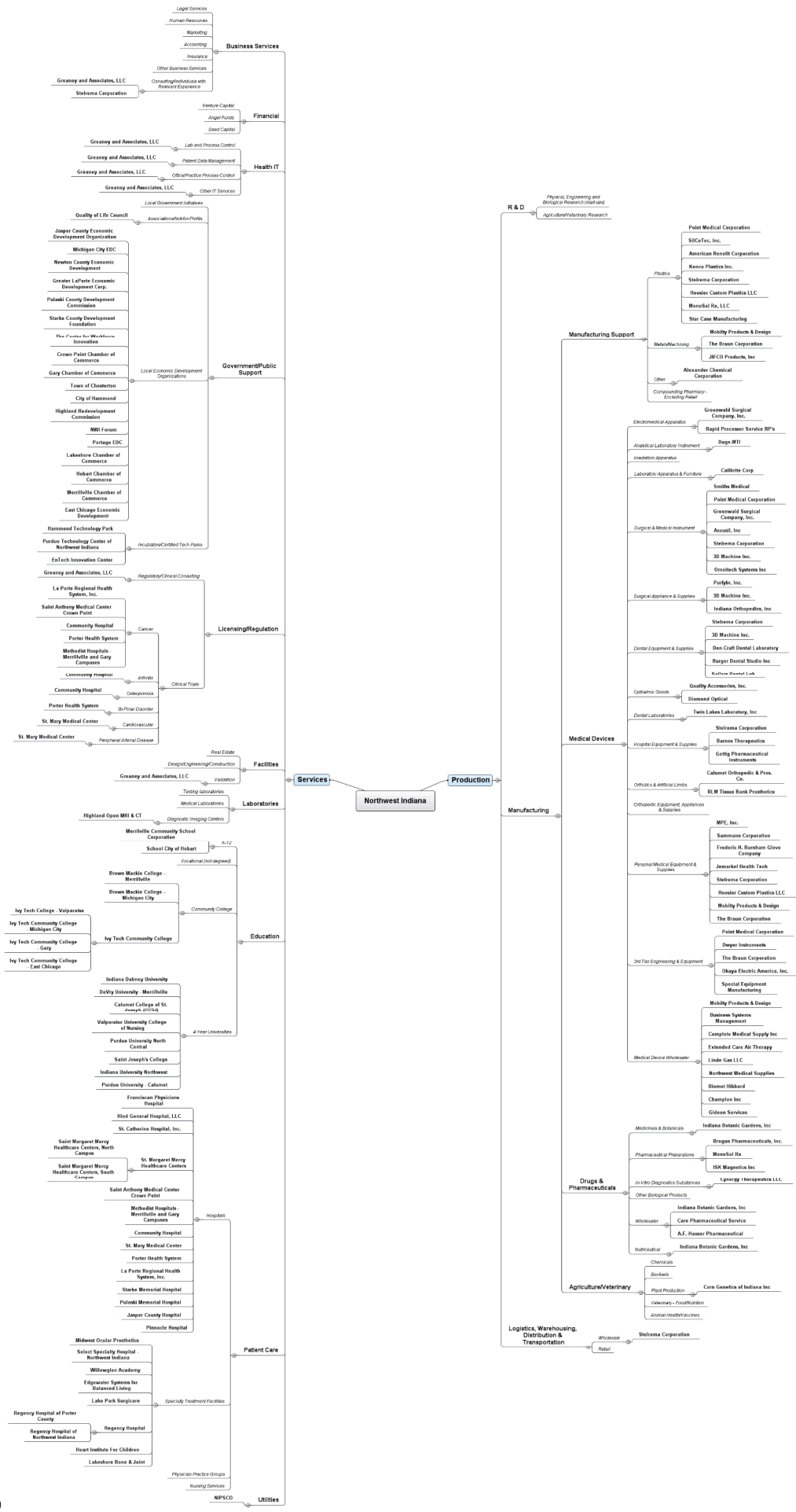
Participants felt that Northwest Indiana has good leadership and the political will to tackle challenging issues. The overall business climate in the state is good and recent changes to the tax structure were recognized. Overall, participants were positive about the future of the region and the potential for the life science industry to grow and prosper in the area.

Data Collection Results & Existing Business Analysis

At the beginning of the process, IHIF's database contained data on approximately 83 life science entities in the region. These entities include companies, educational institutions and healthcare providers. Surveys were disseminated to the majority of these companies, resulting in 58 completed surveys. Independent research and data gathering supplemented the survey results. In total, 13 companies were removed from the list (out of business, moved, etc) and 29 new companies were added to the list, resulting in 99 total companies in the final database. Information on these 99 companies is included in the region's asset map. The complete database of companies included in the asset map is available at www.ihif.org.

It is important to note that the asset map is not all-inclusive. The data collection process, as outlined above, was as comprehensive as possible. However, as with any survey, the response rate was not 100%. Although independent research was conducted, there is no doubt that assets may be missing. The Indiana Health Industry Forum will continue to add to the database and the asset map in the future.

Existing Business Structure Asset Map



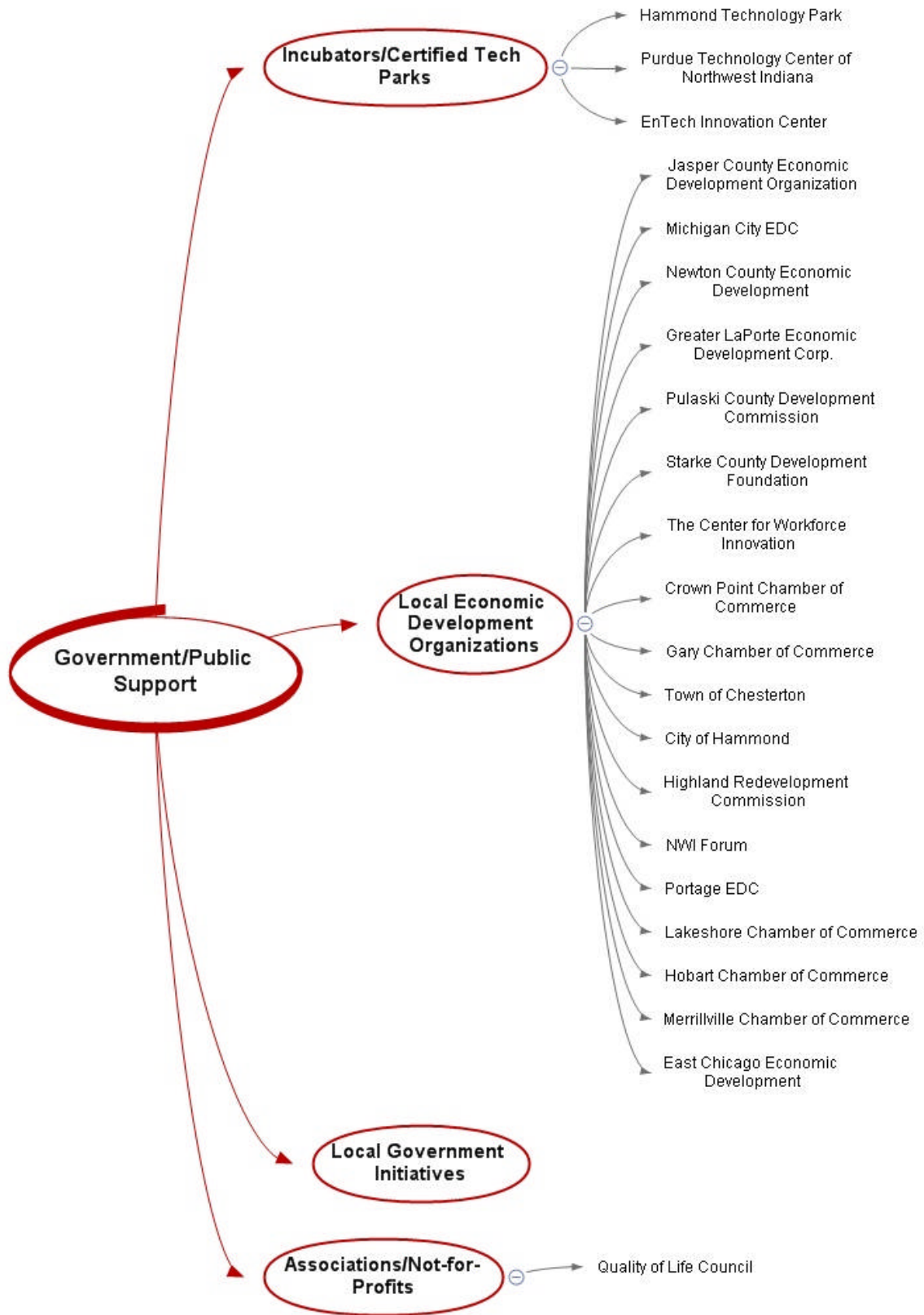
The asset map for the Northwest Indiana region creates a visual representation of the life sciences industry in the region, broken down between the service sector and the production sector. Areas of strength and weakness in the industry clearly emerge.

In the production sector, there is particular strength in the manufacturing branch, particularly for medical devices, drugs & pharmaceuticals, and manufacturing support. Weakness exists in the research and development cluster and the logistics cluster for this region.

In the service sector, patient care and education are the strongest branches. The map shows some weakness in business services, which is probably attributable to the region's proximity to Chicago. Legal, marketing, human resource and consulting services are likely drawn from the Chicago market. Other areas of weakness include laboratories and financial resources.

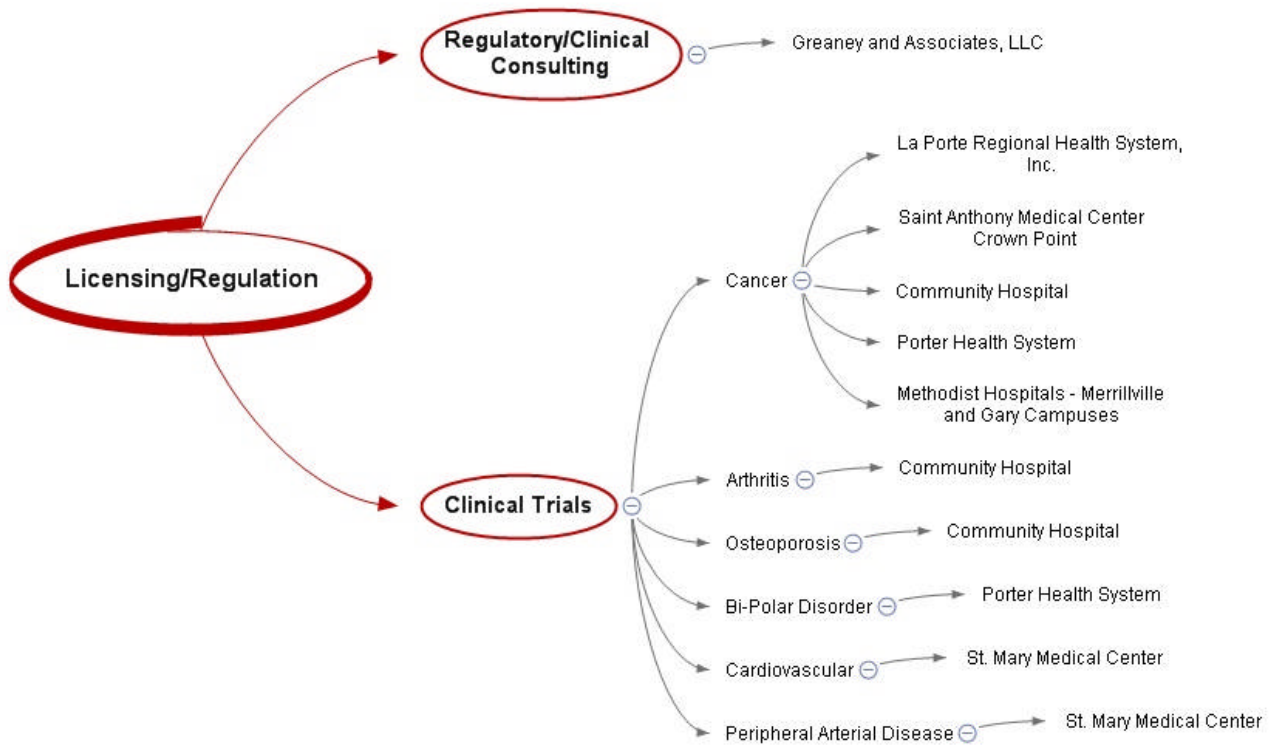
The following section examines major branches of the asset map in more detail.

Government/Public Support



This branch of the asset map includes those government and non-profit entities that support the development of the life science industry, locally and state-wide. Northwest Indiana is home to three technology parks, which encourage innovation and technology transfer. Economic development resources are readily available in all areas of the region.

Clinical Trials

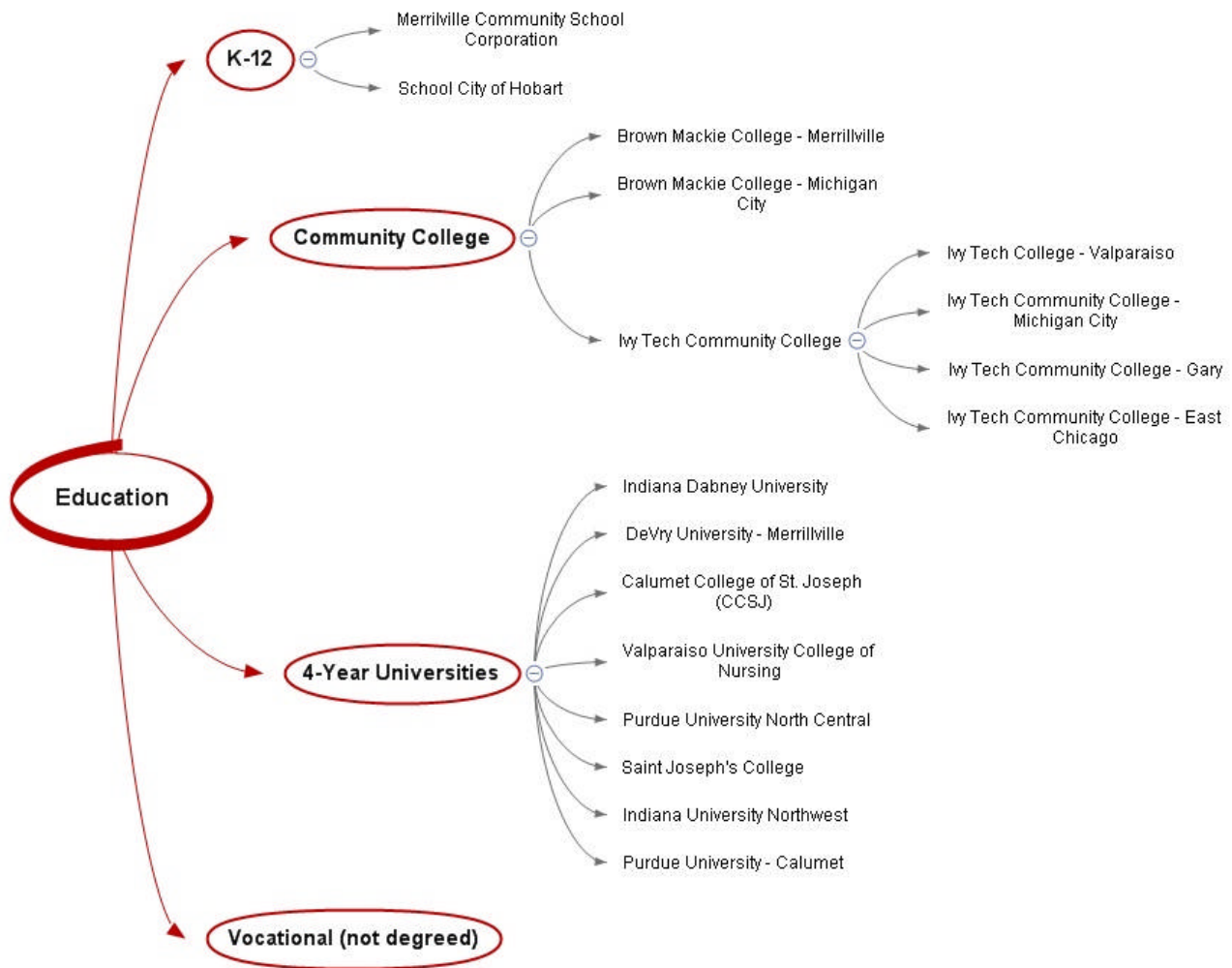


Many hospitals in the area are involved in clinical trials. While trials are performed in a variety of focus areas, there is a concentration of cancer trials in the region. Clinical trials can provide both income and research opportunities to hospitals and physicians that participate. Trials also provide reduced cost or free medical care to patients who participate, as well as giving them access to cutting-edge healthcare. .

Trials take place in four stages. Preclinical trials, the first step in the testing process of bringing a new drug to market, are done before any testing on humans can be conducted and may involve years of experiments on human and animal cells. Human testing is done in the next three phases. Phase I studies assess a drug's safety, using a relatively small number of healthy volunteers. Phase II studies are primarily concerned with efficacy. These studies are often done using control groups and are typically "blind", meaning that neither the patient nor the doctor knows if the drug or a placebo is being administered. Phase III studies are done using several thousand patients. Testing on a large scale provides a more thorough understanding of the drugs effectiveness and side effects. Phase IV studies, often called marketing studies, are used to compare a drug with other drugs on the market and to monitor long-term effectiveness, cost and impact on a patient's quality of life.

Northwest Indiana has the potential to increase clinical trials activity. There is a good population base from which to draw participants. There are a number of nursing programs in the region, providing a good source of workers for contract research organizations (CROs). CROs, which administer clinical trials for drug companies, are typically staffed heavily by nurses. Hospitals in the area are already involved in trials, which can spur innovation in healthcare.

Education



A wide variety of educational opportunities related to the life science industry are available in Northwest Indiana. Programs are available at all levels from K-12 to 4-year institutions. Northwest Indiana has community college offerings through both Ivy Tech and Brown Mackie. Purdue University and Indiana University have campuses in the area and offer a variety of life science degree programs. Indiana Dabney University has many options for nursing education, including a masters degree in nursing. Valparaiso University has made a number of investments in new facilities in recent years, including a new science center.

Patient Care



All aspects of patient care are represented in this branch. As can be seen on the map, this cluster is highly developed. Specialty treatment facilities are prevalent, and quality hospitals are spread throughout the region. There may be potential to attract both patients and workers from Chicago. As compared to Illinois, the cost structure in Indiana is favorable, with higher Medicare reimbursements and lower malpractice premiums. Medical office developments and support services may be needed to support further development. Training opportunities for medical personnel are plentiful. Students attracted from the Chicago area may be more likely to work in Northwest Indiana if they are trained in the area. Both hospitals and universities have an interest in expanding the healthcare sector.

Medical Devices



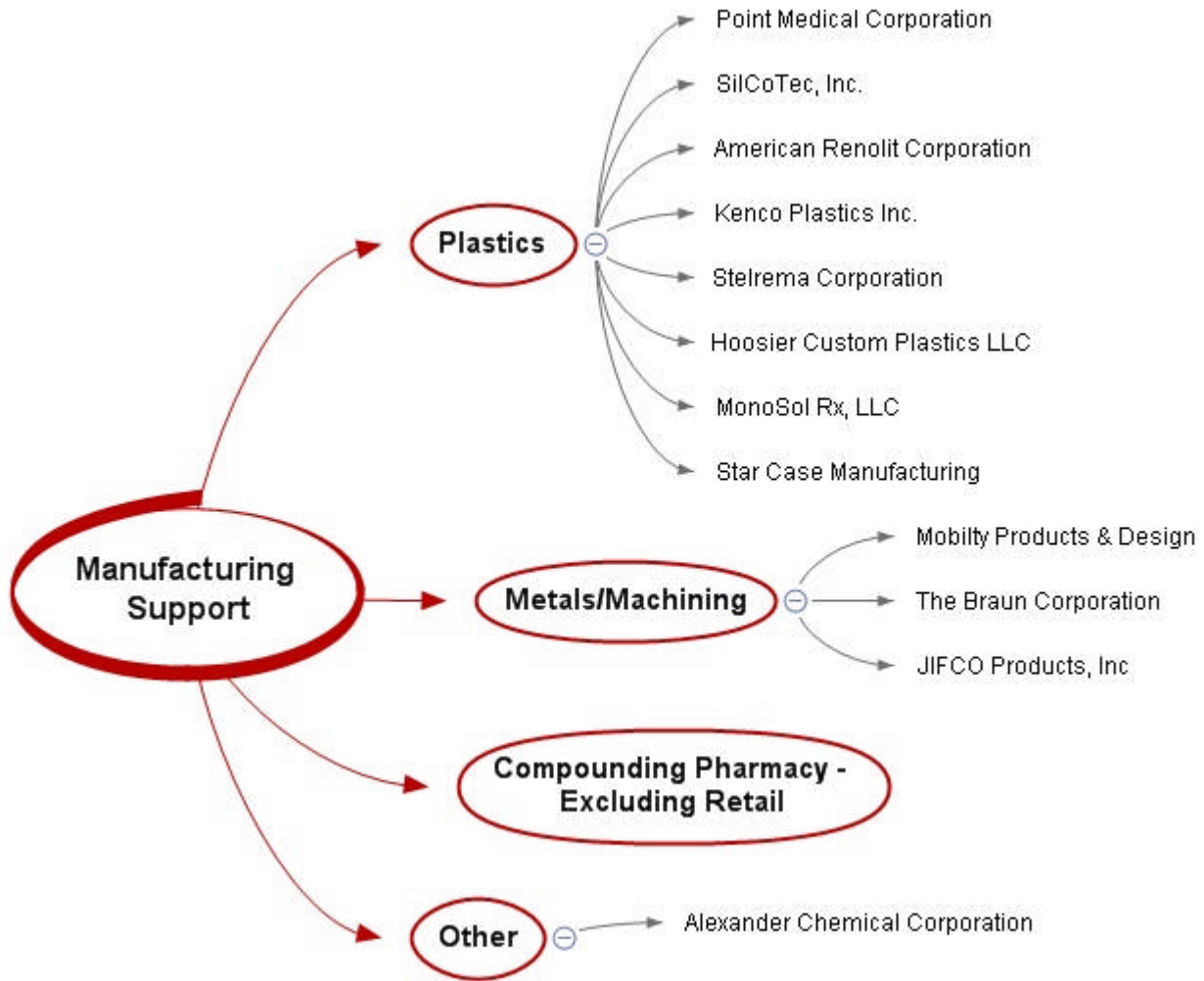
The medical device category of the asset map is included in the overall manufacturing sector. Companies in this branch manufacture a product that is used in the process of patient treatment. The life sciences manufacturing sector is very strong in Northwest Indiana and there is a notable concentration of companies involved with medical devices. These companies are well-distributed across the entire range of industry categories. Areas of particular strength include surgical and medical instruments, surgical appliances and supplies, dental supplies, and personal medical equipment.

Plastics seem to be a common thread among many of these companies. Specialty plastics are utilized in a variety of applications. For example, Point Medical creates silicone implants and Accusil uses silicone and rubber to create medical device components. Combined with the plastics sector of the manufacturing support cluster, there is a definite concentration of manufacturers of medical grade plastics components. This expertise could be a building block for business attraction.

The proximity of Northwest Indiana to Chicago also means that the region has a large population base. Medical device wholesalers are prevalent in the region, as well as producers of personal medical devices.

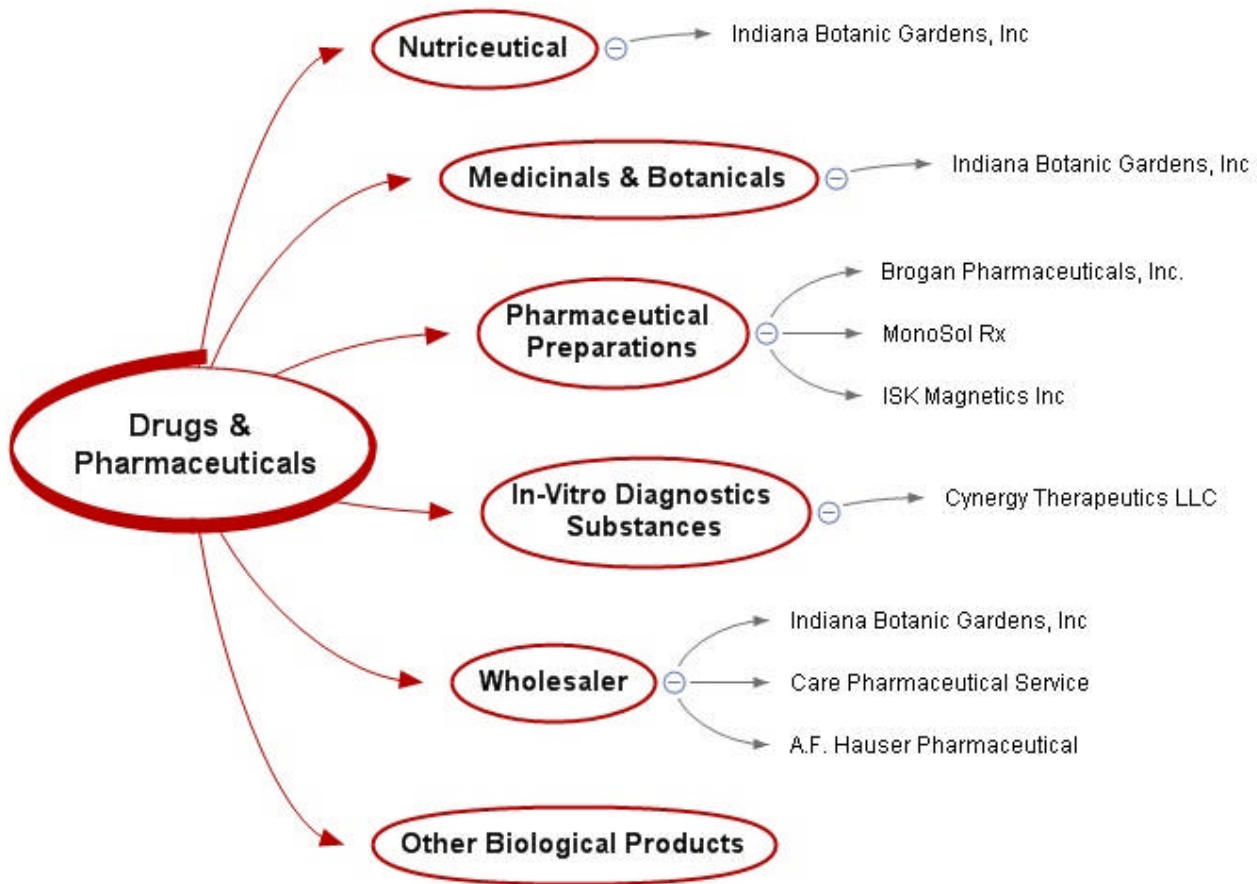
While the medical device industry in Northwest Indiana is strong, it becomes dominant when combined with the cluster in North Central and Northeast Indiana. Hundreds of companies are involved in the medical device industry across Northern Indiana.

Manufacturing Support



There are a number of companies which provide manufacturing support services to the medical device and pharmaceutical sectors. The area's strength in plastics is prevalent in this sector, with metals & machining also playing an important role. Given the historical presence of manufacturers in the area, there may be more of these types of companies that could support life science applications. Companies that are currently providing components for automobile and durable goods manufacturing could, with training and education, diversify into the life science industry.

Drugs and Pharmaceuticals



The drugs and pharmaceuticals branch of the asset map represents the production of over-the-counter, prescription, in-vitro, nutraceutical and other treatment formulas. While not as large as the medical device cluster, the production of drugs and pharmaceuticals is an important part of the life science economy in Northwest Indiana. Many of the pharmaceutical companies in Northwest Indiana are small companies with a niche business. There is expertise in a variety of areas, including production of over-the-counter and nutraceutical products, both growing sectors of the pharmaceutical industry. Companies like MonoSol RX and Cynergy Therapeutics are leaders the development of drug delivery applications. The proximity to Chicago's pharmaceutical cluster provides a skilled workforce, support services and executive talent to producers in the region. The area is attractive to executives of large firms in Chicago who may want to spin out a business in a lower-cost environment.

Gaps in the Asset Map

While the manufacturing sector of the life science industry is very strong, there are a limited number of firms involved in research and development. With three relatively new technology parks located in the region, there should be increasing opportunities to attract research companies to the area. The lower cost structure in Northwest Indiana provides entrepreneurs and executives of Chicago firms who are interested in starting a business a viable alternative. A lower cost location with access to the same amenities as Chicago would be very attractive.

Logistics operations are not well-represented in the map. While congestion in the area may limit the development of very large distribution centers, proximity to a large population should encourage the development of specialty distribution centers for hospital supplies, medical devices and pharmaceuticals.

On the service side of the map, there are a couple of notable gaps. Specialized business services are necessary to support the unique needs of the life science industry, so development of services like marketing, human resource and technology consulting in Northwest Indiana should spur growth in all sectors. The

availability of venture capital and angel funding in the region is very limited. While it is widely recognized that the entire Midwest is lacking in this area, given the wealth in the Chicago region and the abundance of large biotech and pharmaceutical firms, there should be an interest in providing funding through angel networks and traditional venture capital.

Building a Life Science Environment

The asset map and corresponding database provide a comprehensive listing of the life science companies in the region. As part of an existing business strategy, the database should be reviewed and updated annually. The companies in the database should be incorporated into the local economic development office's existing business outreach programs.

- Because talent, new technology and rapid change are hallmarks of the life science industry, having a strong network of related companies is especially important to these firms. A business retention strategy for life science companies must include offering networking and educational opportunities.
 - Utilize existing networking opportunities
 - IHIF Life Science Luncheon
 - Indiana Biomedical Entrepreneur Network
 - Kelley School of Business Life Science Forums
 - The IHIF Annual Innovention Conference
 - Programs at local colleges and universities
 - Seminars devoted to life science topics
- Keep life sciences companies informed about legislative and program developments at the state and local level. These issues can directly impact the bottom line of a company, but many companies don't have the time or the expertise to stay abreast of changes.
 - Provide legislative updates specific to life science issues
 - Provide information about incentive programs that are especially applicable to life sciences companies such as the Venture Capital Tax Credit, 21st Century Fund and others. Comprehensive information is available at www.iedc.gov.
- Network with existing venture capital firms locally and throughout the Midwest. Gather information about their investment targets, funding levels and strategies. Serve as a source regarding venture capital opportunities to local companies.
- Learn about the life science industry. The life science industry is truly unique. The critical issues facing the industry are different than those facing Indiana's traditional industries such as durable good manufacturers and logistics firms.
 - Regularly review publications (listed below) that are applicable to local life science companies.
 - Review information from local universities regarding research initiatives, funding sources, new programs.
 - Follow national and international initiatives that impact healthcare, research & development and regulatory issues.

Clinical Trials

Conducting clinical research is a mandatory and very expensive requirement for bringing a new drug or device to market. Companies need not only to identify patients but also need to be sure the people collecting and analyzing the data are responsible and accountable. Anything that can be done to reduce the time and paperwork to get a product into a clinical evaluation setting ultimately helps to reduce the associated costs.

- The Indiana Health Industry Forum (IHIF) has formed a task force to investigate how Indiana can streamline the process for drug and device clinical trials. The goal is to reduce the costs incurred by Indiana companies conducting those trials and to encourage out-of-state companies to conduct more of their trials in Indiana. Any company or hospital involved in (or interested in becoming involved in) clinical research should be encouraged to participate.

Contract Manufacturing

Indiana's manufacturing expertise translates across the board to the health and life science industries. Whether a client is working to bring a new pharmaceutical or biopharmaceutical to market or developing and testing a medical device, contract and outsource service providers can help every step along the way.

- **Devices**
 - Contract services may include: development of plastic or metal parts, software development, machining or tooling, prototyping, design & engineering, sales & distribution, regulatory and patent guidance
 - Many existing companies may have competencies that can be used to manufacture medical/surgical instrumentation and devices.
- **Pharmaceuticals/Biopharmaceuticals**
 - Contract services may include: discovery, analysis, formulation, scale up manufacturing, clinical research, regulatory and patent guidance, modeling, logistics and cold chain storage.
 - BioCrossroadsLINX program - BioCrossroadsLINX advances Indiana's drug development sector and facilitates connections with the biotechnology and pharmaceutical industries. Home to more than 40 contract drug development companies and their 6,000 employees, Indiana's technology, resources and spirit make it a premier drug development and manufacturing center in the U.S. These contract service providers support the growing outsourcing needs of the pharmaceutical and biotechnology industries. This program provides a web-based service to identify service providers in Indiana.

Regional Strategy Recommendations

As a result of our investigation and based upon the assets recognized within the study area, we would like to offer the following growth strategy recommendations for the region:

Business Attraction and Growth

**Disclaimer – Inclusion on this list in no way constitutes an endorsement, representation of interest or future business intent, or existence of a relationship with the Indiana Health Industry Forum, it's consultants or affiliates.*

- Build upon the strong production base and skill sets available within the community to encourage expansion and to attract new manufacturing and research investments in the following areas:
 - **Pharmaceuticals (generics, OTCs):** The recommendation is based upon the region's proximity to the life science research, development and distribution assets in Chicago, the lack of large tracts of developable land in that market, and the presence of some OTC and nutraceutical production existing in the region. It is also based upon the Northwest region's strategic position allowing it to source additional scientific and technical talent from Chicago. Bulk production of these products would likely need to focus on drugs available in generic or over-the-counter forms due to tax penalties inherent to operating in the US; however, contract production of drug formulations for prescription products could be an attractive target as well.
 - Some leading companies in this field are:
 - Johnson & Johnson
 - Pfizer
 - Bayer
 - Novartis
 - Bristol Myers Squibb
 - Ranbaxy
 - King Pharmaceuticals
 - Some important trade shows for this industry are:
 - Biotechnology Industry Organization (BIO)
 - BIO-Europe
 - INTERPHEX Asia
 - INTERPHEX
 - Industry Publications:
 - BioWorld Today
 - BioPharm International
 - Innovations in Pharmaceutical Technology
 - Pharmaceutical Technology
 - Pharmaceutical Technology Europe
 - Contract Pharma
 - **Vaccines:** As with the previous recommendation, the target of vaccine research and production is based largely around the region's geographic proximity to Chicago plus some of the existing life science training assets available in the region. Vaccine development and manufacturing, particularly the growth of microbial or cell-based production, is a strong candidate for the state of Indiana due to its experience with large scale fermentation operations and for the US due to the nature of their sale to governments.
 - Some leading companies in this field are:
 - GlaxoSmithKline
 - Sanofi Pasteur
 - Wyeth
 - Novartis
 - Some important trade shows for this industry are:
 - Biotechnology Industry Organization (BIO)
 - BIO-Europe
 - INTERPHEX
 - INTERPHEX Asia

- Industry Publications:
 - BioWorld Today
 - BioPharm International
 - Innovations in Pharmaceutical Technology
 - Pharmaceutical Technology
 - Pharmaceutical Technology Europe
 - Contract Pharma

- **Medical devices:** The recommendation is drawn from the existing concentration of medical devices companies in the region with particular strengths recognized in surgical and medical instruments, dental supplies, personal medical equipment and surgical appliances and supplies. The use of plastics in these production operations appears to be prevalent with specialty plastics a unique asset for the region. There also appears to be an opportunity to further collaboration with the orthopedics cluster in Warsaw, Indiana to seize production support, supplier opportunities.
 - Some leading companies in this field are:
 - Biomet
 - DePuy Orthopaedics
 - Smith & Nephew
 - Stryker
 - Zimmer Holdings

 - Some important trade shows for this industry are:
 - Medical Device & Manufacturing East & Midwest
 - FIME International Medical Expo

 - Industry Publications:
 - IEEE Engineering in Medicine and Biology Magazine
 - Medical Device & Diagnostic Industry
 - Medical Product Manufacturing News
 - Medical Device Technology

Entrepreneurial Growth: Business Incubation

- Build upon the assets (clinical trials, universities, lab technician and nursing programs) within the community to encourage expansion and to attract new investments by contract research organizations. The recommendation is drawn from the region's health care, clinical trial, educational and transportation strengths. Contract research organizations (CRO's) assist drug companies with the process of moving drug candidates from development to market. Those CROs primarily focused the management and execution of clinical trials appears to be a particularly strong target.
 - BioCrossroadsLINX program - BioCrossroadsLINX advances Indiana's drug development sector and facilitates connections with the biotechnology and pharmaceutical industries. Home to more than 40 contract drug development companies and their 6,000 employees, Indiana's technology, resources and spirit make it a premier drug development and manufacturing center in the U.S. These contract service providers support the growing outsourcing needs of the pharmaceutical and biotechnology industries. This program provides a web-based service to identify service providers in Indiana.

Entrepreneurial Growth: Hospitals

- **Hospitals as an Idea Generator**

In many instances hospitals are among the largest employers in a county but often overlooked as a source of innovation and technology resources. Whether or not a hospital is conducting clinical research on the premises, doctors and nurses may have ideas for new products or have created techniques to solve common problems.

- Develop good working relationships with individual hospitals and work to be seen as a source of encouragement and guidance for people exploring ideas.
- Be familiar with areas of clinical research in your area (see map)
- Be familiar with centers of excellence

- **Tech Transfer & Innovation**

While some hospitals have excellent technology transfer mechanisms to encourage staff to explore opportunities as a means to encourage professional growth, others may not consider their facilities as fertile ground. High tech equipment and procedures can be found in many rural hospitals, especially as hospitals compete for patients by advertising the latest and greatest equipment, staff, and facilities.

- Have a referral network to local hospitals for companies that may want to explore the adoptability of their new medical device. Early feedback from authoritative sources can help refine a product and make it more likely to succeed on the market.

- **Be aware of the dynamics of the hospital business model.**

Collaboration between providers is unlikely (again, competing for patients), unless they are in separate patient markets. For-profit and not-for-profit hospitals are affected by insurance reimbursement policies. Opportunities to decrease costs and increase staff efficiency are in high demand. Many hospitals are exploring implementing quality systems.

- Check with IHIF for referrals to hospitals with innovative programs
- IHIF Economic Development Network
- Refer to IHIF for industry specific service provider information and other business development resources.

- **Attracting Talent**

As with the rest of the life science industry, extreme competition exists. Attracting and keeping medical talent is key to the success of local healthcare providers. Indiana's malpractice insurance premium cap is a large advantage.

- Be familiar with new equipment purchases. The opportunity to work with current technologies is attractive to doctors and may help to encourage their relocation to more rural areas.
- Quality of life is a high motivator for attracting doctors and their spouses. Many times a spouse will be as educated as the candidate that is looking in your area.
- Develop a local spousal employment referral network.
- Assess local intellectual capital – promote number of Ph.D, M.D. and Master's level degreed professionals.
- Continue to focus upon education and training support for health care delivery professionals within the region. The demographic trends of the US and the State of Indiana are driving the need for medical professionals, from orthopedic surgeons to home health care workers. The existing educational and training resources available within the area make this a clearly identified target for the area.

Additional Regional Strategies

- Seek opportunities to further capitalize on the region's strategic location near Chicago building upon the area's transportation assets. The area has a natural geographic advantage in its location and the recent rise in oil prices is forcing many companies, including life science companies, to rethink their distribution strategies including how inventory is held. The region's proximity to major population bases and its strong transportation infrastructure makes the area a natural for logistics investments.
- Continue to seek opportunities to collaborate and market the region's assets jointly with other portions of the state. The Northwest area can benefit greatly from joining in marketing and promotion efforts with the rest of the state by highlighting the critical mass of life science resources available, the area's geographic location within these assets, and through cost sharing with the other regions.
- Expand the focus on collaboration between the economic promotion agencies within the region. This recommendation is based upon the need of companies seeking locations for expansions or investments to have a central clearing house of information and visibility to contacts. It is also drawn from the collective benefit that can be drawn from collaboration among the entities allowing including costs sharing, communication of best practices, issue avoidance, etc.
- Continue to focus upon education and training support for health care delivery professionals within the region. The demographic trends of the US and the State of Indiana are driving the need for medical professionals, from orthopedic surgeons to home health care workers. The existing educational and training resources available within the area make this a clearly identified target for the area.
- Medical office development – Northwest Indiana offers many strategic advantages for medical office space development. Indiana's cap on malpractice insurance premiums, favorable reimbursement policies through Medicare, lower real estate costs (especially compared to the Chicago market) and existing capacity in the market all combine to offer physicians and medical specialists an affordable and productive location to grow their practices.
 - Market cost and transportation benefits to Chicago-area physicians and physician practice groups.
 - Build connections with local hospitals to encourage physicians and specialists to locate practices in proximity health care delivery facilities

Summary

The Indiana Health Industry Forum's Statewide Asset Mapping and Strategic Planning project is the first of its type in the state. The regional analysis and recommendations developed through this process are just a starting point. IHIF will be available to assist local communities in adding to the asset map, further developing strategies and creating successful implementation plans for these strategies.

For more information on this project or regarding IHIF's programs, please visit www.ihif.org.