

Chapter 5: Strategic Directions

This chapter focuses on the proposed strategic directions for Kansas' Comprehensive Strategic Plan Update. It begins with the rationale for this study and includes a summary of the strategy. The strategy focuses on the framework that must be constructed over time to sustain economic development in Kansas, workforce development, technology and communications enhancements, improved natural resources, and to improve the competitiveness of key industries.

The Urgency of Implementing a New Strategy

In 1986, at the time of the *Redwood-Krider Executive Report: Basic Findings, Implications and Strategy*, all Kansans felt a shared sense of urgency regarding economic development, and as a result of their concerted actions, much was accomplished. Today, there is a greater sense of complacency, and yet there are serious challenges brewing beneath the surface, each of which contributes to a tenuous economic policy situation. These challenges include the:

- Crisis in the rural economy.
- Critical need for a trained workforce.
- Erosion of competitiveness of the aerospace cluster.
- Disproportionate share of Kansas' workforce in low-growth industries.¹

Other areas for concern include the lack of a clear information technology and communications plan—integral for a Knowledge Economy, and stagnant funding of economic development, at a time when other states are ramping up their economic development investments and technology initiatives to increase their competitiveness.

Kansas is a relatively small state population-wise, but the divisions among people are deeply ingrained. The rural-urban divide is the most striking of these divisions, but there are also other distinctions, across state boundaries, and right down to the county level, where neighboring communities see one another as rivals more than as partners.

The essential point here is that the strategy must work for all Kansans. It cannot be only for the high-tech industries, or simply for the cities, nor simply for the state's rural counties. It must be a strategy that embraces a breadth of concerns, a concept around which all Kansans can rally, so they can stand behind it and be willing to do what it takes to see it through.

¹ With the exception of the Johnson county region and the K-10 corridor.

The strategy directions proposed below seek to address these imbalances and use innovative methods to create opportunities for all Kansans to participate in a more prosperous, entrepreneurial economy.

The overall strategy will help Kansas shift from low value-added occupations and commodity-dominated markets to a more prosperous and dynamic Knowledge Economy. The principles of a Knowledge Economy are aligned with core values that are uniquely Kansan: a commitment to education, a concern with quality and reliability, and an ability to work together to achieve a common aim.

Strategy Summary

As discussed in Chapter 6, the practical problems of implementing economic development policies loom nearly as large as the actual economic issues that such policies are designed to address. A successful economic strategy must consider the conditions that create these difficulties. While many excellent efforts are under way throughout the state, our focus groups revealed a strong sense among Kansans that there is a lack of overall coordination and comprehensiveness in economic development.

This should not be taken as a criticism of individual agencies and programs. Nor is it the kind of problem that can be overcome with greater consolidation and control of the economic development process within a single agency. In general, the unity of purpose needed for effective state-wide change can be achieved on a more sustainable basis by encouraging and providing a framework for broad-based leadership to emerge at many levels. Particularly in a state such as Kansas, with its history of independent thinking and aversion to unitary leadership, the more broad-based approach is most likely to succeed in the long run.

Therefore, the centerpiece of our five-part strategy package is an integrated framework for statewide economic development. Kansas is not one economy—it is a set of quite distinct economies, one in which cultural and ethical values are more similar across the state than are economic opportunities. Moving toward greater regional economic autonomy, while maintaining strong state-level involvement in the economic development process, is Kansas' best hope for breaking the logjam that currently prevents policies from being enacted, sometimes due to each region's aspirations for greater economic opportunity.

Connected to the central organizational/implementation framework strategy are a series of related strategies with more a specific focus. These strategies, as with the central strategy, are derived from the issues identification process—the issues that are foremost on the minds of Kansans:

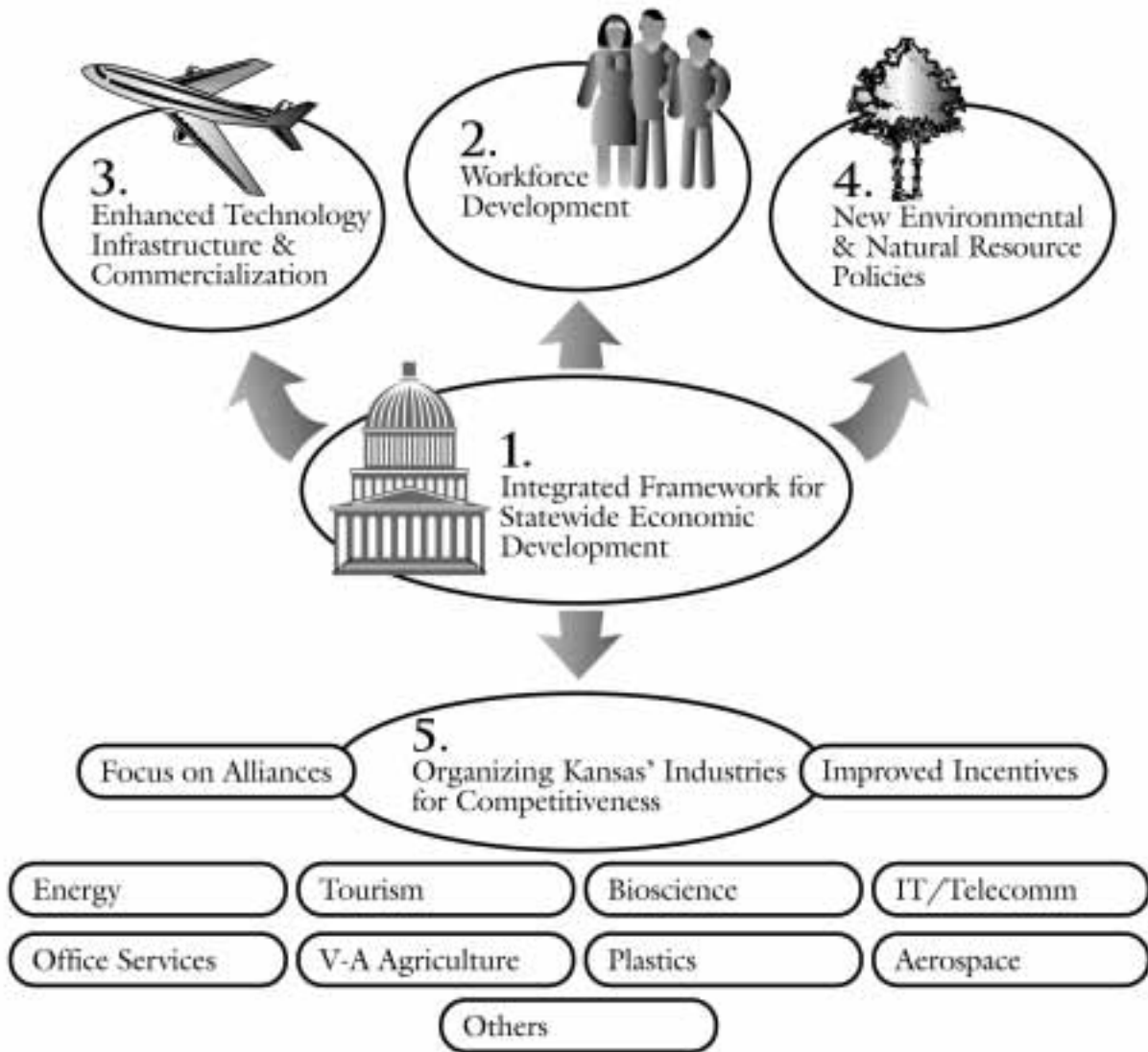
- Strategy #1: Integrated Framework for Statewide Economic Development
- Strategy #2: Workforce Development
- Strategy #3: Enhanced Technology Infrastructure & Commercialization
- Strategy #4: New Environmental & Natural Resource Policies
- Strategy #5: Organizing Kansas' Industries for Competitiveness
*Aerospace • Tourism • Office Services • Biosciences • Energy •
IT/Telecommunications • Materials • Value-Added Agriculture*

Strategy #5 is actually comprised of a set of separate strategies for each of the six industries that were evaluated individually in working group meetings,² and one overarching set of industry competitiveness initiatives.

Each of the five strategies, as shown in Figure 5.1, is described in detail in the sections that follow. In addition, much of the detail behind the proposed initiatives can be found in Appendix A.

² The selection of these six areas (energy, aerospace, materials, biosciences, IT/telecom, value-added agriculture) was not meant to indicate that these six industries are the only ones worthy of policy attention in Kansas. The objective from the point of view of the study was to convene a sufficient number of industry working groups to genuinely sample the diversity of the state's industries, and to determine what resources and enthusiasm exist, particularly on the part of the private sector, to become more involved in economic development strategy and policy making. As a part of Strategy #1, it is hoped that more industries will be identified and will undergo similar industry strategy development processes.

Figure 5.1: Five Key Strategies for Implementing the Knowledge Economy



Strategy #1: Integrated Framework for Statewide Economic Development

As reported in Chapter 4, consistent concerns emerged from across the state regarding a) the coordination of policies and b) regions' perceived inability to take advantage of the full potential of their industries.

The core strategy has four components:

- a) Economic Development Infrastructure & Communication Strategies
- b) Regional Collaboration and Leadership Development
- c) Maintaining the Competitiveness of the Aerospace Cluster
- d) Funding and Organization of State Economic Development Agencies

These components are described in detail in the sections that follow.

Economic Development Infrastructure and Communication Strategy

Activities taking place at the regional level will bring new ideas and new leadership into the economic development arena in Kansas. It is important that these activities not be controlled, but rather monitored, coordinated, and supported from Topeka. Implementation of the initiatives recommended below will ensure that the individual economic strategies developed at the regional level add up to a whole at the state level.

Economic Development Infrastructure & Communication
Marketing Comprehensive Strategic Plan to the State of Kansas
State Economic Summit—Coordinating Regional Strategies
Kansas' Image Improvement
Economic Development Education Kansas' Legislature
Enlist Strategic Leadership Team

Two of these initiatives will be described in more detail below.³

State Economic Summit—Coordinating Regional Strategies. Holding an economic summit on an annual basis would provide each region and industrial grouping an opportunity to present their existing initiatives, report on their progress, receive feedback

³ Descriptions of all initiatives may be found in Appendix B.

on their strategies; and find ways to network with other regions and staff of relevant state agencies, and linked academic programs. On a more frequent basis, a regional advisory council, comprising leadership in regional programs (e.g. corridor development programs), meets to exchange information with state-level economic development organizations.

Marketing the Comprehensive Strategic Plan to the State of Kansas. The Comprehensive Strategic Plan needs to be communicated to the people of Kansas using a variety of means. The single most important tool to ensure that this message is communicated successfully will be the ability of state economic leaders to convince the public that the state indeed faces several urgent challenges, namely:

- **Collapse of the rural economy**
- **Workforce development crisis**
- **Erosion of competitiveness of aerospace cluster**
- **Structural deficiencies—over-dependence on slow-growing industries**

This final point, regarding the structure of Kansas' economy, is in many respects a deeper underlying problem. Originally identified by *Redwood-Krider Executive Report: Basic Findings, Implications and Strategy*, the excessive concentration in slow-growth industries means that, even though Kansas' workers are on average better-educated than workers in reference states, labor productivity is, in fact, lower (see Technical Report #1, Section 2, Figures 2-2 through 2-7). In effect, Kansas is producing excellent workers, but Kansas' industrial structure is not well-suited to utilize them to their full potential.

For example, Kansas has many capable and talented farmers, oilfield workers, and small-scale manufacturers who, despite their best efforts, cannot, and for the most part, will not be able to generate sustained income growth at or above the national average. There are many promising initiatives for sectors such as value-added agriculture, oil and gas, and light manufacturing that have been included in the Comprehensive Strategic Plan, but even rather heroic efforts will not create enough high-paying jobs in those sectors to raise average incomes in Kansas significantly. For this reason, the creation of a more entrepreneurial business climate, where start-ups can thrive, and where firms in higher-growth industries can be attracted, is also an important element of the strategy.

Challenges & Opportunities Confronting Kansas' Traditional Rural Communities

Conversations throughout the strategic planning process confirm the notion of the emergence of two Kansases. One is young, dynamic, rapidly growing, and increasingly wealthy. Typifying this Kansas are Johnson, Sedgwick, and Douglas counties. The second Kansas consists of communities experiencing declining demographics of population and age, and increasingly finding themselves without the critical mass necessary to sustain the once vibrant economic and social units that constituted an earlier Kansas. We foresee yet a third emerging Kansas, with the rise of regional market centers of hubs around which smaller towns may find renewed opportunity.

Demographic data support this assertion. Of one hundred and five counties in Kansas, fifty-eight have smaller populations today than in 1890. Of the remaining forty-seven counties with populations today greater than in 1890, thirty nevertheless are smaller today than their all-time peak population. Eighty Kansas counties have lost population since 1980. According to Kansas Statistical Abstract projections, seventy Kansas counties will lose population between today and the year 2030. Only nineteen counties in Kansas now claim their largest-ever populations. Of the Kansas counties that have experienced population growth since 1980, it is projected that twenty-five will lose population between now and 2030. By 2030, nearly seventy percent of all Kansans will live in the nine counties comprising the state's metropolitan areas. Add to this the population that will concentrate in regional market center towns, and the prospects for many small towns become increasingly bleak.

It seems clear that traditional Kansas is undergoing fundamental and irreversible change. For some, this is an acceptable evolutionary process. For others, this phenomenon gives rise to grave concerns. Given the state's history of expansion in the early years and contraction for much of the last century, it seems safe to say that there will be far fewer rural Kansas communities in twenty-five years than there are today.

But what can be done to mitigate the downward spiral? How can Kansans provide tools that will enable those in rural Kansas, imbued with a 21st century pioneer spirit, to construct a new and successful model for resurgent communities?

These strategies, and their attached policy recommendations, offer tools for use by enlightened and strong community leaders, to enable the continuation of a viable small town and rural Kansas society well into the future. But it is important to understand that realization of this goal primarily depends upon local leadership.

Information Superhighway

Whether in education, health care, or work opportunity, it is essential that broadband Internet access be extended to every town and to every farm and ranch in Kansas. Just as the railroads and highways established Kansas' link to the world in the 1800s and 1900s, today our linkage to the global marketplace is electronic—and it must be more than 14.4 bps dialup access. Great investments have been made all across our state in high-speed transmission and hardware facilities. With enactment of KAN-Ed Legislation by the 2001 Legislature, the state has begun, as a matter of public policy, to acknowledge the vital role of information technology in bringing the benefits of the Knowledge Economy to all Kansans. The future of rural Kansas depends upon fully linking all existing infrastructure (and filling in the gaps where they exist) to bring Kansas fully online.

By use of distance learning, we can extend the necessary breadth and depth of curricular offerings to students in rural communities that will prepare them to compete on a level playing field throughout the course of their careers. The legitimate fear of isolation from quality healthcare may be overcome by application of tele-medicine practices to assure quality general and specialized medical care to communities that neither can, nor should try, to afford the most sophisticated health care infrastructures in their hometowns. By providing opportunities for telecommuting, we can increase incomes in small towns and

on Kansas' farms and ranches while helping alleviate critical workforce shortages elsewhere in the state.

Broadband communication technology is a necessary investment that we must make. Fundamental to this strategic plan is the commitment to link existing networks and to fill gaps where they do exist, to assure all Kansans easy, affordable, and instantaneous access to the electronic superhighway.

Housing

The phenomenon of two Kansases is also a concern in the housing market. While growing urban areas are facing rising prices and shortages of affordable housing, rural areas suffer from declining owner occupied home prices. This creates a concern among families that purchase homes in these markets, and for firms that are considering relocation to rural Kansas, making the move to a rural setting problematic. In parts of the state where housing prices are depressed, building a new home brings with it the likelihood that the construction cost will exceed the resale value. This situation acts as an impediment to the attraction of new employers to rural areas.

Governmental Efficiency

Another fundamental building block of the strategic plan is to promote the streamlining of government while assuring the efficient delivery of services to the public. In the 2001 legislative session, as the magnitude of Kansas' revenue shortfall became apparent, there were calls for increased taxes to balance the budget. There are many who assert that taxes in Kansas are too high already. To the extent that tax considerations drive business investment decisions, an increase in taxes, they argue, would make Kansas communities less competitive in their drive to sustain, expand or diversify their economy. Research over time confirms that Kansas lacks competitiveness in matters related to tax policy. Our goal must be to neutralize tax impacts on Kansas. This strategy affirms that commitment.

This updated strategic plan goes beyond a commitment to comparative tax neutrality. It proposes that we seek to make the most efficient use of the revenues currently collected, thereby assuring greater accountability for the stewardship of collected and budgeted revenues. In communities straining under the burden of tax levies increasingly borne by a shrinking population base, Kansans must have confidence that current revenues are being wisely spent before making decisions regarding the need for new taxes.

Beyond government's efficient use of fiscal resources, the commitment to streamlining should recognize as well that at some point in time, Kansans may desire (or feel compelled) to reconsider the wisdom of maintaining the four-thousand-plus taxing units of government that make Kansas (on a per capita basis) the nation's most heavily-governed state. This strategy proposes the identification and removal of all impediments to the redrawing of governmental service delivery boundaries. By taking this step, local Kansas communities will be empowered to make the choices that fit their needs as future circumstances unfold. This is not, let it be made clear, a recommendation for change in the current structure of governance or a call for consolidation. It is a recognition that the will

of Kansans tomorrow should not be constrained by the persistent impact of structural decisions made one hundred and forty years ago.

We must be clear, however, in acknowledging that this necessary investment is not, by itself, sufficient to assure the survival of any “at risk” Kansas community. It is what Kansans choose to do with new technology, with new community development, and more efficient government delivery systems that will make the difference. Survival will depend upon enlightened community leadership. It will require a return to the frontier spirit of the early settlers—those who were willing to take extraordinary risks, while rejecting the status quo, to carve out a new life in this place we call Kansas.

Regional Collaboration & Leadership Development

The regional component of the Comprehensive Strategic Plan is crucial to obtaining buy-in for the wider strategy. This component is designed as a response to the perceived crisis facing rural Kansas and the smaller cities.

Regional Collaboration & Leadership

- | Expanded Role for Universities and Community Colleges as Catalysts of Economic Development
- | Kansas Corridor Development Programs
- | Aggregation & Pooling of Local Government Services

In the aggregate, the future of Kansas’ rural areas appears bleak. The depopulation of rural centers, driven largely by technology-derived productivity gains in farming and a decline in the oil and gas industry, has meant that more and more public services are disappearing. Kansas farms are producing more food but employing fewer farmers each year. Low population counties face erosion of the glue that holds their communities together when elements such as the local high school, the local bank, the local clinic, and the post office lose necessary resources for continued operation.

However, throughout western and southeast Kansas, there are surprisingly vibrant smaller cities, ranging in populations from 10,000 to 25,000. While each of these centers has a different story explaining its recent successes,⁴ the bigger picture, from an economist’s point of view, is that market forces are picking certain regional service centers as those most efficient to serve and be served by rural areas in Kansas. Though the delivery of government services has proven difficult to consolidate to achieve efficiency gains, the market has not been as restrained by such considerations, and has already picked some winners in this respect—mainly towns in the range of 15,000 to 30,000 population.

⁴ Examples include an Amazon.com warehouse in Coffeyville, technical service call centers in Hays, and meat packing in Garden City, Dodge City and Liberal.

Consider the case of a small town whose community leaders want to support their local industry. Smaller counties with populations of 1,200 to 3,000 cannot realistically expect to receive state or federal funding for technology incubators, new community colleges, large specialized training programs, and similar high-growth initiatives. However, in collaboration with one of the market center cities, many of the economic benefits of having such a center in one's own community can be achieved.

This process is not automatic, nor is it easy. The larger city needs to see some economic or social benefit in return. The smaller community can offer to assist in lobbying in Topeka, the design work, and other aspects of attracting the center to their nearby market center city, and in return, play a role in shaping the capabilities of the center, project or program.

If two or more counties can work together in this fashion, they can compensate for many of the disadvantages of small size and remote location.

There are many obstacles to successful implementation of this type of regional collaboration. Neighboring counties are more used to viewing one another as rivals, a view that is implanted early with competitive school sports, and which often carries over to competition for industrial attraction or for government programs. Such rivalries will not disappear overnight, but the economic logic of joining forces on key economic development programs should be compelling enough to overcome such considerations, when the alternative is understood to be slow economic starvation leading to collapse.⁵

There are at least eight regions that are remote from the largest urban centers of Kansas City, KS-Johnson county, Wichita and Topeka, whereby aggregating resources from five to fifteen counties (depending on the region), considerable economic concentration can be achieved.

Several locally-driven regional economic development entities have already been formed in Kansas, among them Southeast Kansas, Inc., and the Western Kansas Regional Economic Development Association (WKREDA).

One of the best ways to ensure successful regionalization will be to provide regional stakeholders with access to more resources they can utilize if and when they decide to form networks and act collaboratively. If stakeholders at the regional level see an opportunity for their industries to become more competitive, then they will be motivated to get involved and stay committed to the regional processes.

The six industry stakeholder meetings, undertaken from January to March 2001, revealed that business leaders in most major industries in Kansas are strongly in favor of creating structures to support their industry on a regional basis. These stakeholders see a lack of

⁵ Case studies of several "Multi-region Economic Development Strategies" are documented in a report by the National Association of Regional Councils. This document can be downloaded at <http://www.narc.org/PDFs/Guidebook2.pdf>.

coordination of policies affecting their industries and provided many thoughtful initiatives for organizing and developing industries during four-hour meetings.⁶

While it is not practical to use a government-driven approach to force the formation of such groups, expanding the mission of universities and community colleges to play a greater role as catalysts of economic development coordination is entirely appropriate. Universities such as Ft. Hays State and Pittsburg State have shown much leadership in this regard, and yet much more can be done. This initiative establishes a resource, generally located in the more vibrant market towns cited above, that can be used by as many as 15 counties to better coordinate economic development strategies and accelerate the diffusion of technologies and better business practices.

Support for Aerospace Cluster

As discussed below, in the section on clusters, Kansas' aerospace cluster is at risk, and will require an aggressive cluster-based competitiveness strategy to retain its position as a mainstay of the Kansas economy. Given its contribution to Kansas' tax base and its strategic position in a technology-driven industry, all Kansans have a stake in the continued health of this cluster.

Support for Aerospace Cluster

- Cluster-based Competitiveness Strategy for aerospace
- Funding for applied R&D in composites, avionics, micromanufacturing
- Alignment among manufacturers on training
- Supplier Development Program
- Leverage Council on Competitiveness Study of Aerospace Cluster
- Communications Campaign
- Improved air linkages to Wichita

Funding and Organization

When carried out effectively, economic development expenditures should not be viewed as an ordinary expenditure item in the state budget. More than any other category, these outlays are an investment. When these funds are focused on improving the industrial structure of the economy, resulting in a larger tax base, they are self-funding.

⁶ Six "industry cluster" meetings, led by the consulting team, were held throughout the state from January to March 2001.

This report echoes the call of the *Vision 21st Century Task Force Report for Financing Economic Development for the Next Decade* to establish “a benchmark of investing one-tenth of one percent of the Kansas Economy, or \$1 of every \$1,000 in personal income, back into stimulating future commerce...” At the very least, the EDIF cap should be removed and non-economic development uses of lottery proceeds should be shifted to the State General Fund.

In the issues identification process, stakeholders commented that by using the Kansas Lottery as the source of funding for the EDIF, it was easier to separate economic development investments from other budgeting priorities in each legislative session, and preferred to see this structure maintained. We recommend that the non-economic development programs that have been funded in recent years from lottery proceeds be shifted to other sources of funding. Any shortfall between the 0.1% of the Kansas Economy (\$72 million in the year 2000) and the lottery proceeds should be made up from the General Fund.

Funding & Organization

Invest \$1 for every \$1000 generated by the Kansas economy
EDIF to be devoted again to purely economic development objectives
KDOC&H: leadership in implementing overall strategy
KTEC: lead in development of cluster-oriented S&T Plan
Kansas, Inc.: greater focus on public/private dialogue and leadership development

Strategy #2: Workforce Development

Kansas’ best selling points in the eyes of out-of-state employers are the reliability, work ethic, and overall professionalism of the work force, as well as the generally high level of educational attainment. Although Kansas has workforce issues, as do all states, overall it is at a moderate advantage due to these strong foundations. A tactic often recommended in military as well as economic competitions is to “build on strength.” Kansas needs to increase its advantage by developing more innovative and comprehensive workforce programs. Kansas has an opportunity to stand out in the Knowledge Economy. By continuing to foster and capitalize on the excellence of its work force, Kansas can position itself to be ready for the coming global economy, with its reliance on versatile, technically competent workers. The integrity and overall commitment to quality that already typify Kansas’ workers is a valuable resource that, properly supported through more targeted workforce development, can become a keystone attraction for Kansas in the years ahead.

Many Kansas employers are not in a position to see such longer-term trends and opportunities, engrossed as they are with the immediate challenges of finding and retaining qualified workers. Problems with workforce availability and skill levels were among the most oft-cited in every forum held throughout the state. In many respects, these initiatives are aimed at improving the connection between the demand for skilled

labor with occupational labor supply. A host of cross-cutting workforce initiatives were proposed by project participants. Most cluster working groups also generated industry-specific proposals. Three of the seven⁷ Vision 21st Century Task Force reports were on workforce development issues, underlining the crucial importance of this area, and the strong response from concerned private/public groups.

In fact, the common underlying theme in most of the initiatives concerns the need to make existing educational and training programs more commercially relevant or more applied. Throughout most of these initiatives, there is consistent emphasis on greater involvement of industry in conceiving, designing, and implementing these programs. Fostering effective private sector participation is, of course, easier to prescribe than to deliver, and is greatly facilitated by a strong private/public implementation framework such as described in Strategy # 1.

Implementing the ten initiatives in the Targeted Workforce Strategy will bring Kansas closer to the ideal of a Knowledge Economy, providing more seamless, lifelong learning opportunities and a more capable, flexible workforce.

The initiatives described in the table below are designed to address specific problems that arose during the issues identification process. Initiatives W-1, W-9 and W-10 were proposed by the Vision 21st Century Task Forces, and are completely in alignment with the stakeholders in the Comprehensive Strategic Plan process. Taken as a whole, they promote a pipeline of qualified workers to feed Kansas industry.

TARGETED WORKFORCE DEVELOPMENT	
W-1	<i>Preparing Kansans for the Jobs of the 21st Century</i>
W-2	Seamless Regional System of College Prep, Vocational Prep, & Technology Prep Institutions
W-3	Regional Public/Private Consortia
W-4	Remedial Adult Education
W-5	Increased Math, Technology, & Science K-12
W-6	Lifelong Learning Program
W-7	Soft Skills Training Program
W-8	Immigrant Education Program
W-9	<i>Early Childhood Care, Education & Health</i>
W-10	<i>K-12 Education: Financing for Results</i>

⁷ One could say four of the seven task force reports, if one counts the report on “Meeting the Needs of Special-Care Kansans.”

Strategy #3: Enhanced Technology Infrastructure and Commercialization

An essential element of Kansas’ economic vision is to apply new technologies in every industry, be they new economy or old economy industries. Few industries can escape the necessity of upgrading their production processes with more automation, connectivity, use of the Internet, and orientation to the global market—certainly none of the industries producing traded goods and services, which are the foundation of an economy’s prosperity, can afford to ignore technology.

There is significant resistance to the notion that technology can make a difference for all parts of Kansas. Of course, in the K-10 Corridor, that is exactly what is happening, but many Kansans living outside that region essentially disavow what is happening there, either minimizing it, or arguing that technology applications can be leveraged there, but “not in my town.”

One of the initiatives is a Technology Public Relations Campaign (T-2) aimed at de-mystifying technology. The initiative would focus on demonstrating the applications currently underway in Kansas, and attempting to build wider support for the idea that technology is not just something for states like California and Massachusetts, but that Kansas can do it, too. A good public relations firm could take advantage of U.S. Senator Pat Roberts’ commitment to science and technology, for example, to popularize the notion that all Kansans should apply their “can-do” attitude to this sector.

A more grass-roots oriented method to ensure a more comprehensive state-wide infusion of the technology theme is reflected in initiative T-1—the Integrated Industry/Cluster-Oriented Science & Technology Plan. This initiative recognizes that the current strategy (the Centers of Excellence) has been in place for 15 years, and needs to be updated and brought into alignment with the Knowledge Economy approach. Rather than spreading our technology dollars too broadly, this initiative uses the framework developed in the Regional Councils and Industry Alliances Network to identify sectors in need of applied research, and provides them with an Industry Alliance working group to work on implementation issues. One of the Vision 21st Century Task Force initiatives has been included here (T-5).

TECHNOLOGY AND COMMERCIALIZATION STRATEGIES
T-1 Integrated Industry/Cluster-Oriented Science & Technology Plan
T-2 Technology Public Relations Campaign
T-3 Technology Commercialization Leadership
T-4 Digital Assessment of Kansas IT
T-5 <i>Funding to Make Latest Telecom & IT Accessible All Across State</i>

Strategy #4: New Environmental & Natural Resource Policies

Even in a Knowledge Economy, the optimal utilization and preservation of natural resources is paramount. A series of initiatives have been proposed focusing on energy and water issues and creating consensus-based mechanisms for development and stewardship.

Although some of the industry alliances, such as value-added agriculture and energy, will be very involved in fine-tuning these initiatives and helping to implement them, many of them constitute cross-cutting improvements on economic foundations. As such, these are more appropriately addressed by regional councils and key line agencies and regulatory bodies (such as the Kansas Corporation Commission) at the state level.

ENVIRONMENTAL & NATURAL RESOURCE POLICY IMPROVEMENTS
E-1 Statewide Effective-use Energy Policy
E-2 Effective-use Policies for Conservation & Development of Natural Resources
E-3 “Creative Communities” Initiative
E-4 <i>Enforce Sustainable Water Use Policies</i>
E-5 <i>Establish “Total Maximum Daily Load” Requirements</i>
E-6 <i>Enhance Water Quality and Quantity</i>
E-7 <i>Financial Commitment To Protection of Water and Natural Resources</i>

Strategy #5: Organizing Kansas’ Industries for Competitiveness

The economic structure of the Kansas economy is more stable than it was in 1986, and much of the credit for this is due to the swift and decisive implementation of the recommendations of the *Redwood-Krider Executive Report: Basic Findings, Implications and Strategy* by the Kansas Legislature. Today, however, the Kansas economy is still disproportionately concentrated in slow-growth industries (see Chapter 3 industry analysis).

The ultimate means by which Kansans will improve their quality of life is by putting more people into higher-paying jobs. Up to a point, this can be accomplished by shifting more Kansans from low-paying sectors into high-paying sectors—a change in industrial structure. Only a fraction of the workforce can make such a shift, and the only remaining strategy is to make Kansas’ existing industries more competitive. There are two ways of making an existing industry more competitive: by cutting wages, or by making labor more productive. Since reducing wages would conflict with the goal of creating more high-

paying jobs, this implies that the competitiveness we seek requires increasing productivity.

The most widely recognized approach to increasing productivity in a given industry is called cluster-based development.⁸ According to this doctrine, when firms in an industry not only compete in their output markets, but also within the allowable limits of prevailing antitrust laws, and collaborate in joint marketing projects, product development initiatives, training programs and community-building, they find that the networking involved can produce substantial benefits when they are competing with firms in another region. This kind of cluster thinking, for which Silicon Valley is famous, is evident in a number of successful industries across the U.S. and around the world.

Today, Kansas only has one classic or mature cluster,⁹ in which there is a high concentration of employment in a particular economic sector that entices a wide array of supplier firms and institutions to specialize in serving the cluster: Wichita's aerospace cluster. This group of firms has all the hallmarks of a classic cluster, with a major portion of its output being exported outside the region, a significant portion of the metro area's work force employed by firms in the cluster,¹⁰ a wide variety of materials and components suppliers, specialized services, and even its own research agency, the National Institute for Aerospace Research (NIAR).

⁸ The quality movement, which started in the early 1980's and brought Quality Circles, TQM, and ISO 9000, can be seen as a precursor to the cluster approach. Clustering initiatives may be seen as expanding the quality circle out of the shop floor to cover the entire industry: suppliers, the government agencies that impact it, and the academics whose work is transforming it.

⁹ The other two classic pillars of the Kansas economy in recent decades were the oil & gas industry, and agriculture. However, today neither of these sectors employ the concentrations of workers that would allow them to be characterized as clusters. This is not to say that these industries cannot generate clusters: in terms of agriculture, California's wine industry in Napa, Sonoma & Mendocino Counties constitutes a cluster, as does oil & gas in Houston.

¹⁰ Led by Boeing, Cessna, Raytheon and Bombardier.

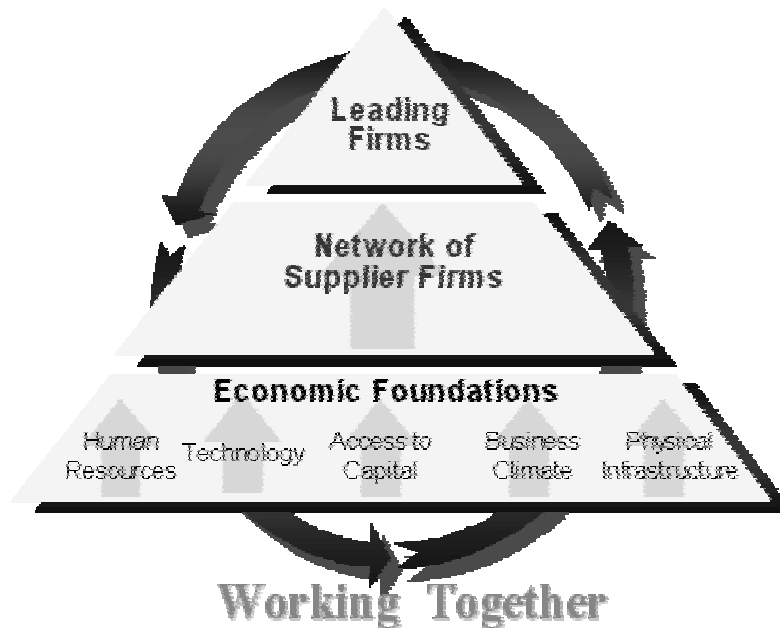


Figure 5.2: Anatomy of a Cluster

As in the creation of Research Triangle Park in North Carolina 25 years ago,¹¹ a conscious strategy on the part of Kansas' economic leaders to create clusters from some of Kansas' existing industries could yield the desired result: higher paying jobs in existing industries. However, the path to creating such clusters is not easy or linear. The existence of a cluster implies some level of leadership in that industry world-wide, mastery of a niche in which the excellence of local capabilities guarantees sustainability of the higher-than-average salaries that a cluster generates.

There are areas in Kansas where some seed clusters are forming. In the Kansas City area, the firms and research centers in the Life Sciences Institute are beginning to work together, and the presence of Sprint, Black & Veatch and other advanced information technology firms signals the possible emergence of an IT & telecommunications cluster. The south-central and southeastern parts of the state are showing an increasing concentration of advanced materials manufacturers that are related to, but distinct from the aerospace cluster, e.g. the emerging polymer cluster in Pittsburg. In most of the rest of the state, there are excellent ingredients for cluster formation—strong research capabilities, good infrastructure, industrial capabilities, work ethic—but very little organized activity that is likely to lead to cluster formation.

¹¹ See Appendix D for a description of the origins and current status of North Carolina's RTP.

In fact, one of the tentative findings¹² of this study is that even Kansas' one existing cluster, the aerospace cluster, is at risk. Industry executives warn that the traditional strengths of the industry—the strong work ethic and precision machining culture of the region—may not be enough to keep jobs in the area. The aerospace industry is undergoing a fundamental transformation: Boeing is redefining itself and will be relying on subcontractors more than ever before, as it focuses on its core strength in large-scale systems integration; other manufacturers are finally finding ways to automate key functions, reducing the need for Wichita's expensive skilled labor pool. The older, more experienced members of the workforce are rapidly retiring, and the younger workers do not have the same skills and work ethic that has made Wichita successful over the years. Many of the skills found in Wichita today can be found in maquiladora factories in northern Mexico for a fraction of the wage.

Overall, aerospace industry executives report a sense of entitlement among the workforce and state officials alike that the aerospace industry is here to stay, and that there is little urgency to upgrade training, research facilities, and infrastructure in order to keep the aerospace cluster strong.¹³ From the point of view of cluster analysis, the aerospace cluster does feature an employment concentration, a strong export orientation, and a large number of supplier firms. Weaknesses, however, include the fact that a large proportion of the inputs to assembly operations in Wichita are made elsewhere (predominantly southern California), and the low level of linkages within the industry. Aside from the Flying in Formation program, there are relatively few examples of inter-firm cooperation of the type which thriving, dynamic clusters often develop. Part of this may be due to the fact that none of the four leading aerospace firms are headquartered in Wichita—top managers are more risk-averse about interacting with their competitors, and this restrains them from engaging in *co-opetition*.¹⁴

Why clusters?

During the stakeholder meetings across the state, most Kansans readily understood the concept of clustering, and expressed a desire to form cluster working groups immediately. They saw clustering as a framework to address concerns about fragmentation, lack of coordination, and the need for a more aggressive approach to technology and workforce issues. However, several points were raised, among them:

¹² Based on interviews and focus groups with aerospace industry executives. This conclusion will likely be reinforced by a far more in-depth, study by the Council on Economic Competitiveness, of the Aerospace Cluster in Wichita, which is due to be released in June 2001.

¹³ This sense of complacency is reinforced by the strong cyclical nature of the aerospace industry. Even when employment in aerospace dips, Kansans don't become alarmed, assuming that it is merely cyclical and not structural.

¹⁴ Adam M. Brandenburger, Barry J. Nalebuff (Contributor), Ada Brandenberger, "Co-Opetition: A Revolutionary Mindset That Redefines Competition and Cooperation; the Game Theory Strategy that's Changing the Game of Business," Doubleday Publishers, December 1997.

How can Kansas grow clusters when so many important industries are so spread out?

The goal of cluster-based collaboration is not always to create a classic cluster, but often simply to allow the industry in question to acquire more of the features of a cluster: stronger buyer-supplier linkages, more joint projects, better private/public collaboration, support for entrepreneurship and innovation, and stronger leadership. These features can be achieved even among rural-based agricultural industries, where concentration in one location is not an option. The object of the exercise for such industries is to engage in clustering rather than shooting to become an ideal cluster.

Since many of our potential clusters are in the Kansas City area, isn't there a danger that most of the benefits will accrue to Missouri and not to Kansas?

Here is the distinction between being tactical and being strategic. It is in all Kansans' long-term interest for Kansas City to be a vibrant, successful metropolitan area, so that world-class industries and researchers will always be attracted to locate there. If Boeing and Raytheon had competed at every opportunity, the space shuttle would never have flown. Yet, within that larger framework of collaboration, it makes sense to compete in ways that don't undermine the overall economic health of Kansas City. Since markets do not respect political boundaries, much of Kansas' prosperity hinges on the economic health of the greater Kansas City area. Allowing Kansas City to become dysfunctional as we perpetuate historical cross-border rivalry allows Kansas' real competitors—Omaha, Chicago, Mexico and China—to gain competitive economic advantages.

Since there is no way we can ever compete with Silicon Valley, why would we want to try to have an IT cluster?

The unfortunate aspect of the competitiveness terminology is that it tempts us to look at trade issues and economic growth through the lens of a sports metaphor, looking for winners and losers. In reality, the more successful is Silicon Valley, the more likely it is that Kansas' IT cluster can grow and prosper, too. As housing costs and engineering salaries rise in Silicon Valley (an inevitable consequence of success), more functions that Silicon Valley used to do become too expensive to do there any longer.

In addition, Kansas firms can exploit niches in the IT world that play to its strengths: PCS (originated by Sprint), large-scale systems integration and avionics (by-products of the aerospace Cluster), IT technical support (already expanding in Hays and Manhattan) and medical software (spinning off from Kansas City's sizable medical establishments). Because of the dynamic of specialization and the expansion of trade, the global economy is a win-win proposition, where regions that get their act together simply accelerate more rapidly.

Ultimately, the potential benefits to Kansas of adopting a clustering approach are large, and the costs are relatively small. The alternative is to allow more of Kansas' gross state product to be commoditized—the business services as much as the grain—and therefore locked into price competition rather than value competition (See Figure 5.5).

Figure 5.5: Value Competition Means Moving Up the Value-Added Curve

Just as the study team was unable to reach every part of Kansas geographically, it was also not feasible to hold a separate industry/cluster meeting for every major industry in Kansas. In the implementation of this strategy, there are two industries that stand out clearly as requiring a similar level of attention: tourism and office services. These industries have high growth potential, can absorb employment in both small and large enterprises, and can provide significant economic opportunities in rural as well as urban areas of Kansas.

Appendix A summarizes the results from the collaborative strategy development process, including the contributions of over 400 persons in stakeholder meetings across the state. Over 100 individual strategies and initiatives were proposed, in 20 conferences, cluster meetings, focus groups and retreats. In the appendix, the reader will find more detail regarding these initiatives, and be able to see more clearly how they were grouped into five main strategies to make the Kansas economy more competitive and expand economic opportunities.