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21ST CENTURY JOBS INITIATIVE
Tennessee's Resource Valley

Final Report

December 23, 1996

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Introduction

Tennessee's Resource Valley, a regional economic development organization, was asked to facilitate a two-year, \$750,000 grant from the Department of Energy. The grant's purpose was to make the East Tennessee region less dependent on federal funds for its economic well-being and to increase regional awareness of the advantages of proximity to the Department of Energy facilities in Oak Ridge.

The mission of Tennessee's Resource Valley is to market the business location advantages of mid-East Tennessee to corporate decision makers and to facilitate regional initiatives that impact the creation of quality job opportunities. Tennessee's Resource Valley represents fifteen (15) counties in East Tennessee: Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier and Union.

Consultant Team

Tennessee's Resource Valley was fortunate to attract the talents of two internationally-renowned economic strategy consulting firms. Their leadership, experience and expertise established credibility for the 21st Century Jobs Initiative. Their recommendations, included with this report, provided sound solutions to the issue of future economic growth for East Tennessee.

The consultant team for the 21st Century Jobs Initiative was comprised of DRI/McGraw-Hill from San Francisco and the IC² Institute at the University of Texas-Austin. These two consulting firms are known world-wide as economic strategy experts.

DRI/McGraw-Hill

Ted Lyman, the 21st Century Jobs Initiative project director, was principal of DRI/McGraw-Hill's Economic Competitiveness Group. As the lead consultant, DRI/McGraw-Hill was involved in every phase of the planning process. DRI/McGraw-Hill helped develop economic strategies in Austin, Jacksonville, Salt Lake City and Wichita. State economic development projects include Iowa, Nebraska, North Dakota and Wyoming. These projects included recommendations for developing high-tech private industry sectors and for enhancing university-driven technology transfer activities.

IC² Institute

Headed by Dr. George Kozmetsky, a co-founder of Teledyne, the IC² Institute is an international center specializing in technologically-driven economic development. The IC² Institute brought to the project their knowledge of emerging industries and new approaches to the roles of private and public institutions in economic development and technology commercialization. The IC² Institute is known around the world for its model of technology-driven economic development, using multi-disciplinary teams to research and formulate problems that require creative solutions.

Work Program

The consultant team's approach consisted of three parts. Economic research formed the foundation upon which the project could build. New approaches to collaboration and networking characterized the cluster working group approach. Finally, the work of cluster groups resulted in action initiatives or "business plans" which were formulated to address specific problems or opportunities within the region.

Tennessee's Resource Valley staff supported the work of the consultant team by providing logistical support and supplementary analysis. In addition, staff developed a database of individuals and companies participating in the project, arranged meetings and prepared follow-up correspondence. Additional staff support was provided by the University of Tennessee and Lockheed Martin Energy Systems.

Economic Analysis

The fifteen county economy was analyzed by using the "cluster" approach to regional economics. Cluster-based economic development is premised on the fact that companies are less able nowadays to provide all of the inputs they need to succeed. As a result, they look for communities or regions which can provide these inputs. Where these inputs exist, companies gain a competitive advantage.

Clusters are comprised of both small and large firms and the economic infrastructure that serves them. Economic infrastructure includes human resources, technology, financial resources, physical infrastructure, quality of life, and the tax and regulatory environment. By fine-tuning the economic infrastructure to meet the needs of clusters, communities and regions can create unique opportunities that will encourage businesses to expand, attract outside investment, and create jobs.

Economic Clusters (Employment analysis)

Using input-output analysis and export trade data, DRI/McGraw-Hill identified eight clusters of economic activity in East Tennessee:

- Agriculture and Food Products
- Apparel and Textiles
- Automotive and Transportation
- Business and Financial Services
- Forest Products
- Metals and Materials
- Technology Intensive Products and Services
- Tourism

These eight clusters represent the major concentrations of economic activity within the region. Specifically, these are the industries that sell products or services outside the region and, therefore, bring money into the region. Examination of the manufacturing clusters indicated that, in some instances, a high demand existed within the region for a product or a raw material that was not being met by suppliers within the region. These "gaps" were identified as possible targets for industrial recruitment. Economic and employment data for each cluster can be found in Section II of the Final Report.

Economic Benchmarking

As a part of its analysis, DRI/McGraw-Hill compared the Resource Valley region to similar regions in the United States. A report titled "Benchmarking East Tennessee's Economic Capacity" was produced which compares East Tennessee (Knoxville Metropolitan Statistical Area) to the following regions:

Albuquerque	Austin	Chattanooga
Colorado Springs	Denver	Jacksonville
Memphis	Portland	Raleigh/Durham
Orlando	Salt Lake City	San Antonio
San Jose (Silicon Valley)	Tucson	

This reference group was chosen based on the population size and employment growth. It offered a "yardstick" by which to measure East Tennessee's economic performance. Each one of these regions is attempting to capitalize on its comparative economic advantages and become advanced 21st century economies.

Economic capacity was measured in six categories of economic infrastructure: human resources, technology, financial resources, physical infrastructure, quality of life, and tax and regulation. The

methodology and results are further explained in the Benchmarking study accompanying this report.

Cluster Working Groups

An important component of the consultant team's work plan was citizen participation in the economic strategy planning process. To get the best possible input from business and community leaders in East Tennessee, a series of three highly focused meetings were held involving each of the eight clusters. Each cluster's representatives formed a working group whose mission was to use the economic analysis on their cluster to brainstorm for strategic actions that could improve the quality of jobs created in our economy.

The public was invited to share its views on the future of their cluster and our regional economy. Resource Valley staff initially sought to recruit co-chairs for each of the clusters. In doing so, leadership qualities that would lend credibility to the effort and also allow the best possible input into the working group phase of the project were sought. Secondly, Resource Valley staff contacted each of the 15 counties to add names and diversity to each working group.

The cluster working group process was facilitated by Ted Lyman and Jim Gollub, principals of DRI/McGraw-Hill's economic competitiveness group. This series of three highly-focused meetings enabled business and community leaders to take a careful look at where the region's economy was headed and to formulate action plans to intervene. The objectives of the three meetings were:

Meeting 1 (mid-June, 1995)	Identify common industry needs Set priorities for action
Meeting 2 (mid-July, 1995)	Match regional resources with industry potential Explore a future industry cluster vision Narrow the possible action areas
Meeting 3 (September, 1995)	Complete Business Plans for initiative implementation

Attendance at the working group meetings ranged from a high of 80 attending the first Technology-Intensive group meeting to a low of 8 attendees at the third Apparel and Textiles group meeting.

21st Century Jobs Initiative Survey

A survey was undertaken in July, 1995 to gather information from a more diverse array of leaders within East Tennessee. This survey involved a non-random sample of 1500 business and community leaders from East Tennessee. Non-random sampling techniques were used in order to get input from a majority of the region's business and community leaders. While a random sample was not used for this survey, every effort was made to distribute surveys to leaders in all 15 counties of the Resource Valley region. Six hundred individuals participated. The purpose of the survey was to discover perceptions in the region on the facilitators and inhibitors of economic growth and new business formation. A detailed discussion of the survey findings can be found in Section III of the final report.

Highlights from the survey findings were:

- The region possesses a strong technological base of knowledge.
- Competitively priced land and a pro-business environment are available.
- Quality-of-life ranked highly among respondents.
- Protecting the region's natural assets and resources to maintain our quality of life is a concern.
- The region's technology base must be harnessed to form new business enterprises.

Findings and Accomplishments

Listed below are highlights of the findings and accomplishments of the Jobs Initiative.

- For the first time, economic data on the 15 county regional economy was gathered and analyzed.
- From this analysis, eight economic clusters were identified. These clusters form the "backbone" of our economy. While they represent 30% of all employment in the 15 counties, the other 70% of jobs in our economy depend on these eight clusters.
- Employment growth in our five traditional manufacturing clusters was forecast to remain steady or decline over the next ten years.
- Rapid increases in employment growth are expected in the Business and Financial Services cluster and the Tourism cluster.
- Supply gaps or gaps in our economic clusters were identified. The consultant team examined the purchasing patterns for raw materials and finished products in our region. From this

analysis, they identified products and services where demand was not being met by regional suppliers. This "Supply Gap Analysis" will enable economic development professionals to more effectively target business and industries.

- Unique opportunities exist in this region to infuse our traditional manufacturing processes with new technologies emerging from the Oak Ridge complex. These opportunities have been identified and categorized by cluster.
- Issues were articulated that are important to the vast majority of East Tennessee's business and community leaders.
- These issues were grouped into five "Big Ideas" for our region:
 - 1) Educate and train a world-class workforce
 - 2) Grow the jobs of the 21st century
 - 3) Make Oak Ridge's technology more accessible
 - 4) Connect the Valley to the world
 - 5) Market East Tennessee as the place to be

The regional leadership is now working together to implement these five "Big Ideas."

- Thirty business plans were formulated by the cluster working groups. Each one of these business plans was scored by the working groups and then given an average "readiness" score based on the perception of its readiness for implementation.
- A "blueprint" for action was formulated by the cluster working groups drawing on the regional economic analysis.

A new vision was developed for East Tennessee as a result of the Jobs Initiative: Build a 21st century economy that is driven by our advanced technologies and unique lifestyle. "Five Big Ideas" were developed to help ensure East Tennessee's future success:

Educate and train a world-class workforce

Strengthen business/education partnerships to build the most effective school-to-work program in the nation.

- Tennessee Valley Scholars program was initiated in Blount County and is being promoted to other counties. This program focuses on students that are more likely to enter the workplace directly from high school.
- Pellissippi State Technical Community College School to Career Initiative. Pellissippi State received a \$1.3 million grant to develop a 2-county school to career program.
- Manufacturing Technology Program (Alcoa High School). An internship program was developed with Alcoa High School.
- An automotive supplier skill needs assessment was completed by Roane State Community College which was used by the automotive cluster.

Grow the jobs of the 21st century

Improve access to capital, markets and business resources to create a valley of entrepreneurs

- Retreat involving CEOs recommended the formation of an entrepreneurial center.
- At the 1st and Future 50 meeting in Knoxville in May, it was announced that the UT Business School intends to form a CEO group to examine entrepreneurial support issues.
- At the Governor's Council on Agriculture and Forestry conference in May, 1996 a series of recommendations were endorsed that will enhance the growth and expansion of forest products firms and employment in the state. Many of the recommendations came from the forest products cluster.
- The Manufacturing Means Jobs Initiative was launched by a partnership of the Tennessee Board of Regents, the University of Tennessee, Lockheed Martin, and the Department of Economic and Community Development. This initiative will enhance the delivery of technical services to existing industry in the state and improve communication channels between the involved institutions.

Make technology more accessible

Use our region's advanced technologies to help our existing and new businesses compete in the global marketplace

- Tennessee Center for Research and Development (TCRD) is staffing a Technology Commercialization Working Group to review barriers to the commercialization of technology.
- A list of barriers to commercialization will be identified by the working group as well as the development of an implementation strategy

Connect the Valley to the world

Provide highways, air routes and communications networks to move workers, visitors, freight and information into, out of and around East Tennessee

- An Information Technology Business Association (ITBA) was formed. The association currently has 25 member companies. Its mission is to promote the creation, expansion, and attraction of information technology companies to East Tennessee.
- Regional transportation priorities are being articulated and discussed with the Tennessee Department of Transportation. The primary focus is a "beltway" around Knoxville.
- The Knoxville-Oak Ridge Regional Network (KORRnet) went on-line in June, 1996. KORRnet is the region's Freenet on-ramp to the Internet. Plans are to expand this service to the 15 counties of Tennessee's Resource Valley.
- An Internet conference is planned for area CEOs, government leaders, and small businesses. The theme will be: "How the Internet can add value to your business."
- Attract low-fare airlines to McGhee-Tyson Airport.
- Explore new forms of communication between clusters, economic development groups, and government through the use of the Internet and the Knoxville-Oak Ridge Regional Network (example: a medical on-line discussion group is being formed.)
- Continue to pursue toll-free dialing for Tennessee's Resource Valley counties.

Market East Tennessee as the place to be

Promote our natural and man-made resources to businesses and visitors, marketing our technology and tourism

- A cluster-based marketing plan was developed which ties together the technology and lifestyle themes.
- Resource Valley continues to generate around 100 responses a month through its marketing activities.
- The Resource Valley trade show display was updated to incorporate the technology message.
- The "Next Big Steps for Downtown" Knoxville planning process was successfully completed as a follow-on to the 21st Century Jobs Initiative.
- Tennessee's Resource Valley World Wide Web home page has been redesigned and is updated on a regular basis.
- The Resource Valley Roundtable, comprised of economic development organization representatives from around the region, was organized to develop common themes and marketing strategies.

- Marketing possibilities within emerging clusters in our economy such as information technology, environmental management/restoration, and business services are being explored.
- Market the Resource Valley's technology assets and lifestyle through trade show display, targeted mailings, advertisements and the web page.
- Working with the Airport Authority and Lockheed Martin, Resource Valley placed murals at the McGhee-Tyson Airport to promote the Resource Valley to the air traveler.
- A new technology-based marketing initiative is being launched to attract high tech firms to the region.

Progress Monitoring

Perhaps the greatest accomplishment of the 21st Century Jobs Initiative is that a framework was created for business and community leaders to collectively solve problems in the future. According to the consultant team, communities which prosper in the 21st century will be those that have learned to work together to solve today's problems and anticipate tomorrow's challenges.

Tennessee's Resource Valley tracked the progress of the 21st Century Jobs Initiative by encouraging the implementation of the "Five Big Ideas" that emerged from the consultant team's recommendations. A full-time project manager, Allen Wimmer, oversaw the initiative and presented a progress report on a quarterly basis to the Tennessee's Resource Valley Board of Directors and on an annual basis to the Department of Energy.

Tennessee's Resource Valley continues to facilitate and advocate the implementation of the 21st Century Jobs Initiative by working closely with regional business and community leaders. In some cases, Tennessee's Resource Valley took the lead role (i.e. marketing). In others, Tennessee's Resource Valley staff provided more of a supporting role. Nevertheless, Tennessee's Resource Valley has a strong Board of Directors comprised of private and public sector leaders who continue to work toward improving our regional economy and lessening our dependence on Federal funding with the goal of increasing our economic prosperity.