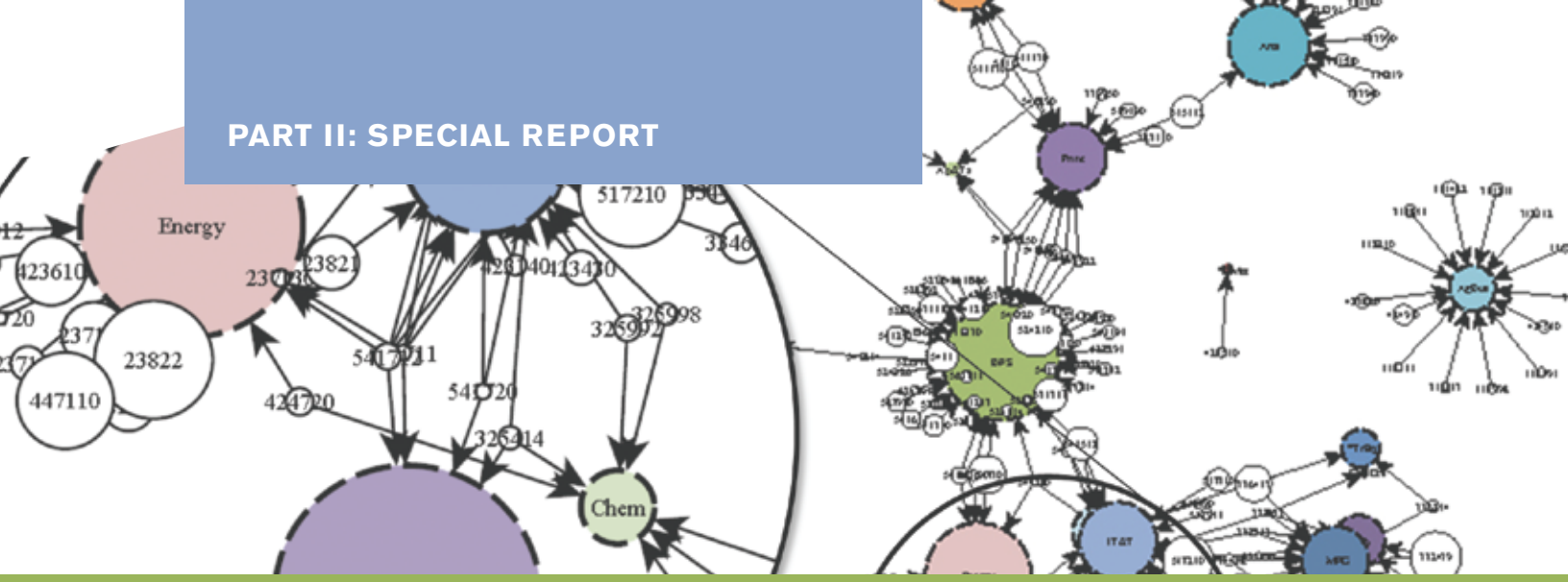
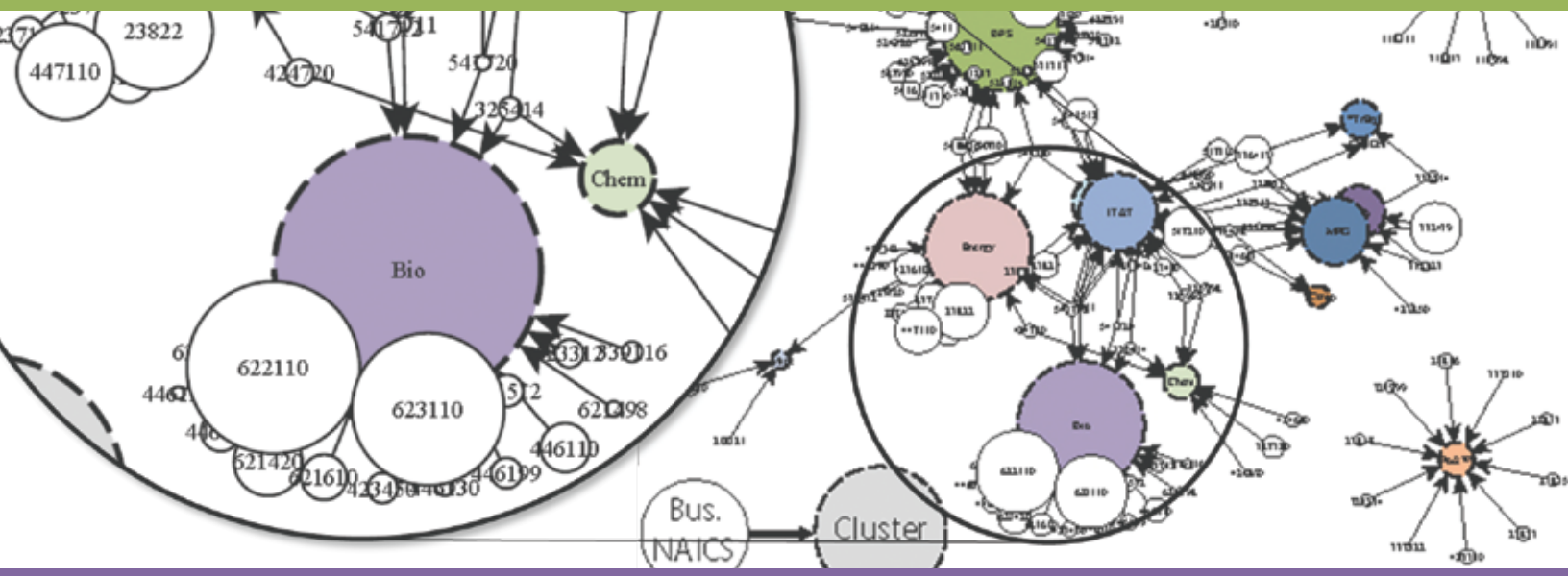
PART II: SPECIAL REPORT



September 2011

Growing Rural Innovation-Based Economies:

Kansas Opportunity Innovation Network



National Association of Development Organization (NADO) Research Foundation
In Partnership with the EDA *Know Your Region Project*

This special report explores an innovative partnership and approach focused on increasing the number of globally competitive products and services produced in Kansas rural communities, presenting detailed analysis and steps undertaken by economic development partners. For a descriptive overview of the report, see the accompanying case study.

The mission of the Kansas Opportunity Innovation Network (KOIN) is to enhance the global competitiveness of rural businesses by providing access to innovative ideas, new markets, expertise, capital and collaborations, independent of close geographical proximity. Through a pilot project in 2007 that expanded in 2010, KOIN's development of new regional innovation tools and processes will generate the core benefits of industry clusters in rural regions where traditionally defined clusters often do not exist.

KOIN's broad coalition of partners include the U.S. Department of Commerce's Economic Development Administration (EDA), the Advanced Manufacturing Institute (AMI) at Kansas State University (an EDA University Center), several EDA-funded Economic Development Districts (EDDs), the Kansas Association of Regional Development Organizations (KARDO), the Kansas Department of Commerce (KDOC), the United States Department of Agriculture (USDA) Rural Development, local workforce investment boards and several community economic development organizations. "We are very pleased to see the unique collaboration that KOIN has fostered between one of our EDA University Centers, Economic Development Districts and other federal, state, and local economic development agencies," said Robert Olson, Director of the EDA's Denver Regional Office.

Economic Development Districts

Economic Development Districts (EDDs) are multi-county regions designated and funded by the U.S. Department of Commerce's Economic Development Administration (EDA). They are responsible for conducting regional strategic planning by developing the Comprehensive Economic Development Strategy (CEDS), which is produced every five years and updated annually by EDDs to stimulate and guide the economic development efforts of a community or region according to its unique needs. EDDs are typically regional, serving multiple counties and municipalities to address shared economic and community development challenges and opportunities, regional employment patterns, transportation networks, common industry or business clusters, and natural and infrastructure assets. Through their CEDS, EDDs bring together regional partners around economic development planning, and identify regional goals and objectives, and prioritize projects that may be eligible for financial assistance from EDA. EDDs also provide technical and other forms of assistance to their service areas.

The nation's 380 EDDs are often administered by a regional development organization (RDO). The term RDO is used to describe multi-jurisdictional planning and development organizations that are governed primarily by local government-elected officials who are focused on strengthening local governments, communities and economies through regional solutions, partnerships and strategies. These public entities are often known locally as: councils of government, area development districts, economic development districts, local development districts, planning and development districts, planning and development commissions, regional development commissions, regional planning commissions or regional councils.

EDA University Centers

EDA's University Center (UC) program supports over 50 institutions to make the resources of universities available to the economic development community, particularly in regions of chronic and acute economic distress. The UCs, which EDA considers long-term partners in economic development, are required to devote the majority of their funding to respond to technical assistance requests originating from organizations located in the economically distressed portions of their service regions. UCs conduct a variety of activities in support of economic development, including targeted commercialization of research, workforce development, and business counseling services, as well as helping local organizations with conducting preliminary feasibility studies and analyzing data.

Source: Economic Development Administration, http://www.eda.gov.

Objective

KOIN seeks to generate and adapt the core benefits observed with industry clusters where there is insufficient critical mass to support traditional industry clusters. New connection strategies are being developed to build rural innovation-based economies with a focus on increasing the volume of opportunities, density of expertise available, diversity of interactions and access to markets and market knowledge.

At the core of this work are projects and efforts that are targeted to increase the competitiveness of traded wealth businesses. Specifically, the project's aim is to level the competitive playing field for technology-based businesses that form the basis of the innovation economy.

New connection strategies are being developed to build rural innovation-based economies with a focus on increasing the volume of opportunities, density of expertise available, diversity of interactions and access to markets and market knowledge.

To facilitate the development of the network, the partners involved in KOIN are developing a holistic framework implemented through demonstration projects in different regions. Initial network partner projects range broadly across the scope of work, geography, industry and regional characteristics.

KOIN's strategy includes needs-based profiling and clustering, innovation assessments, opportunity scouting, boundary spanning, open innovation, design thinking, incubation, regional competitiveness, social networking, innovation network development, IT-based strategies and innovative information visualization approaches. The network acts as an opportunity catalyst, boundary spanner and connector for rural and/or distressed Kansas companies, communities and regions wishing to compete in regional, national and global markets with innovative technology-based goods and services. To serve these roles, KOIN is:

1. Mapping and profiling innovation competencies, assets, capabilities, and needs of regions, communities and their local companies
2. Developing the ability to scout new opportunities, especially global opportunities, outside existing markets where businesses may have little to no connection access
3. Creating an actively woven network of technology providers, expertise, capital and potential business partners that possess complimentary competencies who can enable businesses and their public sector partners to respond in a competitive manner
4. Facilitating the ability to readily connect and combine opportunities, companies, communities and regions in innovative ways so that the response is greater than the sum of its parts

Rationale

At one time, the heart of commerce existed on Main Street, USA. In many communities, it literally was a street that housed a variety of businesses. This very real Main Street provided opportunities to local entrepreneurs to create wealth based on ideas, goods and services that could be traded close to home. Locally grown prosperity was a key to success.

Today, the heart of commerce is not a place at all. It is a sprawling, dynamic, global network of innovation generating goods and services that can be produced anywhere in the world and delivered to your doorstep.

Agents are connected electronically rather than physically. Communities, states and countries that can build and maintain a storefront on this new Main Street of technology and innovation will generate traded wealth that will lead to prosperity.

It is for this purpose that KOIN is being developed—to connect rural regions to this new Main Street. KOIN is the result of an innovative working partnership between an EDA university center, federal agencies, regional development organizations, a statewide development association, state government and local economic development organizations.

Leveling the Competitive Playing Field

Innovation-based networked economies are no longer tied to the traditional concept that ideas, assets, capital, skills, expertise and infrastructure have to be in close geographical proximity or agglomerated into urban clusters in order to be globally competitive. "By clustering around opportunities, knowledge and competencies, rural companies and communities can level the playing field by overcoming critical mass challenges with connection strategies," says Jeff Tucker, associate director of the Advanced Manufacturing Institute.

Together KOIN's partners are focused on creating a networked business development ecosystem that transcends geography, discovers new markets, innovates openly and fosters global competitiveness. KOIN is enabling rural companies and communities, regardless of location, to be where new opportunities intersect great ideas then nucleate around those opportunities with knowledge, connections and the resources necessary to be successful.

To do so, KOIN is working to provide technology-based businesses with increased access to innovation resources and to develop new tools to enhance collaboration and cooperation within a region. These tools focus on: developing a sense of regionalism, identifying the movers and shakers in a community, developing the means to identify opportunities, and building partnerships.

A Blending of Competencies and Perspectives

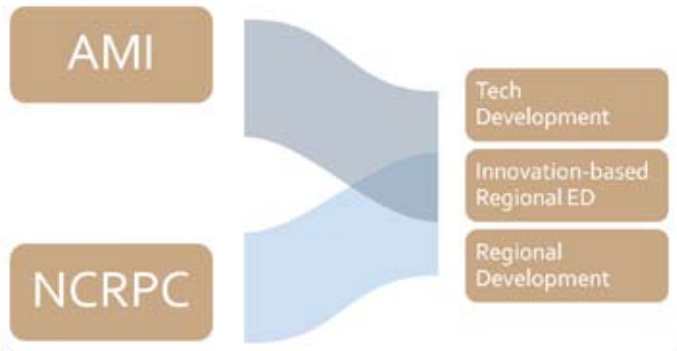
The Advanced Manufacturing Institute (AMI) provides engineering and business services to spur the formation and development of technology-based businesses. AMI has completed more than 2,500 early stage technology development projects with more than 500 companies in the past 15 years. AMI has been designated by the Economic Development Administration as an EDA University Center since 2004. "Our partnership with EDA has significantly enhanced our organization and increased the economic impact of our work," says Brad Kramer, AMI director.

As AMI expanded its economic development role, it repeatedly found that many rural companies were isolated from access to the resources needed to innovate new products and services in a timely manner. In some cases there was isolation from marketplaces, resulting in limited opportunity exchange. In other cases it was isolation from ideas, causing companies to stagnate around current products and services due to a lack of strong connections to new sources of technology and innovation. Some companies were isolated from global connections, and many did not have pathways to establish global business relationships to participate in new emerging markets. For other companies, it was isolation from support networks, people who took a vested interest in seeing an entrepreneur or company succeed and helped remove impediments.

AMI has historically viewed innovation as a contact sport that requires ready access to sources for ideas, capital, workforce, expertise and infrastructure. In 2007, AMI found itself asking how it could help Kansas companies in rural regions connect to growth opportunities and resources, regardless of location. In addition, how could AMI impact more than one company at a time on any given project?

Around the same time in Beloit, Kansas, John Cyr, then executive director of the North Central Kansas Regional Planning Commission (NCRPC, an EDA-funded Economic Development District), was asking different, but intersecting questions. He was seeking insights to regional development and planning questions regarding the applicability of regional industry clusters, industry

A Migration to a Complementary Relationship



sector trends and inter-linkages and where to make future investments, with limited resources, that support and grow the region's wealth-generating, technology-based businesses. Recognizing the need for a strong technology perspective and knowing the work AMI does in business planning and early-stage technology development, Cyr enlisted AMI to help bring new economic opportunities to rural and distressed parts of the state.

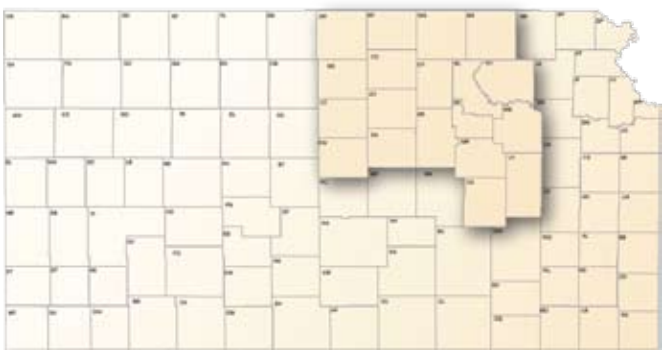
A Regional Innovation Pilot Project

With support from an EDA University Center grant that began in 2007, AMI and the NCRPC began work on a pilot project for 19 North Central Kansas counties to raise awareness of regional interconnectedness, assess innovation readiness, identify regional key industry drivers and connections, uncover regional business sector trends and begin mapping the region's social network. This information would be used to propose strategies, methods and tools to capitalize on regional business growth opportunities. A key objective of the project was to begin to change the nature of the regional discussion among leaders within the 19 counties.

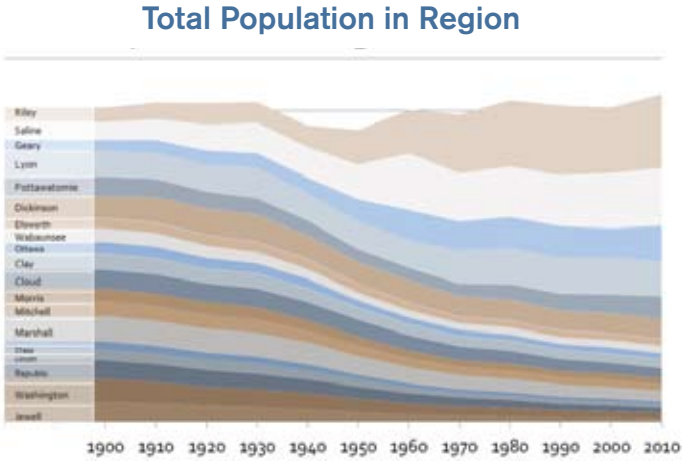
The work included conducting a quantitative key industry analysis with special interest in existing or potential regional industry clusters, and a qualitative analysis that included a regional innovation assessment, interviews with regional leaders and a preliminary regional social network analysis of how businesses, banking, and the economic development communities were connected in the region.

Many quantitative and qualitative insights resulted from the regional pilot project; some validated the region's changing dynamics while others challenged perceptions about the interdependencies within the region. For example, while the region's population has essentially remained unchanged since 1900, there has been a significant outmigration from the western counties to the central and eastern counties, which contain regional centers, a military fort, and a state university.

The project determined that regional cooperation is critical if rural areas are to succeed in supporting area innovation. When AMI asked three different groups how they define their region, they all had different answers. Economic development officials said it was their city or county. Banks said it was wherever they have branches, and businesses said it was wherever they have customers. Policymakers may just look at political boundaries, but businesses have a much broader view of what constitutes a region.



Nineteen counties are served by the North Central RPC.



The North Central Kansas region's total population has changed little since 1900, but significant outmigration from the western counties to the central and eastern counties has occurred.

Like many rural regions throughout the country, North Central Kansas is faced with numerous challenges, such as population shifts and service consolidation in education, healthcare, public safety and financial groups. In such situations there is often a lack of recognition of regional interdependencies in an effort to maintain community autonomy. This is especially true when considering where specific businesses are physically located and who receives the financial benefit from those employers. Analyzing where workers reside versus where they are employed can expand the region's discussion regarding skilled workforce and the region's innovation readiness.

Likewise, the flow of capital (traditional lending and venture) within the region helps people begin to understand their region's ability to support the capital intensive work of developing new innovations. AMI prototyped several user-friendly visualizations to

demonstrate workflow intensity (direction, distance and volume) and banking relations patterns.

To help regional leaders visualize industry concentrations within the North Central Kansas region, AMI used a combination of traditional representations and prototyped new tools to represent industry concentration information. The project team also developed new ways to visually layer related industry information to better understand the inter-relations of data such as industry sectors, number of establishments and employment levels.

One example of prototyped visualizations created by the pilot project team was the creation of a visual metric termed an "LQ Burst" (location quotient). Using regional and national employment data, this metric enables regional planners and leaders to visualize the industry cluster topography of the region over a targeted area while maintaining localized concentrations of discrete industries. (More of this pilot work can be seen at the project's website: http://ami.ncrpc.org.)

In rural or urban social networks, people have strong ties with people they know well, and weak ties with a broader network of people they come into contact with periodically, such as business associates. In an urban area, those contacts occur frequently. In a rural community, one's daily business social network is not as intense or diversified due to the sheer amount of business activity in the community. But being part of a broad social network can help an entrepreneur know who to contact to move an idea to the next stage. "We strongly believe that successful entrepreneurs are not necessarily smarter, they are just better connected," said Tucker. "Connections to markets, ideas, and capital are what make people successful."

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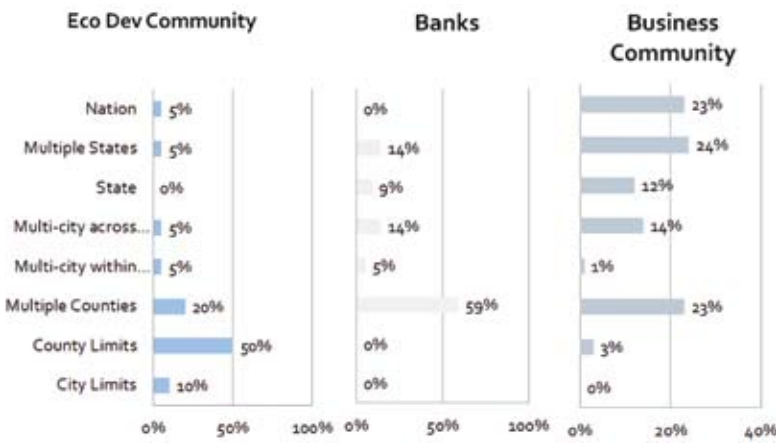
– Jeff Tucker, AMI associate director

What is a Region?



AMI asked economic developers, banks, and businesses how they define their region, receiving widely different responses.

Regional Analysis - Interdependencies

- **Workflow**
  - Shows where people in the region work through the world

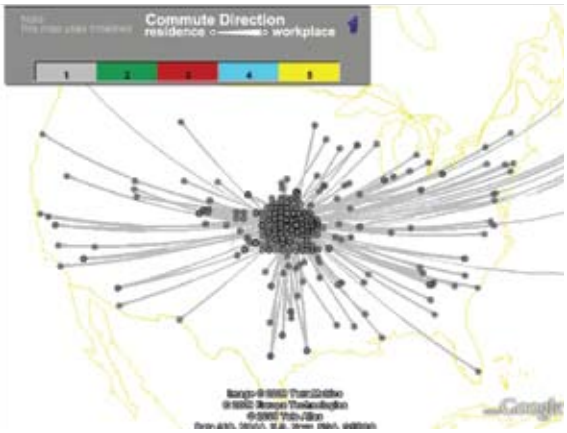


Image courtesy of AMI

Branch Map of Banks Headquartered in Kansas

Traded Clusters in the North Central Region

Percent Change in Employment, Location Quotient, and Employment for All 19 Counties in 2006

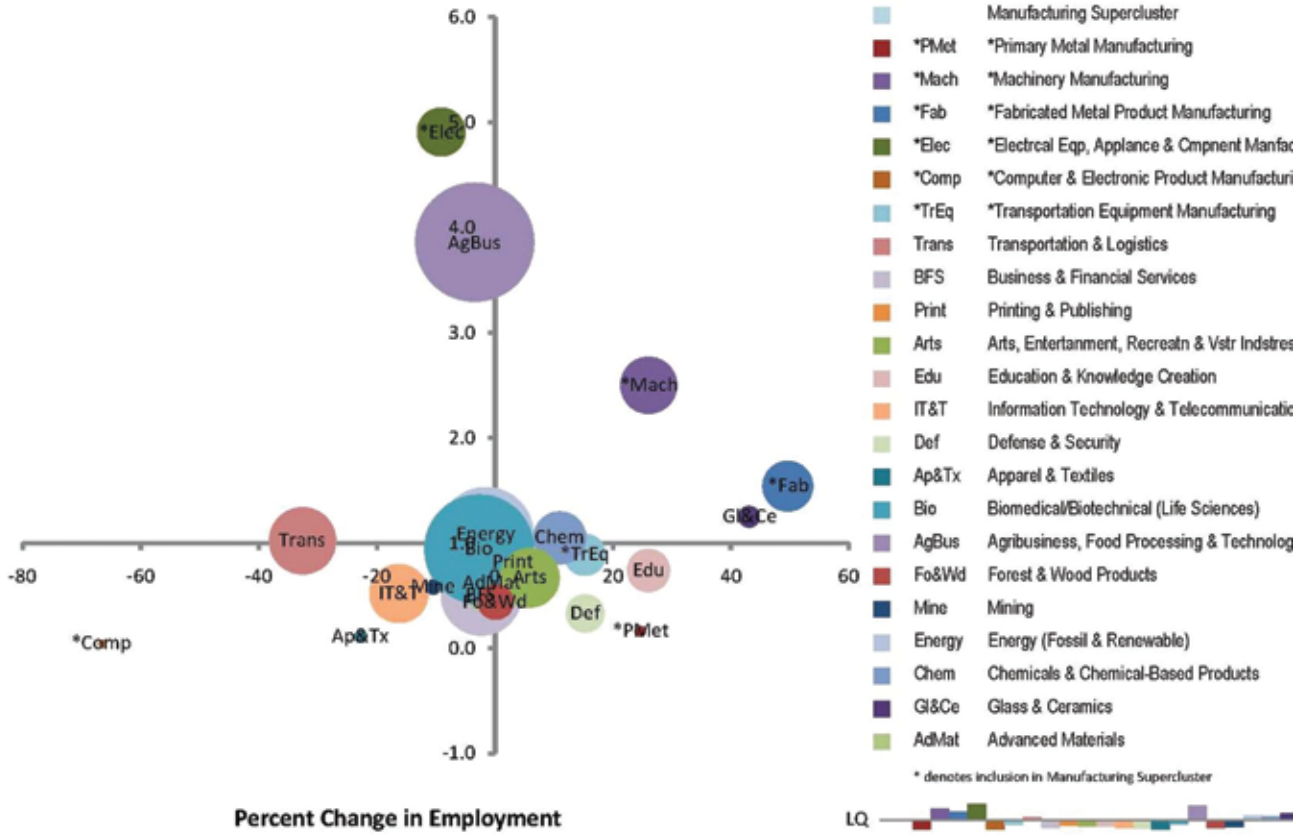
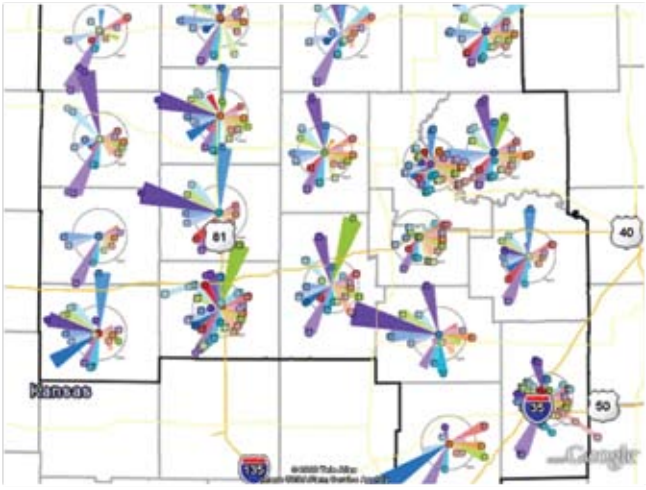


Image courtesy of AMI

Regional Analysis - Where to Start?



AMI.NCRPC.ORG

Image courtesy of AMI

LQ Bursts as a Measure of Region Clusters

$$LQ = \frac{\left(\frac{\text{Employment in Industry } \langle j \rangle \text{ in Region}}{\text{Total employment in region}}\right)}{\left(\frac{\text{Employment in industry } \langle j \rangle \text{ in US}}{\text{Total employment in US}}\right)}$$

Image courtesy of AMI

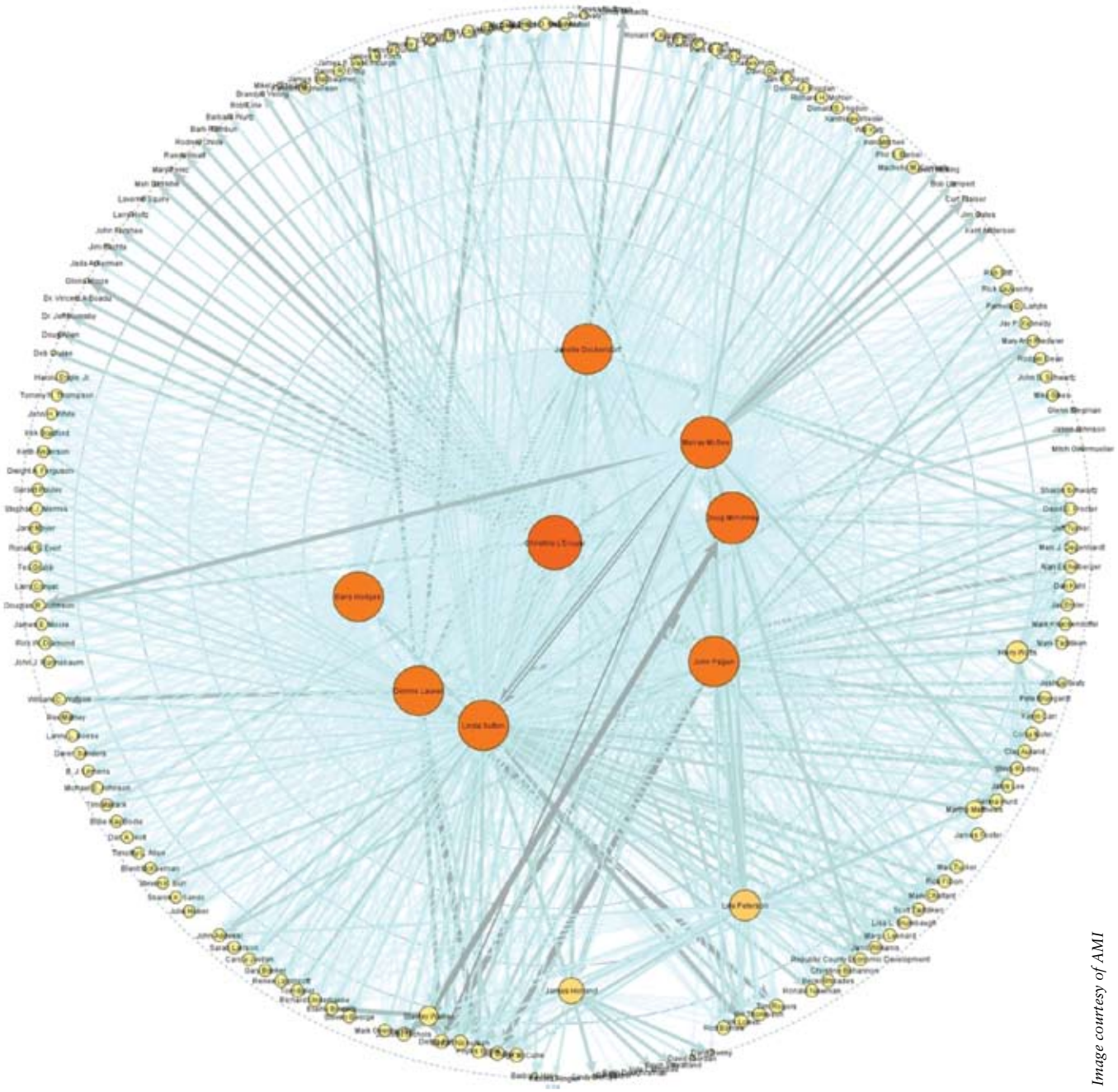


Image courtesy of AMI

According to Manveen Saini, AMI's economic development project manager, "to lay the groundwork for future network weaving, AMI performed a preliminary Social Network Analysis (SNA) mapping exercise of the pilot region's economic development leadership. This map was to help the group understand how their regions communicate with each other. The visualization created by the map makes it easy to see where connections exist and potential isolated clusters." Saini continues, "For instance, there may be two county officials who do not appear to be working together, but an SNA map may show they are connected through a personal or professional network. The map makes it clear where relationships are and the potential bridges between different clusters of people."

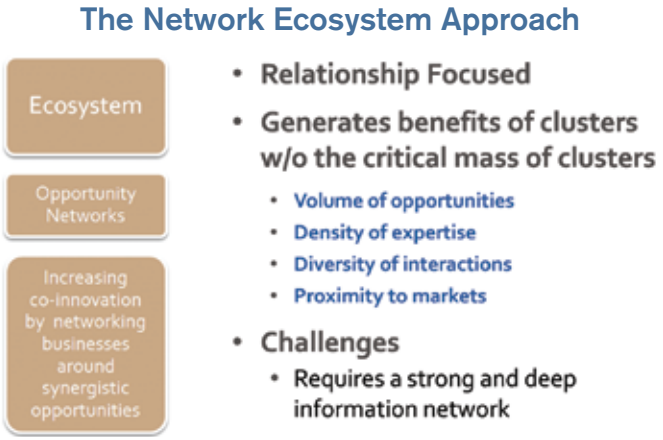
Expanding the Idea: The KOIN Framework

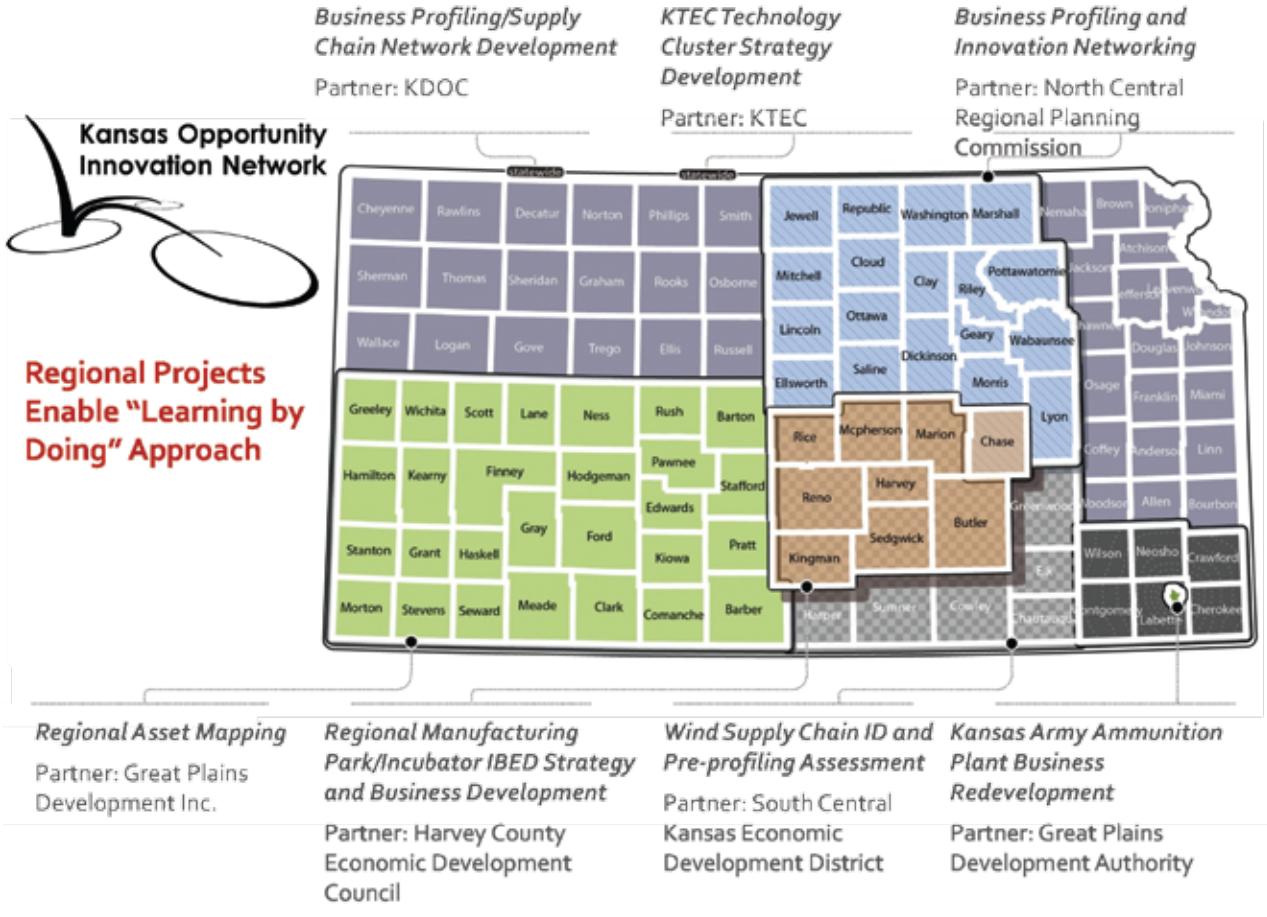
Today, most of the economic development community employs a common portfolio of business development approaches, whether it is an urban or rural setting. Most of these approaches are founded in the concept of critical mass. There is either sufficient critical mass of incentives to attract businesses into the region, common

business and industry to cluster around or sufficient local entrepreneurial activity to justify dedicated support programs for entrepreneurs. A primary challenge in rural communities and regions is maintaining a sense of critical mass to be viable, much less trying to replicate successful strategies employed in larger communities and urban areas. Clearly, one size does not fit all.

Since the days of early pioneers and settlers, rural communities have thrived or declined based on their ability to overcome critical mass challenges. While there may not have been a sustaining critical mass of local resources or activities in those early days, the community (ecosystem) was such that people were connected (networked) in a way that resources came together and clustered around the needs and competencies of others to accomplish great tasks. A lot can be accomplished by connecting with others. Sometimes the answers to the challenges that lie ahead come from reexamining the past and learning what made an effort initially successful.

Based on AMI's early-stage technology development experience, the learning from the pilot project collaboration with NCRPC, and the research of numerous others, the pilot project team determined that





a sustainable solution for building a "connectedness" to business growth opportunities in rural communities needs to accomplish the following objectives:

1. Weave peer-to-peer business development opportunity networks
2. Focus on clustering needs and competencies, not just industries
3. Connect to global market development opportunities and infrastructure
4. Focus entrepreneurship on traded industries or wealth generators
5. Level the urban and global playing field with hub-and-node approach versus traditional cluster approach
6. Create hard-to-copy regional competitiveness
7. Attract and retain skilled people
8. Engage regional wealth and investment capital

AMI and the Kansas Association of Regional Development Organizations (KARDO), a statewide association of EDDs and RPCs led by Cyr, crafted a concept for expanding the pilot work performed in North Central Kansas to achieve the connectedness objectives. The result is the Kansas Opportunity Innovation Network. KOIN is supported by a three-year grant from the EDA University Center program. KOIN adds an alternative economic development strategy for rural communities. The network recognizes and responds to the rural challenges of critical mass for ideas, markets, skills, expertise, capital, infrastructure and connections.

KOIN is working on regional innovation projects across the state of Kansas. Each project is undertaken with a "Learn by Doing" approach in which the project partners are highly engaged in both achieving specific project objectives and in piloting and developing new KOIN concepts that can be used in future efforts. These projects are varied in objective and complexity.

How EDDs work with KOIN

John Cyr is the executive director of the Kansas Association of Regional Development Organizations and former executive director of the North Central Kansas Regional Planning Commission. He has worked closely with KOIN and AMI in both roles. Edited excerpts of an interview with him follow.

What is the role of EDA-designated economic development districts in KOIN?

After the North Central Kansas Regional Planning Commission approached AMI, we discussed their perspective as an engineering group and ours as a regional group and found a lot of commonalities, and we began to develop the KOIN concept. To start, we talked with our counterparts around the state and tried to get them engaged in doing a common project in each location that would identify business sectors, networks that existed, where there might be a possibility for future growth and the areas that everybody needed to watch because they were slated for decline.

The involvement of the other EDDs varies based on their internal focus. Their activities include reaching out to the local business community and making sure they participate in questionnaires and phone calls to build up a base of information and conducting foundational asset mapping work.

What does KOIN offer EDDs to help further economic development?

KOIN provides a portal much larger than what has been available until now. AMI can do asset mapping, research what market opportunities are available for your area or find another business that has the talents you do not have. AMI may have awareness of venture capital that EDDs may not be aware of. KOIN is a way for EDDs to reach the expertise that AMI and other partners possess.

University centers and EDDs do not often collaborate to this level. What has made this extensive collaboration successful?

AMI has a history of working with businesses throughout the state. They are not locked into a traditional university campus-centric mindset. They work at the place of business of their clientele. EDDs have historically done that as well, so they have a good feel for the local economy. AMI provides technical and networking expertise and is trying to facilitate regional economic development opportunities. Together, we have been trying to promote regional cooperation and a more collaborative environment. It truly is a synergistic relationship.

Agile Asset Maps and Business Profiles: Taking Advantage of Regional Strengths

Economic development officials have been listing their regions' assets for a long time, but that usually means only capital, human resources and financial assets. KOIN's Agile Asset Mapping process digs deeper. The prototyped interactive maps allow viewers to use elevation to show employment, making it clear at a glance where the area's major employment centers are located.

AMI's Agile Asset Maps also blend a region's assets with geographic form. Instead of just listing the products a company makes, KOIN Agile Asset Maps focus on companies' capabilities and needs. Regional asset maps include population, workforce and education, as well as workforce skills, production competencies and research and development technologies. Viewers will be able to get a pop-up for each company showing its location, ownership, products and capabilities.

Bob Wetmore, associate director of Great Plains Development, Inc. (the EDD for Southwest Kansas) says, "Asset maps can be helpful in attracting new businesses to our region. If a new business is looking at our area,

Landscape Perspective

Image courtesy of AMI

Access to Business Detail

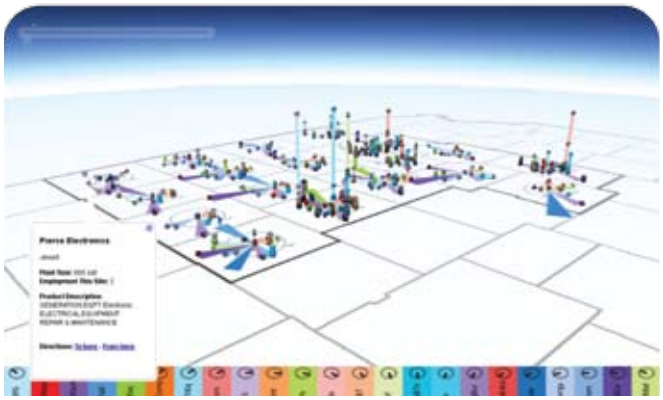
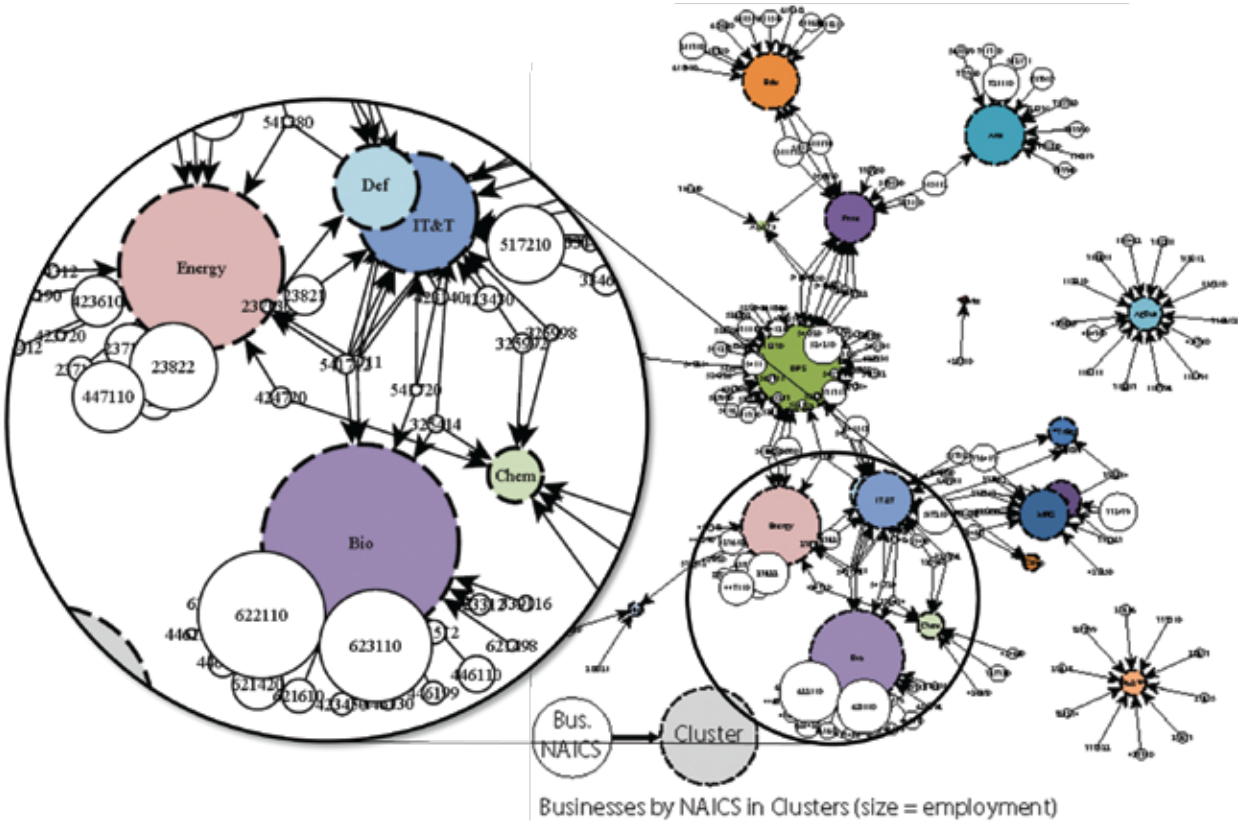


Image courtesy of AMI

Connectedness - Mapping Industry Connections Using SNA Methods



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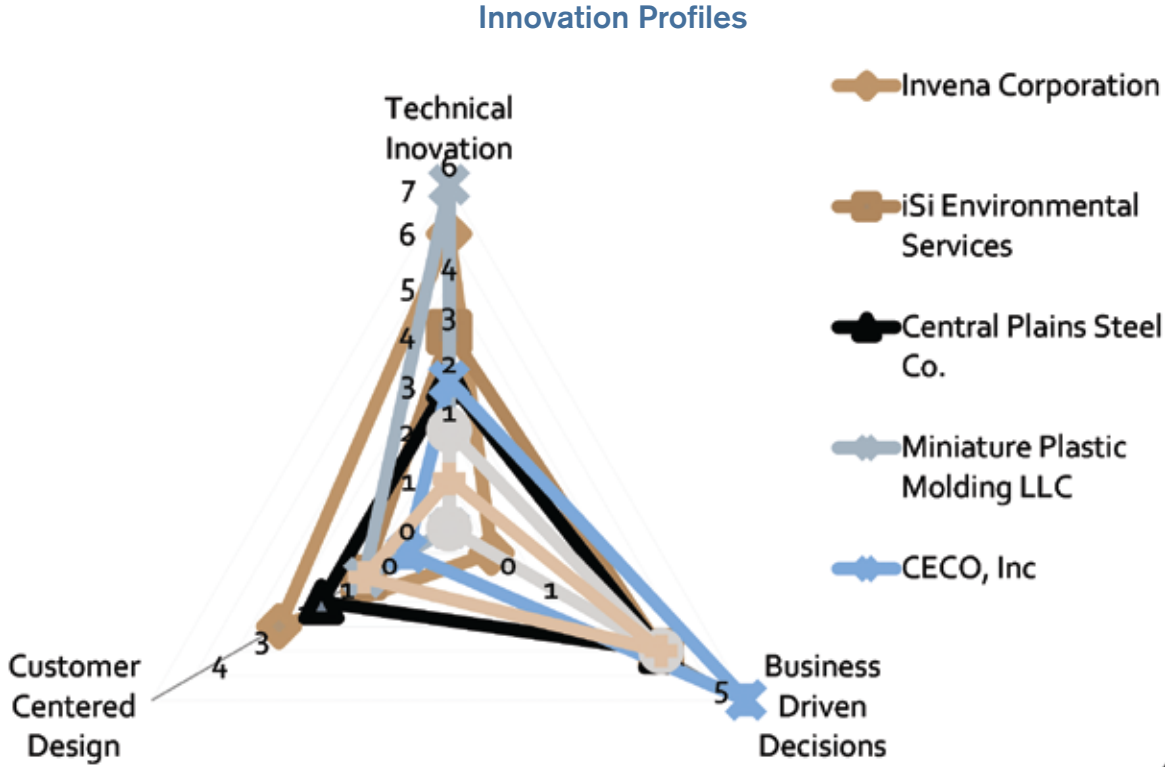


Image courtesy of AMI

they immediately want to know where certain assets are located."

By adapting social network mapping techniques, AMI is also helping economic development officials gain deeper insight into potential interconnections of business within a region.

Others in the state's economic development community find KOIN's approach toward asset maps unique and timely in light of a growing interest in regional development. "If you are an economic development person or want to expand your business in a specific location, you can see the assets that are there," says Stan Ahlerich, executive director of the Governor's Council of Economic Advisors. "As a business owner, you can see how you can leverage your business by discovering other companies or individuals in nearby counties working on a similar idea."

In the same way a region's physical boundaries should not limit how economic developers serve their communities and regions, businesses in rural areas need to efficiently go outside their region and existing markets for new ideas, services, workers and capital. KOIN is piloting work to profile businesses based on their needs, capabilities, and competencies and map those along with the regional assets in a large interactive database. AMI will help connect companies with others that can fulfill their needs or use their services. By developing business profiles within a targeted region, economic development professionals and regional planners can begin to weave a new business development ecosystem that leverages compatibility of companies with respect to innovativeness, risk, design capability, and market channels.

Developing Deep Collaborations

While KOIN has been under construction for just over a year, Tucker acknowledges there are still numerous challenges to overcome in piloting a new form of rural innovation infrastructure, not all of them technical in nature. The university, economic development organizations, state entities and private companies have to recognize they have different goals and focus on common interests, in this case, economic development. Patricia Clark, Kansas state director for the U.S. Department of Agriculture Rural Development, says, "To find a common cause, communities have to begin to transcend their traditional rivalries and competitiveness with respect to the idea that each community has to have the same of everything. If we are unwilling to work with our neighboring communities or shift how we have always thought of ourselves, we are giving up our future."

Creating deep collaborations is a big part of what KOIN does. What is innovative is that these regional collaborations do not have to be geographically bound. "A network approach helps minimize the geographic isolation that rural businesses may experience. It creates a critical mass to explore a certain market that individual businesses might not be able to do

Photo courtesy of Harvey County Economic Development Council

on their own," says Clark. "A network amplifies the opportunities while it also spreads the risks."

Deep collaboration and networking have also helped develop a new project in Newton, Kansas, where the Kansas Logistics Park is strategically investing in the success of its tenants by wrapping innovation services around an otherwise normal real estate deal business model. From the time the Logistics Park was publicly announced in November 2009, Mickey Fornaro-Dean, executive director of the Harvey County Economic Development Council, was looking for something more sustainable than a typical industrial park. "How can we wrap additional services around the property sale and support our companies in different ways?" She is working with AMI on various possibilities, such as tenant companies paying a lease instead of buying the property, getting extra services from the Economic Development Council and building deep collaborations with tenants in an effort to accelerate their success.

The first tenant is the Spartanburg, South Carolina-based company Tindall Corporation, which is building a dedicated wind tower base plant. The company said it chose the location for its ready access to interstate and rail lines, its central location in the country's wind corridor, its small town feel and the commitment to building a partnership. Although Tindall bought, rather than leased, the property, park management has already provided extra services, helping Tindall with hiring and marketing. A group of local companies is working to develop a consortium, looking at their capabilities and how they could support future park tenants. Fornaro-Dean says that could be used as an investment point for potential future tenants.

A second company, New Millennium Wind Energy of Denver, Colorado announced in July 2011 that it would build a wind turbine plant in the Kansas Logistics Park. Among the deciding factors in choosing that location, the company said, were a strong local workforce, good logistical support and the commitment to building a win-win partnership with park management.

Together, Tindall and New Millennium expect to hire 750 workers within four years.

In keeping with KOIN's emphasis on networking, Fornaro-Dean assembled a team of development partners to put together an incentive package for New Millennium that included financial incentives and logistics support. The partners included local, state and federal agencies, infrastructure companies, attorneys, local businesses and consultants and universities. The Kansas Logistics Park will help New Millennium with various services, such as transportation logistics and workforce development. AMI will also work with executives at New Millennium to find what kind of suppliers they need, and then work with companies inside and outside the region to see if they have the necessary capabilities.

AMI and its partners are seeking to extend the work started through KOIN with other initiatives.

In summer 2011, AMI and the Harvey County Economic Development Council were awarded a Rural Business Enterprise Grant (RBEG) from the U.S. Department of Agriculture to assess the feasibility of developing a manufacturing accelerator at the Kansas Logistics Park (KLP) in South Central Kansas, and determine if there is sufficient infrastructure and supply to support an accelerator for nine rural counties. The grant will pay AMI to conduct a regional innovation readiness assessment for the area, to look at the resources, connectivity, and assets to make sure the accelerator would be productive. It is all part of AMI's continuing effort to leverage a variety of funding sources to improve the quality and quantity of innovation-based economic activity for rural communities in the state.

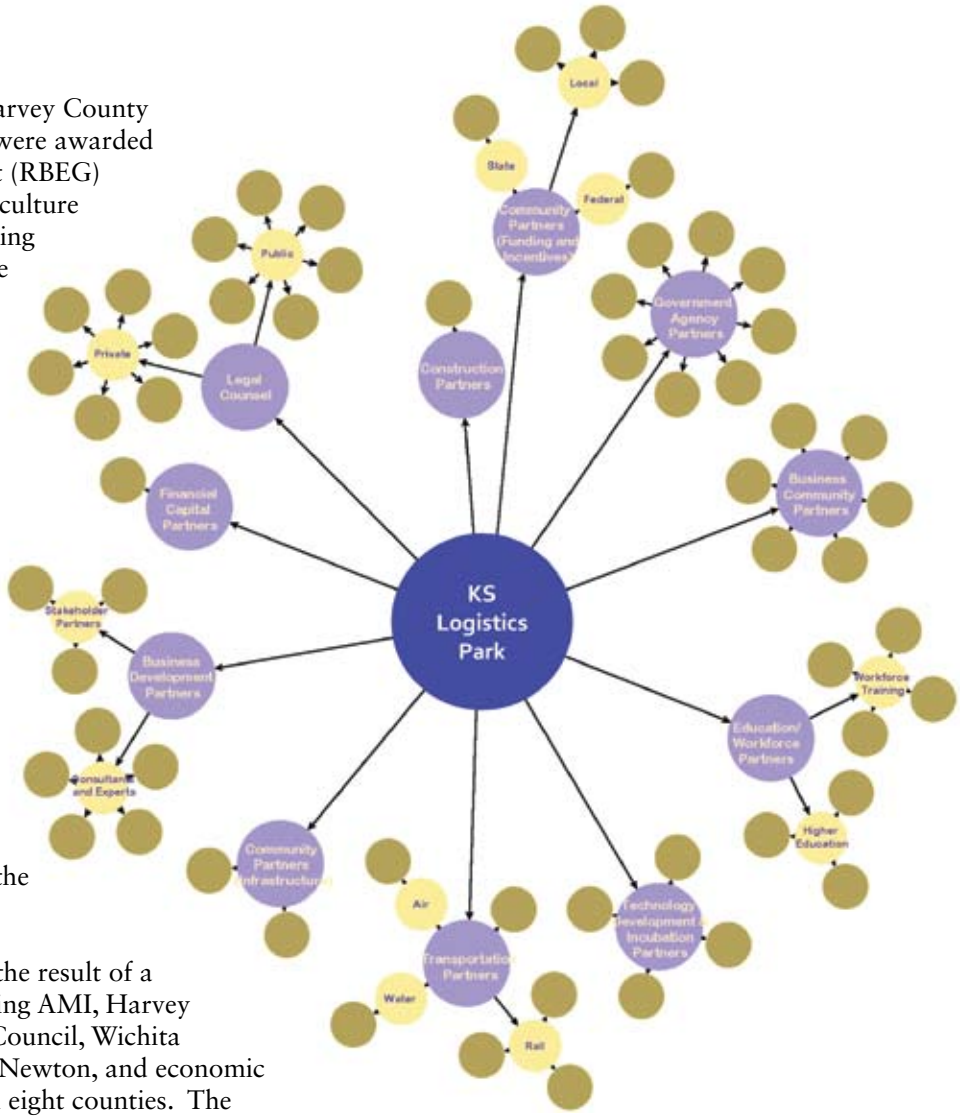


Image courtesy of AMI

This project, much like KOIN, is the result of a multi-pronged partnership including AMI, Harvey County Economic Development Council, Wichita Technology Corporation, City of Newton, and economic development representatives from eight counties. The project is evaluating the feasibility of networking a rural manufacturing accelerator to the KLP and other regional industrial parks. A manufacturing accelerator, usually located in urban areas, is a facility where infant manufacturing businesses are given space and business assistance to help them grow. Larger companies may also be offered space to do development work away from their production operations.

Scouting Early-Stage Niche Opportunities

The Great Plains Industrial Park (GPIP) is a 13,727-acre park located in Labette County, Southeast Kansas and is the site of the former Kansas Army Ammunition Plant. Centrally located between Tulsa, Oklahoma, Kansas City, Missouri, Wichita, Kansas and Springfield, Missouri, it is serviced by major east-west and north-south highways and by the Union Pacific and Burlington Northern Railways. The Port of Catoosa is located 90 miles south and two major airports are situated within a two-hour drive of the facility. The park has parcels as large as 3,000 acres, and a large number of available operations and storage buildings. The facility has its own water and sewage treatment systems, more than 100 miles of roadway and 33 miles of improved rail capable of supporting unit trains. The Great Plains Development Authority (GPDA) has been commissioned to serve as the Local Redevelopment Authority (LRA) with the mission of accepting, marketing, developing, and managing the new GPIP.

The GPIP has potential to be a tremendous asset for the region. Maximizing the value of this asset will provide long-term benefits to the region's economy. It is imperative to identify the strategic alignment, competitive position and perceived value in the marketplace to realize the full potential of the GPIP. Competition among industrial park developers is fierce, as there are a limited number of business relocations and expansions, and site selectors have a wealth of prospective sites to consider, even within a 150 – 200 mile radius. Strategic business development planning, proactive positioning and active opportunity scouting will be critical to ensure that the GPIP becomes a vibrant regional reality rather than a regional opportunity.

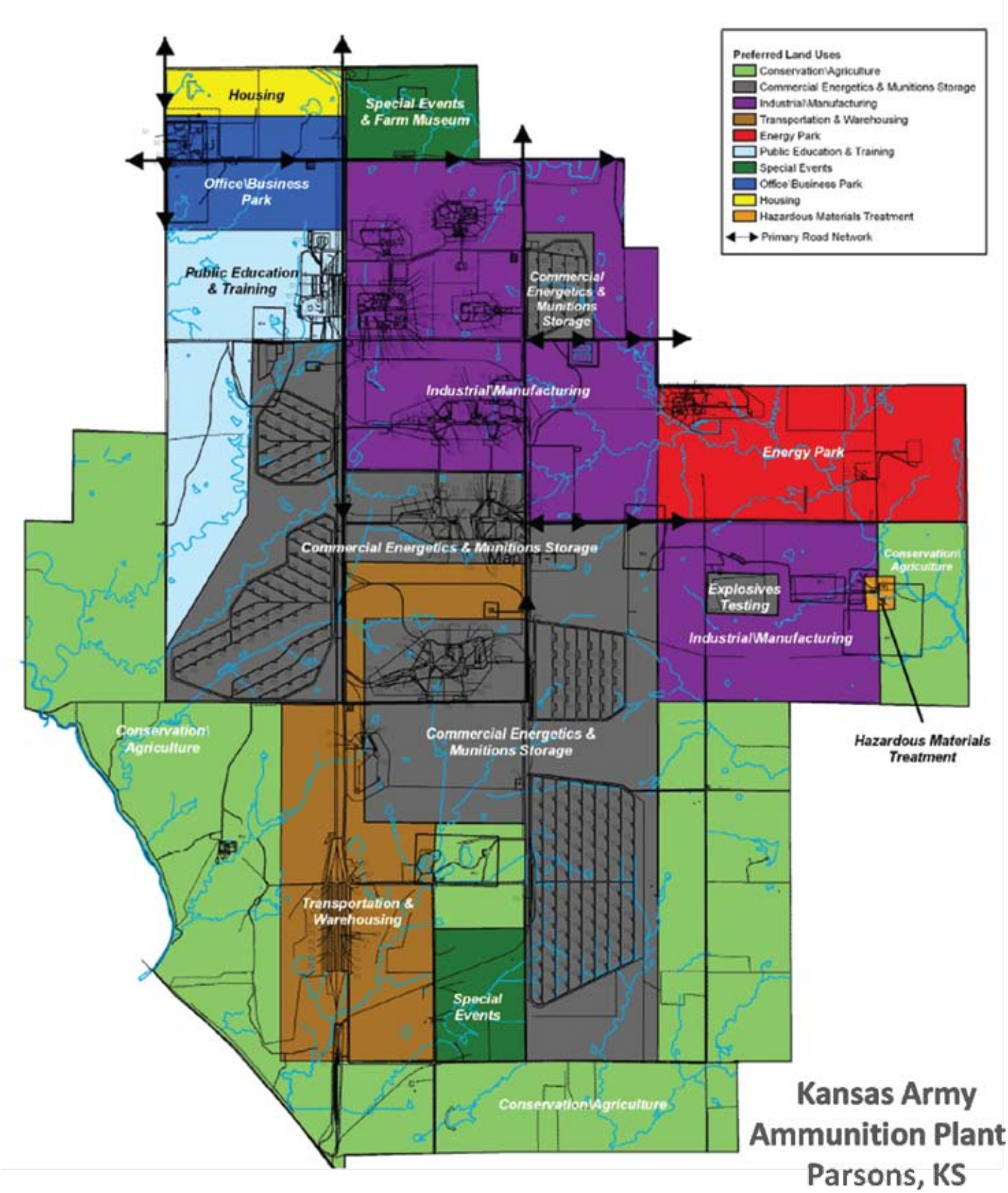
Through KOIN, AMI is working closely with its regional economic development partners to research markets and opportunities, develop strategic and operational plans that leverage competitive strengths and minimize weaknesses of the redeveloping base, weave networks of resources and potential partners, and then fill in technical and business support gaps that local or regional partners may have due to time or expertise limitations.

AMI is supporting GPDA's business redevelopment of the GPIP by teaming with GPDA over a three-year period to extend the market research and business development functions of their full-time staff to accelerate their business redevelopment efforts. The work will include: market research support, targeted acquisition, asset planning and management, and business development and networking support.

AMI and GPDA are pursuing niche market opportunities that leverage the park's previous mission and pre-existing assets, such as military connections, large tracts of available land, utility infrastructure and existing structures, as well as regional assets such as synergistic businesses and educational institutions. "One possible use for the site would be as a remanufacturing site for heavy equipment, such as military equipment, which requires significant storage space for used equipment cores," said Ann Charles, deputy director of the GPDA. "With the access to rail and influx of military vehicles and equipment returning to the United States, the site could be used to store military equipment and then remanufacture items for third party sales. For instance, another country may have a use for remanufactured Humvees."

Photo courtesy of Great Plains Development Authority

Photo courtesy of Great Plains Development Authority


Preferred Land Uses
Conservation\Agriculture
Commercial Energetics & Munitions Storage
Industrial\Manufacturing
Transportation & Warehousing
Energy Park
Public Education & Training
Special Events
Office\Business Park
Housing
Hazardous Materials Treatment
Primary Road Network
Housing
Special Events & Farm Museum
Office\Business Park
Public Education & Training
Commercial Energetics & Munitions Storage
Industrial\Manufacturing
Energy Park
Commercial Energetics & Munitions Storage
Explosives Testing
Industrial\Manufacturing
Conservation\ Agriculture
Conservation\ Agriculture
Commercial Energetics & Munitions Storage
Hazardous Materials Treatment
Transportation & Warehousing
Special Events
Conservation\Agriculture
Kansas Army Ammunition Plant - Parsons, KS

Weaving Connections

"Because we span many industries, we can connect companies," says Tucker. For example: DT Search and Design, a small Missouri company, approached Kansas State University about developing a comprehensive energy and odor management system for large scale cattle feeding operations, and was referred to AMI. When AMI and DT interviewed potential customers, they found a limited market for that idea, but saw a related need for nutrient recovery from wastewater to meet EPA regulations. AMI connected DT with the Kansas Livestock Association (KLA) and KLA Environmental Services Inc. KLA was working on a similar project, and eventually DT and KLA formed a joint venture, Kansas Environmental Management Associates (KEMA). Not only did AMI assist through networking the new company to several public and private funders and sources of technical expertise, AMI served as a design and engineering resource throughout this early-stage technology development project. Another useful visualization technique, an SNA map depicts the social network that AMI was able to weave to help KEMA move from concept to a production-scale demonstration unit. Along the way, AMI also connected KEMA to several companies who had intersecting interests in waste stream management, such as pork producers, ethanol plants and algae producers who were seeking sources of collected nutrients to serve as feedstock for their algae production. While the beginning of this work predates the establishment of KOIN in 2010, the approach employed in weaving this innovation network is exactly what KOIN enables.

Connecting to the wind industry holds great potential for Kansas businesses, both on the manufacturing side as well as power generation. The Great Plains are among the leading states in terms of wind energy production potential, therefore wind farms are of great interest to many Kansas communities. Likewise, where commercial wind farms are placed, turbine manufacturers are sure to follow due to the logistics involved in moving very large power generation equipment from factory to field. Siemens has already built a wind turbine equipment plant in Hutchinson, Kansas.

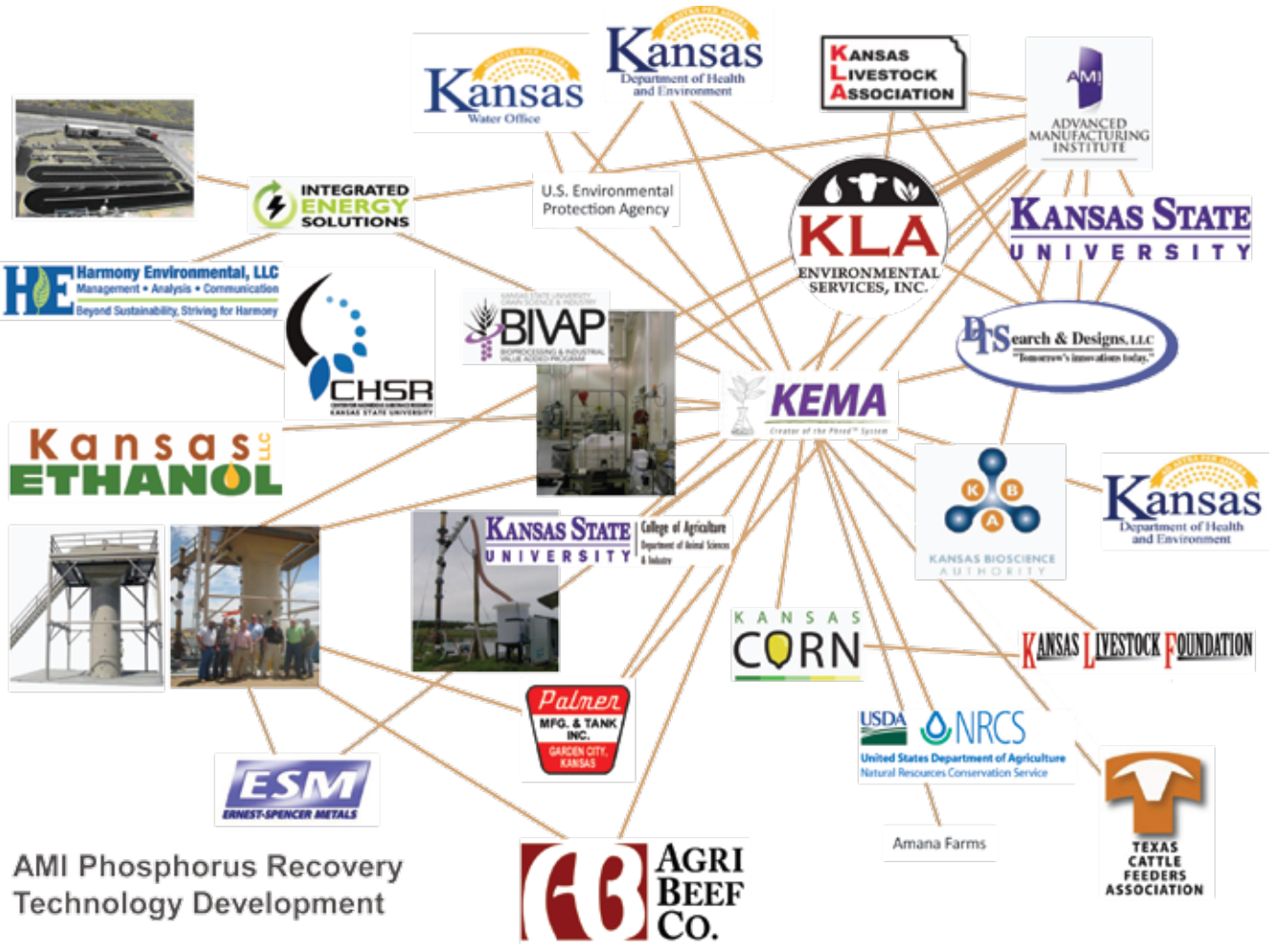


Image courtesy of AMI

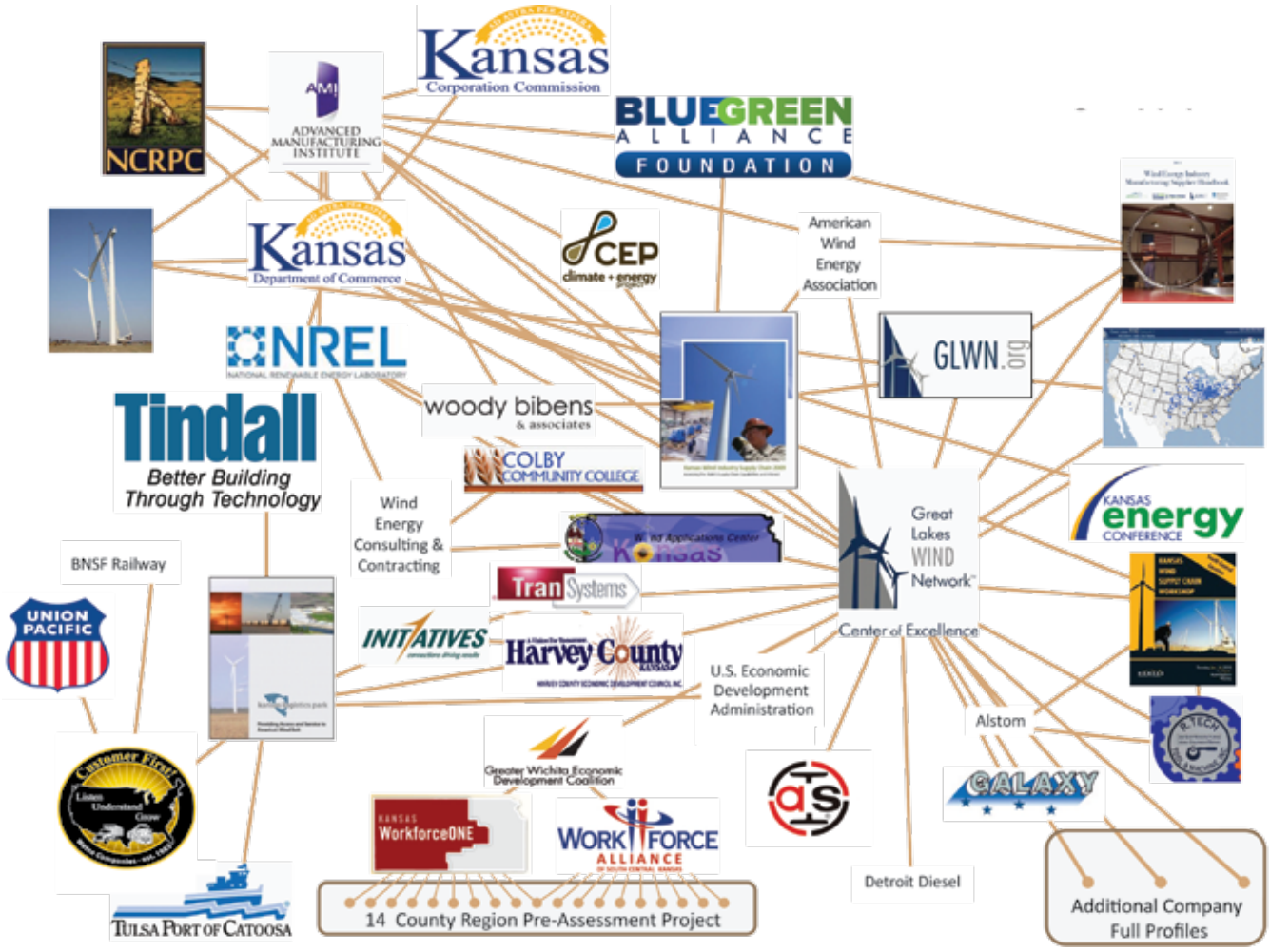


Image courtesy of AMI

To help small local companies identify ways to connect to large out-of-state manufacturers, Cyr approached AMI again to discuss how it could assist manufacturers in his region that were interested in participating in the emerging wind industry. AMI and NCRPC connected to the Kansas Corporation Commission (KCC), the state's energy regulatory group, and the Kansas Department of Commerce (KDOC) to learn more about needs and current activities.

AMI partnered with KDOC to develop the state's wind turbine manufacturing supply chain. In addition, AMI worked with KDOC, Blue Green Alliance, Climate/Energy Project and American Wind Energy Association (AWEA) to conduct the state's first Wind Industry Supply Chain Survey in 2009 to determine the state of the industry and identify potential barriers. The survey found that the largest barrier was understanding the wind industry and connecting to the market and customers.

To support wind industry development in Kansas, AMI reached out to GLWN, an international wind industry supply chain group, to leverage its networks, contacts, industry insights and technical expertise. The discussions eventually resulted in AMI becoming the first GLWN Center of Excellence trained and networked to project GLWN's services into the Great Plains Region.

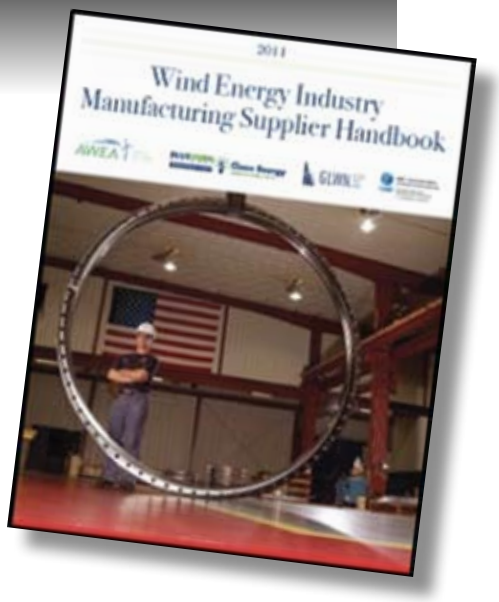
GLWN works with both wind turbine manufacturers and smaller local suppliers. "We help suppliers evaluate how well their capabilities match up with what is typically required by the wind industry," says GLWN Executive Director Ed Weston. "The wind industry has particular cost and quality requirements."

It can be hard for a company to adapt to the new industry's requirements, Weston adds. The wind industry and the aircraft industry, which has thrived in Kansas for many years, have much in common. Both are highly engineered and extremely quality-oriented. But wind, being a global industry, has more price competition and works on a larger scale. Most of the big players are based abroad. So it is helpful for small, rural companies to get advice from GLWN and connect to the industry through their regional GLWN Center of Excellence at AMI. "We are excited to have such capable partners like AMI that enable us to project our services and capabilities into a primary wind

state and continue to cultivate new potential suppliers for the large industry OEMs [original equipment manufacturers] coming onshore," says Weston.

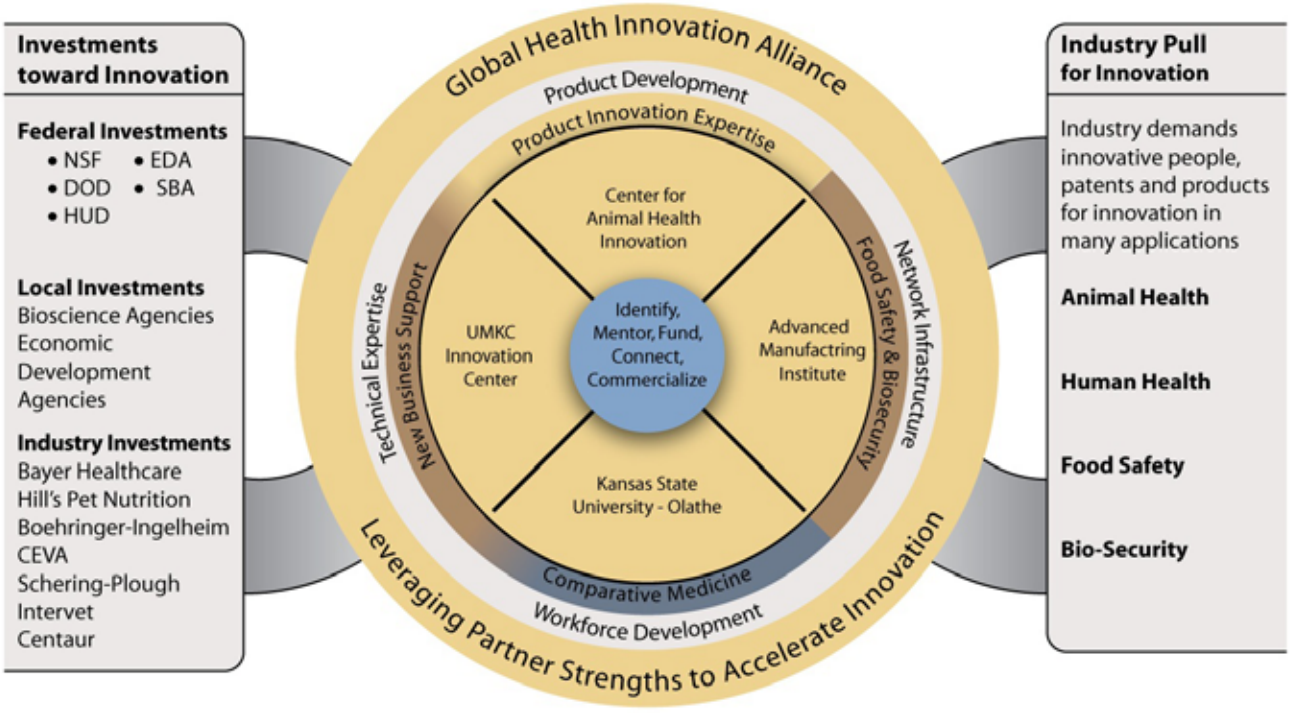
AMI, GLWN and KDOC have also partnered on a number of manufacturing supply chain workshops throughout the state to raise industry awareness. These workshops resulted in the profiling of Kansas companies, such as Alstom, R-Tech and ASI, to assess their readiness and fit within the industry. Some of these companies connected to each other through the process and are exchanging new work, independent of their interest in the wind industry.
As part of this network, AMI also connected to Harvey County's efforts to develop the Kansas Logistics Park (KLP), a wind industry-focused industrial park which has connections to Tulsa's Port of Catoosa. As an EDA University Center, AMI also connected the KLP and EDA to fund $2.4 million of utility infrastructure.

With Siemens building a wind turbine equipment plant, South Central Kansas EDD Executive Director Bill Bolin wanted to find out how suppliers in his district could work with Siemens. He asked AMI to preliminarily assess 125 regional companies to see if they would be well-suited to meet the needs of Siemens. Again, this presented the opportunity to extend the wind industry manufacturing supply chain within the state. For those companies that have shown potential and expressed interest, AMI is conducting a detailed analysis of the local companies' assets, officially known as a GLWN Wind Capabilities Profile Assessment, to present to Siemens and other wind equipment manufacturers considering locating there.



In addition, AMI connected to Kansas State University's Wind Applications Center, the U.S. Department of Energy's National Renewable Energy Lab (NREL), Colby Community College and others, to develop an NREL-sponsored Small Wind Turbine Test Center in Colby, Kansas. Recently AMI and GLWN have also collaborated on the Wind Energy Industry Manufacturing Supplier Handbook to help prospective suppliers better understand the industry.

AMI and GLWN are extending the KOIN concept to apply GLWN's model to the power generation side of the industry as well. KDOC, in partnership with AMI and GLWN, conducted the state's first Wind Farm



Construction and Logistics Supply Chain Workshop in Wichita in August 2011 for Kansas construction companies interested in learning more about the wind industry. "Some areas will be hard for non-specialized companies to get into, such as crane work with wind towers," says Keith Myers, director of training services for KDOC. "But our contractors are experienced with road construction, trenching, and putting down electrical cable."

Weaving opportunity networks, whether at the company, regional, or industry level involves assessing the starting condition of the network and then proactively building connections to fill structural holes. Being able to envision a greater opportunity and then connect the dots to realize those opportunities is a key objective of KOIN.

Building Rural to Urban Connections

The Animal Health Corridor stretches across several Midwestern states and has the Kansas City region at its center. Its unique assets make it a major contributor to the global animal health and nutrition marketplace with extended capabilities in biosecurity, food safety and human health.

Over the past several years, the assets of the corridor including industry, researchers, government, economic development organizations and business development services, have integrated into a strong economic cluster. Cluster members now participate in networking events, collaborative programs and an Animal Health Investment Forum. Some areas that still need development are the ability to create better linkages between university researchers and industry-based research and development, as well as a way to strengthen peer-to-peer innovation networking within the corridor and accelerate development of the region's highly skilled labor pool.

These needs inspired a public-private-academic response to the pending federal Jobs and Innovation Accelerator Challenge. The Global Health Innovation Alliance (GHIA) is a partnership among the Center for Animal Health Innovation, AMI, Kansas State University Olathe Campus, the University of Missouri and the University of Missouri-Kansas City Innovation Center. Together, GHIA proposes to focus on stimulating jobs in the Animal Health Corridor by utilizing cluster assets and innovation networks to bring high impact-innovations to market.

At the core of the alliance's Statement of Work are the opportunity innovation networking methodologies being developed under KOIN. The GHIA presents another opportunity to expand the application of KOIN's methodology to another specific industry and to rural regions in Kansas and Missouri, again confirming that economic activities know no political administrative bounds.

Today, the Animal Health Corridor's primary activities within the region are largely focused on the Greater

Kansas City urban area and three to four outlying smaller communities where universities or large industry employers are located. The proposed alliance deliberately seeks to expand the industry's economic impact further into the surrounding rural communities that lay within and are adjacent to the corridor by connecting to smaller companies who have the potential to become part of the industry's supply chain network where appropriate.

Next Steps

KOIN is based on a simple but powerful belief, attributed to innovation expert Andrew Hargadon, that successful entrepreneurs and inventors are no smarter, no more courageous, tenacious or rebellious than the rest of us—they are simply better connected. Can the work of KOIN be replicated in other communities? That is the hope. Some technological tools, like asset mapping, deep social network analysis, network weaving and interactive visual tools that make a region's assets instantly clear, can definitely be used elsewhere. KOIN uses technologies to map and create networks for businesses that would not normally find each other. In all these ways, it offers an opportunity for rural communities to have access to some of the economic levers that have been the privileged domain of urban cities until now.

For more information, on the initiatives highlighted in this report, visit:

Kansas Opportunity Innovation Network
www.innovatekansas.org

Advanced Manufacturing Institute
www.amisuccess.com

Kansas Logistics Park
www.kansaslogisticspark.com

Kansas Army Ammunition Plant Redevelopment
www.greatplainsindustrialpark.com

AMI's Economic Development and Cluster Analysis for North Central Kansas
http://ami.ncrpc.org

Kansas Economic Development Districts

Great Plains Development, Inc.
www.gpdionline.com

North Central Regional Planning Commission
www.ncrpc.org

Northwest Kansas Planning and Development Commission
www.networkkansas.com

South Central Kansas Economic Development District
www.sckedd.org

Southeast Kansas Regional Planning Commission
www.sekrpc.org

About KOIN

KOIN Team

The KOIN effort is led by Jeff Tucker, associate director at the Advanced Manufacturing Institute, under the supervision and guidance of Brad Kramer, director at AMI.

Manveen Saini, economic development project manager at AMI, oversees all economic development projects at the institute, and Dale Wunderlich, industrial designer at AMI, works with the team to apply design thinking to economic development approaches.

KOIN Partners

The first generation partners in the KOIN effort are

AMI
ADVANCED MANUFACTURING INSTITUTE
Engineering Success

Great Plains Development, Inc.

GREAT PLAINS INDUSTRIAL PARK

A Vision For Tomorrow.
Harvey County KANSAS
HARVEY COUNTY ECONOMIC DEVELOPMENT COUNCIL INC.

Ad Astra Per Aspera
Kansas
Department of Commerce

NCRPC

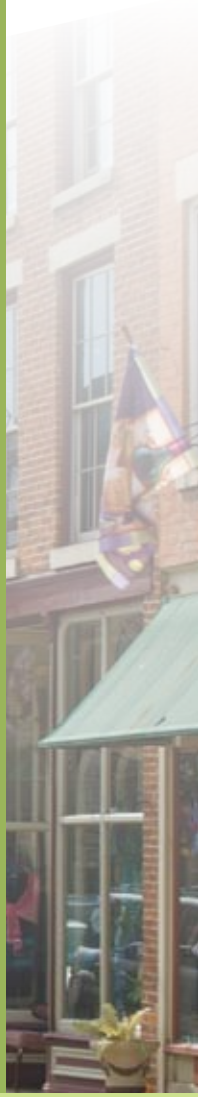
SCKEDD
South Central Kansas Economic Development District

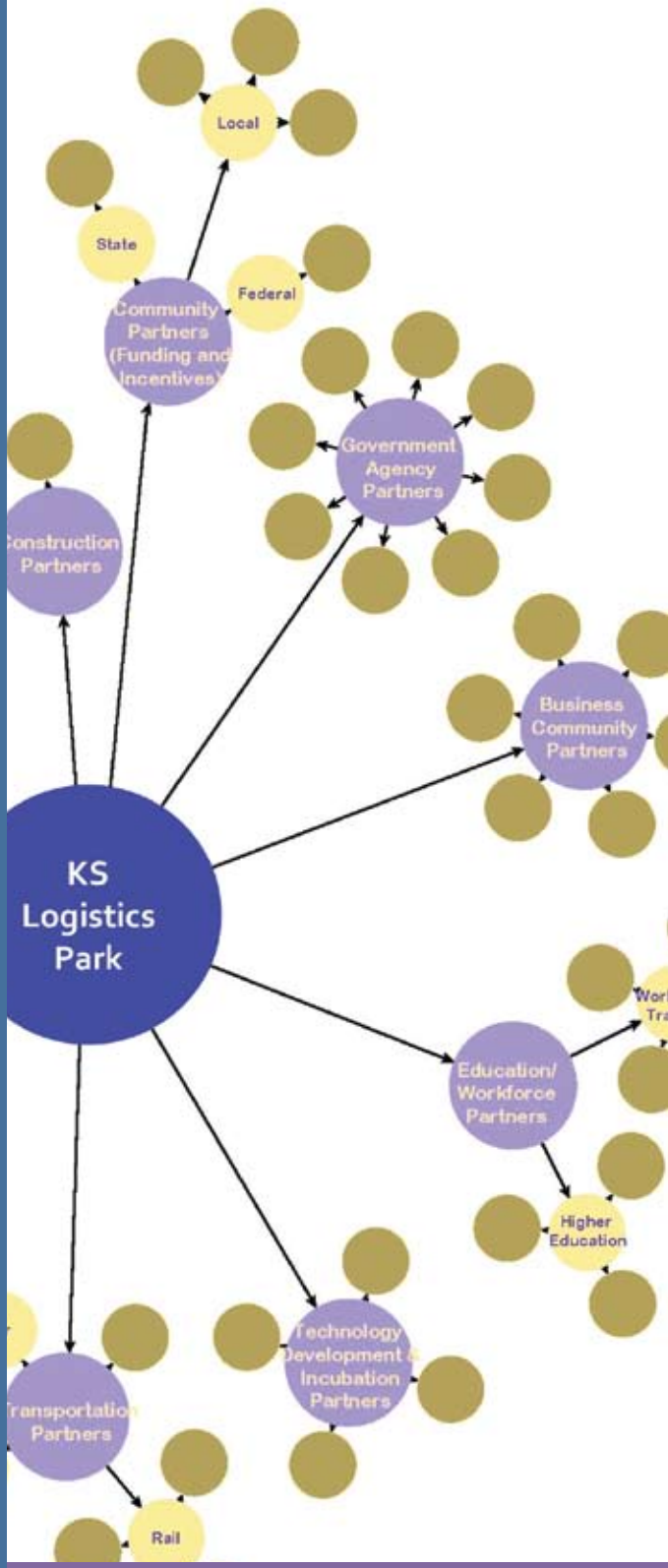
About the NADO Research Foundation

Founded in 1988, the NADO Research Foundation is the nonprofit research affiliate of the National Association of Development Organizations (NADO). The NADO Research Foundation identifies, studies and promotes regional solutions and approaches to improving local prosperity and services through the nationwide network of regional development organizations. The Research Foundation shares best practices and offers professional development training, analyzes the impact of federal policies and programs on regional development organizations, and examines the latest developments and trends in small metropolitan and rural America. Most importantly, the Research Foundation is helping bridge the communications gap among practitioners, researchers and policy makers.

This report was researched and written by the Advanced Manufacturing Institute's Jeff Tucker, the KOIN team, and freelance writer Joan Mooney, with guidance from NADO Executive Director Matthew Chase, Deputy Executive Director Laurie Thompson and Senior Program Manager Carrie Kissel. We thank all the individuals who provided information and photographs and those who consented to be interviewed.

This special report is based upon work supported by the U.S. Economic Development Administration (EDA) under Agreement No. 99-06-07548, and is part of the Know Your Region project (www.KnowYourRegion.org). Any opinions, findings and conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of EDA or the NADO Research Foundation.





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400 North Capitol Street, NW, Suite 390
Washington, DC 20001
202.624.7806 phone
202.624.8813 fax
Info@nado.org
www.NADO.org
www.KnowYourRegion.org
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