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Northern NM Regional Economic Development Initiative

Regional Economic Development Strategic Plan
February 2009

Prepared for Los Alamos County and Regional Partners:

City of Española
Rio Arriba County
City of Santa Fe
Santa Fe County
Taos County
Town of Taos

A "Progress through Partnering" Initiative

REGIONAL DEVELOPMENT CORPORATION

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Executive Summary

The Northern NM *Regional Economic Development Initiative* or REDI is one of Los Alamos County's *Progress through Partnering* initiatives, and is funded by increased gross receipts tax revenue from the change in Los Alamos National Laboratory's contractor status. In 2007, Los Alamos County signed cooperative agreements with seven local governments in the four-county region of Los Alamos, Rio Arriba, Santa Fe and Taos to develop this Plan, which will be implemented over a 25-year horizon.

REDI began as a public sector driven effort focused on investment in regional projects in the strategic areas of Human Capital and Infrastructure, and on initiatives in Public Policy. During the planning process, five goals were developed for REDI. The first goal, *Diversify the economy,* led the project team to recommend that REDI's initial focus be placed in the framework of target industry clusters. Because clusters focus on strengthening the private sector, they orient economic development efforts toward market opportunity and private sector investment. The REDI process prioritized four target clusters—Renewable Energy and Green Industry, Technology, Media and High Value/Value Added Agriculture—which have proven to be sound from a strategic perspective. REDI's clusters resonate well with the target industries and projects identified by local governments in the region, as well as with statewide industry clusters and projects. And there is a considerable amount of synergy among the four industry clusters, lending greater opportunities to leverage the clusters together.

Under a cluster-focused approach, REDI's mission is ***to develop and strengthen the target clusters of Renewable Energy/Clean Industry, Media, Technology and High Value/Value Added Agriculture in northern NM.*** This will largely be accomplished through targeted regional business attraction, retention, expansion and creation efforts focused on the four clusters, beginning in 2010. A strong emphasis is recommended for attracting and creating location-neutral businesses in the region. Key projects and initiatives in Human Capital, Infrastructure and Public Policy will create an ecosystem in which the clusters can grow and thrive. REDI will take a leadership role in such projects and initiatives that are regional in nature and do not duplicate existing efforts, and will partner on and support projects that are local in nature or have existing capacity. Through this framework, REDI has identified the following short-term projects and initiatives as REDI priorities:

- **Regional Broadband Project** to plan for and deploy broadband infrastructure throughout the region. Broadband is critical to the success of the Technology and Media clusters, as well as for location-neutral businesses, and will provide new economic development opportunities for rural areas.

- **Regional Cluster Strategies** to develop a private sector and market driven approach for REDI's target clusters. The strategies will identify northern NM's competitive advantages in the clusters, providing a strategic direction for REDI's business attraction, retention, expansion and creation efforts.

- **Amendments to the Local Government Economic Development Act (LEDA)** to lift the restriction on retail for rural areas and increase the "cap" of public money invested in economic development projects from 5% to 10% of annual general fund expenditures.

- **Human Capital Partnerships** that better align the efforts of economic development, community colleges, schools and workforce entities. Recommended initiatives include training and education to support the target clusters, a training and technical assistance network for employers and employees, high school career and technical training, career pathways, industry mentors programs and other customized efforts.

- **Annual State of the Region Conference** to prioritize regional capital projects and create a regional policy agenda. Through regional cooperation, greater success can be achieved at the state and national levels.

REDI recommends a public-private partnership as the vehicle to implement this Plan. This will require one year to secure financial contributions and to assess feasibility of the effort. Public-private partnerships are a proven model for regional economic development efforts nationally, and will result in a more sustainable, market-driven funding source for economic development. Like REDI's cluster-focused approach, this implementation mechanism is recommended to strengthen and seek leadership from the private sector.

Introduction

Origin of the Plan

On December 21, 2005, the US National Nuclear Security Administration awarded the contract to manage and operate Los Alamos National Laboratories to Los Alamos National Security, LLC, a group of private and public organizations. With the change in management, Los Alamos County began receiving gross receipt tax payments from LANS, something which they had not received before when the University of California served as the management and operating contractor at LANL.

In the fall of 2005, Los Alamos County staff, Council leadership and Representative Jeannette Wallace discussed using some of the potential increased gross receipts to benefit the northern NM region. On February 14, 2006, the Council adopted a list of "Guiding Principles" on utilizing gross receipts taxes on projects that would enhance regional partnerships, and further approved strategic goals with a regional context. Additionally, on August 12, 2006, the Council approved using up to $1.5 million annually of the gross receipts tax revenue for these regional initiatives.
The regional alliance that developed from Los Alamos County's leadership is called "Progress through Partnering." The partners in the effort are Los Alamos County, the City of Española, Rio Arriba County, the City of Santa Fe, Santa Fe County, the Town of Taos and Taos County, representing the four-county northern NM region. In 2006 and 2007, the regional partners signed cooperative agreements, which were approved by Los Alamos County Council at their March 20, 2007 meeting. Each cooperative agreement carries a five-year term limit and designates the regional projects for the first year. 2007 project initiatives and funding for each are as follows:

1. **North Central Regional Transit District**. $500,000 (2007), $1.1 million (2008) and $880,000 (2009) used to pay membership assessments for RTD members, operational expenses associated with start-up costs related to NCRTD and half of the local matching funds for transit projects of participating agencies.

2. **Española Basin Regional Planning Issues Forum (EBRPIF)**. $25,000 (2007) and $150,000 (2008, 2009) to support administration and operations of the group and to facilitate regional issues development.

3. **Indigent Health Care**. $460,000 (2007, 2008) to supplement Sole Community Hospital payments that are matched with federal Medicaid funds at St. Vincent Hospital ($400,000) and Española Hospital ($60,000).

4. **Regional Economic Development Strategic Plan**. $250,000 (2008) designated for award to a planning entity to be selected by the County via a formal procurement process for the development of a Regional Economic Development Strategic Plan.

In October 2006, Los Alamos County issued an RFP for the Regional Economic Development Plan and the regional partners reviewed proposals and interviewed two firms. The Regional Development Corporation (RDC) was chosen as the contractor for the plan. The RDC entered into

a partnership with the North Central NM Economic Development District (NCNMEDD) for the proposal and development of the Plan.

Major Plan Requirements

Pursuant to Los Alamos County's RFP and contract for the Regional Economic Development Strategic Plan, the following elements must be addressed and/or included in the Plan:

1. The potential to complement and leverage LANL and LANS economic development assets, including recommendations to modify LANL economic development plans or programs to improve economic diversification.

2. Proposed projects for implementation in the next ten years, including workforce development and education programs, transportation and communications infrastructure (broadband), housing initiatives, and efforts to address other infrastructure needed to support economic development.

3. The potential for integrating projects with New Mexico economic development projects and efforts.

4. A methodology to integrate the Plan with existing city, county, and regional economic development plans.

5. Evaluation and recommendation of federal, state, regional and local incentive programs (public and private) to grow the businesses, industries or clusters identified in the Plan.

6. Analysis of current indicators and method for tracking changes over time resulting from the implementation of the Plan and other events.

7. A funding strategy to maximize funding opportunities with the State of New Mexico, federal government and other funding sources.

8. Mechanism for developing a sustainable implementation of the initiatives outlined in the Plan.

Planning Process

The planning process to create the Economic Development Strategic Plan was branded as "REDI," or Northern NM *Regional Economic Development Initiative*. The "REDI" brand may also be employed for the implementation phase of the effort. The planning process for REDI involved three distinctive phases, as described in this section.

Phase I: Data Gathering and Analysis began in December 2007 and ended on May 1, 2008. This phase included individual, one-to-one meetings with approximately 65 stakeholders in the region (Dec. & Jan.), data gathering and analysis (Feb. & March), a second round of individual and group stakeholder meetings in April to confirm project team findings, and a stakeholder workshop on May 1. The combined findings from the meetings and data analysis were explored in a "Regional Needs Report,"

REDI Stakeholders

- Local Governments, including regional partners
- Tribal Governments
- State and Federal Agencies
- Economic Development Organizations
- Chambers of Commerce
- Institutions of Higher Education
- School Districts
- Major Private Sector Entities, including LANL

portions of which are included in Appendix B and in the Performance Measures Section of this Plan.

During this phase, the project team distilled the findings from the one-to-one meetings and the data analysis into a series of goals for REDI, four strategic areas in which REDI should focus its investments, and ten industry clusters that were either established or emerging in the region. As shown below, REDI's goals evolved directly from regional needs identified in this phase of the planning process.

Regional Needs	REDI Goals
1. NM, and northern NM in particular, are overly dependent on government jobs and investment.	1. Diversify the economy.
2. NM has some of the lowest educational indicators in the US, and rural schools typically lag behind.	2. Develop a high-quality workforce.
3. Taos and Rio Arriba counties have very low incomes and high poverty rates.	3. Increase the number of higher-paying jobs.
4. Northern NM suffers from "brain drain" of its best and brightest, who move away for better economic opportunities and lower costs of living.	4. Retain and attract youth and families.
5. BBER is projecting a substantial shift in NM's population to the urban areas.	5. Make rural communities vibrant.

Three of REDI's four strategic areas—Infrastructure, Public Policy and Human Capital—were described as the "building blocks" or "foundation" for economic development. They are also areas in which the public sector has significant control or influence. The project team recommended that strategic investments in these areas were needed before economic development efforts could be truly effective, particularly in some parts of the region. For example, northern NM's lack of broadband makes it difficult to support location-neutral businesses and high-tech industries. The region's low skill levels, relatively low unemployment rate and poor educational performance make improving our current and future workforce an imperative, particularly as the US moves into a constrained labor market.

The fourth strategic area of Economic Development Services was established due to interest by local governments in a regional approach to economic development. While this idea was initially spurred by the lack of resources in many local governments to establish their own economic development programs, it quickly became apparent that numerous other benefits would result. First, northern NM is a relatively small area, with a total population of just under 250,000. Demonstrating a combined labor force to businesses desiring to relocate would create a significant advantage, particularly for smaller communities. Providing relocating and existing businesses with various options for site selection would also help keep more businesses in northern NM. In addition, the potential to leverage the assets of each community in the region (for example: technology in Los Alamos, sites in Rio Arriba County, arts communities in Taos and Santa Fe) would create another advantage in attracting and growing businesses.

REDI's meetings with regional stakeholders and review of economic development plans and documents lead to the identification of ten industry clusters which were established or emerging in the region. Clusters such as arts and culture and recreation are established and part of the region's successful tourism industry. Others, such as renewable energy, are beginning to evolve for a variety of external factors, and many local governments in the region have created strategies to engage in this cluster. REDI created a matrix of these clusters and the four strategic areas, showing real and potential projects and initiatives at the intersection of each cluster and strategic area. The purpose of this was to demonstrate how investments in the strategic areas would support one or more industry clusters, and therefore, economic development in the region.

At a stakeholder workshop held on May 1, 2008 ("May Day Consensus"), stakeholders were asked to prioritize the ten industry clusters according to objective criteria, such as which clusters provide high-paying jobs, and which clusters are feasible given workforce, infrastructure and environmental considerations. Stakeholders were then asked to vote on which clusters "provide the greatest potential and opportunity for northern NM in the short-term (1-5 years)." The clusters that were selected were (in order of votes): Renewable Energy/Green Industry, Technology, Value Added Agriculture and Entertainment (film and music). It should be noted that the four target clusters overlap significantly with the other six, and that many of REDI's projects and initiatives will benefit more than one of the ten clusters.

REDI Target Industry Clusters (in bold)
1. **Renewable Energy/Green Industry**
2. **Technology**
3. **Value-Added Agriculture**
4. **Media**
5. Health & Wellness
6. Arts & Culture
7. Manufacturing
8. Recreation
9. Forest Products
10. Security

For the most part, the four target clusters represent a focus on high-paying jobs and industries that will grow the regional economy through a high potential for export of goods and services. There is also more potential for REDI to add value in these four clusters because they are *emerging* clusters, and do not have the same amount of organizational support as established clusters in the region. A good example of this is the New Media segment of the Media Cluster, which represents the intersection of technology, arts and culture and entertainment. This is an emerging cluster segment whose development is a critical recommendation in the report *Economic Importance of Santa Fe's Arts and Cultural Industries* (2004) by the UNM Bureau of Business and Economic Research. REDI can add more value to New Media, which currently has little formal, institutional or organizational support, than to traditional arts and culture initiatives, which are well supported by the numerous arts organizations and institutions in the region. The intersections among the clusters are described in more detail in Section II: Economic Development Services, and opportunities for projects and initiatives in non-target clusters are described under Other Opportunities in the same Section.

Phase II: Implementation Plans and Regional Expert Teams began in June 2008 and ended in September 2008. During the months of June and July, REDI convened Regional Expert Teams in the four strategic areas of Economic Development Services, Human Capital, Infrastructure and Public Policy. Each team held eight to nine meetings over the two-month period, drawing upon the expertise of public and private sector representatives in the four strategic areas to develop an implementation plan for their team's recommendations. The implementation plans were assimilated into a Regional Expert Team Report. The team leaders and purpose of each Regional Expert Team is shown in the chart below.

Regional Expert Team	Team Leader	Purpose
Economic Development Services	Cecilia Ciepiela	Make recommendations for providing regional ED services and for target cluster development.
Human Capital	Sharon Shaffer	Recommend initiatives that will bring together workforce, education, public and private sector entities in a comprehensive approach to address current and future human capital needs.
Infrastructure	Gus Cordova	Prioritize infrastructure projects of regional benefit in the areas of water and wastewater, transportation, telecommunications and affordable housing for regional capital improvements planning.
Public Policy	Fred Brueggeman	Recommend specific public policy initiatives for the next 5-10 years to support the target industry clusters and improve economic development potential in NM and northern NM.

Upon completion of the Regional Expert Team meetings, the project team focused on proposing and engaging the regional partners in consensus on an implementation strategy for REDI. The project team wished to determine REDI's mechanism for implementation well in advance of completion of the plan. This would enable the Plan to be action-oriented, and to lay out a game plan for immediate implementation activities. In August and September 2008, the project team met individually with each of the seven regional partners, and made presentations to their governing bodies. On September 29, 2008, the regional partners convened for a meeting on the implementation mechanism, and arrived at general consensus on the mechanism, funding and

governance structure, as well as 2009 regional project and policy priorities. These are described in the Implementation Section of the Plan.

Phase III: Plan Drafting, Review and Adoption began in October 2008 and ended in December 2008. The Regional Economic Development Strategic Plan was drafted in October, and was reviewed by stakeholders at an event in early December. Comments from stakeholders and the regional partners were incorporated into the plan in December. Los Alamos County plans to propose the Plan's adoption in early 2009.

In late 2008 and early 2009, the project team also solidified the funding and legislative strategy for the regional projects proposed for the first year of implementation. This involved meeting with key New Mexico legislators; potential funders such as state agencies, the Economic Development Administration and private foundations; and key private sector representatives who could support and/or help fund the effort.

Phase IV: Implementation. While outside of the scope of the planning contract, REDI's implementation is slated to begin in 2009. Beyond the priority projects named in the Executive Summary, numerous tasks related to governing and financing REDI are required in 2009, including:

* Securing financial commitments from the seven regional partners and the private sector, to determine the feasibility of a public-private partnership as REDI's implementation mechanism.
* Securing grant funding for a three-year start up period.
* Establishing a governing body for REDI that expands to include private sector representatives.
* Formalization of REDI and its governing body through a 501(c)3 or other structure after feasibility of the public-private partnership is determined.

In terms of long-term implementation, it is important to recognize that this Plan represents the larger universe of what the region should work toward *over the next 25-years*, prioritized and scheduled according the needs and opportunities that exist today. Actual implementation, however, will depend on financial, political and community support for various initiatives. For example, it is quite possible that a initiative which appears to be a relatively low priority in the Plan may be implemented immediately because a funder is willing to support it, the initiative is politically popular, or community leadership emerges in that area.

Economic Development Context

The context for a regional economic development effort is much larger than the regional or local economies which are the subject of this Plan. This was aptly demonstrated in late 2008, when the subprime mortgage crisis and other factors gave way to a national, and then global, economic downturn of historic proportions. While the downturn should not dictate the fate of a 25-year economic development plan, it does have significant short and long term implications. Some implications cannot yet be identified, others—such as local and state government budget shortfalls—may limit government funding in the short term, and still others—such as the federal economic stimulus package—will provide new opportunities for infrastructure investment. The current economic downturn, however, is just the first of many changes that this Plan must weather if it is to be a viable long-term effort. As a result, it is imperative that this Plan remain a living document that is continually informed by the larger economic context, and implemented according to the will and leadership of the region.

Key Definitions

This Section defines some of the concepts and tools used in this Plan and provides an overview of today's knowledge or innovation economy.

Economic Base Jobs. At a meeting of the REDI regional partners, Mark Lautman, former Director of Economic Development at Mesa del Sol aptly described economic development as the ability of a community to generate more in revenue than it must pay in services to support its population. Simply put, if the economy grows faster than the population, the tax base will grow, and there will be more dollars to serve each person in the community. When local governments make decisions about economic development, it is important to consider that every tax dollar comes from a private sector, commercial transaction.

Economic base jobs are central to this definition because they produce a good or service that is sold outside of the community, and therefore grow the economy by bringing in money from the outside. Non-economic base jobs, on the other hand, produce a product or service that is purchased in the local economy. Examples include local restaurants, dry cleaners, beauty shops and grocery stores. While also critical to the economy, the markets for these goods and services are limited by the size of the local population. A municipality of 10,000, for example, can only support so many dry cleaners. Of course, there is a relationship between economic base and non-economic base jobs. It is estimated that for every economic base job, 2.5 new non-economic base jobs are created in the local economy.

Value Chain Analysis (VCA) is a practical tool based on competitiveness theory developed by Michael Porter, Professor at Harvard Business School. While developed for application at the firm level, it has been adapted for application to industry and sector analysis.[1] The methodology is a straightforward and objective analytical tool for assessing key market actors, their roles and interrelationships, competitiveness and incentives *vis a vis* specific market opportunity. The methodology has been implemented world wide to analyze a variety of market opportunities and is

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[1] See Institute for Strategy and Competitiveness, http://www.isc.hbs.edu/

based on the following assumptions, which have been documented based on on-the-ground experience:

- Increased knowledge of end markets drives change
- Industry-level competitiveness is as important as firm-level competitiveness
- Incentives for upgrading are offered by better knowledge of markets and by scale and reduced risk achieved through value chain collaboration
- Ongoing learning is necessary for keeping up with consumer demand and preferences
- Firms learn primarily from their buyers
- Willingness to collaborate among competitors increases the benefit to all value chain stakeholders

A value chain is defined as "the full range of activities and services of market actors required to bring a product or service from its conception to its end use and beyond."[2] Market actors in the value chain can include producers, processors, input suppliers, exporters, retailers, etc., as well as supporting services such as finance, legal services, research and development, specialized technical services, or information and communications technologies. The approach moves away from a singular focus on producers to a holistic understanding of the value chain in which they operate *vis a vis* their target market. The approach provides an understanding of the competitive requirements and "success factors" of the target markets and, based on that, evaluates the constraints and opportunities currently faced by value chain members in capturing it. The aim is to identify the most critical leverage points where solutions and interventions will have the greatest impact on the value chain.

Figure 1: Value Chain Framework
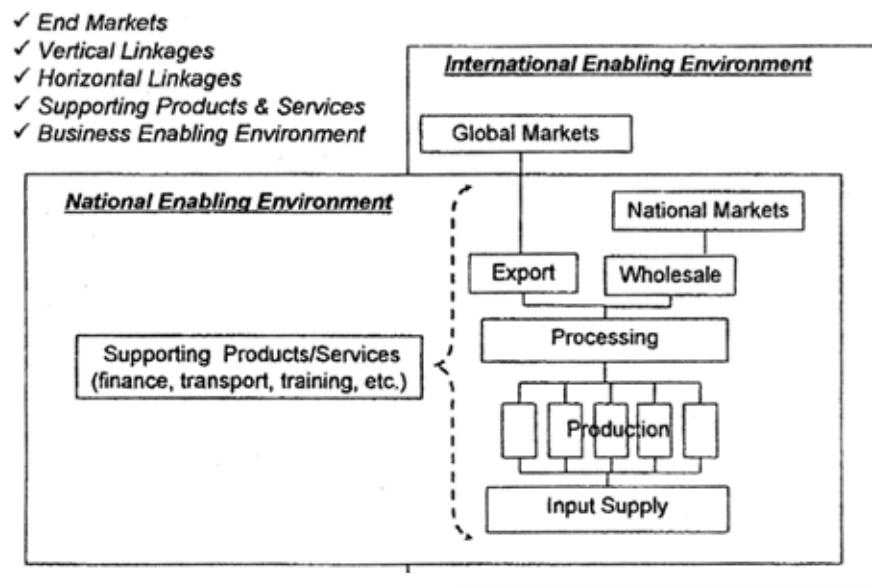
Source: AIS Development

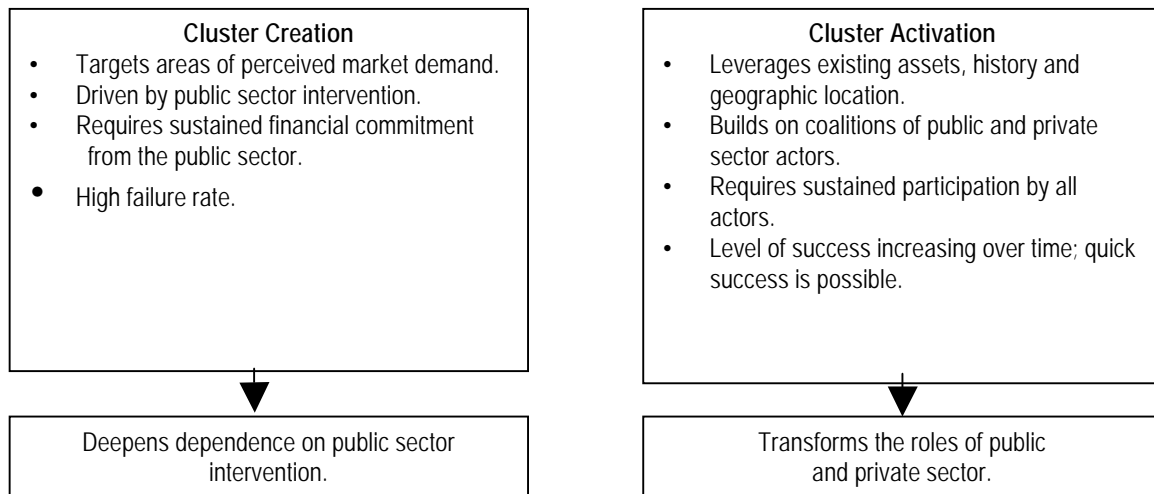[2] *USAID Briefing Paper: The Value Chain Framework.* This Briefing Paper is based on: Olga Kula, Jeanne Downing, and Michael Field, *Globalization and the Small Firm: A Value Chain Approach to Economic Growth and Poverty Reduction* (AMAP BDS Knowledge and Practice microREPORT #42, USAID/G/EGAT/MD. Washington, D.C.: ACDI/VOCA, 2006). http://www.microlinks.org/ev_en.php?ID=21629_201&ID2=DO_TOPIC.

Industry Clusters are *geographic* concentrations of interconnected businesses, suppliers, and institutions associated with a particular industry, and have been used widely to increase the competiveness of geographic regions. While the concept of agglomeration upon which industry clusters are based dates back to the late 1800s, industry clusters were popularized by Michael Porter in *The Competitive Advantage of Nations* (1990) and by Paul Krugman in *Geography and Trade* (1991). Industry clusters are typically identified and developed around the following comparative advantages: traditional knowledge and skills retained in a geographic area, natural resources linked to a geographic location (biofuels in Iowa), or technology resources associated with universities and research centers (Silicon Valley). However, because globalization often precludes geographic concentration of an entire cluster or value chain, Hubs and Nodes, another geographic model, builds on the industry cluster model to propose cooperation among *linked regions*.

Government programs widely use industry clusters for competitiveness initiatives; however, as shown below, Michael Porter and others differentiate government-driven "cluster identification" from more successful "cluster activation," which assumes that private sector champions, rather than government entities, drive the process.

Figure 2: Cluster Creation vs. Cluster Activation

Cluster Creation	Cluster Activation
• Targets areas of perceived market demand. • Driven by public sector intervention. • Requires sustained financial commitment from the public sector. • High failure rate.	• Leverages existing assets, history and geographic location. • Builds on coalitions of public and private sector actors. • Requires sustained participation by all actors. • Level of success increasing over time; quick success is possible.
↓	↓
Deepens dependence on public sector intervention.	Transforms the roles of public and private sector.

Source: Michael Porter, 2003

The Innovation Economy

The US economy of today is markedly different than the nation's "Old Economy," which was based on resources, manufacturing and goods production. Actually, goods-producing employment has been declining in the US since 1910. In 1940, goods and service-producing employment each represented approximately 50% of jobs in the US. Since then, goods-producing employment has declined to the extent that it represented slightly over 20% of jobs in 2000, with service-producing employment making up just under 80%.[3] While conventional wisdom frequently points to off-shoring and outsourcing to places with lower labor costs as the primary cause, off-shoring and outsourcing are merely outcomes of an industrial evolution driven by the knowledge or innovation economy. This new economy drives technological advancements that increase productivity and enable global networks.

Table 1: Comparison between Old and New Economies

Industrial Age (Old Economy)	Knowledge Age (New Economy)
Economy based on resources	Economy based on human knowledge
Success determined by advantage in key resource	Success determined by people who can learn & adapt
Competitive edge was cheap place to do business	Competitive edge is a highly-skilled workforce
Job creation	Wealth creation
Individual projects	A balanced portfolio of investments
Funding research projects through competitions	Investing in commercialization of technology
Bureaucracy	Maximizing return on investment
Inputs and activities	Results and outcomes

Adapted from *The Workforce and Economic Development Connection*, a presentation given by Richard Seline, CEO, New Economy Strategies, at the International Economic Development Council (IEDC) professional development conference, September 6-7, 2007

The innovation economy is characterized by persistent and repetitive change in which things are constantly in flux. Rapid technological changes underlie much of this, as industries must adjust to new modes of production, marketing and distribution. In this context, economic development cannot be a straight line to an ultimate goal, but must employ a nimble set of strategies that are constantly updated and realigned in partnership with the private sector, which has first-hand experience with these changes. Other important aspects of the knowledge or innovation economy, as related to economic development, are described below.

- Technology and globalization have "sliced the supply chain" separating different stages of production into different states and nations. This has implications for how cluster-based initiatives such as REDI approach vertical integration, which now may require partnerships with other regions rather than local development of the full value chain.

- While traditional manufacturing will continue to move overseas, sophisticated, high value-added manufacturing will become more important in the US. This may create some advantages for New Mexico and northern NM, which historically had no manufacturing base, but possess national laboratories and significant research and development capacity that may

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[3] *Responding in a Turbulent Economy: Creative Roles for Workforce Investment Boards*, A Report to the Ford Foundation, Mark Troppe, Workforce Strategies Group, April 2004.

enable high value-added niche manufacturing. It also raises the issue of continuous advanced training and special, customized training that may require partnerships among scientists, firms and economic development or workforce development agencies.

- The knowledge or innovation economy has tremendous implications for human capital, and vice versa. Human capital is the source of new and creative ideas that are the foundation of the innovation economy, and therefore, the most important competitive advantage for economic development in the future. Due to this heightened role, the US must comprehensively address human capital issues to maintain its global competitiveness.

- The growth of the US workforce is projected to slow dramatically in the next few decades. In 2020, an estimated 12 million jobs requiring post secondary education could go unfilled, assuming retirement of 46 million baby boomers and a 22% increase in jobs requiring post-secondary education. In a constrained labor market, the existing workforce—including retirees, immigrants and unskilled workers—will play an important role. Increased health statistics allow people to live longer, and therefore work longer. And the sheer numbers of immigrants and unskilled or low skilled workers makes them appropriate targets for retraining and programs that enable advancement and improve productivity. The abundant supply of global talent is another important part of the equation. While global talent may cause companies to relocate even highly-skilled work overseas, it also presents an opportunity, as many foreign workers desire to work in the US, and could help offset labor shortages. While it seems possible to address some of the US' labor shortage through such measures, the greatest threat to US competitive advantage exists in its "pipeline" of future workers. While the demand for high-skilled jobs, particularly in STEM disciplines, is increasing, US educational levels are falling; primary and secondary achievement scores are low, particularly in math and science; and a significant skills gap exists in the workforce. If these issues are not addressed, they could undermine the US' competitiveness vis-a vis other countries in the new economy.

Economic Development Services

Economic Development Services is one of REDI's four strategic areas, established due to interest by local governments in a regional approach to economic development. The benefits of providing regional economic development services include the ability to: 1) demonstrate a combined labor force, 2) provide multiple location options for business attraction, retention and expansion prospects, and 3) leverage regional assets to attract, retain and grow more businesses. It also provides a cost-effective way for local governments with no or limited economic development resources to engage in business attraction, retention and expansion, while its regional and cluster focus precludes it from duplicating current economic development efforts undertaken by local governments in the region.

Focus on Target Industry Clusters

This Plan recommends a cluster-focused approach to economic development services. The four target industry clusters identified through the REDI process have proven to be sound from a strategic perspective. The target clusters of Renewable Energy/Green Industry, Technology, Media and High Value and Value Added Agriculture are synergistic and overlap with the clusters and economic development strategies being pursued by the State of New Mexico and individual local governments in the region. It should be noted that while Los Alamos County does not have target clusters, its list of target industries includes NAICS codes that are consistent with those included in REDI's Technology and Media Clusters. In addition, Los Alamos County is focused on retail projects to prevent retail leakage outside of the community.

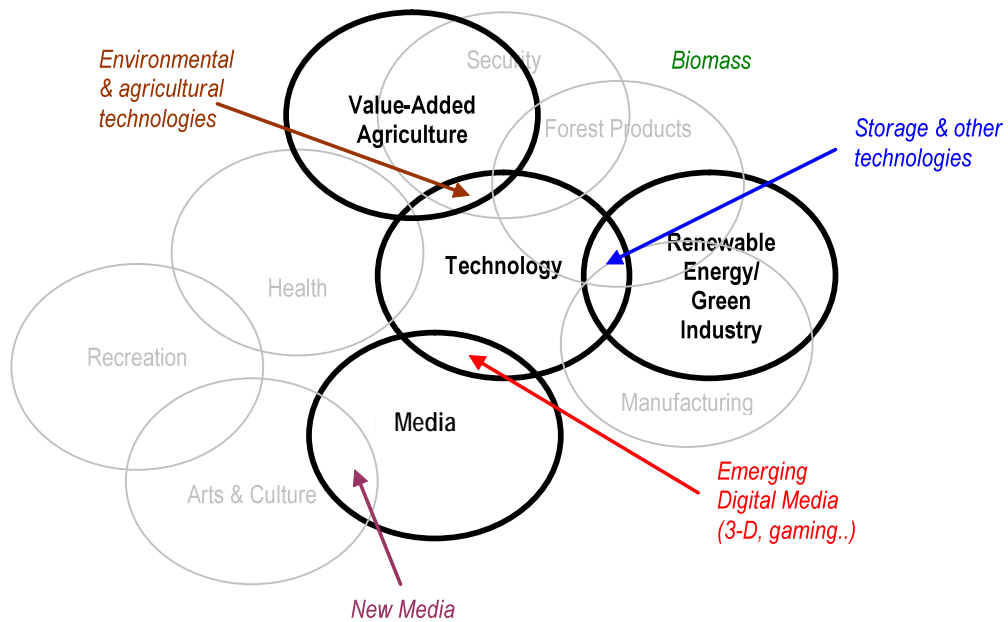Figure 3: Synergy among REDI clusters

Table 2: Synergy with State and Local Clusters

REDI	City of Santa Fe	Santa Fe County	Town of Taos	NM Partnership
Renewable Energy & Green Industry	Green	Clean Renewable Energy & Technology	Renewable Energy	Renewable Energy
Technology	Innovation,Knowledge Based Enterprise		Technology	Technology
Media	Media	Film/Media		Film
High Value/Value Added Agriculture		Agriculture		Food Processing
	Arts & Culture	Arts, Culture & Entertainment	Art & Culture	
		Outdoor Recreation	Sports Recreation	
				Aerospace
				Manufacturing
				Maquila Suppliers

This Section of the Plan is dedicated to further analyzing these four target clusters and recommending an initial strategy for business attraction, retention, expansion and creation in the four-county region. There are two primary reasons for recommending an economic development strategy focused around target clusters, as explained below.

1. **Strengthen northern NM's private sector.** Historically, economic development efforts in New Mexico have been driven by state and local government and their agencies. At the same time, the private sector has frequently looked to government to reduce or take on business risk. While REDI is a government-driven effort, its process has sought and invited participation from the private sector and from organizations and institutions that represent and support the private sector. REDI has drawn upon best practices in economic development to recommend a strong private sector role in northern NM's long-term economic development. Because clusters focus on developing and strengthening the private sector, they provide REDI with the opportunity to change the economic development paradigm from one in which government makes the decisions, to one in which government partners to support the private sector in growing the economy.

2. **Focus on clusters allows REDI to take a *strategic* approach to economic development.** REDI's approach to cluster development is based on the following cluster best practices. Successful clusters are defined by:

   - Being *private sector* driven. This means that solutions to competitive constraints should be commercial in nature, and not depend on government intervention.
   - Being *market* driven. This means having an assessment of cluster competitiveness based on an understanding of the target market and the success factors for competing in it.

- Exploiting and creating competitive advantages, including the potential for regions (or sub regions) to specialize in specific market segments within the cluster.
- Increasing competitiveness by building connections, relationships and partnerships among firms and public institutions in strategic areas and for strategic activities. This implies an understanding of the value chain for each cluster, as well as the relationships of the cluster with capital, support services, workforce and policy institutions.

Regional Cluster Strategies

To remain consistent with these best practices, REDI is recommending that Regional Cluster Strategies be pursued as one of REDI's 2009 priority projects. The needs for and benefits of Regional Cluster Strategies include:

- Create a collaborative regional strategy that "levels the playing field" for the various levels of economic development services that exist in the region.
- Base REDI's economic development services on market-driven data (i.e. Market Intelligence) for the industry clusters. This has the dual effect of making REDI activities more targeted and strategic in nature, and therefore more successful, and providing an objective assessment of what will the *market will support*, rather than what entities and individuals *want to see*.
- Assess the competitive advantages of the region and its communities vis a vis the segments of each target cluster.
- Be developed in a collaborative process (Cluster Working Groups) with both public and private sector representatives. This will help to identify private sector leaders for each cluster, as well as lay the foundation for the public-private partnership described in the Implementation Section of this Plan. The Cluster Working Groups provide a basis for developing the membership structure and activities of the public-private partnership.

Regional Cluster Strategies consist of an objective evaluation of the economics and competitiveness of each cluster. Such an evaluation involves a range of economic and market analysis tools that allow the region and industry stakeholders to understand the structure and nature of the identified clusters, and their strengths and weaknesses *vis a vis* both the market and the competition. The outline below provides a standard cluster strategy model, based on Michael Porter's competitiveness "diamond," but other approaches are equally effective, as long as they are based on an understanding of the target market and the success factors for competing in it. The scope of work entails:

1. Cluster-focused market analysis, through NNMConnect Market Intelligence, to define the structure and characteristics of the market
2. Identifying key success factors of existing competitor clusters
3. Assessing regional cluster composition, structure and performance, and benchmarking it against competitors to clearly understand the position of the regional cluster in the market, where weaknesses can be minimized and strengths leveraged.
4. Regional cluster competitiveness assessment, identifying advantages and disadvantages related to:
   - Factor conditions (e.g., workforce, education, risk capital, infrastructure)

- Firm rivalry and strategy (e.g., intensity of local competition)
- Demand conditions (e.g., size of local market, disposable income, willingness to pay a premium, policies to build demand)
- Related and supporting industries (e.g., quality and quantity of local suppliers; synergies with other established clusters)

5. Definition and prioritization of strategic recommendations

Developing the Regional Cluster Strategies involves hiring Cluster Facilitators who are experienced with each cluster, and also have cluster development experience. The Cluster Facilitators will convene working groups that include private sector and public sector representatives. It is expected that the Regional Cluster Strategies will take up to five months to complete and will cost $20,000 each. The regional partners may choose to implement one, two, three or four of the Regional Cluster Strategies initially. Synergy among the clusters makes it advantageous to implement all four simultaneously; on the other hand, a single "pilot" would allow REDI to work out the process, implementation and funding to inform subsequent strategies.

Existing Services

Local Economic Development Services. Currently, local business attraction, retention, expansion and creation are addressed in various ways throughout the region. On the local government level, the City of Santa Fe, Santa Fe County and the Town of Taos employ economic development staff responsible for business attraction, retention and expansion. Rio Arriba County employs an Economic and Community Development Director but does not pursue business attraction, retention and expansion directly. Los Alamos County contracts its business attraction, retention and expansion efforts to Los Alamos Commerce and Development Corporation (LACDC), an organization that consolidates the local chamber of commerce, economic development organization and Small Business Development Center (SBDC) in one resource. Taos County and the City of Española do not employ economic development staff or contract for economic development services.

On the level of economic development organizations, Santa Fe Economic Development Inc. (SFEDI), an organization that employed an "economic gardening" approach to business development in the City of Santa Fe, was discontinued in January 2008. Santa Fe's portfolio of local technical assistance providers for entrepreneurs continues to include the Santa Fe Business Incubator (SFBI), an active Service Corps of Retired Executives (SCORE) program, and Creative Santa Fe, an organization formed to promote the growth of creative industries in Santa Fe. The Greater Española Valley Community Development Corporation (GEVCDC) is designated to act on Española's behalf for its certified community designation, which involves responding to PROs (Potential Recruitment Opportunities), organizing site visits and helping to negotiate deals. However, because the GEVCDC does not receive operational funds from the City of Española, it is unable to fill this role effectively. In addition, Los Alamos, Española, Santa Fe and Taos all have chambers of commerce that are actively involved in economic development. The Los Alamos and Santa Fe chambers operate business retention and expansion programs through contracts with Los Alamos County and the City of Santa Fe.

Based on this analysis, only Los Alamos County is undertaking active business recruitment, and there are great disparities in the levels of economic development services being provided at the local level. The greatest gap is in the City of Española and Rio Arriba County, where organizations exist to support economic development but lack funding to do so.

Like in other regions throughout the US, regional economic development services provided by REDI are meant to *complement* local economic development efforts, not replace or serve as a substitute for them. In other words, it would be optimal if the City of Española, Rio Arriba County and Taos County developed local economic development expertise, from which economic development priorities for the community are set and local initiatives are carried out. REDI would then work with local economic development representatives to develop and implement *regional* initiatives based on the target industry clusters.

REDI anticipates challenges in implementing regional economic development services given that the region is not on a level playing field in regard to providing local economic development services, and because there is inherent competition for resources between local and regional programs. For this reason, it will be very important to secure private sector financial commitments for REDI, to integrate REDI and other regional programs as described below, and to assist in developing capacity for local economic development where it does not currently exist.

Regional Economic Development Services. On the regional level, there are four existing business retention, expansion and creation initiatives in northern NM:

- The New Mexico Small Business Development Center (SBDC) network provides direct assistance, entrepreneurial education and resource links for potential and existing small businesses. SBDC offices are located throughout the region, in Los Alamos, Española, Santa Fe and Taos.

- Northern NM Connect (NNMConnect) is a major economic development initiative funded by Los Alamos National Security LLC (LANS LLC). It operates several programs which connect technology entrepreneurs with customized resources to accelerate the growth of their companies.

- EBS (Empowering the Business Spirit), a program of the Regional Development Corporation, is a network of twenty business assistance organizations, lenders and educational institutions committed to making northern NM the perfect place to start and grow a business. Services include easy access to free services for entrepreneurs, entrepreneurship and financial literacy education for youth and adults, and information on the importance of small businesses to regional policymakers.

- Taos Entrepreneurial Network (TEN), LINK (a program similar to TEN launched in Rio Arriba County) and Growing Entrepreneurs Network (GEN) in San Miguel County are based upon network facilitation, a model that uses grassroots marketing, one-on-one coaching, and community-based business export networking to help create local start-ups and grow local businesses. TEN, LINK and GEN are currently funded with local contributions and with seed funding from EBS and LANS LLC.

Table 3: Comparison of EBS, NNMConnect and REDI

	EBS	NNMConnect	REDI
Level	Firm level	Firm level	Industry level
Market	Lifestyle, indigenous small	Technology companies	Cluster firms, all sizes
Stage	Start up, Growth	Growth, Innovation	All size with focus on growth
Services	General business development services, enterprise facilitation/community networking, youth entrepreneurship, micro credit	Capital, coaching, networking and education	Cluster-specific services, cluster networking, cross cluster networking
Sector Focus	None	None	Renewable Energy, Technology, Media, Value Added Agriculture
Service Providers	Non-profit, donor funded organizations	Private sector	Private Sector
Sustainability	Free		Fee based, transaction based

EBS, which is funded by a grant from the Kellogg Foundation, will run out of operating funds in the fall of 2009. TEN, LINK and GEN will become increasingly reliant on local contributions as seed funding from EBS and LANS LLC dries up. Program managers for EBS, TEN, LINK and GEN are now discussing how to merge these efforts into a single mutually supportive and sustainable regional initiative.

Proposed REDI Services

This Plan recommends that existing business retention, expansion and creation programs become major partners with REDI in the sense of providing firm-level services, as well other services which can be easily adapted to the cluster level (i.e. Market Intelligence and Networking through NNMConnect). This will build on existing capacities, reduce competition for limited local resources, bolster existing successful programs, and strengthen a results-oriented regional approach to economic development that has been in development prior to REDI.

As described above, REDI will lay the foundation for providing regional economic development services in 2009 through the development of Regional Cluster Strategies. In 2010 and thereafter, cluster strategies will be implemented through business attraction, retention, expansion and creation efforts, as well as cluster-related projects. It is anticipated that the entire business attraction, retention, expansion and creation program will be overseen by a single entity hired by the regional partners in mid to late 2009. That entity, for its part, would focus on business attraction, which is not being provided regionally, as well as cluster-level business retention, expansion and creation efforts. The business attraction efforts and partnerships for business retention, expansion and creation are described below.

Business Attraction. Historically, northern NM has not embraced large-scale business attraction due to its potential impacts on culture and the environment. As a result, most local governments in the region engage in "passive" business attraction by responding to Prospective Recruitment Opportunities (PROs) that meet their standards. Los Alamos is the exception and directly recruits businesses in addition to responding to PROs. Both public and private sector representatives who

participated in REDI expressed interest in supporting local businesses first, prior to focusing on business attraction. This is especially true in the Renewable Energy and the Green Industry Cluster, where participants in the Regional Economic Development Services Team focused on the need to provide direct assistance to local entrepreneurs, whether they are service providers, manufacturers or technology developers, rather than recruiting outside companies. The team emphasized that northern NM firms need to be competitive globally, even to compete and survive in the local market.

Nevertheless, there are reasons to pursue a *targeted* business attraction strategy in northern NM. Because of the region's small population (under 250,000) and emerging nature of REDI clusters, it is not realistic to expect that all expertise needed for the development of target clusters is available within the region or state. As discussed in this section, there are numerous gaps in the value chains and support services for the target clusters that are not being filled locally, and that will require some level of business attraction to address. Furthermore, the scale of business attraction is changing as more and more people work as location-neutral businesses, both by operating their own businesses from home or working remotely for a larger company. As location-neutral businesses increasingly become the norm, business attraction becomes more appropriate for northern NM.

During the REDI process, the NM Partnership (NMP) highlighted some of the potential benefits of doing business attraction on a regional basis, primarily the potential to improve competitiveness through joint marketing of a regional labor pool. Portraying northern NM's labor pool as regional is accurate since people currently commute for work throughout the region and can continue to do so with the availability of regional transit. Another opportunity opened up by regional collaboration is participation in marketing events, because NMP can allocate resources to regional marketing when supporting more than just one county. NMP also recommended local and regional incentives for business attraction. While state level incentives are attractive, they are not necessarily competitive with other states. Consequently, local incentives can make the difference in closing the deal. Santa Fe and Los Alamos have defined the types of local incentives they may offer, particularly through the use of the Local Economic Development Act (LEDA), and the Town of Taos is in the process of developing an economic development strategy that will address this. REDI may need to assist Española and Rio Arriba County in defining local incentives that would provide a competitive advantage for business attraction.

The NM Partnership stressed that business attraction can be a complement to, not a competitor with, local business development and cluster development. REDI's recommendations are in line with this approach: *to use targeted business attraction as a means of cluster development*. REDI's approach would steer clear of businesses that conflict with the environmental and cultural priorities of the region, and would take advantage of cost-effective partnerships with the NM Partnership and other regional allies to attract new businesses. Business attraction services under REDI are proposed as the following:

- Common regional marketing
- Active participation in trade shows and sales missions
- PRO response, site visits and deal negotiation, where appropriate
- Strategic alliances & partnerships with the NM Partnership, other communities and regions

- On-line data including infrastructure assessment, commercial building and site inventory, and regional/community profiles with demographics and labor force data
- Local and regional incentives to make northern NM more competitive

Business Retention and Expansion. REDI's business retention, expansion and creation efforts are directly related to cluster development, while direct assistance to firms would be provided through regional partnerships with NNMConnect, EBS, TEN/LINK/GEN, SBDCs and others. The following is a list of recommendations for business retention and expansion that resulted from the REDI process, which will be refined and supplemented with recommendations from the forthcoming Regional Cluster Strategies.

- **Growing Businesses to the Next Level.** As shown in this Section, the vast majority of businesses in REDI's target clusters employ only one to four people, indicating that most clusters are not mature. Growing businesses to the next level, even if they remain under 20 employees, is a major goal for REDI. In terms of assisting individual businesses, REDI would expect to partner with NNMConnect for firms working in Renewable Energy and Green Industry, Technology, and Media, many of which can be served under NNMConnect's programs. Growth in film vendor and agriculture businesses could be handled by the EBS and TEN/LINK/GEN programs, by the regional film liaison recommended in this Section, and by local agricultural support organizations like TCEDC.

- **Access to Capital.** The REDI Regional Expert Team of Economic Development Services recommended that REDI help to develop a funding mechanism to fill the "risk gap" that many firms face when applying for financing. Participants agreed that access to capital is not an availability problem, but relates to the quality of the business case of the borrower and ability of lenders to reduce risk, either through collateral, financing partnerships or other creative solutions.

- **Gaps in Support Services.** REDI has identified the dearth of engineers, software engineers, management companies and accountants as major challenges to local businesses, and in some cases, as a factor in a business staying in northern NM or relocating elsewhere. REDI can help fill these gaps through business attraction and creation, creating better linkages at the industry level among existing support services and those who need them, helping support services to grow or increase their quality to better meet local business needs, and creating workforce and education programs in these areas. Again, in this case, assistance to individual firms would likely be handled by NNMConnect and EBS, while programs to fill gaps in support services at the cluster level would be handled by REDI.

- **Networking.** NNMConnect has identified lack of networking opportunities as a major challenge for its technology entrepreneurs. REDI plans to include networking as a service provided by the public-private partnership. Because NNMConnect is already providing networking opportunities to its entrepreneurs, it would be logical for REDI to partner with NNMConnect for cluster networking events.

- **Research and Market Intelligence.** According to NNMConnect, lack of market data on which to base critical business decisions is another challenge that technology

entrepreneurs face. Market Intelligence services could be provided by NNMConnect for REDI's clusters, both during and after the Regional Cluster Strategies. At the firm level, NNMConnect would provide these services directly to entrepreneurs and small businesses. Standard research services would also be provided by REDI.

Business Creation. REDI's business creation efforts are directly related to cluster development, while direct assistance to potential firms would be provided through regional partnerships with NNMConnect, EBS, TEN/LINK/GEN, SBDCs and others. The following is a list of recommendations for business creation that resulted from the REDI process, which will be refined and supplemented with recommendations from the forthcoming Regional Cluster Strategies.

- **Promote Target Clusters and Support Services through Existing Programs.** Use EBS, TEN/LINK/GEN and SBDCs as mechanisms to provide potential entrepreneurs with information on the demand in the target industry clusters and related support services. For example, if a client is considering opening a courier business, that client can validate their business case if linked with existing businesses in the region that will use the service.

- **LANL and other Retirees.** As the nation increasingly faces a constrained labor force, retirees are a potential source of both new workers and new businesses. With the exception of Rio Arriba County, the region has an aging population, many of whom are skilled and educated. In the case of LANL, future funding cuts may result in more forced retirements for individuals who still want to work. Through EBS, REDI should develop a service to link retirees to business opportunities, some of which may result in temporary employment and others in business creation.

- **Workforce Training Programs.** Due to the great demand for accountants and bookkeepers across all industries, the REDI Economic Development Services Team recommended a pilot "journeyman" project, possibly in conjunction with UNM's Anderson School, whereby graduates work directly with existing accountants under a structured professional development program. REDI can take the lead on this and other workforce training programs designed to create new businesses in high-need areas.

- **Educational Partnerships.** REDI would oversee development of partnerships between private industry, the schools and community colleges for placement of students in mentorships, apprenticeships, internships and summer jobs in the four industry clusters, using REDI's private sector members as employers. This is a longer-term effort described in more detail under Human Capital that would depend in part on upcoming educational reforms at the state level, as well as significant outreach by REDI to school boards within the next year. REDI could also be involved in helping to design Career Pathways for the target clusters, and in developing technology and entrepreneurship education. One of the outcomes of these initiatives would be a pipeline of entrepreneurs who would create new businesses in the region.
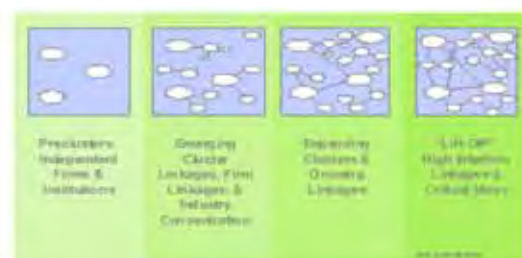
Target Industry Clusters

This section of the Plan uses value chain and industry cluster analysis to assess the advantages of each REDI target cluster based on existing private sector companies operating in the clusters. It also discusses the enabling environment for each cluster with regard to Human Capital, Infrastructure and Public Policy. Investment in these three strategic areas is the most appropriate and effective role for government in REDI.

REDI has identified companies working in each cluster through research on employers by NAICS code and keyword in the NM Department of Workforce Solution's LASER database, by internet searches and links, and by lists of firms compiled by NNMConnect and the WIRED Employer Survey. While the list of companies is not exhaustive, it is fairly comprehensive. For each cluster, company names are organized in a graphic which shows the value chain on the vertical axis, and cluster segments on the horizontal axis. The graphic demonstrates whether existing businesses in the cluster have an orientation toward horizontal integration (many businesses in one part of the value chain) or vertical integration (many businesses in different parts of the value chain). The clustering of companies in one part of the value chain or in one cluster segment may indicate some comparative advantage in the region. The lack of coverage throughout the value chain (vertical axis) indicates areas where the region needs to increase its competitive advantage, either through business attraction, retention, expansion and creation or through partnerships with other regions. The lack of coverage throughout the cluster segments (horizontal axis) indicates areas where the proposed cluster strategies should evaluate potential competitive advantage.

Please note that determining which companies work in which part of the value chain is a subjective process, subject to the information provided by the company in its NAICS codes or on its website. Also, companies that work at various levels of the value chain were included in the part of the value chain where they appeared to be most dominant.

It is important to note that the relatively small number and size of firms in each cluster demonstrates that REDI's target clusters are in the very early stages of development, and can be considered "Preclusters" or "Emerging Clusters." As emerging clusters which have yet to develop their potential, it is important that REDI set realistic expectations through the Regional Cluster Strategies. In the meantime, this Plan identifies preliminary recommendations throughout this Section, all of which are summarized in the tables below. The tables are organized by cluster, and divide the recommendations into two components: Economic Development Services—business attraction, retention, expansion and creation undertaken in partnership with the private sector,

Figure 4: The Cluster Life Cycle

Source: *Promoting Competitiveness in Practice*, The Mitchell Group for US AID, Nov 2003.

and Regional Projects—human capital, infrastructure and public policy investments and initiatives lead by the public sector to support cluster development.

Table 4: Summary of Recommendation for REDI Target Clusters

	ECONOMIC DEVELOPMENT SERVICES				REGIONAL PROJECTS AND INITIATIVES		
	Business Attraction	Business Retention/ Expansion	Business Creation	Overall Strategy/ Questions for Cluster Strategy	Human Capital	Infrastructure	Public Policy
Renewable Energy & Green Industry	• Marketing & Distribution businesses	• Solar, Green Building & Energy Efficiency businesses • R&D businesses • Grow existing businesses to the next level	• Solar, Green Building & Energy Efficiency businesses • R&D businesses	• Position Santa Fe & Taos as "demonstration sites" for green innovation • Determine region's competitiveness • Explore how northern NM can participate in NM production & distribution	• Support SERPA, STC & UNM-Taos programs	• See RETA under Public Policy	• Support amendments to RETA • Support increase in NM Innovation Fund to $10M • Double PTC for wind/biomass & solar; double per facility cap on solar facilities • Sponsor Local Govt. Prog. for Renewable Energy & Energy Efficiency (2010)
Media	• Film productions • New Media & IT businesses • Accountants, lawyers, marketers for Film; software engineers for New Media • Marketing & Distribution businesses	• Assist local businesses in becoming vendors to the film industry • Grow New Media & IT businesses to the next level	• New Media & IT businesses	• Expand film production & use of vendors region-wide • Foster New Media region-wide • Evaluate the potential of attracting post-production to NNM • Determine region's competitiveness in music segment	• Support potential film training at Los Luceros property • Career pathways for New Media	• Santa Fe County Media Park • Taos Community Auditorium "Black Box"	• Protect existing film incentives • Additional 5% Rural Tax Rebate (2010) • Expand Production Zone to include all of NNM (2010)

	ECONOMIC DEVELOPMENT SERVICES				REGIONAL PROJECTS AND INITIATIVES		
	Business Attraction	**Business Retention/ Expansion**	**Business Creation**	**Overall Strategy/ Questions for Cluster Strategy**	**Human Capital**	**Infrastructure**	**Public Policy**
Technology	• Technology businesses • Engineers • Management companies	• Partner with NNMConnect to grow Tech. businesses to the next level • Strengthen links between Tech. companies and existing Mgt. Firms • Improve products, services, convenience with existing suppliers	• Technology businesses • Engineers • Management companies • Courier service	• Expand Technology businesses throughout the region • Evaluate the potential for prototyping/rapid mfg. in the Española Valley	• Technology education in public schools	• Española business incubator • Rio Arriba industrial park for prototyping/rapid mfg. • Santa Fe Innovation Park, Santa Fe Complex • Flexible high-tech space/incubator in Taos	• Reauthorize and increase funding for SBIR • Early Stage Technology Business Program (2010) • Support increased funding for business incubators to $5M (2010)
High Value and Value Added Agriculture		Partner with agricultural orgs. & agencies to: • Grow local producers to the next level • Encourage higher-value crops identified in cluster strategies • Implement recommendations of the Grass-Fed Beef Study • Strengthen links between producers & fiber arts retailers	• Marketing & distribution businesses • Agricultural producers	• Evaluate potential for high value alfalfa products • Identify marketable high value crops & products • Determine steps to expand wine & beer sales into export markets • Explore synergies with other three clusters, including agricultural R&D, and renewable energy		• Española Community Market • Distribution & storage infrastructure • Support farmer's market & commercial kitchen infrastructure • Support acequias & retention of water rights	• Support restricted retail package liquor license • Support expansion of Farm to School & Restaurant programs • Support Trust Fund for agricultural infrastructure & programs • Support increased technical assistance & marketing for producers • Support adequate funding for NM Livestock Board & Dept. of Agriculture

Renewable Energy and Green Industry

Overview

Energy, in the form of the state's vast oil, gas and coal reserves, is New Mexico's oldest form of economic development. In the 1940s, two national laboratories devoted to nuclear energy were established, making the federal government the initial driver of New Mexico's energy-related public policy. As a result of the first energy crisis in the 1970s, New Mexico became a leader in energy policy by creating the New Mexico Energy Research and Development Institute and a variety of financial programs to encourage the deployment of alternative energy systems. While some 40 states have replicated and adapted New Mexico's original programs, many of the programs no longer exist in New Mexico. So, despite New Mexico's abundant renewable resources—including solar, geothermal, wind and biomass—the state is currently not a leader in Renewable Energy and Green Industry, which has become a highly-competitive cluster in cities and regions throughout the world.

Instead, the State of New Mexico is positioning itself as a national leader in large-scale production and bulk distribution. Northern NM, however, may have difficulty participating in the state's strategy, because its access to "the grid" for power distribution is limited. Rather, the region has, and is still developing, research, production, distribution, and installation businesses oriented toward small scale renewable energy applications. In the longer term, this industry cluster will complement the Technology Cluster as early-stage renewable energy technologies are fostered to locate and expand in the region. The following paragraphs describe state and local plans and initiatives relevant to the Renewable Energy and Green Industry Cluster.

The New Mexico Science and Technology Plan (2008) identifies Energy, Environment and Water as one of New Mexico's five areas of strength. Energy includes state policies to position New Mexico as a leader in large-scale production and distribution; investments in research and development of new technologies such as Solarec by Los Alamos Renewable Energy; and algal biodiesel which is currently being tested in southeast New Mexico. The Science and Technology Plan is also focused on using the national laboratories and the state's intellectual resources to develop revolutionary approaches to renewable energy, including nanotechnology and direct electrical and hydrogen production. Nanotechnology research is concentrated at Sandia National Laboratory, while Los Alamos National Laboratory is home to a large majority of the patents on hydrogen fuel cell technology.

Los Alamos National Laboratory has broadened its work in nuclear energy to renewable energy of all sorts, including hydrogen and solar. NNMConnect is working with various companies developing renewable energy technology, and LANL has pledged its support to Northern NM College's SERPA (Solar Energy Research Park and Academy, described below), as a research partner in storage technology.

Solar Energy Research Park & Academy at Northern NM College (NNMC) in Española. In 2008, the New Mexico Legislature appropriated $3 million to SERPA to establish Bachelor's and Master's Degrees in Mechanical Engineering at NNMC with a focus on solar energy and storage technologies. SERPA will develop a strategic partnership with LANL to complement research and

development for storage technologies, and will feature an onsite PV installation for hands-on training and energy production, possibly at the El Rito campus.

Santa Fe Initiatives. The Santa Fe Community College developed *Technical Resources for Energy and Environment* (TREE), which provides a strategic framework to position the Santa Fe Region as a Center of Excellence in renewable energy, energy efficiency, water conservation, and sustainability systems. The basic objective, premise, and components of the strategy are as follows:

> *TREE Objective*: Support the creation, development, and growth of businesses and non-profit organizations working in community sustainability and clean tech sectors (including renewable energy, energy conservation, water conservation, and others), with the primary goal of engendering *a viable small-scale industry cluster,* and an emphasis on *empowering entrepreneurs,* within a *regional development context*.

> *TREE "Tiers":*
> * Community Development—support for a sustainable community vision and growth of local markets
> * Workforce and Business Development—development of workforce and support for businesses and organizations that seek to serve or develop the renewable energy market
> * R&D—support for development and commercialization of competitive, new clean and renewable technologies

The Sustainable Technologies Center (STC) at Santa Fe Community College (SFCC) is a core component of the TREE Strategy that will focus on renewable energy technologies, sustainability technologies, and water conservation technologies. The STC will focus on solar PV, thermal, and central solar (concentrated solar power), biomass, water conservation, green building, smart grid, and energy assessments. It will be an applied research/training facility with a strong industry partnership.

In addition, the City of Santa Fe has developed the *Sustainable Santa Fe Plan*, which comprehensively considers issues of climate change, energy efficiency, building code and construction standards, carbon emission reduction, water reuse and conservation, urban agriculture, ecological restoration, and city-wide environmental sustainability standards. The Plan makes recommendations for city government policy and city-wide initiatives to achieve sustainability. The TREE Strategy and Sustainable Santa Fe position Santa Fe as a leader in this cluster.

Santa Fe is also studying the local distribution system and undertaking a pilot to develop and test a demonstration community-level distribution system. The development of one or more "smart grids" should be explored as a component of infrastructure development, and additionally, and as an innovation that could be central to this cluster's development.

Taos Initiatives. In addition to Santa Fe, Taos has long been a leader in renewable energy. Taos is home to KTAO, the first radio station run entirely on solar energy, as well as to the first Earthships, which apply sustainability, green building and renewable energy to residential construction. The Taos Solar Music Festival, which promotes sustainable and renewable energy,

just celebrated its tenth year. Most importantly, Kit Carson Electric Cooperative has become a regional leader in developing solar generation to supplement local electricity production and consumption. The Town of Taos is currently exploring the potential to develop a biofuels plant that will dispose of local and regional waste to create a source of fuel. The Town of Taos is also in the process of developing a SmartCode, a model form-based code which regulates land development by controlling urban form, with less emphasis on controlling land uses. The SmartCode's guiding principles include creating walkable neighborhoods and rural-urban transects or a series of human habitats ranging from the very rural to the very urban.

UNM-Taos has a four-year degree program for design and engineering, as well as vocational training with a dual credit option for maintenance, construction and installation. The Taos High School recently received a grant for a class to install and build solar panels, which has been offered in partnership with UNM-Taos since August 2008. UNM-Taos works with NNMC to pool students in order to establish required enrollment for upper-level engineering classes.

Description of the Cluster

The following figure illustrates the segments of the Renewable Energy and Green Industry Cluster. As described in the following paragraphs, northern NM's natural resources and existing businesses point to advantages in the cluster segments of Solar, Green Building and Energy Efficiency. The cluster segments of Wind and Biofuels are focused primarily in other parts of the state which have resource advantages in those areas, although there is potential for and interest in Biofuels and Biomass in northern NM.

Figure 5: Segments of the Renewable Energy and Green Industry Cluster

Solar/ Geothermal	Wind	Biofuels/ Biomass	Energy Efficiency	Biotecture/ Green Building

Legend:
National Leader
Developing Cluster Segment
Not Developed

As illustrated in Figure 6, the greatest concentration of Renewable Energy and Green Industry businesses in northern NM occur in the segments of Solar and Green Building, with most businesses providing retail installation and construction services. These businesses are primarily local-serving and employ technicians, engineers and builders at moderate wages. For the most part, they do not represent economic base jobs that capture dollars from outside the region or state. Another concentration of businesses is noted at the level of research and development in the value chain, across most cluster segments. Research and development businesses represent economic base jobs and are among the highest paying.

Northern NM has very few businesses in the production/manufacturing and marketing/distribution levels of the value chain. While New Mexico has historically lacked a manufacturing base, in recent years, Albuquerque has been successful in attracting aerospace and solar manufacturers, and the manufacturing sector has grown as a result. It should be noted that growth in manufacturing in New Mexico is related to the US' weak dollar, which attracts European companies to locate here. Northern NM has and will continue to have limitations for manufacturing due to its more remote location. The region north of Santa Fe does not have interstate or rail access, and there are no

major airports outside of Albuquerque. In addition, the City of Santa Fe and Town of Taos may experience public opposition for larger scale manufacturing projects. In the discussion of the Technology Cluster, this Plan recommends evaluating the potential for niche manufacturing in the Española Valley, particularly in terms of prototyping or rapid manufacturing for research and development companies, including those working in the Renewable Energy and Green Industry. Outside of this, however, northern NM is likely best served by partnering with Albuquerque to create linkages with the manufacturers, rather than making significant investments to attract manufacturers itself.

On the other hand, northern NM could certainly benefit from strengthening its marketing and distribution capacity. This point is emphasized by Trevor Loy, managing partner at Flywheel Ventures, in a recent article about venture capital in New Mexico. While Loy cites the impressive growth of venture capital in New Mexico in recent years, he notes that "New Mexico's venture-backed firms remain weak in sales, marketing and distribution. If companies want to attract follow-on investments from venture firms, they must strengthen their performance in those areas."[4] This will be especially important during an economic downturn, when venture firms may be less forgiving with follow-on funding.

As shown in Appendix A, most businesses in this cluster are small, ranging from 1-4 to 10-19 employees. Conergy Inc. in Santa Fe is the largest employer, with 50-99 employees. Businesses are geographically concentrated in Santa Fe, Los Alamos and Taos, with a significant research and development company—Los Alamos Renewable Energy (now Solarec/Sundrop Fuels)—located in Pojoaque. Clearly, growing existing small businesses in this cluster should be a priority of REDI.

The following table lists the strengths and challenges for the Renewable Energy and Green Industry Cluster based on this analysis, with corresponding recommendations for initial business attraction, retention, expansion and creation efforts. Of all REDI target clusters, Renewable Energy has the broadest geographic benefit in that various segments of the cluster and value chain can be implemented in various parts of the region. However, to be successful in this cluster, REDI must consider how the region can effectively participate in the State's strategy for energy production and distribution, as well as define northern NM's comparative advantages vis a vis other regions.

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[4] *Venture Capital Remains Robust Despite Economic Downturn*, New Mexico Business Weekly, March 21, 2008.

Table 5: Strengths, Opportunities, Weaknesses and Challenges for the Renewable Energy and Green Industry Cluster

Strengths and Opportunities	Recommendations
Name recognition and history of applied technologies in Taos and Santa Fe for green, solar and sustainable	Position Taos and Santa Fe as "demonstration sites" for green innovation.
Concentration of solar and green building businesses	Retain, expand and create solar, green building and energy efficiency businesses.
Concentration of local-serving installation and construction services	Increase local demand.
Concentration of R&D businesses	Attract, grow and create new R&D businesses.

Weaknesses and Challenges	Recommendations
Renewable Energy cluster is highly competitive	Determine through cluster strategy NNM's comparative advantages vis-à-vis other regions.
Limited access to "the grid"	Determine through cluster strategy how NNM can participate in state production and distribution efforts.
Most businesses are small employers	Grow businesses to the next level (1-4 employees to 5-9, etc.)
Weak manufacturing base	Explore prototyping and rapid mfg. in Española Valley. Partner Albuquerque or others.
Weak marketing and distribution	Attract, grow and create marketing and distribution businesses.

Figure 6: NNM Renewable Energy/Green Industry Businesses organized by Value Chain (vertical axis) and Cluster Segment (horizontal axis)

Value Chain	Solar & Geothermal	Wind	Biofuels & Biomass	Green Building/ Biotecture	Energy Efficiency	Other
Retail (International) / Retail (Domestic)	ADI Solar Cedar Mtn. Solar Dahl Plumbing & Solar Energy Concepts Positive Energy Solar Age of NM Solar Wise LLC Solar Ray Solar Survival Skills Sunvolt Solar Electric Valverde Energy	Bluenergy Solarwind Independence VAWTPOWER Wind Power	Althouse Inc. Renewable Energy Partn. Sunbelt Biofuels Local Energy	Earthship Biotecture Ecobuilders EcoNest Building Co. Fine Gardens Sustainable Urban Green Builders Living Designs Group Palo Santo Designs SF Sustainable LLC Solar Smith LLC	Althouse Inc. Homewise Inc.	
Export / Wholesale					Brother Sun/US Sky	Earthstone
Distribution/ Marketing	Conergy		Sunbelt Biofuels Nambe Pueblo			
Manufacturing/ Generation	Bluenergy Solarwind	Bluenergy Solarwind		Savio Engineering	CleanAir Systems	Earthstone
Design/ Prototyping				Earthwrights Design EcoNest Building Co. Living Designs Group		
Research and Development	Cedar Mountain Solar EQ Solaris Los Alamos Renewable Energy Solar Energy Ltd. Sustainable Resources Inc. Valverde Energy	Bluenergy Solarwind Independence	Renewable Energy Corp. Solarec/SundropFuels Sunbelt Biofuels			Earthstone Energy Related Devices Morphic Corporation Sustainable Resources Inc.

Enabling Environment

Human Capital. New Mexico is developing a number of workforce initiatives to support the emerging Renewable Energy and Green Industry Cluster. Community college programs, namely SERPA at Northern NM College, the STC at Santa Fe Community College, and UNM-Taos' design/engineering degree program and vocational training are described in the overview to this section. In the 2009 Legislative Session, NNMC plans to request $3 million for SERPA, with one million dedicated to operational costs, and $2 million to retrofit existing buildings with solar panels and make existing solar panels operational. For the STC, $11.5 million has been approved through bonds for capital investment to date. This Plan recommends that REDI support all three initiatives to ensure a skilled workforce for the Renewable Energy and Green Industry Cluster.

While not located in northern NM, two established workforce programs provide models for the emerging SERPA and STC projects in the region. The North American Wind Research & Training Center (NAWRTC) at Mesalands Community College in Tucumcari is a wind energy technician training program that focuses on operations and maintenance, with a complementary research and development program. This is a partnership with NMSU and Sandia National Laboratory that will feature a 1.5MW GE wind turbine for energy generation and training for wind energy technicians. NAWRTC is funded through the State Legislature and US Department of Labor. The first training program was implemented in the fall of 2008, coinciding with the installation of the wind turbine. San Juan Community College (SJCC) Renewable Energy Program in Farmington has had a solar PV technician training program for several years, focusing on training PV installers for small residential and commercial applications.

In addition to the above-mentioned workforce training programs, New Mexico is positioning itself as a leader in Green Collar Jobs training. In an effort to complement, enhance and expand current efforts statewide, the Regional Development Corporation is initiating a new broad-based Green Collar Jobs effort that will coordinate statewide efforts and create a Green Collar Coalition to compete for federal workforce training dollars, develop an integrated state-wide strategy, and help attract renewable energy and energy efficiency businesses to the state. The Green Collar Jobs initiative is a partnership with New Mexico Economic Development Department, the Department of Workforce Solutions, the Department of Education, and the Department of Indian Affairs.

Public Policy. New Mexico offers numerous incentives and programs to support research and development, use, production, and distribution of renewable energy. This section summarizes the state's programs and incentives, with areas where policy changes are recommended in 2009 or future years described in greater detail.

New Mexico's has a strong suite of incentives and programs for solar energy. New Mexico has the first Renewable Energy Transmission Authority (RETA) in the nation; strong Production Tax Credits for wind, biomass and solar; an Energy Innovation Fund that invests in clean technologies with immediate market potential; an Angel Investment Tax Credit up to $25,000 for High Tech/Clean Tech investment; and a clean energy grant fund for public entities interested in pursuing a renewable energy or energy efficiency project. There is also a sales tax exemption for solar installations, which saves consumers an additional 7%, on average. For customers within the PNM service territory, any residence or commercial business that installs a solar PV system on their property is eligible for a .13/kWh incentive, regardless of electricity consumption. This

Customer Generation Program allows PNM to essentially purchase the Renewable Energy Credit (REC) that is produced from the solar PV system and apply that REC towards its RPS compliance, as described below.

New Mexico currently has one of the strongest Renewable Portfolio Standards (RPS) in the country, which requires all investor-owned utilities (IOU) to produce 20% of their electricity by 2020 from renewable sources, and rural electric cooperatives to produce 10% of their electricity by 2020 from renewable sources. In 2008, the New Mexico Legislature amended the Efficient Use of Energy Act to require all IOUs to achieve 10% energy efficiency savings by 2020, creating in effect an overall RPS of 30%. The New Mexico Public Regulation Commission, in its rulemaking for the RPS, included a solar minimum of 20% of the total RPS, thereby encouraging utilities to diversify their renewable generation portfolio. New Mexico also has one of the strongest net metering laws in the country, with a maximum project size capped at 80 MW. Net metering allows independent energy producers to connect to the grid and sell power back to the local utility.

The state promotes biodiesel through its blending facility tax credit which requires that all diesel sold in New Mexico contain 5% biodiesel by 2012. In the area of green building, New Mexico has a sustainable building tax credit of up to $10,000 for LEED-certified (Leadership in Energy and Environmental Design) residential homes, and up to $162,000 for LEED-certified commercial buildings.

REDI recommends the following policy initiatives which support the Renewable Energy and Green Industry Cluster. Many of these initiatives are likely to be introduced in the 2009 Legislative Session, with others potentially occurring in future years.

1. **RETA.** New Mexico's Renewable Energy Transmission Authority is a quasi-governmental authority mandated to develop new transmission infrastructure to enable more renewable energy development. A minimum of 30% of the energy on a RETA project must come from a renewable source, and the Authority has bonding capacity to fund transmission projects. While several transmission "corridors" and projects have been presented to RETA, no action has been taken to date. There is currently over 5000 MW of wind energy cued up for interconnection into a variety of transmission lines, but very few projects will proceed without new or upgraded transmission capacity.

   REDI supports the following proposals, which are likely to come before the New Mexico Legislature in 2009, to enable RETA to improve its efficiency and begin infrastructure development:

   - Streamline and simplify the manner in which RETA is authorized to issue bonds
   - Allow RETA to maintain financial accounts outside of State Treasury, which will enable it to respond more adequately to market demands and daily operations
   - Allow RETA to offer tax incentives to energy and transmission developers, similar to those offered to developers working with Industrial Revenue Bonds
   - Enable RETA to become financially self-sufficient through credit and revenue streams
   - Fund the Revolving Loan Fund to enable RETA to begin financing individual projects

2. **New Mexico's Energy Innovation Fund** directly invests grants into promising clean technologies with immediate market potential. REDI strongly supports increasing the amount of funding for the Energy Innovation Fund and the Clean Energy Grants program from the current funding of $3 million to $10 million. These funds support renewable energy projects at New Mexico public schools and municipalities, and help emerging New Mexico businesses commercialize clean tech products.

3. **Production Tax Credit.** New Mexico is one of only a handful of states nationwide that features a Production Tax Credit (PTC) for wind and biomass of .01/kWh, and an average of .027/kWh for solar. Coupled with the federal .02/kWh PTC for wind and the federal 30% Investment Tax Credit for solar, this amounts to a significant incentive in New Mexico. The current state Production Tax Credit of .01/kWh for wind and biomass is capped at 2 million megawatt hours, all of which has been allotted. The New Mexico Legislature needs to double the MWH to 4 million to enable more wind development statewide, particularly in the northeast part of the state. The current PTC of .027/kWh (average) for solar energy is capped at 500,000 MWH, all of which will likely be allocated by the end of 2009. The New Mexico Legislature needs to double the total cap to 1 million MWH, and also double the per-facility cap of 200,000 MWH to 400,000 MWH, which would enable larger solar facilities to be built in the state. REDI supports 2009 legislation to accomplish these goals.

4. **No or Low-Interest Loan Programs** are recommended to support the installation of renewable energy systems. A bill is being considered for the 2009 Legislative Session that would be focused on residential solar photovoltaic (PV) systems, and would provide much needed up-front assistance for those unable to afford the initial capital costs. The bill would also broaden the pool of residences that want to generate solar electricity on their properties. There are currently 23 states across the country with similar solar loan programs.

5. **Feed-in Tariffs** promote energy entrepreneurship and independently-owned generation by obligating electrical utilities to buy renewable electricity at above market rates, thereby overcoming cost disadvantages of renewable energy sources. Feed-in-tariffs represent a different approach to quotas such as Renewable Portfolio Standards in that they offer long-term stability in renewable energy markets; opportunity to all willing participants in the market; and the freedom to produce, sell and own energy and stimulate rapid rates of growth. Legislation for feed-in-tariffs is not expected in 2009; however, current hearings at the PRC may lay the groundwork for legislation in 2010.

6. **Local Government Program for Renewable Energy and Energy Efficiency.** The following policy recommendation was developed by the REDI Public Policy Team and should be considered for introduction in the 2010 Legislative Session.

   Local governments in the region own hundreds of buildings and together pay millions of dollars in energy costs. A few have programs for new construction and retrofits; in fact, the City of Santa Fe has implemented energy efficiency measures in existing buildings and new construction consistent with the *Sustainable Santa Fe Plan*. REDI's recommendation is that all local governments in the region adopt renewable energy and energy efficiency programs to bring all of their facilities up to EPA Energy Star standards. These programs should be designed to maximize the local retention of energy dollars by utilizing local resources, local

finance, and locally-owned independent businesses. This would have the effect of reducing energy use, recovering costs through energy savings, and stimulating growth and expansion of local businesses and the cluster. Starting this program in northern NM and later expanding it to the rest of the state could help keep desired business expansion in the region.

State block grant funding for this program may actually become available in 2009 through the federal economic stimulus package. In the absence of such a funding source, however, REDI recommends using the New Mexico Water Trust Board (WTB) as a model financing program. Like the WTB, an "Energy Trust Board" (ETB) could be created to provide state financing for renewable energy and energy conservation projects for all types of governmental facilities at many levels. The ETB could prepare a plan for compliance with renewable energy and energy conservation standards just as the WTB is charged with implementing the State's water plan. The ETB could promulgate grant guidelines and solicit applications for viable projects from municipalities, counties, school districts, higher education, and state agencies. The projects selected to best meet the energy standards would be bundled and presented to the Legislature for approval as a package. The Energy, Minerals, and Natural Resources Department would need to provide staff to evaluate the applications and oversee completion of the selected projects. Municipalities and counties could also fund projects with their own resources, and any applicant could solicit federal funds or funding through legislative appropriations.

6. **Additional Policy Recommendations**. The REDI Regional Expert Team on Public Policy made numerous other recommendations for the Renewable Energy and Green Industry Cluster. These appear below in order of priority and should be added to REDI's implementation plan as they are approved by the regional partners. Initiatives described below are grouped into this category either because the legislative strategy for them has not yet been developed, or because they require further discussion.

   1. Urge the New Mexico Congressional Delegation to increase funding for renewable energy technologies and the national hydrogen fuel cell research facility at LANL. This can be done in part through the efforts of the community coalition to support LANL, which is currently being formed. In requesting increasing funding for hydrogen, REDI also needs to consider the findings of LANL's 2006 cluster analysis for hydrogen, which determined that the state could not compete effectively with other regions already pursing hydrogen development. LANL continues to own a majority of the patents for hydrogen technology, and a strategy for how to continue and strengthen northern NM's role in hydrogen should be discussed.
   • Develop system benefit funds through tariffs on utility bills to offset some of the costs of developing alternative energy systems through a rebate program.
   • Expand grants to low-income families for energy-efficient appliances and heating/cooling systems, and loans to businesses for installation of renewable energy systems.
   • Require use of alternative energy to heat swimming pools and use of LED light sources in all traffic control signals.
   • Modernize New Mexico's solar rights law and expand it to include wind rights.

Media

Overview

To date, film leads New Mexico's media industries in that the state's film incentives, adopted in 2002, have positioned the state as national leader in film production. The 2003 New Mexico Media Industries Strategy is currently being updated, but focuses on three elements in its present form:

1. Protecting and supporting "core" industries, including deepening the crew base, creating incentives, and promoting private sector investment in infrastructure.
2. Supporting New Mexico filmmakers and "above the line" film businesses and professionals to keep more of the film revenue in New Mexico (e.g., producers, directors, screenwriters, music scoring).
3. Exploiting the wealth of technology resources within New Mexico to redefine the scope of the industry to include digital media, including fostering linkages between the creative community and the labs.

Despite its success, New Mexico's film industry is under threat from various sources. Despite the removal of the "sunset clause, the New Mexico Legislature continues to question the value of the state's film incentives, which may stifle new infrastructure investments. In addition, new competitor states have entered the market, and the industry is only beginning to grow above-the-line and digital media jobs which are

AVERAGE ANNUAL WAGE (2006)	Motion Picture & Sound Recording
United States	$54,111
New Mexico	$25,444
Los Alamos County	Data not available
Rio Arriba County	Data not available
Santa Fe County	$22,933
Taos County	$18,826

associated with higher wages. Generally, wages in the industry are relatively high, as illustrated by average annual US wages for motion picture and sound recording in the table at right. Unfortunately, in New Mexico, the average wages for these sectors are much lower, reflecting significant part-time employment in film and music, and the fact that the industry is has not yet developed capacity for higher-paying jobs.

REDI's has a multi-faceted role in developing the Media Cluster. On the one hand, REDI should offer a strategy for how the entire region can benefit from the film industry. This begins with support for New Mexico's film incentives, and establishment of a film production "hub" at Santa Fe Studios in the Santa Fe County Media District. The rest of the region can benefit by attracting more films north of Santa Fe and encouraging local vendors to sell their goods and services to the film industry. Success of such a regional expansion will be dependent on several factors discussed in this section: 1) the presence of a regional film liaison, which may result in local and regional incentives and permitting processes; 2) a rural production tax credit for filming in rural areas; and 3) possible expansion of the film production zone to include all of northern NM. Post-production activities may be possible throughout the region with adequate broadband; however, New Mexico's competitiveness in this part of the value chain will need to be evaluated further in the Media Cluster Strategy.

On the other hand, through the Media Cluster Strategy, REDI should examine the potential for other Media segments that create higher-paying, economic base jobs. As discussed below,

northern NM has a concentration of New Media and Information Technology businesses which are complemented by the region's research and development capabilities. Businesses in these segments of the Media Cluster should be developed irrespective of the film industry, but with the understanding that they complement film and will create an environment that attracts more films to northern NM. Significantly, New Media overlaps with the Technology and Arts and Culture Clusters, indicating that investment in New Media may produce a substantial return on investment throughout the region and across numerous industries.

Cluster Description

What REDI is now calling the "Media" Industry Cluster was initially termed "Entertainment," and included film and music. The cluster was renamed to reflect the growing significance of New Media and Information Technology in the region, and to be more consistent with the industry clusters being targeted by the REDI regional partners.

Figure 7: Segments of the Media Cluster

Film	Music	New Media	Information Technology

Legend:
National Leader
Developing Cluster Segment
Not Developed
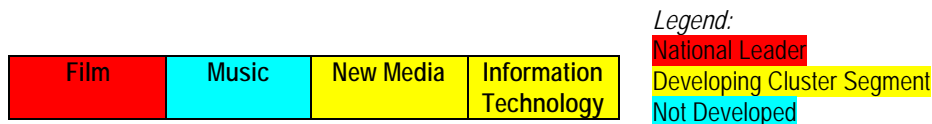
Film Segment. In Film, there are numerous businesses in Santa Fe and several in Taos dedicated to motion picture and video production. Firms working in post production are primarily located in Santa Fe. A complete list of these businesses as reported in New Mexico Department of Workforce Solutions LASER database is included in Appendix A; the businesses that appear in Figure 8 are those listed on the New Mexico Film Office's website. Almost all of these businesses are small employers, with 1-4 employees. The New Mexico Film Office website provides a statewide list of digital multimedia firms, almost all of which are located in Santa Fe and one in Taos County. This indicates that northern NM may have a competitive advantage in digital multimedia over other parts of the state.

Beyond production, the film industry provides opportunities for local businesses to sell goods and services to the industry. A recent meeting of the Santa Fe Chamber of Commerce's Economic Development Committee revealed that films are presently going to Albuquerque for most of their vendor needs, and that there is considerable opportunity for northern NM businesses to serve the film industry. Areas where there are no northern NM vendors listed on the New Mexico Film Office website include payroll, website development, video duplication, banking/financial services and environmental consulting. In addition, the New Mexico Film Office has indicated a need for accountants, lawyers and people with marketing expertise.

In terms of the value chain, New Mexico has been successful with film production, particularly with film technicians and below-the-line work. Efforts to train or educate New Mexico residents to fill above-the-line positions are certainly important, and significant progress has been made in promoting local filmmakers. It is realistic to expect, however, that a substantial number of above-the-line jobs will continue to be filled by people brought in from Los Angeles. In addition,

opportunities with marketing and distribution are limited, because these activities are associated with the film studios in California.

The REDI Economic Development Services Team recommended pursuing post production throughout the region, because it can hypothetically be done anywhere and is relatively high paying. REDI views this as a valuable, but longer-term recommendation for two reasons. First, post production requires adequate broadband infrastructure, which will be addressed through the Regional Broadband Project. Second, New Mexico as a whole has had limited success attracting post production to date, largely because it still occurs on the lot at the film studios. This Plan recommends that the Media Cluster Strategy evaluate the potential for post production to be transportable to New Mexico. It is possible that at least simul-post or close-post production, which is essentially the rough editing that occurs during production, can be done in New Mexico.

Despite the rapid growth that has occurred in New Mexico's film industry, it is important to understand that the industry is still in the early stages of becoming "anchored" in the state through permanent infrastructure such as Albuquerque Studios and Santa Fe Studios. Santa Fe Studios will create the "hub" for the film industry in northern NM and will provide opportunities for the rest of the region to increase its participation in film production and vendor services. The REDI Economic Development Services Team recommended that the region designate and fund a Regional Film Liaison for this purpose. Many communities in New Mexico have a film liaison that is familiar with the film industry, local sites and processes, and can interface with the New Mexico Film Office and film crews. Film liaison services entail conducting an inventory of potential locations and support services (e.g., vendors), responding to Film Office script opportunities to identify prospective locations, organizing scouting visits, and supporting film crews with location management services by coordinating access to local services and easing the permitting process. In northern NM, only Santa Fe has a film liaison. Until recently, the Taos film liaison was Jonathan Slater at the Taos Film Commission.

While REDI Economic Development Services Team participants recommended that one liaison per community be hired, this is probably not realistic, based on Taos' recent experience. The Taos Film Commission received $13,000 directly from the Town of Taos to provide film liaison services in the Taos area, but at that level of funding, the Commission was not able to sustain the service and cover its costs. The Town of Taos was not able to increase the funding amount, and consequently, the Film Commission did not accept funding from the Town of Taos for the coming year and no longer provides film liaison services. From a regional perspective, if Taos, Rio Arriba/Española, and Los Alamos contributed $13,000 each, one film liaison could provide services to the entire region. A key requirement of the regional film liaison will be outreach to the Pueblos. Separate funding for a Pueblo film liaison may be called for, perhaps through the Institute of American Indian Arts. Significantly, the liaison function could become a mechanism to implement a regional permitting process, regional and local incentives and public education throughout northern NM.

Figure 8: NNM Film and Music Businesses organized by Value Chain (vertical axis) and Cluster Segment (horizontal axis)

Film	Music

Retail (International)

Retail (Domestic)

Export

Wholesale

Distribution/ Marketing

Post Production

- Dead Horse Studio
- Divilicious Productions
- Dominic Capello Studiolo
- Earway Productions
- Flamdoodle Animation
- HD Solutions
- HDNM Entertainment
- Lightningwood Pictures
- New West Media Foundation
- Rotation Films
- The Skyhorse Company
- Spirit Productions
- Squeaky Reel

Production

Film	Music
Becker Video Productions	Adobe Recording
HD Solutions	D7 Productions
HDNM Entertainment	Dead Horse Studios
Lightningwood Pictures	Great Day Productions
Mountainair Films	MJ 313 Sound Studio
A NM Film Production Service	Rainbow Cassette Studio
New West Media Production	Sandscape Publishers (Mfg.)
Robert Leibovit Entertainment	Santa Fe Soundworks
Rotation Films	Soulfood Music and media
Route 66 Studios	Sound Choice Production
The Skyhorse Company	Sound Lab
Talmark Productions	Stepbridge Studios
	Vault

Vendors (Inputs)

- Santa Fe Jets (Aviation)
- Curbside Café (Caterers)
- Exchange Communications (Communications)
- Weldon Construction (Construction)
- Swims of Taos (Costumes)
- Shotmaker (Equipment)
- Serious Grippage and Lighting (Gripps and Lighting)
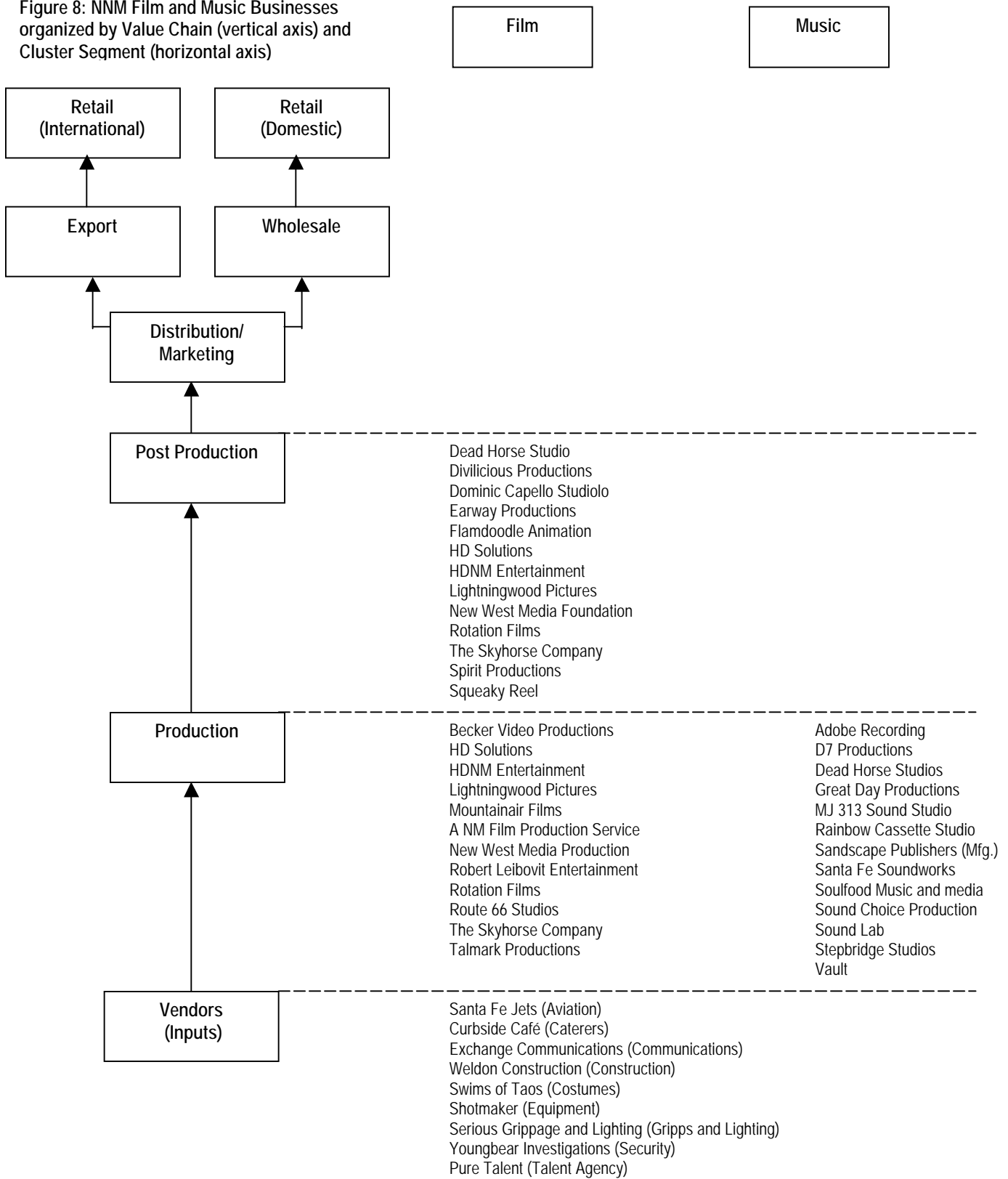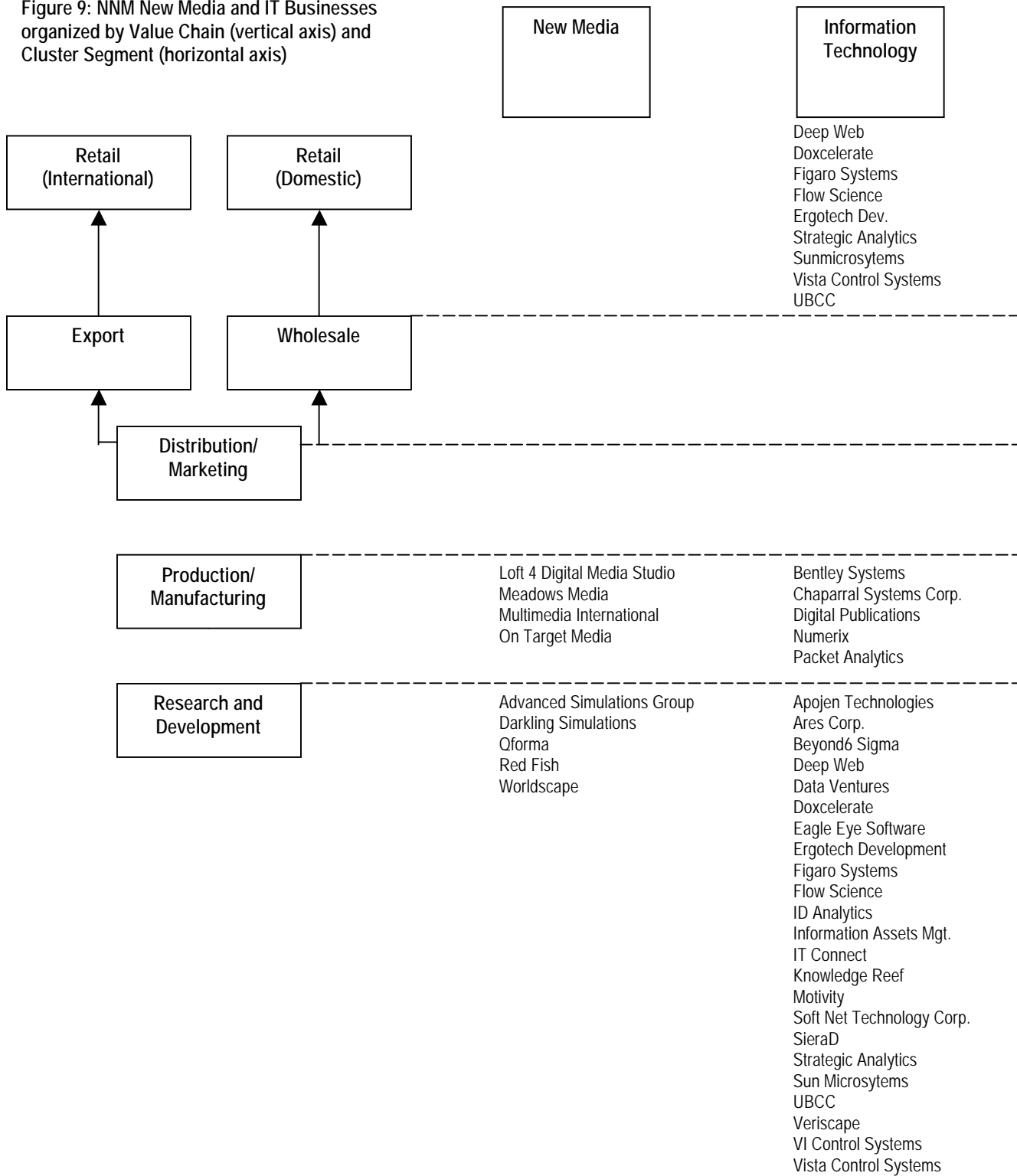- Youngbear Investigations (Security)
- Pure Talent (Talent Agency)

Figure 9: NNM New Media and IT Businesses
organized by Value Chain (vertical axis) and
Cluster Segment (horizontal axis)

New Media	Information Technology

Information Technology list:
Deep Web
Doxcelerate
Figaro Systems
Flow Science
Ergotech Dev.
Strategic Analytics
Sunmicrosytems
Vista Control Systems
UBCC

Retail (International) → Export

Retail (Domestic) → Wholesale

Distribution/ Marketing

Production/ Manufacturing

New Media	Information Technology
Loft 4 Digital Media Studio	Bentley Systems
Meadows Media	Chaparral Systems Corp.
Multimedia International	Digital Publications
On Target Media	Numerix
	Packet Analytics

Research and Development

New Media	Information Technology
Advanced Simulations Group	Apojen Technologies
Darkling Simulations	Ares Corp.
Qforma	Beyond6 Sigma
Red Fish	Deep Web
Worldscape	Data Ventures
	Doxcelerate
	Eagle Eye Software
	Ergotech Development
	Figaro Systems
	Flow Science
	ID Analytics
	Information Assets Mgt.
	IT Connect
	Knowledge Reef
	Motivity
	Soft Net Technology Corp.
	SieraD
	Strategic Analytics
	Sun Microsytems
	UBCC
	Veriscape
	VI Control Systems
	Vista Control Systems

The Music Segment is not part of the New Mexico Media Industries Strategy and is much less developed than film. The music industry is supported by the New Mexico Music Commission which maintains a web directory and calendar of artists and music events, and works throughout the state and with other state agencies to promote New Mexico's many diverse musical traditions. Northern NM is home to musical artists of many genres, as well as to several small recording studios in Santa Fe and Taos and one music publisher in Santa Fe. The Media Cluster Strategy would need to evaluate market conditions and competitive advantages for this segment, and to explore opportunities that combine film and music. Participants in the REDI Economic Development Services Team recommended the following:

- Linking the music and film industries in terms of film scoring opportunities, perhaps through a new film scoring program at NNMCC.
- Improving participation of communities in northern NM, especially Rio Arriba and Los Alamos, in statewide support programs for production and marketing of New Mexico musicians through the New Mexico Music Commission.
- Support for regional music and film festivals. Local governments can support the use of northern NM music and musicians in events they help to sponsor. The international festival for "Cojunto" music is unfortunately held in San Antonio, Texas; however, the rise of new performance venues and opportunities in the region should be used to promote the region's musical heritage.

New Media, broadly defined, includes communications technologies based in a digital or computerized environment, including internet, video games, and computer simulation. The strength of this cluster lies in a concentration of innovative firms located in Santa Fe, coupled with 3D environments in Los Alamos, such as the CAVE at LANL, which was created to help scientists in the Advanced Simulation and Computing program understand and explore their data. In addition to the CAVE, Los Alamos County loaned nearly $1.5 million to WorldScape Inc. in 2008 under a project participation agreement subject to the New Mexico Local Economic Development Act. WorldScape is a high-tech research and development firm that specializes in immersive technology applications, primarily for the US government. It is creating an immersive theater in the Los Alamos Research Park that will allow audience members to walk into an environment surrounded by an alternate reality. The company has a cooperative research and development agreement with LANL centered on visualization development technologies. New Media represents a niche in which northern NM may have a competitive advantage, an idea that will be tested in the Media Cluster Strategy.

At the Coronado Venture Forum's July 17, 2008 meeting on the State of the Digital Media Industry in New Mexico, it was reported that an increasing proportion of films are using advanced computer graphics, are animated, and are being made in three-dimensions. These are the films that are making the most money. In addition, computer gaming industry revenues have now passed revenues in the film industry, and immersive three-dimension digital entertainment is just over the horizon.

New Media overlaps significantly with Arts and Culture. *Economic Importance of Santa Fe's Arts and Cultural Industries* (2004) by the UNM Bureau of Business and Economic Research cites the failure to establish arts and culture in new media and emerging industries as one of the critical challenges for the Arts and Cultural Industries. The report states that Santa Fe's wealth of talent

in technical and applied fields are poorly integrated with the creative talents in arts and culture, limiting flexibility and growth. BBER identifies these specific opportunities in its report: animation and special effects, video game design and development, web development, niche software for design, visualization and management, and cultural-related content software.

In fact, Cultural Technology, an emerging field that merges digital technology and cultural context, is one way to link northern NM's technology and arts and culture assets through New Media. Northern NM has advantages in this segment because Highlands University is developing an academic and workforce program known as The Center for Cultural Technology (CCT), a proposed national center of excellence for Cultural Technology. A partnership between Highland's Media Arts Program and the New Media Department of Cultural Affairs, the goal of CCT is to create a local and diverse talent pool of multimedia specialists who will work in New Mexico's museums and cultural industry. CCT also includes a research and development component for new digital media. CCT plans to spearhead the creation of The Virtual Museum of New Mexico, a virtual museum that will share collections and information and has numerous educational and research applications.

Information Technology (IT) is related to, but differentiated from New Media in that it focuses on computer-based information *systems*, particularly software applications and computer hardware. The strength of this segment is a concentration of innovative software developers, most of which are located in Santa Fe with a few businesses in Los Alamos and Taos. Although this group is dominated by small employers, a few firms—notably Flow Science and Numerix—employ above 20 people. As shown in Appendix A, the region is also home to many computer programming businesses, most of which employ 1-4 people. In terms of the value chain, this segment is strongest in research and development, and weakest in distribution and marketing. Manufacturing is also weak, although a few firms exist in Santa Fe.

The following table lists the strengths and challenges for the Media Cluster based on this analysis, with corresponding recommendations for initial business attraction, retention, expansion and creation efforts. Of all REDI target clusters, Media has significant private sector investment and considerable potential for high-paying jobs. However, in order for these benefits to extend to the entire region, broadband infrastructure must be deployed and the potential of New Media must be explored and developed.

Table 6: Strengths, Opportunities, Weaknesses and Challenges for the Media Cluster

Strengths and Opportunities	Recommendations
Emerging hub for film production in Santa Fe	Support development of Santa Fe Studios at the Santa Fe County Media Park.
Strong film production segment	Hire regional film liaison to attract films throughout the region.
Demand for vendor services in film	Assist local business in becoming vendors to the film industry.
Concentration of New Media businesses in Los Alamos and Santa Fe, and potential for new media region-wide	Attract, grow and create New Media businesses throughout the region, with increasing expansion into rural areas as broadband is deployed.
Concentration of IT businesses in Santa Fe	Attract, grow and create IT businesses throughout the region, with increasing expansion into rural areas as broadband is deployed.
Weaknesses and Challenges	**Recommendations**
Most businesses are small employers	Grow businesses to the next level (1-4 employees to 5-9, etc.)
Post production still occurs on studio lots in CA	Determine through cluster strategy if post production can be transportable, and if NNM's can at least take advantage of simul-post.
Undeveloped music cluster	Determine advantages through cluster strategy.
Lack of accountants, lawyers and people with marketing expertise for Film	Attract, grow and create businesses in these areas. Good potential for location-neutral businesses.
Lack of software engineers for New Media	Attract, grow and create new businesses. Good potential for LANL retirees, location-neutral businesses. Promote education programs & career pathways in New Media.
Weak marketing and distribution for IT & New Media	Attract, grow and crate marketing and distribution businesses.

Enabling Environment

Human Capital. When New Mexico's film incentives were rolled out in 2002, nearly all of the film labor force was imported from California. In four short years, the New Mexico Film Office has partnered with local colleges to create film technician training programs at Santa Fe Community College, Northern NM College at El Rito, Eastern NM University in Roswell, Central NM College in Albuquerque, and the Doña Ana branch of New Mexico State University. Film training is also planned to occur at the Los Luceros property in Alcalde, which was recently purchased by the State of New Mexico from a private landowner. Today, New Mexico has the largest crew base outside of the west coast, with 1,800 trained technicians. In its efforts to expand opportunities in above-the-line jobs, the New Mexico Film Office invests in and encourages mentorship opportunities such as the IAIA Native Showcase Teen Program, New Mexico Filmmakers programs and conferences, and the New Visions New Mexico filmmakers' competition.

Northern NM offers many degree and certificate programs in media arts. The College of Santa Fe offers a Bachelor's Degree in Graphic and Digital Design, with tracks in graphic design, motion graphics and web design, and interactive art and technology. Santa Fe Community College (SFCC) offers an Associate of Art degree or certificate in Media Arts, with concentrations in animation, digital imaging, graphic design, moving image arts, video production and web design. UNM-Taos offers certificates in Digital Graphic Design and Multimedia, while UNM-Los Alamos

offers an Associates of Applied Science in Digital Media Arts. The Institute of American Indian Arts (IAIA) offers a Bachelor's Degree and Associates of Applied Science in Media Arts. While not located in the REDI region, Highlands University in Las Vegas offers a Bachelor's of Fine Arts in Media Arts with emphasis areas in communication design, interactivity and multimedia, and digital filmmaking. Highlands also offers the only Master's in Fine Arts in Media Arts in New Mexico, and as described above, is currently developing a national center of excellence for Cultural Technology.

As a Media Cluster Strategy is pursued in the next year, special attention should be given to creating relationships between colleges and firms to better connect new graduates with jobs in the field. In addition, REDI should assess existing programs to ensure that students have pathways to careers in emerging fields of computer graphics, computer gaming, animation, three-dimension and immersive three-dimension. Firms participating in NNMConnect have noted a lack of software engineers as a major challenge to their growth potential and their willingness to remain in New Mexico. Ensuring that education and training in these areas is adequate will help this new high-paying segment of the cluster flourish in northern NM.

Infrastructure. The success of New Mexico's film incentives has spurred rapid infrastructure development over the past four years. The development of Albuquerque Studios has pulled many projects to Albuquerque, despite the fact that Santa Fe is a desirable film location and contains New Mexico's western sets. Santa Fe Studios plans to purchase property at the 65-acre Santa Fe County Media Park by the end of 2008, and will begin a 12-month construction schedule for a film production studio. Later phases will include sound and music recording, and potentially, post-production. Significant infrastructure investment, particularly in broadband, is required to support Santa Fe Studios, and an infrastructure backbone design is currently underway through the Santa Fe Regional Telecom Coalition. Broadband at the Santa Fe County Media Park is required for the region to attract, grow and create jobs in the Media and Technology Clusters.

In addition, the Town of Taos is currently upgrading the Taos Community Auditorium for expanded performance, meeting and classroom space. A flexible "black box" is being considered which can be used for performance space, filming and even simul-post or close-post activities. Such a project would greatly improve Taos' ability to attract more films, and potentially, post-production.

Public Policy. In 2002, the State of New Mexico adopted a highly-competitive suite of incentives that have made the state a national leader in film production, but have often been called into question by the New Mexico Legislature. Permanent and long-term incentives are important to justify the construction of studios and other infrastructure in the region, which provide a physical and investment base more significant than transient "location-shooting" activities. REDI and the regional partners should be active in supporting and protecting the incentives to foster confidence in the film industry and encourage new infrastructure investment. Existing film incentives include:

- **25% Film Production Tax Rebate** on all production expenditures, including New Mexico labor, which are subject to taxation by the State of New Mexico.

- **Film Investment Loan Program**, with participation in lieu of interest, for qualifying feature films or television projects. Terms are negotiated and the budget must be at least $2 million. Loans may total up to $15 million per project, which can represent 100% of the project budget.

- **No Sales Tax**, primarily for commercials and public service announcements. Type 16 Nontaxable Transaction Certificates (NTTCs) are issued and presented at the point of sale to avoid gross receipts tax (sales tax) charges. This incentive cannot be used in conjunction with the 25% tax rebate.

- **Film Crew Advancement Program** offers a 50% reimbursement of wages for on-the-job training of New Mexico residents in advanced below-the-line crew positions. New Mexico supervisors and keys have the opportunity to hire and mentor qualifying New Mexico crew in advanced positions for this program.

Another key advantage is that the State of New Mexico has the rare distinction of working well with the unions. New Mexico's two overlapping work zones, formally known as "Production Centers," allow films to move within 60-mile radii of Albuquerque and Santa Fe, without additional costs. Unions include IATSE 480 (98 crafts), two local teamster unions (300-400 members), the Directors Guild, and IATSE 600 (camera).

The REDI Regional Expert Team on Public Policy made two policy recommendations which would expand the potential and benefits of the film industry into rural areas and throughout the region. Because the New Mexico Film Office has advised that the 2009 policy focus will be protection of existing film incentives, REDI plans to engage the New Mexico Film Office in a strategy to pursue them in 2010.

1. **A Rural Tax Rebate** would add an additional 5% to the existing 25% rebate, as an incentive for production or postproduction activities based in rural areas. A proposal which has been considered by the New Mexico Film Office is to add an additional 5% tax rebate for tier 1 rural areas, and an additional 2.5% tax rebate for tier 2 rural areas. Under the existing Film Production Tax Credit legislation, a rural area is defined as any part of New Mexico not within a H Class County, the State Fairgrounds, an incorporated municipality with a population greater than 30,000 located within an MSA, and any area within a ten-mile radius of the exterior boundaries of such a municipality. A tier 1 rural area includes all unincorporated areas and municipalities with populations of 15,000 or less; a tier 2 rural area includes municipalities with populations of 15,000 or more.

2. **Expand the "Production Center" Designation** refers to the labor union work zone for film, currently identified as a sixty-mile radius from Santa Fe. If the northern production center included the entire region, this would encourage film business in the rural areas more than sixty miles from Santa Fe.

Technology

Overview

New Mexico's history with technology began in the 1940s, when Sandia and Los Alamos National Laboratories and several defense-related research institutions were established in the state. The national laboratories have made New Mexico a leader in research and development and in some science and technology applications, which bodes well for the competiveness of a Technology Cluster. The greatest challenge to development of a robust cluster, however, has been converting federal resources into private sector opportunities. The Corporation for Enterprise Development's (CFED) *20th Development Report Card for the States* for 2007 illustrates this. New Mexico ranks first in the nation for the number of PhD's, scientists and engineers, as well as for federal research and development. It is also in the top ten for SBIR grants and graduate students in science and engineering. On the other side of the equation, the state ranks 37th in private research and development and 43rd in royalties and licenses. Academic research and development is relatively high at 19, while the number of businesses created by academic R&D is low at 38. Despite these rankings, significant progress is being made in strengthening the cluster, as described in the following initiatives.

The New Mexico Science and Technology Plan was completed for Governor Richardson's office in 2008. The plan builds upon the state's national laboratories and research and education institutions to identify five areas of strength: Aerospace; Bioscience; Energy, Environment and Water; Information Technology and Nanotechnology. These categories are roughly congruent with the segments of the REDI Technology Cluster, and have varying degrees of relevance for northern NM:

- Aerospace primarily builds upon the southern NM assets of White Sands Missile Range and Air Force Research Laboratory, and identifies Spaceport America in Doña Ana County as its cornerstone project. The optics cluster is important to Aerospace, and some companies exist in northern NM.

- Bioscience includes neuroscience; computational biology; genomics, which is anchored in Santa Fe at the National Center for Genomics Research; and detection and remediation of biothreats, which is based at Sandia and Los Alamos National Laboratories.

- Energy includes state policy initiatives, natural resources, intellectual resources and R&D capacity to create new energy and environmental technologies, all of which are relevant for northern NM. New Mexico is also looking into biofuels production, and is testing microalgal biodiesel in southeast NM.

- Information Technology centers on advanced computing and digital media, segments in which northern NM may have a competitive advantage. The state is also taking a leadership role in advanced computing, through the New Mexico Computing Applications Center (NMCAC).

- Nanotechnology is most relevant in central NM, as it is anchored at the Microsystems and Engineering Application Complex at Sandia National Laboratory. The Center for Integrated Nanotechnologies (CINT) has its core facility at Sandia and is unique for its emphasis on both scientific discovery and integration of nanostructures in the micro and macro-world. LANL is home to a secondary CINT facility, and its research and development in this field has helped to foster some nanotechnology companies in northern NM.

Santa Fe has developed a strong concentration of innovative technology businesses over the last ten years in disciplines which include, overlap and extend beyond informatics, complexity, computer simulation and modeling, digital/new/multimedia, information technology and life sciences. Some of these businesses grew from LANL technology, but many evolved from collaborations with the Santa Fe Institute, which emphasizes multi-disciplinary approaches and solutions. The Santa Fe Business Incubator (SFBI) is also a source of this technology success. SFBI opened its doors in 1998 and has incubated a large number of technology start-ups over the years. Two new projects—the Santa Fe Innovation Park and the Santa Fe Complex, are further developing Santa Fe's multi-disciplinary technology cluster through physical space, collaborative projects and educational endeavors.

Los Alamos National Laboratory's historically conservative policies regarding licensing agreements and intellectual property rights have changed with new management at the Laboratory. LANS LLC has begun contracting out legal work to ensure that technology is "pushed" out of the Lab, and has encouraged Lab employees to create their own businesses to commercialize LANL technology. In fact, LANL has included a complete appendix in its contract with LANS to encourage regional technology commercialization. The purpose of the appendix is to support transfer of new and emerging technologies between the Laboratory and private industry, as well as to develop mechanisms for Laboratory technologies to stimulate business start ups; create job opportunities; and attract entrepreneurs, businesses and capital to the region.

LANS' major economic development investment—Northern NM Connect (NNMConnect)—operates several programs which connect entrepreneurs with customized resources to accelerate the growth of their companies. NNMConnect is based on the highly successful San Diego Connect model that helped grow the biotechnology sector in San Diego County over the past 25 years by connecting economic development organizations, local governments, the University of California San Diego, small businesses, and the capital/financial community, into a business ecosystem that has seen the creation of over 800 companies with thousands of high paying jobs. 2008 was NNMConnect's first year of operation. It is now expanding its core "push" approach to commercializing technology from within the lab, to a "pull" approach that seeks market-based applications and entrepreneurs outside the lab for which existing technologies can be leveraged. NNMConnect has numerous programs under its umbrella that are described below:

- **Venture Acceleration Fund (VAF)** is focused on getting innovation to market faster. VAF's target customer base is regional entrepreneurs and businesses with a LANL technical connection needing funding to mature their technology. Each year, VAF awards investments totaling $350,000 to facilitate projects with regional entrepreneurs, companies, investors or strategic partners. Project proposals focused on specific evaluation criteria must develop and refine novel solutions that demonstrate strong market demand and have promise to achieve regional economic development.

- **Springboard** focuses on getting companies to the next level through expert coaching for high tech companies in all stages of development, including concept, start-up, and growth. Entrepreneurs spend several weeks in coaching sessions with a NNMConnect coach, then make a presentation to a panel of experts that match the needs of each company. The panel includes a venture capitalist, a seasoned entrepreneur, corporate and patent attorneys, marketing professionals and an executive from a successful company in the same industry, among others. The goals of the panel presentation are to provide the entrepreneur with candid recommendations for the refinement of their business plan and to help identify next steps to achieve the company's goals. Following the panel presentation, the entrepreneur meets with his or her coach to identify next steps, incorporate the feedback from the panel, and implement a strategic plan for the next six to twelve months.

- **New Mexico Small Business Assistance (NMSBA)** provides New Mexico small businesses with technical assistance to help resolve specific technical and business problems. These assistance projects impact the New Mexico economy through workforce development and business creation, retention, and expansion. NMSBA allows up to $2.4 million worth of assistance annually, per eligible national laboratory, in exchange for a gross receipts tax credit from the State of New Mexico. Rural New Mexico small businesses (Small Business Administration definition) can access up to $20,000 of assistance and urban small businesses (Bernalillo County) can access up to $10,000 annually. Scientists and engineers lend their expertise to small businesses in a variety of areas, including manufacturing, agriculture, oil and gas, biotechnology, information technology, and energy and environmental resource management. Assistance is offered through technical consultation, training, testing, and access to specialized equipment and facilities.

- **Market Intelligence.** NNMConnect's Market Intelligence initiative is currently in a pilot phase and expects to become "live" in January 2009. The program is based on existing programs generally grouped under the term "Economic Gardening" in other regions of the country, such as Littleton, CO; Wyoming (statewide); Loveland, CO; and Beaverton, OR. The program aims to provide high quality market-related information and counseling for companies in the seven-county northern NM region, with a particular emphasis on companies that have the capacity to add jobs. The program will use sophisticated data sources to help the program's market analysts answer market queries from companies. The program will provide help in determining what companies really need to know, detailed information to help answer the question, and assistance in analyzing the information and determining next steps. The types of questions that will be handled include: market size and propensity to buy, customer characteristics, competitors, industry trends, and marketing lists of individuals or business customers for targeted marketing.

  A key element of the program is to cooperate with other regional entities that support entrepreneurs and to include representatives from these business support organizations in the initial meeting with the client companies. In this way, a broad range of business expertise will be brought to hand to assist the company. Although companies are seen as the primary clientele of the program, the program also envisions serving cluster development efforts by providing information about the industry and economic trends that
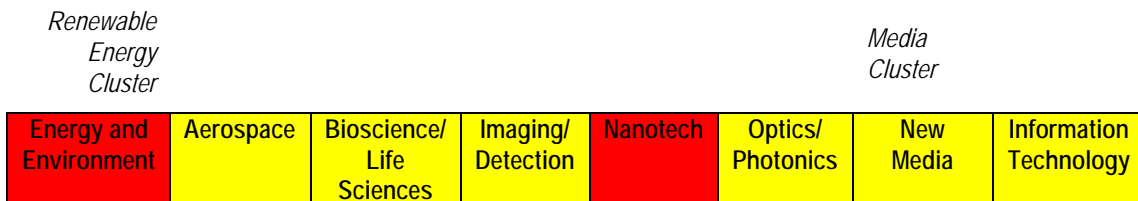
affect clusters, identifying potential cluster members, identifying gaps in the cluster and value chain, and assessing competing clusters.

Description of the Cluster

Technology is not a traditional industry cluster, but rather a process that creates tools, devices and services to advance the state-of-the-art or improve existing methods. Yet when considered as a cluster, high-tech and innovation companies in northern NM represent significant private sector momentum, investment and potential. Furthermore, NNMConnect has identified several challenges for the technology entrepreneurs with which it works. Two of these—networking and understanding the value chain—can be addressed by developing technology companies as a cluster, rather than individual, isolated businesses.

The figure below shows the segments of the Technology Cluster, including those that overlap with other clusters. Please note that Figure 11, which depicts the value chain and cluster segments for Technology, does not include New Media and Information Technology businesses, which are identified in the Media Cluster, but does include Energy and Environment businesses not previously identified in the Renewable Energy and Green Industry Cluster, such as those that work in the field of nuclear energy or on other environmental technologies. Figure 11 also lists Aerospace and Nanotechnology businesses under "Various and Other," as few businesses in these segments exist in northern NM.

Figure 10: Segments of the Technology Cluster

Renewable Energy Cluster

Media Cluster

| Energy and Environment | Aerospace | Bioscience/ Life Sciences | Imaging/ Detection | Nanotech | Optics/ Photonics | New Media | Information Technology |

Legend:
National Leader
Developing Cluster Segment
Not Developed

Technology businesses in northern NM are clearly concentrated in the research and development level of the value chain. Of the firms indentified in the Bioscience/Life Sciences segment, all but one is located in Santa Fe. Firms working in Imaging/Detecting have a greater presence in Los Alamos, with two firms in Taos, two in Santa Fe and one in Española. Optics and Photonics firms are concentrated in Los Alamos and Santa Fe, with one firm in Española. There are also several firms that work in multiple segments of the Technology Cluster, or whose work is difficult to classify. With increasing innovation, it will become more and more difficult to categorize high-tech firms and to identify them through NAICS codes. As shown in Appendix A, the firms identified for this Plan categorized themselves in various ways, some of which were difficult to tie to technology, research or development.

It is important to note that the Technology Cluster has a greater variation in firm size than the other clusters, indicating greater maturity. While there are still many firms with 1-4 employees, there are several that employ 5-9, 10-29 and 20-49. Besides LANL, Genzyme Genetics in Santa Fe is the largest employer in this cluster, with 250-499 employees.

In terms of support services for the Technology Cluster, 24 engineering firms and scientific consultants were identified, with a large concentration in Los Alamos, several in Santa Fe, and two in Taos. Among engineering firms and scientific consultants, there is a healthy variation in firm size. While most firms employ 1-4 employees, several employ 5-9 and 10-19, five firms employ 20-49, and two employ 50-99.

One technology business owner in the region has cited the lack of suppliers and couriers as a major disadvantage to his business. This analysis identified no couriers and six machine shops in the region. Three machine shops were located in Los Alamos, with one each in Santa Fe, Taos and Española. While the number of machine shops appears adequate for the region, the products, services or hours may not match the needs of technology businesses. The Technology Cluster Strategy should address this, as well as the need for a courier service.

A major challenge cited by NNMConnect is the lack of management companies to assist technology entrepreneurs in growing their businesses. Appendix A substantiates this, as only a small number of management companies specializing in technology were identified in the region. In response to this need, REDI should focus on attracting and creating management companies. Improving linkages between existing management firms and technology entrepreneurs should also be explored. It should be noted that a number of firms which classify themselves as management companies are listed in the New Media cluster segment of the Media Cluster. These firms, such as Red Fish and Qforma, use computer simulation and modeling to address business problems, and may be able to provide services to their peers in the Technology Cluster.

Another challenge identified by NNMConnect in its work with technology entrepreneurs is understanding the value chain. Research and development firms sometimes become focused on manufacturing their inventions, regardless of whether they have any knowledge or expertise in manufacturing. Entrepreneurs need better information about how to get their product to market, which more often than not, may require acquisition of the technology or the firm itself. This fact is often viewed negatively, because it may cause the closure or relocation of a northern NM firm at a pivotal point in that firm's growth. In our global economy, there is no way to avoid this reality because New Mexico largely lacks a manufacturing base and does not have a major presence of national and multinational corporations. Instead of limiting the options for technology entrepreneurs, this Plan recommends that REDI evaluate how northern NM can expand its role in the value chain as part of the Technology Cluster Strategy. The following are recommended for evaluation:

1. Explore the Española/Pojoaque Valley's potential for rapid manufacturing and prototyping. This recommendation is based upon advantages that the Española/Pojoaque Valley has in this area, which include a location between Santa Fe and Los Alamos, ample industrially zoned or programmed land, a workforce with exposure to machining and manufacturing, and expertise in training at Sparks Mechanical.
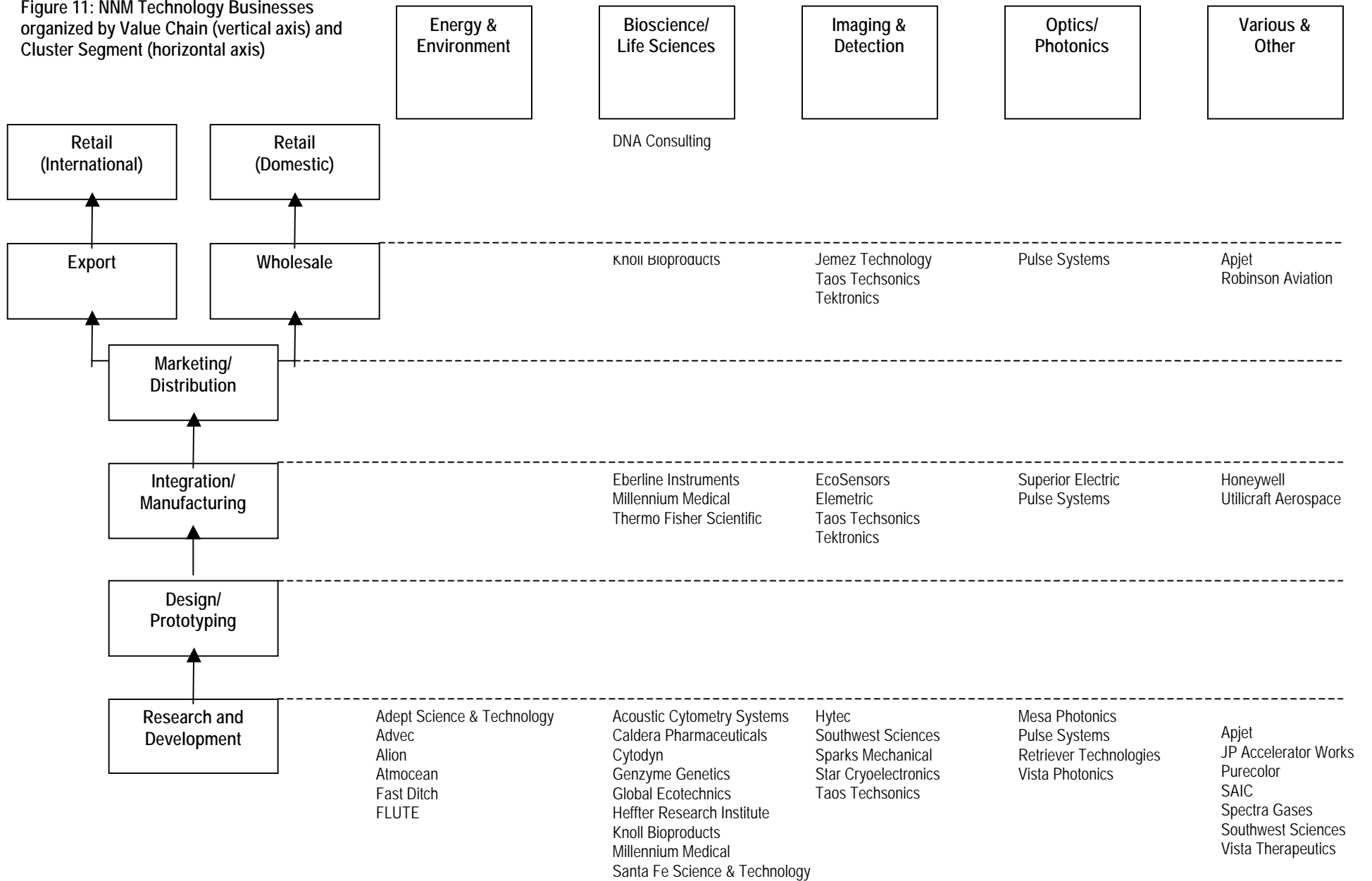
2. Develop regional alliances with Albuquerque and other metropolitan areas for certain types of manufacturing and integration.
3. Attract new R&D firms to northern NM to grow the cluster and replace firms that may be potentially lost through acquisition.
4. Increase the connection of R&D start-ups to New Mexico through the Early-Stage Technology Program described in this Section. The program can also include "anchoring" requirements so that more technology companies stay in New Mexico.

The following table lists the strengths and challenges for the Technology Cluster based on this analysis, with corresponding recommendations for initial business attraction, retention, expansion and creation efforts. Of all REDI target clusters, Technology has the greatest potential for high-paying, economic base jobs, and is a cluster in which northern NM is a known national leader. The Technology Cluster can be strengthened with infrastructure investments in Española and Taos, increased support services, and a coordinated business attraction, retention, expansion and creation strategy focused on small to mid-sized technology businesses which reach into the Media and Renewable Energy/Green Industry Clusters. New dimensions of the cluster can be explored in the prototyping and rapid manufacturing potential in the Española and Pojoaque Valleys.

Table 6: Strengths, Opportunities, Weaknesses and Challenges for the Technology Cluster

Strengths and Opportunities	Recommendations
LANL national leader in Technology	Attract, grow and create new technology businesses region-wide.
Santa Fe concentration of innovation firms	Support SFBI, SFIP, SFC and attract, grow and create new technology businesses region-wide.
Greater variation in firm size than other clusters	Partner with NNMConnect to assist firms in growing to the next level.
Weaknesses and Challenges	Recommendations
Lack of management companies	Attract management firms, strengthen linkages with existing firms.
Lack of couriers and suppliers	Attract/create courier service, work with suppliers to improve products, services and convenience.
R&D weak outside of Los Alamos and Santa Fe	Infrastructure investments for flexible space in Taos, business incubator in Española.
Lack of integration between R&D and other parts of value chain	Explore prototyping/rapid mfg. in Española/Pojoaque, establish regional alliances for manufacturing.
Potential for high-tech firms to leave northern NM if acquired	Early Stage Technology Business Program, business attraction to replace acquired firms.

Figure 11: NNM Technology Businesses organized by Value Chain (vertical axis) and Cluster Segment (horizontal axis)

	Energy & Environment	Bioscience/ Life Sciences	Imaging & Detection	Optics/ Photonics	Various & Other
Retail (International) / Retail (Domestic)		DNA Consulting			
Export / Wholesale		Knoll Bioproducts	Jemez Technology Taos Techsonics Tektronics	Pulse Systems	Apjet Robinson Aviation
Marketing/ Distribution					
Integration/ Manufacturing		Eberline Instruments Millennium Medical Thermo Fisher Scientific	EcoSensors Elemetric Taos Techsonics Tektronics	Superior Electric Pulse Systems	Honeywell Utilicraft Aerospace
Design/ Prototyping					
Research and Development	Adept Science & Technology Advec Alion Atmocean Fast Ditch FLUTE	Acoustic Cytometry Systems Caldera Pharmaceuticals Cytodyn Genzyme Genetics Global Ecotechnics Heffter Research Institute Knoll Bioproducts Millennium Medical Santa Fe Science & Technology	Hytec Southwest Sciences Sparks Mechanical Star Cryoelectronics Taos Techsonics	Mesa Photonics Pulse Systems Retriever Technologies Vista Photonics	Apjet JP Accelerator Works Purecolor SAIC Spectra Gases Southwest Sciences Vista Therapeutics

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Enabling Environment

Human Capital. Community and four-year colleges in the region provide a range of technology-related degrees and certificates. Currently, UNM-Los Alamos offers Associates of Science degrees in Environmental Science, Pre-Engineering and Science, and an Associates of Applied Science degree in Electro-Mechanical Technology. Its recently-launched Applied Technologies Degree Program was developed in collaboration with LANL. Santa Fe Community College offers Associate of Science degrees in Computer Science and Pre-Engineering and Associate of Applied Sciences degrees in Computer and Information Technology, Drafting and Engineering Technology, and Environmental Technologies, as well as certificates in Engineering Technologies and Environmental Technologies. Santa Fe Community College's planned Sustainable Technologies Center will provide opportunities for students to gain hands-on experience in these technology areas, as well as for entrepreneurs to develop demonstration projects at the college. UNM-Taos offers an Associate of Science degree in Pre-Science and a certificate in Internet Technology. Northern NM College offers Associate of Applied Science degrees in Electrical Technology, Engineering Technologies, Laboratory Biotechnology, Chemical Technician and Computer Science. NNMC also offers Associate of Science degrees in Materials Science Technology, Pre-Engineering, Science and Biology. A number of more focused IT degrees and programs are also offered by these institutions.

REDI remains keenly interested in improving technology education in the region's public schools, and is engaged in an ongoing discussion with Lt. Governor Diane Denish's office about potential education partnerships. Once REDI has developed a public-private partnership, private sector members can provide mentorships, apprenticeships, internships and summer jobs to public schools students, and can even help develop technology curriculum. Implementation of such an effort will require one to two years for outreach to the public schools and training of private sector businesses. Such partnerships are described in greater detail in Human Capital Section of the Plan.

Infrastructure. Northern NM is already an established national leader in Technology due to the presence of Los Alamos National Laboratory. This status has been expanded with Santa Fe's growing innovation cluster. REDI supports Taos and the Española Valley's efforts to develop the Technology Cluster in their communities. The Town of Taos plans to focus on small, technology businesses as part of its business attraction strategy, and may develop high-tech oriented flexible space or an incubator for this purpose. Española has ample sites and infrastructure, but has struggled to attract and create new technology firms. A business incubator, which is currently being discussed by the City of Española, is the cornerstone project which would provide the environment for new technology businesses to develop and grow in the Española Valley. Rio Arriba County is considering developing its industrial park in Alcalde in a way that could serve the prototyping or rapid manufacturing stage of production, if it is found to be feasible. Finally, the broadband infrastructure required to support the Technology Cluster is currently being planned through the Santa Fe Regional Telecom Coalition and the REDI Regional Broadband Project, described in the Infrastructure Section of this Plan.

Facilities and infrastructure that support the Technology Cluster are described below.

- **Los Alamos Research Park** is a forty-acre campus located just across the street from LANL's main technical area, in close proximity to researchers, laboratories and facilities at LANL that specialize in areas such as energy, biotechnology, advanced computing, computer simulation and modeling, communications and telecommunications, advanced materials and manufacturing, and microelectronics. The Research Park is designed to enhance the collaborative efforts of tenants with one another, with LANL, and with other R&D activities throughout the world. The advantage of this location is the highly educated and trained workforce, including scientists, engineers, technicians, and professionals who come to Los Alamos from throughout the world for careers in research and development.

- **The LANL Science Complex** is expected to provide modern facilities for a wide range of science, technology, and engineering capabilities necessary to support both National Nuclear Security Administration (NNSA) and non-NNSA missions, and to facilitate removal of aging and deteriorating facilities at the Laboratory. LANL plans to house about 1,600 workers in the proposed complex's two buildings with an adjacent parking garage at Technical Area 62 NW, located west of the Laboratory's main technical area. The vision for the proposed Science Complex is to provide the Laboratory and NNSA with a premier 21st century office and laboratory complex that provides an aesthetic and functional workspace and offers an easy to use, cost-effective and productive work environment. An RFP for the facility was issued in April of 2008.

- **Santa Fe Business Incubator (SFBI)** supports new and growing businesses in a 30,000 square foot facility and offers a wide range of business training, support programs, flexible leases, and shared equipment in a professional working environment. While open to entrepreneurs in all businesses and sectors, SFBI has become an important resource for technology-based businesses, in that many have been, and continue to be, incubated at the facility. SFBI also provides a model for new business incubators such as that under consideration by the City of Española.

- **Santa Fe Innovation Park (SFIP) and the Santa Fe Complex.** SFIP is a proposed campus aimed at creating a globally recognized center of excellence that will bring together Art, Science, Industry and Policy. It will consist of tenants in these four areas to create an environment of innovation and collaboration that can benefit the region through applied projects in public policy, education, health, etc. A feasibility plan for SFIP has been developed, with financial support of the City of Santa Fe's Economic Development Department. Implementation of the project is dependent on investments and funding from potential partners. The Santa Fe Complex is a physical space in downtown Santa Fe, adjacent to the Railyard District, which creates connections across science, technology and art through its tenants, collaborations, special events and youth programs. The City of Santa Fe Economic Development Department recently funded the initial lease payments for organization in its remodeled facility.

- **Supercomputing** is a major component of technology infrastructure. The Roadrunner Initiative will establish the world's fastest computer at Los Alamos National Laboratory in the summer of 2008. IBM is developing the computer, nicknamed *Roadrunner*, which will

be capable of performing more than a quadrillion operations, or a petaflop, when it's fully operational. Hand in hand with *Roadrunner,* the New Mexico Computing Applications Center's (NMCAC) *Encanto* is one of the worlds' most powerful computing systems. NMCAC will apply the power of supercomputing to drive high-tech business and job growth in New Mexico. NMCAC offers three key advantages: 1) enhance New Mexico's ability to draw on the world-class local talent at New Mexico's national laboratories and universities, 2) connect the state through a network of more than 40 gateways, and 3) serve as a bridge among colleges, research universities, national labs, businesses, and communities. NMCAC's primary focus areas will be the health, medical, bio med/tech, and the digital and film media industry, with energy, environment, nanomaterials, remote sensing networks, and financial investment as secondary areas. The Center will offer a range of services and resources to New Mexico companies including technical and computing resources in return for equity in the technologies developed, and R&D partnerships through sustaining memberships. Through its gateways, NMCAC has significant benefits for rural areas of the state, and for education, health (including telehealth and telemedicine) and economic development. All colleges and universities in New Mexico, including branches, will be equipped as gateways to use the supercomputer, enabling distance learning, workforce development, and drawing more students into science and engineering careers.

Public Policy. In the past few years, New Mexico's environment for technology businesses has improved dramatically, as venture capital (VC) has become increasingly available in the state. New Mexico's State Investment Board and Small Business Investment Council have helped to create an environment in which VC can flourish, leading to New Mexico being ranked first among states with the highest percentage growth of VC funding between 2006 and 2007. In addition, at the state and federal level, the following incentives exist relative to Technology and Research and Development:

- **Research and Development Small Business Tax Credit.** This program provides a credit equal to the sum of all gross receipts taxes, compensating taxes, and withholding taxes due to the state for up to three years to qualified R&D small businesses. Eligibility requires that the business employ no more than 25 employees in any prior calendar month; have total revenues of no more than $5 million dollars in any prior fiscal year; and make qualified research expenditures of at least 20% of total expenditures for 12 calendar months, ending with the month for which the credit is sought. Qualified research is defined as that undertaken for the purpose of discovering information that is technological in nature and the application of which is intended to be useful in the development of a new or improved business component, and in which substantially all activities constitute elements of a process of experimentation related to new or improved function, performance, reliability, or quality.

- **Rural Software Gross Receipts Tax Deduction.** This program exempts from gross receipts tax a taxpayer whose primary business is providing software development services and who had no business location in New Mexico other than in a qualified area during the period for which a deduction is sought. The company must have been established after July 1, 2002. Software development services include custom software and website design and development. Rural, for purposes of this tax deduction, is defined as statewide except for an incorporated municipality with a population of more than 50,000 (Albuquerque, Las Cruces, Rio Rancho, and Santa Fe).

- **Technology Jobs Tax Credit.** This credit has two parts: a basic credit and an additional credit, each equal to four percent of the qualified expenditures on qualified research at a qualified facility. The additional credit is earned if the taxpayer increases his payroll by at least $75,000 over the base period and by at least $75,000 for each $1 million in qualified expenditures. The credit amount doubles for expenditures in facilities located in rural New Mexico, defined as outside of Rio Rancho or more than three miles outside Bernalillo, Doña Ana, San Juan, or Santa Fe counties. Eligible expenditures include technological research; facilities; payroll, consultants and contractors performing work in New Mexico; software, equipment, technical manuals, rent and operating expenses of facilities.

- **Small Business Innovation Research (SBIR).** The federal Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs provide more than $2 billion annually in R&D grants and contracts to qualified small businesses, defined as U.S. owned, independently operated, for-profit entities of fewer than 500 employees. Eleven federal agencies are required by law to provide these funds by setting aside 2.5% of their annual extra-mural R&D budgets for use exclusively by U.S. small businesses for new product R&D, thereby providing a unique source of start-up and seed capital for small businesses to develop new innovative product concepts. There are few strings attached to these funds; there is no repayment requirement, no equity sacrifice, and most intellectual property rights remain with the small business. Both programs include three phases: Phase I, the feasibility phase, and Phase II, the prototype phase, provide up to $100,000 and $750,000 respectively. Phase III, the commercialization phase, is not funded by the federal agencies because other sources of capital are expected to carry the innovation into the marketplace. However, some agencies have augmented Phase II programs to address some aspects of commercialization. The receipt of SBIR funds is often used as an indicator of business and entrepreneurial success.

The REDI Regional Expert Team on Public Policy made three policy recommendations which would provide continued and additional support for the Technology Cluster. Because little funding will be available in the 2009 Legislative Session, all policy recommendations are slated for 2010, except for SBIR, which can be addressed beginning in 2009.

1. **Reauthorize the Small Business Innovation Research (SBIR).** In light of current proposals to modify the SBIR program in a manner that would diminish its attractiveness to many New Mexico small technology-based businesses, REDI recommends that the regional partners work with the New Mexico Congressional delegation to reauthorize SBIR substantially in its current form, and to increase funding opportunities. This program is very important to the Technology Cluster, particularly because New Mexico and the region have long received more funding under the SBIR program than our population would indicate.

2. **Create a Program to Fund Early-Stage Technology Businesses.** New Mexico and the region have made major strides in providing financing to the development of market-stage, technology-based businesses, and various agencies are working to provide the managerial and entrepreneurial workforce to help these businesses become successful. However, the region is most convenient and attractive to early-stage, technology-based businesses that need entrepreneurial and managerial help, but also need somewhat risky non-equity

funding. Unlike typical businesses which have cash or can use debt financing, start-up companies formed to commercialize a specific technology usually do not have these options. The challenge is to get funding to the companies and delay recovery of the funds until the product is in the marketplace and the company has sustained income. Few venture capital firms will take early-stage technical risk, conventional lenders will not wait for repayment, and publicly-funded deferred loan programs are rare.

It is recommended that REDI request that New Mexico create a non-profit Research and Development Corporation, and fund it initially in the $5 to $10 million range from the State Investment Council (SIC). The Governor would appoint an initial Board of Directors comprised of New Mexicans with expertise in technology development and commercialization, and there is a large cadre of such people available. The Board of Directors would hire a President with technical and business expertise, and the staff would develop requirements for viable projects. Businesses meeting the requirements would be offered a professional services contract to develop their technology. The Corporation would, in turn, take a position with the business to receive a share of sales of the product developed with the technology as a royalty. Once having reached the point of bringing a product to market, the early-stage company would be in a position to expand through the use of additional capital provided by existing New Mexico venture capital partnerships, to operate with the State Investment Council as a limited partner, or to obtain local financial assistance through the Local Economic Development Act. This model is based upon a combination of New Mexico's former Research and Development Institute, and the current New Mexico Small Business Investment Corporation. By providing financing in this way, New Mexico would also be able to create "anchoring" requirements, making the relocation of successful businesses outside of the region or state more difficult.

3. **Increase Funding for Business Incubators.** REDI and the State of New Mexico should consider increasing funding for existing incubators, as well as new incubators where a business demand can be identified. Most job creation in the country, state, and region occur in small businesses, and business incubators give new small businesses a better head start to becoming bigger businesses than those that grow on their own. REDI should support the New Mexico Industrial Development Executives Association's (NM IDEA) proposal to increase funding for business incubation programs to $5 million in New Mexico.

High Value and Value Added Agriculture

Overview

Subsistence agriculture has a long historical and cultural tradition in New Mexico, and public policies to reserve scare water for agriculture and to tax agricultural land at lower rates are long-standing. In recent years, farmers markets and commercial kitchens have transformed subsistence farming and ranching by providing access to local markets. However, agricultural products for out-of-state export, which would create economic base jobs, are extremely limited in northern NM. To date, New Mexico State University in Las Cruces has been at the center of the state's agriculture policy, and the development of a dairy cluster and of export crops such as chile and pecans has occurred mainly in the southern part of the state.

During the REDI Regional Expert Team process, several concerns were raised regarding this cluster. Some participants voiced concern that the cluster is not focused on economic-base, high-paying jobs, and questioned whether the region's land and water resources can support the significant production increases needed to develop a viable industry cluster. At the same time, it was recognized that the many existing programs which support agriculture are greatly beneficial. These include famers' cooperatives, commercial kitchens, farmers markets, the mobile matanza, and farm to school and restaurant programs. While none are based on actual market analysis that identifies potential economic impact, they have numerous other benefits that are not captured by the traditional economic development paradigm:

1. Savings realized on transportation costs (and therefore fossil fuel consumption) when agricultural products are grown, sold and consumed locally.
2. Primary or supplemental income derived from agricultural activities, particularly in rural areas, where employment and economic development opportunities are limited.
3. The contribution of local production to food security as a result of the availability of local agricultural products.
4. Protection of northern NM's water rights through continued beneficial use of water for irrigated agriculture.
5. Stability in land tenure and homeownership resulting from keeping people on their land.
6. Maintaining open space, vistas and other of quality of life assets by keeping land in production rather than developing it.

Clearly, agriculture is and will continue to be a priority for northern NM. What is most important, therefore, is that REDI develop clear expectations for the High Value and Value Added Agriculture cluster that may or may not be different than those for the other three clusters which focus on economic base, high-paying jobs. For example, if the cluster were oriented toward the local and regional market, its priorities would be to strengthen and expand local programs and services (distribution networks, cold storage, etc.) that provide producers with access to those markets. While orientation toward the local and regional market would not create economic base, high paying jobs, it would still result in benefits, particularly for producers in rural areas, where incomes are low, and may be more appropriate given the land and water resources available in northern NM. On the other hand, it would be short-sighted not to evaluate where northern NM could be most

competitive in terms of creating economic-base jobs within the limits of the region's natural resources.

The REDI Economic Development Services Team held a well-attended meeting for the High Value and Value Added Agriculture Cluster. It is widely recognized that entities represented at this meeting provide extremely valuable services to individual farmers and ranchers. What is missing, however, is a strategic and market-based approach that would identify which types of agricultural production, cluster segments or niche markets the region could be most competitive in. The meeting confirmed the lack of and need for such a strategy. The following entities[5] attended this meeting and are currently providing various forms of agricultural services in northern NM:

- **Española Community Market** is a community, member owned, natural foods grocery store currently in the early development stage. It will provide the community with a range of locally grown foods, products and supplements, as well as an educational forum to promote healthy lifestyles. As the project secures funding, a future planned food facility will become a consumer co-op provider for local organic producers.

- **Farm to Table** is a non-profit organization dedicated to promoting locally based agriculture through education, community outreach and networking. Farm to Table enhances marketing opportunities for farmers; encourages family farming, farmers markets and the preservation of agricultural traditions; influences public policy; and furthers understanding of the links between farming, food, health and local economies.

- **La Montanita Cooperative** is a community-owned, consumer cooperative that offers fresh organic food products, natural body care, and vitamins. The Co-op continues its decade's long commitment to local farmers and producers with its regional Co-op Trade/Food-Shed Project. This initiative is creating wholesale markets while providing product pick-up and distribution, supply delivery service and refrigerated storage for local farmers and producers.

- **New Mexico Acequia Association's** primary focus is preserving the historic communal irrigation systems that support the culture and livelihood of thousands of local farmers and ranchers in New Mexico.

- **NMSU Alcalde Science Center** is dedicated to research on sustainable agriculture and related issues to benefit small family farms and ranches of north central New Mexico. In recent years, the Center has done significant research to scientifically measure the extent of recharge that occurs from acequias.

- **The New Mexico Community Development Loan Fund** is a private, tax-exempt organization that provides loans, training and business consulting to entrepreneurs, business owners and non-profit organizations throughout the state and the entire Navajo Nation. Current priorities include support to rural entrepreneurs, including value added activities in the small agriculture sector.

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[5] Entities who participated in the meeting but do not provide agricultural services are not described here.

- **Northern NM College's Sostenga Center for Sustainable Food, Agriculture, and Environment** in Española includes the Sostenga La Vida Commercial Kitchen and NNMC's Environmental Science Programs, which were established to address pre and post harvest production. The Sostenga Center provides opportunities through hands on learning and economic development, works to preserve the natural heritage of northern NM and seeks to support projects that foster sustainable living based on the premise that healthy food has long been a tradition in northern NM.

- **Rio Arriba County Food Council** was recently formed to provide community coordination, identification and implementation of the top priorities and needs of the area, establishment of policies that are sustainable for the community, and to development of infrastructure to allow easy access to markets.

- **Taos County Economic Development Corporation** has been working for twelve years developing alternatives to structural poverty, dead end jobs and the chronic unemployment affecting the local people of Taos County and northern NM. TCEDC's newest project, the "Mobile Matanza" is designed to cater to the needs of local ranchers by delivering an onsite slaughtering service. This model project seeks to strengthen limited resource farms and ranches by providing income generation through value added agricultural activities and market opportunities.

- **Taos Pueblo's** strategy in promoting local agriculture is incorporating youth into crop production and using a solar powered green house. Local youth are becoming involved in raising a variety of crops and selling the final product at small farmers markets. This gives young adults hands-on experience and helps develop the local market along with technology.

Cluster Description

The cluster segments identified for High Value and Value Added Agriculture are somewhat general at this time, due to the lack of strong concentration of businesses in a single crop, for example. However, as a cluster strategy is developed, it is expected that cluster segments will become more specific (for example: honey and berries instead of animal and crop production).

Figure 12: Segments of the High Value and Value Added Agriculture Cluster

Crop Production	Animal Production	Wine

Legend:
National Leader
Developing Cluster Segment
Not Developed
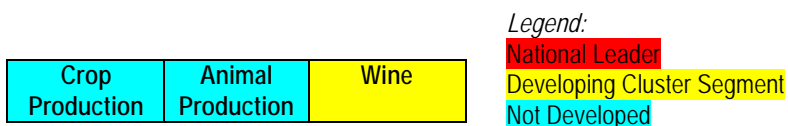
Because of the large percentage of part-time farmers and ranchers in northern NM, many do not report their farms and earnings through formal mechanisms. Therefore, employer data shown in Figure 13 and statistics from the National Agriculture Statistics Services in Table 6 do not provide a complete picture. However, they do illustrate some strengths and weaknesses in the cluster segments and levels of the value chain. For example, the distribution and marketing level of the value chain is particularly weak, resulting in recent efforts to improve distribution and storage infrastructure. As with the other REDI clusters, most businesses in this cluster are small, although there are several that employ in the range of 20-50 people. Assisting local producers in growing to the next level should be a priority of business retention and expansion for High Value and Value Added Agriculture, as it is for the other three clusters.

In terms of sales, the dairy and cattle industries are by far the largest in New Mexico. Hay and crop production rank third and fourth, respectively, with hay production being a critical input for the dairy and cattle industries. In northern NM, cattle and hay rank among the commodity groups with the highest sales in each county. Santa Fe County's highest ranking commodity group is grains, representing significant production of grain for silage, another animal feed product.

Table 6: Agricultural Profiles for New Mexico, Rio Arriba, Santa Fe and Taos Counties
Percent Change from 1997 Census in Parenthesis

Agriculture Statistic	New Mexico	Rio Arriba	Santa Fe	Taos
Number of Farms	15,170 (-15%)	988 (-13%)	460 (-11%)	453 (-9%)
Land in Farms	44,810,083 acres (-3%)	1,431,119 acres (-1%)	683,508 acres (+15%)	466,254 (+50%)
Average Size of Farm	2,954 (+14%)	1,449 acres (+14%)	1,486 acres (+15%)	1,029 (+65%)
Market Value of Production	$1,700,030,000 (+2%)	$10,551,000 (-4%)	$11,783,000 (-20%)	$3,424,000 (-9%)
Market Value of Production per farm	$112 (+20%)	$11 (+11)	$26 (-11%)	$7,558
Value of Crops	$397,257,000	$1,751,000	$8,727,000	$607,000
Value of Livestock & Poultry	$1,302,773,000	$8,800,000	$3,056,000	$2,817,000
Sales by Commodity Group ($1000)				
Grains, oilseeds, dry beans & peas	$68,256,000	(D)	$5,577,000	(D)
Tobacco	-	-	-	-
Cotton & cottonseed	$25,704,000	-	-	-
Vegetables, melons & potatoes	$96,914,000	$276,000	$54,000	(D)
Fruits, tree nuts & berries	$59,061,000	$554,000	$84,000	$60,000
Nursery, greenhouse, floriculture & sod	$41,585,000	(D)	$1,547,000	$20,000
Xmas tress & short-rotation wood crops	$369,000	(D)	-	(D)
Other crops & hay	$105,368,000	$669,000	$1,465,000	$498,000
Poultry & eggs	$17,468,000	$73,000	$23,000	$3,000
Cattle & calves	$533,952,000	$7,129,000	$2,545,000	$1,833,000
Milk & other dairy products from cows	$730,083,000	-	-	(D)
Hogs & pigs	$381,000	$10,000	$5,000	$1,000
Sheep, goats & their products	$9,433,000	(D)	$20,000	$21,000
Horses, ponies, mules, burros, donkeys	$6,600,000	$144,000	$242,000	(D)
Aquaculture	$1,604,000	(D)	-	(D)
Other animals & animal products	$3,254,000	(D)	$223,000	(D)

Source: 2002 Census of Agriculture State and County Profiles, National Agricultural Statistics Service, USDA.
(D)= Cannot be disclosed.

Beef has the greatest concentration of activity in the High Value and Value Added Agriculture Cluster in northern NM. Figure 13 lists the cattle ranches in the region, while Table 6 shows that Cattle and Calve Production has the highest sales for all commodity groups in Rio Arriba and Taos counties, at 68% and 54% of total sales, respectively. In Santa Fe, Cattle and Calve Production has the second highest sales for all commodity groups, making up 22% of all sales.

During the past year, the Taos Community Foundation commissioned a grass fed beef study for northern NM and the San Luis Valley. The study finds that it will be difficult for most ranchers in the region to produce a finished product that is profitable for producers and competitive, even in the local market. The study also recommends that the region consider partnering with an existing buyer that serves the local and regional market, who can buy the whole carcass and work with a group of producers to develop a local value chain within New Mexico[6]. A Beef Summit was held in November 2008 among the New Mexico Economic Development Department, New Mexico Cattlemen's Association and the New Mexico Beef Council to determine a strategy for implementing the recommendations of this and a companion beef study produced by New Mexico State University.

In addition to the recommendations of recent beef studies, marketing infrastructure for the commodity industry should be addressed in a High Value and Value Added Agriculture Cluster Strategy. With sale barns closing, it is more costly to get cattle to auction for the commodity market. There is a need for marketing infrastructure to reduce cost and increase efficiencies, as the commodity market will remain a key segment of the beef industry in New Mexico.

Hay Production is the largest segment of crop production in the state and in northern NM. In addition to its role as a critical input for the state's large dairy and cattle industries, two opportunities have been identified for high value alfalfa products that could potentially be produced in northern NM:

1. **Compressed Alfalfa**, as a livestock feed, is commonly done in the US to add value to alfalfa crops. Goat, rabbit, and cow feeds have been developed out of pelletized, compressed alfalfa. A small amount of additional research is needed to determine whether there is sufficient market for compressed and pelletized alfalfa to merit investment. This is a product that can benefit local farmers and ranchers as well as become a potential export (North American) product.

2. **Chlorophyll Extracted from Alfalfa**, has two primary uses: as a food colorant and as a medicinal/nutritional dietary supplement. Chlorophyll is a high-value product, fetching $50 per kilogram (FOB out of China) for basic chlorophyll paste (oil soluble) and up to $100 per kilogram for Sodium Copper Chlorophyll. Based on initial research, the number of manufacturers/suppliers of extracted chlorophyll is limited and there is possible room for competitors to enter. Additional research is needed on the production, distribution and market profiles for chlorophyll products in order to determine whether there is any potential to create a "high dollar," technology-driven manufacturing capacity to support New Mexico

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[6] *Study of Grass Fed Beef as a Value Chain in North Central New Mexico and the San Luis Valley*, AIS Development, 2008.

entry into either of these markets. Another alternative may be processing of dried, ground alfalfa meal to supply chlorophyll extract manufacturers.

Vegetable and Fruit Production make up 9% of all agricultural sales in New Mexico, 8% in Rio Arriba County, 2% in Taos County and 1% in Santa Fe County. This level of production, and the relatively small amount of acreage dedicated to vegetable and fruit production when compared to forage production, indicate that vegetables and fruits are not being produced at a scale that could support even local or regional consumption, much less export. The low level of local production has been identified as one of the challenges faced by the Española Community Market. This fact, coupled with northern NM's limited land and water resources, precludes production and sale of crops in volumes that would support export to markets outside of New Mexico. However, there is considerable potential for expanded production of vegetables and fruits, particularly high-value specialty crops, which could raise the incomes of local farmers and could be sold in local, regional and statewide markets. For example, the NMSU Alcalde Science Center has noted success with small berry production in northern NM. Berries are high-yield, high-value specialty crops that have the ability to increase incomes for farmers, and develop the value chain through manufacturing of jams and related products.

Wine and beer represent a small cluster segment in northern NM that is relatively developed in terms of access to local markets, both through wholesalers and retail outlets. While REDI did not engage the wine industry to determine areas where a cluster strategy could benefit producers, it appears that greater marketing of the product is needed outside of the state. The Taos Chamber of Commerce is currently proposing a policy to establish a restricted retail package liquor license that would allow small retailers to sell New Mexico-made wine and beer to tourists. Currently, New Mexico wine and beer can only be purchased at a store that holds a package liquor license, which is cost-prohibitive for most small, tourist-oriented shops. This policy recommendation would make New Mexico more competitive with other states in terms of how it markets local wine and beer for export.

Fiber Arts represents a market for local sheep, llama and alpaca producers. *New Mexico Fiber Arts Trails: A Guide to Rural Fiber Arts Destinations* developed by the New Mexico Department of Cultural Affairs identifies 35 fiber arts retail outlets and studios in the region, including the Española Fiber Arts Center, Tierra Wools in Los Ojos, Ortega's Weaving Shop in Chimayo and concentrations of small shops and studios in Abiquiu and Taos County. Links between local producers—whether they raise sheep, llamas or alpacas—and retail outlets can be strengthened as a part of the High Value and Value Added Agriculture cluster strategy.

Given this brief and varied sketch of northern NM's Agriculture Cluster, what is REDI's role in helping to develop this cluster? Based on this analysis, existing programs and initiatives, this Plan recommends the following approach:

1. **REDI should lead the charge to develop a cluster strategy for High Value and Value Added Agriculture.** A regional strategy is needed to identify the barriers that exist to market access and competitiveness, and the challenges faced by producers in profitably selling high value and value added products. This recommendation was made by both the REDI Public Policy and Economic Development Services Teams and provides a unique opportunity to change the paradigm for agriculture from one based on grant funded

programs and anecdotal information, to one that is driven by market opportunity and private sector investment. Notably, the New Mexico Acequia Association lists as a 2008-2010 policy initiative the desire to "pursue feasibility studies for certain types of food processing infrastructure and value chain development.[7]" A cluster strategy for High Value and Value Added Agriculture would serve this purpose and would help identify infrastructure and programs with the greatest return on investment for the region. The cluster strategy should address identification of high value products suited for export, in-state, and local/regional markets; opportunities for e-commerce; and development of agriculture in ways which complement the other three clusters and their focus on high-paying, economic base jobs. This includes the research and development aspects of agriculture, such as drought-tolerant models; and exploring synergies between the High Value and Value Added Agriculture and Renewable Energy clusters such as improving the energy efficiency of agricultural production, linking agricultural and renewable energy production (wind farms), and producing energy markets (biodiesel).

Partner with existing organizations to implement the High Value/Value Added Agriculture Cluster Strategy. Business retention, expansion and creation will be the focus of the High Value and Value Added Agriculture, because the cluster is rooted in the rural areas of the region and is intended to improve opportunities and incomes for existing producers. In addition to the organizations described in this Section, those working directly in agriculture can best carry out many potential recommendations of the cluster strategy, particularly those oriented to local, regional and in-state markets. For example, cluster strategy recommendations regarding what products are most marketable should involve partnerships with the NMSU Alcalde Science Center, which works directly with local producers and can educate them about demand and profit margins for various crops. Recommendations regarding access to markets, distribution and storage would be best handled by Farm to Table, which facilitates direct marketing and opportunities for producers to sell to institutions, restaurants and distributors. The organization has recently considered providing distribution opportunities and storage infrastructure to producers. Farm to Table and the New Mexico Food and Agriculture Policy Council are also working to develop a Trust Fund, funded through public and private sources, to invest in agriculture infrastructure and programs. A partnership between REDI and these organizations could be developed to fund priority infrastructure identified in the High Value and Value Added Agriculture Strategy.
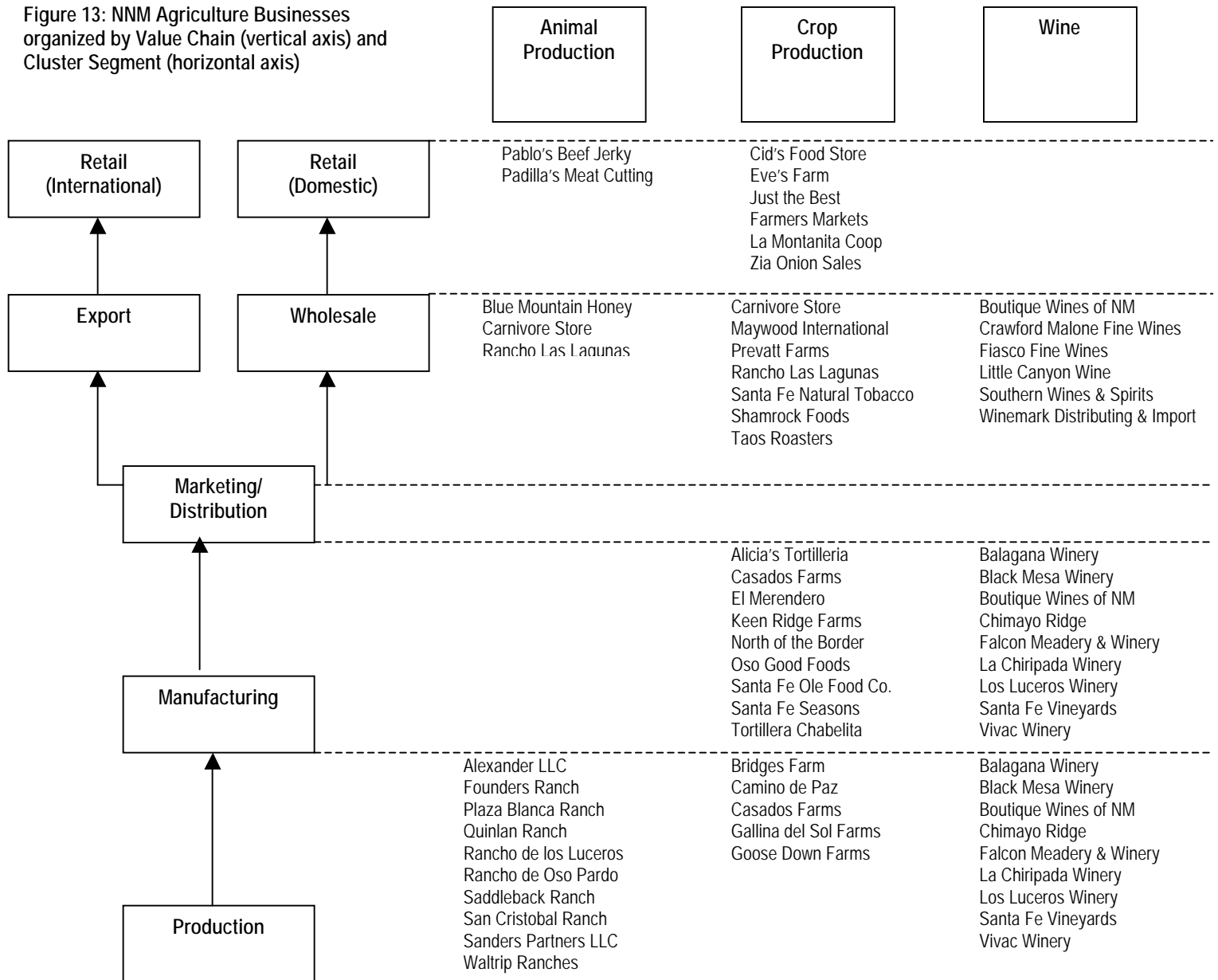
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[7] *New Mexico Food and Fitness Policy Database*, Farm to Table, 2008.

The following table lists summarizes the opportunities and challenges for the High Value and Value Added Agriculture Cluster based on this analysis, with corresponding recommendations for the cluster strategy. Because this cluster still operates largely in the informal economy, is not driven by market-based data and is supported through numerous publicly-funded programs, recommendations are not as detailed or as focused on traditional economic development as the recommendations for the other clusters. However, as shown below, there are numerous opportunities to strengthen this cluster for the benefit of existing producers and local economies throughout the region.

Table 7: Strengths, Opportunities, Weaknesses and Challenges for the High Value and Value Added Agriculture Cluster

Strengths and Opportunities	Recommendations
Existing Grass Fed Beef Study for Taos County	1. Help implement recommendations of the Grass Fed Beef Study.
Potential for high value alfalfa products	• Evaluate through cluster strategy the potential to develop local capacity in high value alfalfa products.
Potential to develop higher-value crops for local, regional and in-state markets	• Partnerships to educate producers on high-value crops/products identified in cluster strategy. • Support farmer's markets and commercial kitchen infrastructure.
Small, developed wine segment	1. Strengthen marketing for export.
Fiber arts as market for wool producers	2. Strengthen linkages between local producers and retail outlets and studios.
Potential to link Agriculture with other REDI clusters & their focus on higher-paying, economic base jobs	3. Explore agricultural R&D 4. Renewable Energy resources & applications
Weaknesses and Challenges	**Recommendations**
Most producers are small employers	5. Grow producers to the next level (1-4 employees to 5-9, etc.)
Weak distribution & marketing	6. Partnerships to address access to market issues, including distribution and storage infrastructure. 7. Explore business creation for distribution and marketing.

Figure 13: NNM Agriculture Businesses
organized by Value Chain (vertical axis) and
Cluster Segment (horizontal axis)

	Animal Production	Crop Production	Wine
Retail (International) / **Retail (Domestic)**	Pablo's Beef Jerky Padilla's Meat Cutting	Cid's Food Store Eve's Farm Just the Best Farmers Markets La Montanita Coop Zia Onion Sales	
Export / **Wholesale**	Blue Mountain Honey Carnivore Store Rancho Las Lagunas	Carnivore Store Maywood International Prevatt Farms Rancho Las Lagunas Santa Fe Natural Tobacco Shamrock Foods Taos Roasters	Boutique Wines of NM Crawford Malone Fine Wines Fiasco Fine Wines Little Canyon Wine Southern Wines & Spirits Winemark Distributing & Import
Marketing/ Distribution			
Manufacturing		Alicia's Tortilleria Casados Farms El Merendero Keen Ridge Farms North of the Border Oso Good Foods Santa Fe Ole Food Co. Santa Fe Seasons Tortillera Chabelita	Balagana Winery Black Mesa Winery Boutique Wines of NM Chimayo Ridge Falcon Meadery & Winery La Chiripada Winery Los Luceros Winery Santa Fe Vineyards Vivac Winery
Production	Alexander LLC Founders Ranch Plaza Blanca Ranch Quinlan Ranch Rancho de los Luceros Rancho de Oso Pardo Saddleback Ranch San Cristobal Ranch Sanders Partners LLC Waltrip Ranches	Bridges Farm Camino de Paz Casados Farms Gallina del Sol Farms Goose Down Farms	Balagana Winery Black Mesa Winery Boutique Wines of NM Chimayo Ridge Falcon Meadery & Winery La Chiripada Winery Los Luceros Winery Santa Fe Vineyards Vivac Winery

Enabling Environment

Human Capital. In northern NM, agriculture is a traditional activity tied to the subsistence economies of Native Americans, the original inhabitants of the area, and Spanish and Mexican settlers. There is a strong and proud tradition of crop and livestock production, with livestock shifting from sheep in the earlier half of the century, to cattle after World War II. Some northern NM residents participate in agriculture with little or no formal training, because it is a family tradition that has been handed down through generations. In addition, 4H programs are a considerable resource and have provided training, education and access to markets for young producers for decades.

The continued practice of agriculture will depend on future generations who increasingly engage in wage labor with fewer ties to the land, and frequently leave family farms in rural areas for better economic opportunities in population centers. Programs in the school systems, colleges and youth community are vital to educating and training youth in agriculture. The Chimayo Youth Conservation Corps is a good example of a program that has local youth growing crops, and through its efforts, feeds the entire Santa Fe Public School System. The Pojoaque Valley School District has established a culinary arts career cluster, in response to the demand for chefs and food producers at the casinos, the revitalization of agriculture in the Pojoaque Valley, and the success of the Pojoaque Farmer's Market. Farm to Table is currently investigating youth farming programs and other new farmer initiatives, including the Small Farm Institute at New Mexico State University, the Service Learning Program at the University of New Mexico, and internship and workforce development programs not associated with educational institutions. When a cluster strategy for High Value and Value Added Agriculture is completed, REDI should determine how to best support these various human capital initiatives.

At the college level, numerous agriculture-related degree and certificate programs exist. Santa Fe Community College offers an Associate in Applied Science degree in Culinary Arts, and certificates in Culinary Arts, Hospitality and Tourism and Patissier. UNM-Taos offers a certificate in Culinary Arts. Degree and certificate programs in environmental sciences are also relevant here. Santa Fe Community College offers an Associates of Applied Sciences degree in Environmental Technologies, UNM-Los Alamos offers an Associates of Science degree in Environmental Science, and Northern NM College in Española offers Associates of Applied Science degrees in Environmental Technology, Environmental Management, Natural Resource Management: Range Ecology, as well as a certificate in Environmental Monitoring. Northern NM College is working with Governor Richardson's office on developing agricultural programs, focused on sustainability and food security, at the Los Luceros property recently purchased by the State of New Mexico. The Los Luceros property could become a demonstration site for traditional agricultural practices as well as new agricultural technologies.

Infrastructure. Water availability is the most important component of infrastructure for continuation and growth of High Value and Value Added Agriculture. Water availability can be viewed in two ways. First, it is a finite resource. Drought, changes in global climate and competition for the resource will reduce the amount of water available for irrigation over time. These facts will inevitably limit growth of the agriculture industry. However, the rural counties of northern NM also see agriculture as a means to protect their water rights from the demands of metropolitan areas, such as Albuquerque and Las Cruces, to the south. This strategy has both practical and legal

dimensions. For example, if the water rights owned by Rio Arriba County are not used, the water will travel south for use by other communities. As a result, Rio Arriba County is developing small, storage areas in high elevations so that water can be stored and the growing season extended. The legal dimension of this issue is that failure to use water rights over time may result in forfeiture of rights under the laws of consumptive use. If rural communities do not use all of their water rights over time, there will be pressure to allocate more water to urban communities. Therefore, protection of water rights is both a reason to continue and expand agriculture, as well as a limiting factor to large scale production of crops.

Northern NM's historic acequia systems are the agriculture industry's oldest piece of physical infrastructure. The acequia system was first established by Pueblo Indians, prior to Spanish contact in the late 1500s. Spanish settlers built upon and expanded the Pueblo's systems to irrigate more land near their settlements. The system has remained in use through the present day, transporting irrigation water from the Rio Grande River to fertile plots in the river valley. The acequia system depends, however, upon continued irrigation, maintenance of the system, survival of governance organizations, and physical access, which is sometimes be blocked by new, non-irrigating landowners.

New agriculture infrastructure has been created in recent decades to support the transition of subsistence food production to value-added products. The Taos County Economic Development Corporation (TCEDC) in Taos and Sostenga La Vida Commercial Kitchen at Northern NM College in Española are the two existing commercial kitchens in the region, with a potential commercial kitchen/incubator currently in the planning stages at Pojoaque Pueblo. At these facilities, food producers pay an hourly fee to process their food in a certified kitchen. TCEDC also has its own food line, Oso Good Foods, in which local growers and food producers can participate. Along with its commercial kitchen facilities, TCEDC has a "mobile matanza," New Mexico's first mobile livestock slaughtering unit, which serves communities within a 100-mile radius, including Rio Arriba County and northern Taos County. TCEDC recently developed a cut and wrap facility for the processing and packaging of local meat products.

The growing popularity of farmers markets, organic and local foods are providing significant momentum in support of the High Value and Value Added Agriculture Cluster. There are farmers markets in Santa Fe, Taos, Pojoaque, Española and Los Alamos, many of which sell out early due to demand exceeding supply. The trend toward organic and local products, as well as rising food prices, will continue to create momentum and growth for farmers markets and other organic food outlets. "New Mexico's Own" product line, also provides opportunities for local value-added products, which are sold on-line and in retail stores.

In addition to the above existing infrastructure, REDI supports the following new projects to expand High Value and Value Added Agriculture infrastructure in the region:

•**Española Community Market** is a community, member owned, natural foods grocery store currently in the early development stage. It will provide the community with a range of locally grown foods, products and supplements, as well as an educational forum to promote healthy lifestyles. As the project secures funding, a future planned food facility will become a consumer co-op provider for local organic producers.

•**Distribution and Storage Infrastructure.** REDI should partner with Farm to Table on investigating mechanisms to improve distribution and storage infrastructure for producers. The strategy should include a regional inventory of resources and gaps as a foundation for developing a network that moves local produce to farmers markets, wholesale and retail outlets, and increases the amount of local produce and value-added products sold to the public.

Public Policy. Pending development of a cluster strategy for High Value and Value Added Agriculture, REDI can play a supporting role in policy initiatives that strengthen the cluster. The following policy recommendations have been made by various organizations that work in agriculture in New Mexico, as well as by the REDI Public Policy Team. Those most likely to be forwarded in the 2009 New Mexico Legislative Session are listed below, with their respective organizations in parenthesis.

1   Support the proposal to establish a restricted retail package liquor license to allow small retailers to sell New Mexico-made wine and beer to tourists. (Taos Chamber of Commerce)
2   Support and expansion of "Farm to School" and "Farm to Restaurant" programs. (Farm to Table)
3   Support and expansion of farmer's markets and commercial kitchens.
4   Support development of a Trust Fund for public-private investment in agriculture infrastructure and programs. (New Mexico Food and Agricultural Policy Council)
5   Support increased technical and marketing assistance for producers and incentives for value-added opportunities. (New Mexico Association of Commerce and Industry)
6   Support adequate funding for the New Mexico Livestock Board and the Department of Agriculture to carry out their responsibilities in education, marketing, promotion, regulation and public relations for New Mexico agricultural products and businesses. (New Mexico Association of Commerce and Industry)

Other Opportunities

Location-Neutral Entrepreneurship "Cluster." During the course of the REDI process, a group casually referred to as "free agents," "lone eagles," or "third-bedroom workers" was discussed on numerous occasions. Such workers work from home, and either own their own business or are employed by a company. A recent survey conducted by Routt County Economic Development Cooperative (RCEDC) in Colorado (Steamboat Springs area) calls these businesses "location-neutral businesses," hence the title of this section.

Location-neutral businesses are growing in number for various reasons including the availability of telecommunications, high gas prices that discourage travel, the acceptance of remote working by the business community, and the ability of employees to define their own schedules and work parameters. The RCEDC study states that as this trend expands, "so will the ability of a segment of our workforce to locate in their 'community of choice.'"

REDI believes that location-neutral businesses should be an important part of any economic development strategy undertaken by the region because they:

- Represent the most environmentally-friendly and low impact economic development that can be promoted.
- Are associated with educated, high-income business owners who are successful enough to relocate their companies, families and customers.
- Have greater potential to benefit rural areas, because they can locate anywhere with adequate telecommunications infrastructure.
- Tend to be clustered in the management and professional services sectors, which are currently underrepresented in New Mexico and can be used to fill many gaps for support services in REDI's target industry clusters.
- Help to grow the environment of entrepreneurship that currently exists in northern NM.
- Can be supported by northern NM's quality of life, which includes rich cultural and recreational assets.
- Many location-neutral businesses are in effect economic base jobs which grow the economy.

While the Regional Cluster Strategies would be used to confirm this, REDI expects that northern NM may have an advantage in this "cluster." While other economic development agencies are planning to adapt their strategies to capture this wave of the future, northern NM does not have an established economic development strategy that it would need to adapt or change. Instead, the region may be able to "leap ahead" of other regions and communities by developing a business attraction, retention and creation strategy focused on location-neutral businesses rather than traditional "companies." This would require a different approach for marketing and providing infrastructure.

Initially, location-neutral efforts could be directed at "low-hanging fruit" such as the core segments of the target industry clusters and gaps in support services for the clusters. These include accountants, accountants and lawyers specializing in the film industry, engineers (all types), software engineers, and management professionals. In addition, business creation can be

achieved by growing location-neutral businesses among local retirees, particularly former LANL employees, who will be needed to support future workforce demands. However, if northern NM develops a strategy geared toward location-neutral businesses through REDI, it would need to address the following issues:

1. **Broadband.** The most important component of infrastructure for location-neutral businesses is broadband, which has already been recommended as one of REDI's regional priority projects. REDI strongly recommends that a regional broadband project be developed and fully implemented within a timeframe of five years. The ultimate goal would to have fiber to the premise for all residences in areas of concentrated population, and fiber-fed wireless connections for all residences in the sparsely populated rural areas.

2. **Other Infrastructure.** Air service and delivery service were high on the list of location-neutral businesses in Routt County, CO. Currently, several airports exist in northern NM, but only Santa Fe is scheduled to provide regional air service in the next year. Ohkay Owingeh General Aviation Airport in Española and the Taos Municipal Airport do not offer air commercial service, but transportation can be booked on private planes at both locations. As reported by local businesses, delivery services north of Santa Fe are very spotty, and would need to be improved to enable location-neutral business attraction.

3. **Quality of Life.** Northern NM has many assets that make it attractive for location-neutral businesses. The quality of life is excellent in terms of cultural and recreational amenities. Certain communities (Taos and Santa Fe, in particular) have name recognition and benefit from exposure to the rest of the country through tourism. And an independent, entrepreneurial culture already exists. However, significant improvements in the school system would be needed throughout the region to attract families. Otherwise, the trend toward retired or semi-retired individuals will continue. In addition, public safety and community beautification will need improvement in certain communities if they are to become attractive destinations for location-neutral business.

4. **Workforce.** Location-neutral businesses in Routt County, CO cited the need for professional and degreed employees when considering business expansion. REDI recommends the following to both create a pipeline of employees and consultants for location-neutral businesses, as well as prepare native New Mexicans for opportunities in this "cluster:"

   • Entrepreneurship programs at high schools in the region.
   • Tax credits to location-neutral businesses that mentor and provide internships and summer jobs to local high school students. REDI recommends a standardized training program for employers, so both the employer and student gain value from the experience.
   • Expanded workforce training programs in the target clusters and their support services that include an orientation toward location-neutral business.

5. **Programs and Services for Entrepreneurs.** If the Regional Cluster Strategies validate a high potential for success in this "cluster", REDI should consider several services and programs that potential entrepreneurs could plug into when considering New Mexico as a destination for relocation:

- **Networking Opportunities.** Under REDI's public-private partnership model, local business owners and businesses considering relocation would be introduced to members of the public-private partnership upon their visit, and could immediately join REDI upon arrival. This would provide a "ready-made" network for the entrepreneur, creating a friendly environment to immediately connect with new business contacts and identify potential partners, subcontractors and support services.

- **Insurance Pools.** REDI could work with the State of New Mexico to develop a health insurance pool for location-neutral businesses. This would provide a high-level incentive for such businesses to locate in the state.

- **"Concierge" Service.** Many people who move to New Mexico experience it for the first time through tourism. Taos is already considering a business-oriented concierge service to help potential businesses find housing, day care and other services, as well as assess the local business climate. This would allow potential location-neutral businesses to consider New Mexico for relocation while on vacation.

Other REDI Clusters. While REDI's target industry clusters represent the primary focus of its efforts, particularly in the next five to ten years, there are opportunities for REDI to work in other clusters where regional projects can be identified. Examples of such projects include a Cultural Corridor from Albuquerque to Taos, which would benefit the Arts and Culture Cluster and would support all industry clusters through quality of life improvements throughout the region. Conceivably, projects in Health and Wellness could also be considered, particularly in the area of workforce and education programs to support high demand for health care professionals.

The Forest Products Cluster was not ranked highly in REDI's prioritization process; however, regional partners have suggested that it be included as part of the High Value and Value Added Agriculture Cluster. Because of this suggestion, a brief analysis of this cluster is included here. However, outside of non-traditional forest products such as honey, nuts, mushrooms, etc. which are already included in High Value and Value Added Agriculture, Forest Products will require a separate cluster strategy from High Value and Value Added Agriculture, because distinct end markets, inputs and value chains exist for each.

The Forest Products cluster segment historically has faced challenges related to access to resources under US Forest Service (USFS) control. Today, the Santa Fe and Carson National Forests have made efforts to work more collaboratively with forest communities and businesses. Santa Fe and Carson administer the Collaborative Forest Restoration Program (CFRP), a grant program signed into law in 2000 and specific to New Mexico. CFRP provides cost-share grants to stakeholders—including tribes, land grant communities, local sawmills, etc.—for public land projects that reduce the threat of wildfire, improve watershed conditions, and provide jobs and training to local communities. In short, CFRP increases opportunities for local communities and businesses to obtain federal contracts for thinning and other forest management activities. In addition, the USFS in New Mexico is currently developing 10-year stewardship contracts that will provide a steady, sustainable supply of timber for local communities and businesses. Despite these positive developments, it is important to note that the success of this cluster will always rely on

USFS policy and management practices, and that private sector investment and market potential will likely be tempered by this fact.

If a cluster strategy is pursued for Forest Products, it should examine the potential for northern NM to develop markets in the local and national green building industry; in replicating the success of flooring manufacturing in Las Vegas, NM; and in biomass, an area which intersects with the Renewable Energy and Clean Industry Cluster and is currently developing through CFRP projects. Key players in the cluster include the New Mexico Forest Industry Association; the Vallecitos Sustained Yield; the Jicarilla Apache Nation, which operates a sawmill and manufactures small diameter wood products; Picuris Pueblo, which is interested in manufacturing charcoal and timber products from its forest resources; and land grants in the region, which are considering developing a sales yard for wood products and materials.

Enabling Environment

Human Capital

This recommendations and initiatives in this section were primarily generated by the REDI Human Capital Team, one of the four Regional Expert Teams that met to develop implementation plans for REDI's four strategic areas in the summer of 2008.

Background

REDI recognizes that human capital is the most critical economic development issue facing the US in general and northern NM in particular. While human capital (or workforce) has always been an important part of the equation, it is becoming increasingly important because:

- The US is entering a constrained labor market, where the retirement of baby-boomers outpaces young people entering the work force.
- Human capital is quickly becoming the greatest competitive advantage in economic development. In today's knowledge economy, talented workers attract companies more than incentives, infrastructure or other factors. Companies will open, expand or relocate to communities and regions where talented workers are concentrated.
- While industries experiencing the fastest growth require high skill levels, US education attainment is falling, and fewer young people are being educated in STEM (Science, Technology, Engineering and Math) disciplines.
- Educational achievement is falling in the US vis-a-vis other countries, and New Mexico ranks low among the states for achievement in math and reading.

Despite the pressing nature of these issues, it is difficult to identify concrete actions that REDI can pursue related to human capital, because of the myriad of players involved. Improvements in human capital involve everyone from workforce development boards, school districts, state government and business and industry, to teachers, students and families. Recognizing this, the REDI Human Capital Team recommended that a Regional Human Capital Conference be convened to lay a foundation for the many partnerships that will need to be forged. This could be done in two ways: 1) by making Human Capital the theme for the first or second State of the Region Conference, or 2) by partnering with Lt. Governor Diane Denish's Office and the Children's Cabinet to plan a Human Capital conference in 2009 or 2010.

Recognizing the reality and need for partnerships, this Plan divides Human Capital initiatives into two categories: 1) REDI-driven initiatives which REDI can implement and 2) Partnerships with which would involve joint planning, with implementation by colleges, schools or other entities, such as workforce boards. In each type of partnership, REDI could assist in obtaining funding or by playing a supporting role in implementation. It should be noted that many human capital initiatives are dependent on REDI implementing a public-private partnership in the future. This is because the public-private partnership will result in private sector membership, which can be drawn upon to support human capital development in a number of ways, as described in this section.

REDI-Driven Initiatives

1. **Regional Workforce Mapping.** During the course of the REDI process, the City of Santa Fe designed a Regional Workforce Mapping project to enable more effective economic development by addressing the lack of workforce data. Existing data and studies have limited relevance for several reasons: 1) they are based upon industries as defined by the North American Industrial Classification System (NAICS), rather than new industries, such as renewable energy/green, digital media, and others; 2) they are not oriented toward local existing business needs nor toward information needed by businesses to relocate in our region; and 3) various information sources do not "speak to each other" and are not aggregated in one place. Yet, in an increasingly constrained labor market, accurate data on the current and future workforce is imperative for educational institutions, policy makers, businesses and individuals alike.

Regional Workforce Mapping includes the REDI four-county region (Los Alamos, Santa Fe, Rio Arriba and Taos), as well as Sandoval and San Miguel counties, where many Santa Fe workers live. It is a pilot project that is designed to be transparent and replicable in other regions of New Mexico. It seeks to provide its four primary audiences—educational institutions, policy makers, businesses and individuals—with the information they need to be effective in contributing to NM's economic vitality, as presented in the following examples:

2. Policy makers and economic development professionals will be able to shape workforce development activities and to provide businesses with substantive information on the available labor force. They will also be equipped to direct other economic development activities according to the available skills, interests and assets of the region's workforce.

3. Educational institutions will be able to develop programs to prepare students for the best jobs of the future. They will also have the information needed to identify their areas of deficiency and their areas of strength.

Workforce Assessment Desired Data (DRAFT)

- **Demographics**
  - Population size
  - Number of households
  - Workforce size
  - Dependency ratio
  - Age
  - Education (by age)
  - Income
  - Ethnicity

- **Labor Supply (Current and future/pre employment pipeline)**
  - Skills/educational attainment
  - Underemployed population (needs definition)
  - Feelings toward work (attitude, interests, desire to achieve)
  - Part-time participants (retirees, parents, people with disabilities)
  - Retirement (when, what plans)
  - Migration patterns (what change factors)

- **Workforce Demand (Current and future and by industry and skill sets)**
  - Overall demand and growth
  - Skills demand and growth
  - Economic base jobs
  - Flow of workers (in and out)
  - Age
  - Wages
  - Obstacles to hiring
  - Available training (industry, schools, others)
  - Effectiveness of training programs

4. Business and industry will have a detailed map of the future labor landscape in order to plan effectively for growth and to leverage workers most productively. Individuals will be able to make informed choices in order to align themselves towards a prosperous career.

The City of Santa Fe has developed an outline of desired data, or the understanding that is desired upon completion of the study. Under the proposed two-phase process, Phase I would include development of a model to demonstrate movements and factors affecting the area workforce. Existing data would be collected (or "ferreted") and plugged into the model. The gaps between the existing and desired data would define the scope of work for Phase II of the assessment, which would include extensive survey work to fill in the information gaps identified in Phase I. The survey work would likely cover the less formal aspects of the economy, like the cash economy; information on subjective factors, such as attitudes; and projections about both the future supply of workers and demand for labor.

While funding is currently not available for this project, it should be pursued in the future under a regional approach where REDI partners and the other two counties contribute funds to the effort. Because Regional Workforce Mapping is designed to be replicable for other regions and the state, there are two developments that could provide funding for the effort. First, the Councils of Government in the State of New Mexico may apply for an US Economic Development Administration (EDA) grant for a statewide workforce assessment based on the Santa Fe model. Second, a bill may be sponsored in the 2009 Legislative Session to fund New Mexico's Councils of Governments to assist in demographic studies, which would create a mechanism for continual updates.

1. **Location-Neutral Ecosystem.** As described in Economic Development Services, REDI has identified location-neutral businesses and workers as targets for business attraction, retention and creation efforts. The REDI Human Capital Team described these workers and businesses as the wave of the future and noted the need to provide them with the infrastructure that they would have in conventional employment situations. The REDI Human Capital Team made several recommendations to create a business "ecosystem" to encourage new location-neutral workers and businesses in northern NM. Such an approach would be northern NM's primary marketing tool in attracting these individuals to the region. The recommendations include:

    -   **Tax Incentives** for location-neutral businesses and their support services.

    -   **Insurance, Retirement and Investments.** REDI would work with the State of New Mexico to develop a health insurance pool for location-neutral businesses. REDI could also fund professional advice for location-neutral workers in the areas of insurance, retirement and investment, providing them access to some of the resources they would have under conventional employment.

    -   **Networking.** REDI would provide an "instant network" by linking location-neutral workers and businesses with private sector members of REDI. Such networking would not only result in new business opportunities for the location-neutral worker, but would also provide a mechanism for the location-neutral business to identify potential support services, collaborators, and subcontractors.

- **Professional Development**. REDI could partner with the community colleges as part of the Training and Technical Assistance Network proposed below to offer customized professional development and training for location-neutral workers and businesses.

In 2009, REDI will lay the ground work for this effort by consulting with state agencies about tax incentives and health insurance pools for location-neutral businesses and workers. 2010 will include proposing legislation for tax incentives and insurance pools. While soft marketing to location-neutral businesses and workers can begin in 2010, it is recommended that a more aggressive campaign wait until the Regional Broadband Project, the greatest factor for location-neutral businesses, is well underway. This would result in the full suite of services being offered sometime in 2011 and 2012.

Partnerships with Colleges

- **Training and Education to Support Target Clusters.** During the REDI Regional Expert Team process, several occupations were identified as critical to supporting REDI's target industry clusters. These occupations include engineers (all types), software engineers, accountants and management professionals. Furthermore, there is a need to ensure that the region's colleges are offering programs in emerging fields, including New Media, particularly as these fields are pursued through REDI. REDI recommends establishing a working group of the regional colleges, which would collaborate with REDI on the four cluster strategies in 2009. During this process, the colleges in the region would assess existing offerings to determine if new programs are needed to support REDI's target clusters. The colleges would potentially develop new programs to meet these needs. For example, the REDI Economic Development Services Team has recommended an accounting journeyman program to support the target clusters.

- **Training and Technical Assistance Network**. The REDI Human Capital Team recognized a major gap in access to workforce training and technical assistance. Currently, most employers provide little or no training to develop their employees or to improve upward mobility. The team suggested a seamless training and technical assistance system where employers and employees could easily access a full range of training, from soft to highly technical skills. It would also be a network for regional or national trainings that would enhance employee skills. The technical assistance piece of the system would provide consultation to employers to determine their training needs and design trainings to meet their needs. It would also consult with employees to assist them with their career paths and identify appropriate on-the-job trainings and new skills development for upward mobility. Employers could require new employees to participate in training modules as a condition of their hiring. The REDI Human Capital Team felt that the community colleges were well-positioned to provide this training. The regional network of community colleges could design a single system and provide training and technical assistance at various locations throughout the region. Training and technical assistance would be offered on a fee-for-service basis, eliminating the need for outside funding in the long term. REDI will discuss this opportunity with the community colleges in the region in 2009.

- **High School Career and Technical Training.** Recognizing that students need options beyond four-year colleges and universities, and that job opportunities requiring two-year certificates are increasing, the REDI Human Capital Team recommended that a regional plan be developed for career and technical training in the high schools. The Human Capital Team recommends an assessment of what types of career and technical training are currently being provided at the high schools (some as vocational educational programs), followed by recommendations to fill gaps and improve existing programs. A partnership with the community colleges to provide career and technical training in the high schools is recommended. This will create additional benefits by increasing the visibility of community colleges in the high schools and by creating one-to-one relationships between adult mentors and students. While new facilities can be discussed as potential projects in this area, programs should be the initial focus because they represent a lower-cost solution that can be implemented more quickly and easily.

During the past two years, the Santa Fe Public Schools (SFPS) undertook a planning process for a Regional Career and Technology Center. Initially, this was conceived as a regional center where students from northern NM could attend through open enrollment. Whether SFPS decides to make the project regional is still being debated. The obvious disadvantage to a site-based center is location and accessibility. It has been discussed that the center could include dormitory living for students needing to commute.

Partnerships with Schools

Four of the six REDI Human Capital Team's recommendations directly involve public education, and will require partnerships with schools and school districts. The difficulty in establishing these partnerships was revealed during the Regional Expert Team process, in which REDI was largely unable to secure participation from the schools, despite significant outreach. The public schools are currently not in a position to join in the discussion. Most are understaffed, underfunded and consumed with meeting the requirements of No Child Left Behind. Until the State of New Mexico pursues education reform that incentivizes schools to partner with economic development and the private sector, these partnerships will depend upon the interest, willingness and ability of individual schools to participate. Clearly, to engage the schools in this manner, REDI should be a key supporter of comprehensive education reform that links education and economic development, such as Lt. Governor Diane Denish's "Educonomy" initiatives which are integrated with her work as Chair of the Children's Cabinet.

In the meantime, the REDI Project Team plans to make direct presentations to the region's school boards during 2009, as a foundation for specific partnerships that can be implemented in years 2-5. The presentations will focus on northern NM's economy and the relationship between education and the economy. The presentations will include current statistics and trends for economic indicators in northern NM, specific challenges in the region, the increasing importance of a highly-skilled workforce, the role of REDI, and potential partnerships with REDI that can be considered by the school districts. Where appropriate, REDI will ask local government officials who have served as REDI regional partners to introduce and/or help make the presentation to the school board. The REDI Team believes this approach will be more successful because:

- Some of the superintendents interviewed for REDI suggested that REDI brief them on the state of the regional economy because it was data they needed and currently didn't have. Therefore, such a presentation would directly address a need articulated by the schools, and would be a positive first step in developing partnerships.
- School board members are elected officials, and many use school boards as a stepping stone to political careers. REDI needs to recognize school districts as political entities, and begin any discussion of partnerships at that level.
- School districts throughout the region have different needs and can partner with REDI at different levels. Therefore, REDI may be more successful if avoids a one-size-fits-all pitch.

The following is a list of the projects and initiatives recommended by the REDI Human Capital Team which require partnerships with school districts. While a regional initiative would be ideal, REDI would like to see one or two pilot projects develop in the region around the following projects and initiatives in years 2-5:

- **Career Pathways.** Several parallel career pathways efforts currently exist in New Mexico, as follows:

  - **Governor Richardson's Workforce Coordination and Oversight Committee (COC)** was established in December 2005 and has identified seven career clusters[8] for New Mexico that will guide strategic planning for economic development, workforce training, and public secondary and post-secondary education for the next decade. The COC career cluster initiative begins at the secondary level and is currently in the process of revising career readiness standards for secondary education. Redesign of high school standards and benchmarks will lead to pathways standards that follow ten strands of learning. These cross all areas of curriculum such as communication skills, critical thinking, and problem solving.

  - **The New Mexico Children's Cabinet Career Clusters Initiative (CCCCI).** Using New Mexico's seven industry clusters, the Children's Cabinet Career Cluster Initiative (CCCCI) raises awareness and develops strategies for students, parents and educators to make sound decisions about academic and career goals, and engages the business community to help develop its needed workforce. Activities under CCCCI include three town hall meetings, a professionally produced documentary, a workforce development workbook, and a professional development summit. The final town hall meeting was held this summer and the workbook is currently being developed. This initiative is chaired by Lt. Governor Diane Denish and represents an important partner for REDI's human capital initiatives.

  - **The New Mexico Public Education Department.** While the New Mexico Public Education Department (PED) is working toward career pathways, there is not a mandated model at present. School districts either create their own programs or follow guidelines tied to Perkins funding, as explained below. At the elementary level, PED uses

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[8] New Mexico's seven career clusters are: Arts and Entertainment; Business Services; Communications and Information; Energy and Environmental Technologies, Engineering, Construction and Manufacturing; Health and Biosciences; and Hospitality and Tourism

a Career Technical Education path that follows a Comprehensive Development Guidance Program. This program provides feeder material to career clusters, allowing students to explore their interest in careers while providing choices to the student. While there are career pathways beginning in some elementary schools, they are not cohesively tied to curriculum that progresses from early elementary through high school.

The larger school districts in the region qualify for Perkins funds which are designated for career and technical training or vocational programs. Smaller school districts can partner to obtain these funds, but none have done so in northern NM. In any case, the funds are limited, as shown in the box at right. The Perkins funds require a "program of study" with general guidelines that promote pathways to certain career clusters such as health studies. For example, a student can take high school courses that lead to a CNA (Certified Nurse Assistant). The student then works toward an LPN (Licensed Practical Nurse) and then enters college for an RN (Registered Nurse) degree or certification.

Perkins Funding in Northern NM	
Public Schools	
Espanola:	$77,294
Santa Fe :	$150,633
Taos:	$42,095
Total:	$270,022
Community Colleges	
Northern NM College:	$147,930
Santa Fe Community College:	$132,496
Total:	$280,426

- **The New Mexico Higher Education Department** plans to use a process model that would begin career pathways in the elementary grades. The adoption and implementation of this model would ensure that the system is starting early in K-12 education to expose students to career pathways that will follow throughout their elementary and secondary education. It would also promote strong visibility and connections between K-12 students and higher education, where connections are currently lacking. Len Malry, Workforce Development Director for the Higher Education Department, was a core member of the REDI Human Capital Team and would likely serve as a champion for any REDI pilot project involving career clusters.

Clearly, the framework for career pathways needs to be implemented on a state level. REDI can provide support for career pathways through its policy agenda, and could develop a career pathways pilot project established through partnerships among the region's school districts and business and industry. The partnership could include development of career pathways consistent with REDI's target clusters, curriculum which draws on the experience and participation of the private sector, and links with the private sector as well as two and four year colleges to connect students to a career or educational path in their high school years. REDI would draw upon its private sector members to partner with the schools on this effort, which could be developed and implemented in conjunction with, or separately from, the Industry Mentors effort below.

- **3D Virtual Academies** are currently being proposed to State of New Mexico agencies by Global Telesis 3, LLC, a company that develops innovative solutions for knowledge transfer using new and powerful formats. 3D Virtual Academies represent new methods for education that present story and project-based curriculum in a format of immersive games-to-teach,

digital storytelling or 3D Virtual Worlds such as Second Life. The advantages of such a learning experience include allowing students to:

1. Practice working in fields that are personally interesting and motivating to them.
2. Learn both the academic and soft skills needed in today's workforce.
3. Have their assessments based on performance of relevant skills in meaningful contexts, rather than on how much they memorized at a given point in time.
4. Have experts in the fields in which they are studying serve as their mentors.
5. Have realistic experiences working as scientists and engineers, learning principles of science and engineering in order to solve problems.
6. Live in various realistic contexts and have hands-on practice in a number of jobs they might actually pursue post-graduation.

3D Virtual Academies could be the format for new curriculum that would support REDI's target industry clusters in northern NM. Some of the 3D Virtual Academies that Global Telesis can develop match with REDI Industry Clusters, including Green, Agribusiness, New Tech and Health Care. In fact, due to the size of the region, REDI has discussed that a broad-based technology curriculum which addresses new media, renewable energy, environmental, health and other technologies, may be more appropriate than a focused curriculum (optics, for example) which directs students to one career that is unlikely to provide ample job opportunities for students to remain in the region. If there is state support for 3D Virtual Academies, REDI could assist in developing partnerships with schools, consulting on the needs of target industry clusters and involving its private sector membership as industry experts for curriculum design.

To enable this effort, legislation entitled Land of Enchantment Knowledge Enhancement 3D Project may be proposed in the 2009 Legislative Session. This bill would appropriate $6 million dollars to contract for the design of 3D immersive academies in aerospace, health care, energy and edutainment (3D media and film), enabled by the NMCAC supercomputer. A cross-departmental entity would be created to oversee this effort.

3. **Industry Mentors.** The Human Capital Team ranked one-to-one relationships as one of the most life-changing experiences that a young person can have. The ability to have a mentor in a work setting that provides apprenticeships, internships, or summer jobs was viewed as a highly valuable experience. REDI's private sector members could serve as a pool of industry mentors for the region, with the added benefit of many mentors working in REDI's target industry clusters. REDI would develop MOUs with school districts that wish to participate. Several mechanisms could be put in place to publicize the opportunity to students: school counselors; teachers; letters sent to parents and students; posters and flyers; REDI, school and industry websites; and industry mentor presence at events such as career days and career fairs. In addition to creating the initial partnership, REDI would need to provide "infrastructure" for this effort in two forms:

   • A training program for industry mentors that allows mentors and students to realize value from the experience. Annual funding would be required to for on-call training, or to fund training provided by the community colleges.

- Support and lobbying for a tax credit program that would incentivize businesses to mentor local students. This proposal is discussed further in the Public Policy section of this Plan.

4. **WorkKeys.** The REDI Human Capital Team recognized the need for "soft skill" training of the workforce, and the WorkKeys—Career Readiness Certificate addresses several key elements of soft skills, such as reading for comprehension, the job application process, interviewing skills, how to get and keep a job, math skills and others. WorkKeys is a test that is given to high school seniors or other adults to assess the person's readiness for the workplace and other skills. Several states and Las Cruces, NM have implemented WorkKeys with reported success. The New Mexico Department of Workforce Solutions has successfully used WorkKeys to document the skills of the labor force for various companies, and would like to expand its use significantly. Implementing the program in northern NM high schools is a doable project that would require approximately $13,000 per year to test all seniors (estimated at 1,280) in the four-county region for basic job skills assessment. If students chose to take additional tests, more funding would be required. WorkKeys offers ten tests, administered at a cost of $10 each.

WorkKeys Tests
• Basic Job Skills Assessment
• Reading for Information
• Applied Mathematics
• Business Writing
• Writing
• Locating Information
• Teamwork
• Observation
• Listening

A WorkKeys Solution provider could be established in the region to provide local access to the system and administer the tests. UNM-Los Alamos is studying the possibility of becoming a WorkKeys Solution site. The WorkKeys website at www.act.org/workkeys/overview provides a map of the more than 1,000 WorkKeys Solutions provider locations, which are most prevalent in the East and Southeast US. Currently, Albuquerque and Las Cruces are the only communities in New Mexico utilizing WorkKeys. The feasibility of this project would depend on each school district's interest and ability to fund or partially fund the testing. REDI could attempt to obtain matching funds for schools that want to participate. A partnership could also be considered between REDI and the Northern Area Workforce Development Board to fund testing for both students and adults.

5. **Competitions.** Though not part of its formal recommendations, the REDI Human Capital Team suggested a number of school competitions that could be sponsored in the four target industries. For example, students could be challenged to design a video game, and the winner would receive a cash prize or laptop. Corporate sponsorships could be secured for the prizes. These competitions could be designed around the career pathways.

6. **Monetary Rewards for Student Achievement.** In some school districts in the nation, students are being paid for high achievement, and the programs are incentivizing students to do well. While this recommendation may generate some controversy, it is worth considering. The progress of such national initiatives could at least be tracked, to determine the viability of this approach in New Mexico.

7. **Community Involvement.** The REDI Human Capital Team also recognized several other partnerships with schools that are considered effective and could be implemented regionally.

REDI would not be the primary implementor of these initiatives, but could play an initial role in connecting schools to the right resources.

I. **The community school model** involves utilizing school facilities for community activities, and in some cases, to incubate economic development projects. This results in closer relationships between the school, parents and the community which are particularly effective in rural areas, and also reduces costs to build new facilities. PED's Rural Revitalization Program is working with numerous communities in New Mexico to implement this model.

II. **Case management models** involve intervention where teachers, parents and sometimes social service agencies work together to address the needs of a student. REDI Human Capital Team members found this approach particularly effective because it requires a team approach and includes early intervention.

III. **Integrating social services in the schools** is another possibility that networks students to the services they need. This has been done in a number of northern NM schools with varying degrees of success, depending on the openness of the school system.

- **Teacher-Focused Efforts.** A variety of efforts have been identified to support teachers. These including requirements and increased funding for professional development, special training through LANL and other programs, award recognition similar to that provided by the Partners in Education Foundation for the Santa Fe Public Schools, monetary awards from private industry, and private industry assistance in recruiting teachers (for example: Chamber of Commerce members establish a fund to pay for relocation costs). Any of these efforts could be implemented, given the right partnerships among schools and private industry.

Partnership with Workforce Entities

Background. The Workforce Investment Act (WIA) of 1998 was new legislation aimed at transforming Workforce Investment Boards (WIBs) from organizations that traditionally served disadvantaged individuals to policy-making bodies that set priorities and allocate resources at the local, regional and state levels; that provide demand-driven services focused on the needs of both employers and employees; and that partner with a broad range of economic development, workforce and education entities to accomplish broad and interdependent goals. In many communities, WIA's intent has been realized through innovative partnerships and collaborations. In some communities, however, a variety of factors have precluded this, with inadequate funding being one of the primary factors in northern NM. This is summarized well in the report *Responding in a Turbulent Economy: Creative Roles for Workforce Investment Boards*, which points to limited and declining resources for workforce development as the origin of tension between funding "traditional program delivery and infrastructure versus a strategic agenda that invests in research, incumbent worker training and related partnering activities."[9] Since the inception of the Workforce Investment Act, the federal government has decreased financial support for Local Area Workforce

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[9] *Responding in a Turbulent Economy: Creative Roles for Workforce Investment Boards*, A Report to the Ford Foundation. Mark Troppe, Workforce Strategies Group, April 12004.

Development Boards virtually every year. This has drastically reduced the ability of NALWDB (Northern Area Local Workforce Development Board) to meet the region's needs.

New Mexico's local workforce development boards are designated by the State of New Mexico to receive federal funds under the Workforce Investment Act (WIA), which includes funding for Adults and Dislocated Workers and funding for Youth. NALWDB and other WIBs in New Mexico were established in 2001 in response to the 1998 WIA legislation. In accordance with a Partnership Agreement signed in 2001 and updated in 2004, the Chief Elected Officials (Mayors, County Commission Chairs, Tribal Governors) in the ten northern counties are charged with oversight of NALWDB's operations, primarily by appointing Directors to the Board. NALWDB serves the following counties, an area substantially larger than the four-county REDI region:

- Region I: San Miguel, Mora, and Colfax
- Region II: Santa Fe, Rio Arriba, Los Alamos, and Taos
- Region III: San Juan, McKinley, and Cibola

NALWDB's primary services are provided through contracts with SERCO and SER Jobs for Progress for the operation of the One-Stop Career Centers system, which serves job-seekers and also supports the needs of employers. Two full-service One-Stop Career Centers exist in the workforce region in Santa Fe and Farmington. The roles and responsibilities for the One-Stop Centers are as follows:

- o Meet employer workforce needs with appropriate job applicant referrals and related services.
- o Work with educational agencies to ensure training is available to meet employer vocational training needs.
- o Develop services that assist employers with job retention, including training.
- o Work with small business support programs, state agencies, small business development centers and local government to ensure businesses are able to access services to remain viable and expand.

In addition to communication with local economic development officials about their specific workforce needs, NALWDB has successfully expanded the traditional focus on serving disadvantaged individuals to serving the needs of employers. However, NALWDB has not taken a leadership role to comprehensively address workforce needs in the region, or to develop partnerships to leverage its limited funding to achieve broader goals. As a result, northern NM's workforce development efforts are largely limited to filling the individual requests of employers and employees in their search for employees or employment.

Responding in a Turbulent Economy profiles twelve case studies of innovative WIB partnerships and initiatives which illustrate the major impact a more strategic WIB could have on northern NM. In these case studies, WIBs serve as major or even lead regional partners and provide workforce resources customized to the region and its economic needs. Some examples are as follows:

1. North Central Indiana 's WIB is the umbrella for a regional economic development strategy that includes workforce, economic and small business development.

2. The Western Massachusetts WIB is a primary partner in a regional planning organization that integrates workforce development, economic development and land use planning.
3. The WIB and Economic Development Corporation in Stanislaus County, CA merged to form a single, integrated workforce and economic development organization that uses competitiveness and analytical capabilities for business attraction and business development.
4. The regional WIB in Jacksonville, FL works with job seekers to develop and implement longer-term income growth strategies, rather than merely job placement, and partners with the local business incubator as the supplier of choice for recruitment and screening needs of rapid growth companies.
5. The San Diego WIB partners with California Manufacturing Technology Consulting and the local community college to develop curriculum and provide workforce training for new hires and incumbent workers. This addresses the workforce needs of biomed firms that locate in California for clinical trials, but often leave due to lack of qualified workforce.
6. The BEST Initiative in Massachusetts is a multi-agency partnership that integrates basic adult education and job training for front line workers, based on "industry teams" that compete for funding. The education and training programs are customized for each industry team, for example, Blueprint for Biomanufacturing and South East Massachusetts Manufacturing.
7. Oklahoma's WIB invested in a Lean Manufacturing program to improve productivity and competitiveness for 20 manufacturers in the state. The program was implemented by the Oklahoma Alliance for Manufacturing Excellence.
8. Southwestern Connecticut's regional WIB launched three workplace training projects focused on incumbent worker training, including H-1 B Technology Training for manufacturing workers who were promoted to higher-skilled jobs with better wages. Significantly, a focus on incumbent worker training was chosen because low population growth, job growth and full employment pointed to local workers as the primary vehicle to increase competitiveness.

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Clearly, with a more broadly focused, strategic WIB, northern NM could greatly improve its workforce and better integrate workforce development with economic and community development. While this Plan does not offer an "answer" for strengthening NALWDB, it does propose the following steps for implementation in 2009:

- Meet with key members of the NALWDB Board and its service providers (SER and SERCO Jobs for Progress) to determine if the WIB is interested in pursuing broader partnerships in the region. While NALWDB and its service providers have participated at times in the REDI process, there has not been a full-blown discussion about concrete partnerships that could be forged.
- Convene a meeting of the regional partners, including the Tribes, who are charged with oversight of NALWDB to identify what they would like NALWDB's role to be in REDI. REDI would then approach NALWDB with a proposal to partner with REDI, which should include potential funding to enable the partnership.
- Increase the regional partners' involvement and oversight of NALWDB, both through strategic appointments to the Board, and through requests for direct meetings and progress reports. Perhaps quarterly meetings between NALWDB and the regional partners can be convened during 2009, to plan a workforce and economic development partnership.

Hopefully, through this process, NALWDB can become a major partner in implementing the *Training and Education to Support Target Clusters* and *Training and Technical Assistance Network* recommendations described above. NALWDB could also be instrumental in designing incumbent training programs ranging from those that target LANL and other retirees to work in new and emerging sectors, to those that upgrade the skills of technicians to work in northern NM's growing cluster of small, innovative firms. Should the prospect for partnering with NALWDB be bleak, restructuring is an option that has been pursued by other WIBs. For example, breaking the four-county region away from the larger NALWDB service area may be one way to align workforce and economic development through REDI.

Infrastructure

While sites and infrastructure associated with specific industry clusters are described in Section II of this Plan, this section includes recommendations for basic infrastructure—water, wastewater, transportation, affordable housing and telecommunications. These recommendations were generated by the REDI Infrastructure Team, one of the four Regional Expert Teams that met to develop implementation plans for REDI's four strategic areas in the summer of 2008.

Infrastructure development is important to economic development for many reasons. Sites and associated infrastructure are required to attract new companies and grow existing ones. Lack of transportation, water and wastewater and telecommunication infrastructure can be a major barrier to economic development, particularly in the rural areas. While REDI does not intend to support any and all infrastructure projects associated with economic development, it can identify high priority projects needed to support the four target clusters, as well as convene a forum for regional capital improvement planning that will enable greater overall investment in the region. This section describes REDI's foremost infrastructure priority, the Regional Broadband Project, which will be pursued in the first five years of REDI. It also describes a regional process and priorities to enable the region to coordinate its state and federal funding requests for basic infrastructure and thereby obtain larger amounts of funding for critical projects of regional scope and benefit.

Regional Broadband Project

Need for the Project. As the pace of innovation quickens and economies become increasingly knowledge-driven, broadband becomes a critical part of any economic development strategy. All businesses—from large multinational corporations to location-neutral, home-based businesses—require reliable, high-speed connections capable of uploading and downloading large amounts of data. Data requirements are particularly great in high-tech industries, including REDI's target clusters of Technology and Media. While lack of broadband is frequently viewed as a barrier to economic development, the presence of broadband in the rural areas will create opportunities that have never existed before. In addition to improvements in education and health care, including distance learning and telemedicine, broadband will enable rural areas to attract and create new businesses with significantly less regard for distance to markets.

Our nation's telecommunications infrastructure is a privately owned, duplicative structure consisting of phone companies such as Qwest and cable companies such as Comcast. Often, the systems of these incumbent carriers were built years or decades ago, and, in the case of the phone lines, were intended for use by voice. The technology is therefore copper wires for phone or coaxial cable for TV, which limits bandwidth. In the REDI region, Qwest and Windstream offer a higher-speed DSL. This is essentially twisted pair copper, which improves capacity but is still very limited. Fiber optics (fiber) offers much greater bandwidth that can meet current and future services of all types. Incumbent carriers do not have a business plan or adequate capital budgets to invest heavily in fiber optics, particularly not fiber-to-the-premise (FTTP), which is required to reach end users of homes and businesses. This is the reason that investments arising from the Qwest settlement will be inadequate to meet current and future needs in the region. REDI's Regional Broadband Project is founded on the proposition that economic development will not be successful

without deployment of fiber. Thus, REDI is recommending a regional network for the four-county region, as described below.

Santa Fe Regional Telecom Coalition. In late 2007, Santa Fe County, the City of Santa Fe and the Santa Fe Community College established the Santa Fe Regional Telecom Coalition (SFRTC), which is planning for broadband to support Santa Fe Studios at the Santa Fe County Media District, the needs of Santa Fe Community College, and a community network for the City of Santa Fe. Santa Fe County recently completed its infrastructure backbone design for the Santa Fe Media Park, and the City of Santa Fe is in the early stages of a study of a multi-tenant fiber ring.

REDI North of Santa Fe. REDI is proposing a similar process to SFRTC's to provide broadband to the rest of the region. REDI has obtained a quote of $105,000 for a regional broadband assessment, estimated at $25,000 per area of concentrated population (Los Alamos, Española and Taos) and $10,000 to $15,000 for the rural portions of Rio Arriba and Taos counties. For the areas of concentrated population, the assessment would likely recommend options for fiber rings and interconnections among the region and to the outside world. For the rural areas, wireless nodes would likely be proposed, and some of these may be "fed" by existing fiber owned by the rural electrical cooperatives. Kit Carson Electric in Taos, for example, has expressed interest in this idea. The assessment would provide one to three options of how adequate broadband can be provided to the entire region, with associated costs and financing mechanisms. The final product will include infrastructure design or the blueprint for deployment in the region. On October 27, 2008, the regional partners outside of Santa Fe met and reached consensus to pursue the regional broadband assessment. REDI is working to secure $50,000 in grant funding, potentially through a CDBG planning grant, which will be matched by contributions from the regional partners. Ideally, the assessment would be bid out and awarded in early 2009 and completed by the end of July 2009.

Once the infrastructure designs for SFRTC and the northern part of the region are completed, they may need to be interconnected. Networks only communicate with the outside world through a "point of presence" (POP), or access to long-haul fiber. It is highly likely that the interconnection would occur in Santa Fe, due to the city's tie to the Albuquerque POP and Lambda Rail. However, there may be other possibilities for interconnection for the region north of Santa Fe, which will be explored during the assessment. Because there is now good likelihood that federal stimulus funding for broadband will become available within the next year, REDI's primary concern is that all planning and engineering work be completed quickly, so that the region and its individual communities can obtain funding for deployment in a timely manner.

Integrated Broadband Strategic Initiative. In late 2008, Richard Lowenberg of the 1st Mile Institute prepared an assessment for Governor Richardson's Office for a statewide Integrated Strategic Broadband Initiative, or open fiber network, which is distinguished from the closed, proprietary model currently in existence. "Open fiber" means "shared" networks, an approach which is being deployed in Europe and Canada and has resulted in better customer service and affordability by way of having multiple service providers use a single open network to reach end customers. An open network would likely be the model adopted by REDI, and REDI is coordinating with the Governor's office to align these regional and statewide broadband efforts.

Regional Capital Improvements

The State of New Mexico Capital Improvements process has historically been a means for local governments to fund projects that cannot be supported through tax revenue alone. New Mexico's tax structure is sufficient to fund basic services in areas with a substantial gross receipts tax base, such as larger cities and towns. In northern NM, this is true in municipalities like Santa Fe and Taos, whose concentration of goods and services capture the dollars of city residents, residents living outside of the municipal boundaries, and tourists . Rural counties which lack a substantial gross receipts tax base are greatly disadvantaged by this tax structure because they must fund basic services primarily through property taxes, which are generally low. As a result, it is common for rural counties to request even basic items from the capital outlay process, such as police and fire department vehicles.

The political dimension of capital outlay complicates this picture. Historically, New Mexico legislators have controlled allocations of capital outlay funds which they use for projects in their districts. In practice, this means that funding allocations are made with little consideration for how important a project is, how it will be maintained and operated once built, and what the return on investment might be. In addition, parceling out relatively small sums of money to benefit the greatest number of constituents makes it difficult for a community to amass sufficient funding for a large project. Capital outlay funds remain on the books in Santa Fe, while the project is delayed substantially in a community that needs it. The backlog of capital improvement projects that have been obligated but not contracted is immense, and has precluded the State of New Mexico from obtaining the AAA bond rating needed for future investments. The State of New Mexico is currently in the process of reforming its capital outlay process to address these issues. Through the REDI process, the North Central NM Economic Development District has discussed a proposal for reform with the Department of Finance and Administration and the Legislative Council Service within the last year.

For northern NM, REDI is proposing an annual capital improvement planning process which would prioritize basic infrastructure projects with regional impact and benefit. How these projects are entered into the State of New Mexico ICIP format will depend upon the types of reforms made by the State. However, the primary objective is for elected officials to meet annually and create a list of priority regional projects that they would collectively lobby for and support during the upcoming Legislative Session.

REDI is recommending that this process take place during an annual "State of the Region Conference," scheduled in July. Following the conference, an annual meeting with State Legislators would be held to present the regional project recommendations. The 2008 REDI process included several meetings to conduct such a prioritization process, as a first step in regional capital improvement planning. It should be noted, however, that in future years, the list of priority projects should be shortened substantially. This would, for example, ensure full funding for up to five projects, rather than partial funding for ten. The projects identified during the REDI process address water, wastewater and transportation. Meetings on telecommunications and affordable housing resulted in a list of recommendations, some of which are included in this section, and others of which appear under Public Policy.

Water and Wastewater. The REDI Infrastructure Team worked from the State of New Mexico Infrastructure Capital Improvements Plan to prioritize water and wastewater projects of regional scope and benefit for the next five years. The chart below provides a summary of the thirteen projects which were prioritized. Please note that funding amounts are based on figures provided by each local government during the Infrastructure team meetings, and have not been verified against new Infrastructure Capital Improvement Plan requests. Following the table are descriptions for each project, organized in alphabetical order by county.

Table 7: REDI Water and Wastewater Priorities

WATER & WASTEWATER PROJECTS	2008	2009	2010	2011	2012	2013
Los Alamos County						
1. Los Alamos San Juan Chama Diversion	0	350,000	75,000	500,000	500,000	23,575,000
2. Los Alamos Effluent Reuse Infrastructure	577,543	793,072	1,010,142	1,304,673	0	0
3. Los Alamos Fire Hydrant Ext: Camp May Rd	0	749,412	553,882	1,391,765	0	0
Rio Arriba County						
4. Rio Arriba Regional O&M Water System	250,000	245,000	170,000	170,000	170,000	170,000
5. Rio Arriba Regional Water Rights Study	0	500,000	15,000	15,000	15,000	15,000
6. City of Espanola Regional Water System	0	250,000	4,467,000	5,700,000	2,500,000	2,500,000
7. Rio Arriba County Wastewater Facility	0	150,000	1,000,000	4,000,000	0	0
Santa Fe County						
8. Buckman Direct Diversion Regional Project	30,000,000	30,000,000	40,000,000	40,000,000	40,000,000	30,000,000
9. Santa Fe County Regional Water Project	0	3,000,000	2,500,000	1,000,000	500,000	200,000
10. City of Santa Fe Regional Water Supply	0	700,000	2,000,000	2,500,000	2,500,000	1,000,000
Taos County						
11. Town of Taos Regional Wastewater Plant	0	800,000	1,825,000	0	2,000,000	5,000,000
12. Valle de Los Ranchos Sanitation District	0	150,000	800,000	5,000,000	5,000,000	5,000,000
13. La Jicarita Regional Wastewater Study	50,000	50,000	0	5,000,000	0	0

1. **San Juan Chama Direct Diversion.** This project involves continuation of design of the water treatment facility that will be needed to utilize the San Juan Chama water supply allocation, the treatment process that will be required to meet state and federal standards, the water transmission lines that will be required to transport the raw and finished water, and how it will tie into the County's water distribution system. The diverted water supply is planned to serve the residents of Los Alamos County and the Los Alamos National Laboratory. In fiscal year 2009, the County will initiate the requisite environmental studies on the San Juan Chama project to determine what environmental impacts, if any, exist, and what mitigation may be needed. As part of that process, the Office of the State Engineer will require that the County pursue a permitting process to divert the water from the Rio Grande, identify any impairment issues on existing uses, and hold the requisite public hearings to obtain State approval for the diversion project. The estimated budget for the diversion project and water treatment facility is expected at $25 million. The Preliminary Engineering Report will evaluate the diversion point which is planned to be built near White Rock and will be designed to divert up to 1,200 acre feet of water rights per year. It is anticipated that a full Environmental Impact Statement will be required.

- **Diamond Drive Phase II - V Effluent Reuse Project.** This project will consist of five phases of an enhanced non-potable water line along Diamond Drive. When the project is completed, the line will allow the utilization of wastewater treatment plant effluent and Los Alamos Reservoir surface water for irrigation of numerous County parks, schools, and other recreational facilities, conserving groundwater resources.

- **Camp May Road Fire Hydrant Project.** Constructed in three phases, this project will consist of installation of fire hydrants along Camp May Road in the County of Los Alamos.

- **Consolidated O&M for Small Water Systems.** Recognizing that a significant number of small water supply systems exist throughout the County that lack certified operators to meet the new certification requirements of the New Mexico Environment Department (NMED), Rio Arriba County submitted a proposal to NMED to consolidate the operation and management of small water and wastewater systems under certified circuit riders. Rio Arriba County was awarded $150,000 toward the feasibility phase of this project, which represents partial funding. The proposal included the following:

Table 8: Operating Budget for Rio Arriba County O&M Project

- Feasibility Study ($250,000): The feasibility study would determine which communities within the County desire to be part of the proposal, explain the benefits of the proposal, seek professional support, determine the regional benefit to the affected communities, and project the short and long term costs.

Recurring Budget	Year 1	Year 2
Circuit Rider	$65,000	$65,000
Bookkeeper	$45,000	$20,000
Outside Contractor	$60,000	$10,000
Operational Costs	$50,000	-
Software & Supplies	$25,000	-
Total	$245,000	$95,000

- Recurring Estimated Budget ($245,000 first year; $95,000 second year): To fully implement the project, the proposal prepared by Rio Arriba County assumes the budget above after completion of the feasibility study.

- **Adjudicated Water Rights for Rio Arriba County.** The County of Rio Arriba recognizes that the availability of water rights will be a crucial factor in any economic development initiative in the region. As a result, the County desires to pursue a geo-technical study to determine the availability of water rights throughout the County, including small water supplies, acequia systems, private holdings, and municipal supplies. The geo-technical study will determine water availability, quantify existing water rights and priority dates, and include an analysis of current and future needs based on population growth. The estimated cost of this geo-technical study is $500,000. Once the geo-technical study has been completed, $50,000 per year will be needed for expert consultation and related costs and to retain a professional geo-hydrologist to keep the water availability records current in light of ongoing water right transfers and water banking.

- **Española Valley Regional Water System.** The Española Valley Regional Water System is a major priority because it is at the center of population for Rio Arriba County. Based on the water service area maps on file with the Office of the State Engineer, the regional water supply system is expected to serve the greater Española Valley, provide service to the Pueblo of Ohkay Owingeh and the enterprises of Santa Clara Pueblo, provide bulk

water services to the four communities of the Cuatro Villas Water Association, and eventually serve the Village of Chimayo. The City of Española recently completed two preliminary engineering reports (PER) to determine the feasibility of providing bulk water services to the greater Española Valley and its regional neighbors. The PERs are based on the availability of an additional 2,000 acre feet of water rights that the City acquired from the San Juan Chama Project. The most recent PER concluded that there is sufficient groundwater available in the basin to meet the needs of the region through the year 2048. The City of Española has acquired federal, state and local funding in the following amounts to develop the regional water supply system:

1. New Mexico Water Trust Board: $3.7 Million (Grant)
2. New Mexico Water Trust Board: $1.9 Million (Grant)
3. New Mexico Water Trust Board: $3.2 Million ($2.8 M Grant)
4. Federal STAG Grant: $1.8 Million (45% local match)
5. BOR Federal Title II Authorization: $3.0 Million ($1 M Appropriation)
6. New Mexico State Appropriation: $1.1 Million
7. New Mexico State Appropriation: $250,000
8. 2008 CDBG Appropriation: $500,000
9. City of Española NMGRT Clean Water Loan: $6.0 Million

The City of Española will require the following funds in order to complete the regional water supply project:

- $2.0 Million in BOR Federal appropriation (pending)
- $2.0 Million in Federal STAG grant (pending)
- $4.5 Million in 2009 Water Trust Board funding to extend service lines to the regional communities
- $2.5 Million in New Mexico Appropriations to replace the water supply well contaminated by the Superfund Site

- **Rio Arriba County Wastewater Project - Tierra Amarilla.** This is a priority project for Rio Arriba County because Tierra Amarilla is the county seat, and is without wastewater services.   The community is sprawled throughout the valley and is proliferated with onsite septic tank systems that will continue to affect the water quality in the area. The County of Rio Arriba has been awarded $150,000 from the New Mexico Water Trust Board for the purpose of preparing a Preliminary Engineering Report for this wastewater project in 2009-2010. The County plans to construct the project in 2011-2015, at a cost of $4-5 million.

- **Buckman Direct Diversion Project.** This joint project will divert the City and County of Santa Fe's full allocation of San Juan Chama project (SJC) water, plus other County supplies to help meet both peak daily demands and overall annual water demands. This $180 million project is the most significant water supply project ever in the Santa Fe region and is of critical importance to both jurisdictions. The project will provide up to 15 million gallons per day for peak demands, is intended to address existing drought protection needs and also meet annual and peak demands through the near term. The project consists of a new diversion from the Rio Grande; an 11-mile, 36-inch diameter transmission line; a new 15 MGD water treatment plant; and nearly 20 miles of new treated

water distribution piping that will tie in to the City/County water systems. The Preliminary Engineering Report is currently in progress as part of a design/build contract with Camp Dresser McKee. The project is anticipated to be on line by the later part of 2010.

The estimated $180 million project will be paid for by three partners. The City of Santa Fe will provide funds backed by City gross receipts taxes and water revenue bonds, Santa Fe County will fund its share through general obligation bonds and gross receipts tax revenue bonds, and Las Campañas will fund its share on a cash basis. Although full project funding will be the responsibility of the three partners, the City and County are likely to solicit a portion of the funding from the New Mexico State Legislature and/or federal appropriations. Santa Fe County's current funding plan is as follows:

General Obligation Bonds $46,000,000
Capital Outlay GRT $31,500,000
Grant Funding $ 2,500,000
$80,000,000

- **Santa Fe County Well Project.** This project is planned to serve the west and south sector of Santa Fe County. Santa Fe County has planned approximately $3 million toward this project that will include construction of new water supply wells, and the potential purchase of existing water supply wells that are deemed capable of adequate water production. Flow rates of 200 to 400 gallons per minute are desired for augmenting the County's water supply system, with each well projected to produce no more that 150 acre feet per year individually. This project is currently estimated at a cost of $3 million dollars. Based on the EBRIF Five-Year Strategic Plan, the overall cost could be as high as $7.2 million.

- **City of Santa Fe Long-Range Water Supply Plan.** A long-range water supply plan settling water supply strategies through 2045 is needed for the prudent management of available water resources. This plan will be tied directly to new operational models completed by the City of Santa Fe to optimize system operations and the utilization of surface water from the Buckman Well Direct Diversion project and Santa Fe Canyon Reservoirs, as well as groundwater diversions from the inner City and Buckman well fields. The estimated cost for preparing the long-range plan is $700,000. The plan includes: the STELLA model, decision-support model, groundwater modeling, and other projects that come out of the planning process. The EBRIF Five-Year Strategic Plan estimates the costs of the project as high as $8.7 million.

- **Town of Taos Wastewater Treatment Plant Upgrade.** This project will consist of a major upgrade to the existing wastewater treatment plant located near Los Cordovas, approximately seven miles from the Town of Taos. The treatment plant is designed to serve approximately 8,000 service connections. The capacity of the treatment plant upgrade will be an additional 2.4 million gallons per day. The upgrade will allow the Town of Taos to serve the communities of El Prado, the Valle de Los Ranchos Water and Sanitation District, the Pueblo of Taos, and other customers within the Town. The estimated budget is $9.6 million dollars. Current available funds are $3 million. An additional $6.6 million are needed to proceed with this project.

- **El Valle de Los Ranchos Sanitation District Sewer Project.** This project will consist of the construction of a sewer main trunk line to connect the sanitation district to the Town of Taos wastewater treatment plant. The El Valle de Los Ranchos Sanitation District includes the unincorporated communities of Llano Quemado, Ranchos de Taos, Talpa, Los Cordovas, and UNM Taos Campus. The sewer main project is designed to serve approximately 2,500 service connections. The estimated budget for design and construction is $15 million dollars. The District is considering the imposition of property taxes to all residents within the district to help offset the cost of this project.

- **The Jicarita Valley Regional Wastewater Study.** The Jicarita Valley is generally known as the Peñasco Valley in southern Taos County. For the purpose of this regional wastewater study, the plan includes the unincorporated villages of Chamisal, Vadito, Rodarte, Rio Lucio, Penasco, and Llano San Juan. The Pueblo of Picuris has been invited to participate in the study and may join at a future date. The members of this district are concerned over the water quality in the area due to the proliferation of septic tank systems and the increasing density throughout the valley. It is estimated that over 3,500 residents reside in the service area. The estimated budget for the feasibility study, the preliminary engineering report, the engineering design, and construction for this project is $5 million.

Transportation

- o **Public Transportation** is the most important transportation issue for economic development in the region. Regional public transit in northern NM is provided by the North Central Regional Transit District (NCRTD), which was established in 2006 as the first regional transit district in the State of New Mexico. Its establishment was enabled by the New Mexico Regional Transit District Act of 2003 which authorized the creation of regional transit districts between two or more governmental units. NCRTD began providing transit service between communities in Rio Arriba, Los Alamos, Santa Fe, and Taos counties in October 2007 through a combination of approaches which include coordinating existing transit providers, taking over existing transit authorities, and providing new service. On November 4, 2008, voters in all four counties approved a 1/8 of one percent increase in gross receipts tax to maintain and expand regional transit. The table below shows existing and proposed service in the four-county region and the cost for each route on an annual basis.

REDI's views NCRTD as one of the most important components of infrastructure for regional economic development. REDI's work throughout the region has confirmed that residents currently commute for employment throughout the region, a scenario which may not be sustainable if gas prices continue to rise. NCRTD provides the means for residents of all incomes to travel throughout the region for employment, thereby accessing a wide range of job markets, employers and salaries.

Table 9: NCRTD Service Plan

NCRTD SERVICE PLAN: LOS ALAMOS & RIO ARRIBA	Annual Cost	NCRTD SERVICE PLAN: SANTA FE & TAOS	Annual Cost
Espanola-Los Alamos-Pojoaque Route	85,830	Greater Eldorado Express Existing Service	240,000
Espanola-Los Alamos-Santa Fe Route	85,457	Greater Eldorado Express Expansion	115,234
Los Alamos County Transit Expansion	160,434	Santa Fe Community College District Route	112,356
Espanola-Santa Fe Route	167,588	Espanola-Chimayo-Espanola Route	73,477
Espanola West Side Fixed Route	130,681	Espanola-NM 599-Railrunner Connection	136,562
Espanola Riverside Fixed Route	132,092	City of Santa Fe Service Expansion	1,442,440
County Demand Response	154,492	Expansion of Penasco-Taos Route	176,816
Espanola-Tierra Amarilla (Chama) Route	79,188	Expansion of Questa-Taos Route	131,169
Espanola-Abiquiu-El Rito-Ojo Caliente	143,220	Expansion of Taos-Espanola Route	178,207
Espanola-Alcalde CR 41	83,210	Taos-UNM Klauer Campus Route	110,332
Espanola-Velarde	119,142	Taos-Arroyo Seco-Taos Route	80,960
Rio Lucio-Dixon-Espanola	98,101	Questa-Red River Route	90,045
Ohkay Owingeh Route	TBD	Questa-Costilla-Amalia-Questa Route	143,045
		Taos-Angel Fire-Eagle Nest-Red River-Questa	180,420
		Molycorp Service	TBD
		Town of Taos Service Expansion	495,258

2. **Highway and Enhancement Projects** in northern NM are overseen by the Northern Pueblos Regional Planning Organization (NPRPO), one of the many RPOs and MPOs that exist for the purpose of planning and prioritizing transportation infrastructure. Because these planning organizations are already in place, the REDI Infrastructure Team worked with them to confirm transportation priorities for the next ten years. All of the cities, counties, and tribal governments within the four-country region participate in the NPRPO, which meets every month in communities within the District 5 area of the New Mexico Department of Transportation (NMDOT). The NPRPO is a forum for promoting highway safety, protecting environmental quality, preserving cultural resources and assessing residential and commercial development impacts on the regional transportation infrastructure. The NPRPO was formed to promote the implementation of a safe, convenient and efficient transportation network within the planning areas of Los Alamos, Rio Arriba, Santa Fe and Taos counties.

NPRPO's planning responsibilities include coordinating the Statewide Transportation Improvement Plan or STIP (see One to Five Year Priorities, below), the Regional Transportation Improvement Program or RTIPR (see Five to Ten Year Priorities, below), preparing annual work programs and long-range planning. The NPRPO's annual work program is prepared cooperation with the cities, counties, and tribal governments that are members of the RPO. The 2008 annual work program was completed by April 15 and includes projects that the membership considers to be significant to the region. The NPRPO's long-range planning activities include collaborating with the NMDOT and other regional partners to identify and document current and future transportation needs, plans, and projects in the four-county area. The NPRPO also coordinates long-range regional transportation planning with other local, regional, and statewide planning initiatives, such as Infrastructure Capital Improvement Plans (ICIP), legislative capital outlay priorities and local comprehensive planning.

Table 10: REDI Five-Year Highway and Enhancement Priorities

NORTHERN PUEBLOS RPO PROJECTS	2008	2009	2010	2011	2012	2013
US64 Taos North - CN 3327	4,250,000					
US64 Jct. NM68 East Taos - CN 3187	600,000					
NM 574 Bridge Replacement - CN D5037	1,159,017					
NM30/NM502 - CN 3980	1,544,550	7,942,218				
Galisteo Bridge NM41 - CN D5016	1,070,983					
NM 333/NM344 Intersection - CN 3823	6,299,114					
NM68 Scenic Overlook - CN 9571		550,000				
NM76 East of Jct. NM503 - CN3787		5,547,748				
US285 South of Jct US64		2,291,971				
NM502 Intersection DP Road - CN 3407		2,596,003	1,043,829			
Espanola Railroad Museum - CN 7535		532,000				
Cerrillos Road Phase II - CN L5030			4,000,000			
US285 South Jct US64 - CN 3820			1,102,536			
Museum Hill Santa Fe - CN 7834			323,000			
Santa Fe CR98 Pedestrian - CN L5050			750,000			
NM111/NM519 Bridges -			2,334,086			
US491 MP94 to 101 - CN 3978				1,453,873		
US84 Inter/Paseo de Onate - CN 3602				2,218,704	3,981,296	
Jct. US64/J8 South Pedestrian - CN D5029				585,000		
NM333 Jct NM41 East - CN D5071				479,623		
US64 MP249 to 254 Tierra Amarilla - CN 3975					10,000,000	
Rio Grande Gorge Bridge - CN 3973					2,000,000	
US64 Rio Arriba Co to US 84 - CN G2755					6,600,000	
NM68 Jct NM74 to Velarde - CN 3978					10,000,000	
Guadalupe Overpass US84 SF - CN D5070					2,500,000	
NM41 Moriarty to US60 - CN D5031					10,000,000	
J8 Jct US64 South in Dulce - CN L5061					325,000	

One to Five Year Priorities. The NPRPO elicits recommendations for multi-modal transportation and enhancement projects for the Statewide Transportation Improvement Plan (STIP), a six-year funding process, from municipal, county and tribal governments within the region. North Central New Mexico Economic Development District (NCNMEDD) is the fiscal agent for implementation of the NPRPO. The table above contains a complete listing of the 1-5 Year Transportation priorities that have been approved by the NPRPO and the NMDOT District Five office. Federal funds have been programmed for these projects and forthcoming federal stimulus funding will help ensure they are completed. However, in the long term, state and local governments may need to play a larger role in funding transportation projects.

Five to Ten Year Priorities. Each year, the NPRPO coordinates the Regional Transportation Improvement Program (RTIPR) process to identify five to ten year transportation priorities. Members are invited to submit Project Information Forms (PIF) by the end of January each year, which are presented to the NPRPO and to the District 5 representatives from the Department of Transportation. By the last day of February, the NPRPO conducts a meeting to prioritize these project requests. The prioritized listing is submitted to the District for its review, and the list of projects identified as the "RTIPR" is approved annually. Because funding has not been identified for projects on the RTIPR, these projects will eventually be placed on the NMDOT Five Year Plan when funding has been obtained and the local match, if any, has been determined. The projects included in NPRPO's 2008 RTIRP include:

Los Alamos County

1. NM501 Phase IV (Diamond Drive) Los Alamos Canyon bridge to N. Road (0.7 miles) will rehabilitate and reconstruct highly deteriorated infrastructure. Estimated budget is $8 million. Los Alamos County is requesting $3 million and funding the balance from the County's CIP.
2. NM502 Los Alamos County (1.34 miles) from Diamond Drive to Knecht includes pavement rehabilitation, sidewalk reconstruction, curb and gutter, and storm drains. Estimated budget is $3.9 million.
3. NM502 Los Alamos County Planning Study (2.15 miles) beginning at MP2 to MP4. Estimated budget for Phase I: Corridor Study is $500,000.

Rio Arriba County

o County Road 319 (Old NM 112) Phase I (2-3 miles) includes roadway improvements and safety enhancements; sub grade preparation; and guardrail at the north end. Estimated budget is $2 million.
o NM 291 City of Española (0.5 miles), from the Santa Cruz historic district towards the high school, includes obtaining ROW, re-alignment of roadway and reconstruction. Estimated budget is $1.3 million.
o NM17 Village of Chama (1.5 miles), from 7th Street towards bridge, includes ADA pedestrian walkways, sidewalk reconstruction, curb and gutter, and overlay. Estimated budget is $1.6 million.

Santa Fe County

a. County Road 88 in La Puebla (2.8 miles) is an enhancement project that includes construction of five foot wide bicycle and pedestrian lanes on both sides of roadway. Estimated budget is $1.75 million.
b. County Road 67 on Old Santa Fe Trail (5.5 miles) is an enhancement project that includes construction of five foot wide bicycle and pedestrian lanes on both sides of roadway. Estimated budget is $4.0 million.

Taos County

c. Camino del Medio from Paseo del Canon West to La Posta Road (1.5 miles) includes obtaining ROW, re-alignment of roadway, sidewalks, curb and gutter. Estimated cost is $1.2 million
d. Taos County/Town of Taos – NM240 from Carbajal to US64 and Upper Ranchitos Road (1.9 miles) includes roadway improvements, drainage and safety enhancements. Estimated budget is $2 million.
e. NM522 Village of Questa, from village boundary to village boundary (1.7 miles), includes installation of a center turning lane and widening of shoulders. Estimated budget is $1.7 million.

Affordable Housing

The REDI Infrastructure Team held one meeting on affordable housing, where the following recommendations were made. These recommendations would not likely be implemented by REDI, but rather by organizations such as the New Mexico Mortgage Finance Authority, the New Mexico Association of Counties, the New Mexico Municipal League, or individual local governments in the region. This Plan recommends that a session of the 2009 State of the Region Conference be devoted to Affordable Housing, at which time these recommendations can be discussed and developed further.

- **Affordable Housing Micro-Loan Program to Improve Existing Homes.** There is a need to create a "micro-loan" program to offer low interest loans to homeowners who want to improve their homes. A recent study completed by Santa Fe County finds that home improvements are one of the most important affordable housing needs. Many homes are in desperate need of weatherization, upgrading of appliances for energy efficiency, and other improvements to create a more "green" home that is energy efficient both in summer and winter. Considering the high cost of energy today, families are spending a disproportionate share of their income heating and cooling their homes. A higher level of energy efficiency could provide the needed monies to pay off the micro loan. It is recommended that this proposal be discussed with the New Mexico Mortgage Finance Authority, to discern if existing loan programs could serve this purpose, or if a new program should be considered.

- **Housing Stock Inventory for the Four-County Region.** There is a need to create a housing stock inventory throughout the region. A housing stock inventory will not only identify the number of homes that are occupied and the number of homes that are available for rent, but also the unmet demand for housing in each community. This inventory would be available to developers and elected officials to determine unmet needs and actions to meet those needs. The initial inventory would create a baseline of existing housing stock in each of the four counties. It will be necessary to update the inventory from time to time to ensure that the information remains current. The most appropriate lead agency to develop the request for proposals and oversee the project is the North Central Economic Development District (NCNMEDD) because the four-county region is within the planning area of NCNMEDD.

- **Encourage In-Fill Development in City/County Zoning Codes.** Building contractors participating in the Affordable Housing meeting recommended that the most cost effective way of providing affordable housing in each community is for elected officials to encourage in-fill development. Each community has vacant properties to which utilities and other infrastructure have already been extended. By constructing in in-fill areas, the community does not expend additional infrastructure money, and lowers the expense to the developer in constructing affordable housing. It is certainly more economical to construct in-fill housing than to construct new housing in new areas that lack utilities and other infrastructure.

  The most appropriate agency to take the lead on this project would be the New Mexico Municipal League, in coordination with the New Mexico Mortgage Finance Authority. The New Mexico League of Planning and Zoning Officials is a sub-section of the Municipal League comprised of planning and zoning professionals from throughout the State. This subsection could consider the preparation of a model ordinance that encourages in-fill development for

affordable housing. Cities and counties could use the model ordinance as a template in their respective jurisdictions.

4. **Encourage the Adoption of Smart Growth Zoning.** Each community should consider "Smart Growth Zoning," such as that being adopted by the Town of Taos, which promotes greater density, open space and the integration of residential and commercial areas to reduce travel. By creating denser zoning within communities, it encourages in-fill, and reduces the overall cost of construction.

    Smart Growth Zoning efforts should include inclusionary zoning provisions. After years of approaching affordable housing as strictly a matter of finding ways to house the poor, some local governments now focus their efforts on providing housing for entry-level teachers, police officers, and other essential workers living on moderate incomes. For local leaders who want to promote mixed-income communities, the trend has fueled growing interest in policies such as inclusionary zoning, which requires residential developers to include a portion of homes affordable to moderate-income residents in their projects. While inclusionary zoning may generate controversy among developers, cities and counties have built support for it by agreeing to density bonuses and other incentives. By allowing developers to build more homes than the zoning otherwise allows, they offset the costs of requiring them to build the affordable housing, enabling them to earn more off of the same patch of land. Any effort to increase workforce housing should begin with a big picture assessment of a community's housing needs, and a review of the local market. In most cases, local governments will want to adopt and integrate multiple strategies and tools to effectively increase the availability of housing for working families. Inclusionary zoning must be mandatory, or it will not yield a significant increase in workforce housing. Model ordinance and codes that pursue these recommendations could be developed as described in recommendation 3, above.

5. **Encourage Additional Rental Housing in our Cities and Counties.** There is a need to create more rental housing that would be eligible for Section 8 rental subsidies by the Public Housing Authorities. Most of the Public Housing Authorities have long waiting lists but lack additional affordable rental housing. The Section 8 program provides low income families with subsidized rental payments so that they can afford to move into rental housing. If the inventory of affordable rental housing increased, the Public Housing Authorities could petition the US Department of Housing and Urban Development to reallocate Section 8 vouchers from those areas of the State that are not fully utilizing them. Instead of making this initiative a separate project, it would be more efficient if the concept of additional low rent housing was incorporated into the planning of "Smart Growth" as explained above.

Public Policy

While public policy recommendations associated with REDI's target clusters are described in Section II of this Plan, this Section includes policy recommendations that will more generally improve the environment for economic development in northern NM, including the ability of local governments to fund economic development and other projects. Amendments to the Local Economic Development Act (LEDA) is the major policy initiative that REDI will undertake in 2009. The rest of the recommendations in this section should be considered for prioritization in 2010 at the 2009 State of the Region Conference. Along with the target cluster policy recommendations, these recommendations were generated by the REDI Public Policy Team, one of the four Regional Expert Teams that met to develop implementation plans for REDI's four strategic areas in the summer of 2008.

Economic Development

1. **Amendments to the Local Economic Development Act (LEDA).** In 1993, the New Mexico Legislature adopted LEDA, the act that allows local governments to provide investments and incentives for economic development which were previously impossible under New Mexico's Anti-Donation Clause. As written, LEDA prohibits "businesses primarily engaged in the sale of goods or commodities at retail" as qualifying entities. In sessions conducted around the state, the New Mexico Economic Development Department (NMEDD) has heard numerous requests, particularly in rural communities, for the State to allow retail as an eligible investment. This amendment has also been suggested by local governments in REDI, specifically the Town of Taos and Los Alamos County. The exact language to make retail eligible under LEDA would be developed by a working committee that coordinates with NMEDD.

   LEDA also includes a "cap" on the amount of public money that can be used for economic development projects. This is limited to 5% of annual general fund expenditures for a local government in that fiscal year. Los Alamos County has inquired about increasing the cap, and other local governments in the region, such as the City of Santa Fe, are also interested in increasing their ability to invest in economic development. As a result, REDI is proposing to raise the cap to 10% of annual general fund expenditures. NMEDD is supportive of REDI's efforts to find a sponsor and offer these amendments in the 2009 New Mexico Legislative Session.

o **Maintain and expand the mission and funding at the Los Alamos National Laboratory, which is recognized as the economic engine of the region.** Beginning in 2009, four of the five members of New Mexico's congressional delegation will be newly elected Members of Congress. With a congressional delegation where four of the five Members will lack any seniority, Senator Jeff Bingaman being the sole exception, there is real concern that federal spending in the state may decline in general, and moreover, that historic congressional support and federal spending for national laboratories, particularly Los Alamos National Laboratory (LANL), could be jeopardized.

   LANL is a major contributor to the economic vitality of the state. LANL's overall budget for FY 2008 is approximately $2.1 billion and the laboratory employs 11,200 people, including

subcontractors. Of the total budget, $416 million was spent on procurement of goods and services within New Mexico in FY 2007. Preserving, and potentially increasing, LANL's budget with new missions is critical to the economic health of the region. Presently, LANL lacks a well defined advocacy or community-based support group that can speak for, or against, pending legislation either at the national or state level. Given the size of the LANL budget and the Lab's importance to the region's economy, the creation of a community based support group that can work with legislators at the local and national levels is urgently needed and should be formed in the near term.

Los Alamos County is taking a leadership role in exploring the feasibility and efficacy of community-based support group, and desires to work with other like-minded communities in northern NM toward the formation such a group. It is presently evaluating other similar New Mexico support groups such as the "Committee of 50" in Alamogordo that advocates on behalf of Holloman AFB, and the "Kirtland Partnership" that was instrumental in keeping Kirtland AFB off the list of final military base closures in 2004. In addition, Los Alamos County and the Regional Development Corporation are members of the Energy Community Alliance (ECA), an organization of communities that are impacted by major Department of Energy installations in the members' geographic area. ECA is presently viewed as an effective and credible voice acting on behalf of DOE installations.

It is envisioned that a LANL support group would be comprised of both public and private institutions. In other words, the local governments could form the backbone of the public sector and individual businesses/companies could be the cornerstone of the private sector. The resulting community based entity is likely to be a non profit 501(c)3 organization or a private foundation 501(c)6 organization. With the likely possibility of budget reductions occurring at LANL in FY2010, any LANL support group should be formed early in 2009 and quickly gain acceptance and credibility with federal, state, and local officials. REDI recommends that the group be completely independent from LANL in all respects.

o **Support the efforts funded by the Economic Development Administration to give grants for a portion of the cost of local infrastructure projects tied to specific business location or expansion plans.** The US Department of Commerce, Economic Development Administration has traditionally partnered with local communities to build infrastructure for economic development. The potential for a new surge of infrastructure investment as part of an economic stimulus package presents an opportunity for the REDI communities. Because this program will be essential to implementing many of REDI's future initiatives, REDI regional partners should consult with the New Mexico Congressional Delegation about maintaining and increasing funding for this EDA program. Further, the planning undertaken by REDI communities can serve as an immediate blueprint for EDA expenditures. This may prove a valuable asset if funds become available.

o **Request full funding for the Payments-In-Lieu-Of-Taxes (PILTS) program, of which 80% goes to fund rural schools, and indirectly supports workforce development.** PILTS is very important to the economic solvency of county governments in New Mexico which have a substantial amount of acreage in federally-owned land from which they cannot realize tax revenue. PILTS has never been fully funded, and REDI should work with the New Mexico Congressional Delegation to ensure its full funding in future years.

Human Capital

- Establish a Community Involvement Tax Credit that would incentivize New Mexico employers to provide mentorships, internships, apprenticeships and summer jobs to high school students. Such an incentive would help develop career pathways that extend from high schools into the workplace, as well as provide a workforce pipeline for local businesses in an increasingly constrained labor market. Specific details of the tax credit will have to be developed with the State of New Mexico, with a proposal expected in 2010.

- Support and restore funding for federal job training programs which have faced serious funding cuts.

- Establish funding for the "America Competes Act," which creates opportunities for excellence in technology, education, and science. The 2007 Act is a bipartisan response to recommendations contained in the reports *Innovate America* and *Rising above the Gathering Storm*, in which New Mexico Senators Bingaman and Domenici played a leading role. The Act focuses on three primary areas of importance to maintaining and improving United States' innovation in the 21st Century: 1) increasing research investment, 2) strengthening educational opportunities in science, technology, engineering, and mathematics from elementary through graduate school, and 3) developing an innovation infrastructure. REDI should lobby the New Mexico Congressional Delegation to support funding for the Act to support REDI's Technology Cluster and Human Capital initiatives.

Infrastructure

a. Consult with the State Engineer's Office on policy changes for water rights leases and over diversions. The State Engineer's Office (SEO) currently does not allow water right leases beyond 10 years. This creates an undue hardship on small water systems that lack sufficient water rights and look to water banks to lease water rights for expansion of their water system. Further consultation with the SEO is needed to see if this term can be extended to 40 years. The SEO also does not allow over diversions to be paid back through leased water obtained from water banks or from municipalities. This creates an undue hardship to small water systems who are unable to pay back the over diversion from existing rights, and look to water bank leases to provide relief. Further consultation with the SEO is needed to see if this policy can be changed.

b. Support federal legislation to fund state initiatives that use public-private partnerships to identify gaps in broadband coverage and develop the supply and demand for broadband. Currently, there are two bills pending before Congress: (S.1492) the Broadband Data Improvement Act and (HR 3919) the Broadband Census of America Act of 2007. These bills would improve information gathering about current broadband deployment and assist in targeting resources to areas in need of such services. A recent FCC order requires more focused broadband data collection from broadband providers but does not address other important broadband mapping elements contained in the pending legislation.

The REDI Infrastructure Team recommends federal legislation that supports state initiatives which use public-private partnerships to identify gaps in broadband coverage and develop the supply and demand for broadband. The ability to accelerate deployment and adoption by bringing together governments, broadband providers, business, labor, farm organizations, librarians, educators, and consumer groups in public-private partnerships is greater than the ability of these diverse players standing alone.

Adopting a national policy to stimulate subscription where it is already available, and deployment where it is not, could have dramatic and far reaching economic impacts. For example, a connected nation study released in February 2008 estimated the total annual economic impact of accelerating broadband access across the nation to be more than $134 billion. In addition to the $134 billion total benefit, the study found that increasing broadband adoption by another seven percent could result in:

- $92 billion through an additional 2.4 million jobs per year created or retained
- $662 million saved per year in reduced healthcare costs
- $6.4 billion per year in mileage savings from unnecessary driving
- $18 million in carbon credits associated with fewer CO_2 emissions
- $35.2 billion in value from hours saved per year from accessing broadband at home

3. **Support the New Mexico Mortgage Finance Authority's 2009 Legislative Initiatives**, which include:

- **New Mexico Housing Trust Fund Appropriation ($15 million).** The New Mexico Housing Trust Fund was created in 2005 and capitalized with an initial appropriation of $10 million. The Fund has received an additional $5 million during the 2006 ($1 million), 2007 ($2 million), and 2008 ($2 million) legislative sessions combined, as well as an additional $1.3 million in loan repayments and interest earnings, for a combined total of $16.3 million in total award capacity. To date, MFA—the Fund's Trustee—has awarded approximately $15.7 million, which has leveraged over $220 million in other housing funding and will result in 2,045 housing units throughout New Mexico. MFA staff anticipate the balance of the Fund—$597,575—will be awarded by year's end. In light of ever-increasing building and energy costs, the mortgage market credit crunch, and dwindling financial resources available for bold housing initiatives, MFA requests a $15 million appropriation to further capitalize New Mexico's Housing Trust Fund to meet unaddressed housing needs throughout the state and sustain the growth of this valuable state program.

- **Energy$avers Program Appropriation ($2.5 million).** The Legislature and Governor Richardson appropriated an initial $1 million in 2007 to create the Energy$avers Program, and appropriated an additional $1 million during the 2008 legislative session. This fund provides low or no-interest rate loans to builders to install energy efficient systems when constructing new homes, and to new home buyers and/or existing home owners to conduct energy efficiency retrofits in existing homes. To date, MFA has awarded $1 million in loans to developers under the Energy$avers Program, and anticipates awarding the remaining $1 million by year end. MFA would like to continue offering Energy$avers, and

plans expand the program to provide borrowers additional incentives to utilize its forthcoming Mortgage$aver Green product.

Mortgage$aver Green is a 30-year, below market fixed rate mortgage available to qualified first-time homebuyers purchasing homes that are certified at the Build Green New Mexico Gold level. Mortgage$aver Green will be offered at 50 basis points below MFA's Mortgage$aver rate. Homebuyers who purchase homes at this level would also be eligible for the Sustainable Building Tax Credit at a rate of $4.50 per square foot for the first 2,000 square feet. A growing proportion of a household's disposable income is spent on energy costs, pushing working families closer to the edge. Energy costs can comprise up to 25% of low and moderate income homeowners' monthly budgets. New Mexico is well-positioned to be a national leader in developing energy efficient policies that serve as a model for the rest of the country as we work to reduce our dependence on oil and seek sustainable and renewable sources of energy.

1. **Energy$mart Program Appropriation ($5 million).** MFA leverages state Energy$mart funds with federal Department of Energy Weatherization Assistance Program funding and Low Income Home Energy Assistance Program funding. The State's financial participation supplements the program and increases the number of assisted households. The State has consistently provided financial support to this program in the past. In 2007, MFA's partners successfully weatherized 1,663 homes with $4.6 million. MFA has identified approximately an additional 40,000 homes that are Energy$mart-eligible.

2. **Emergency Repair Fund Appropriation ($2 million).** Currently, no resource exists to assist low-income homeowners when disaster strikes. This appropriation will enable MFA to provide disaster relief and emergency repairs to homes occupied by low-income households throughout the state. This fund will also enable MFA to help pay for minor repairs to the building envelope, interior walls, roofs, and accessibility modifications for households in which one or more member(s) has a disability. Funds will be leveraged, when possible, with other programs to address major rehabilitation or weatherization needs. An appropriation of $2 million could assist approximately 255 households.

3. **HERO Program Appropriation ($2 million).** Unveiled in 2005, the Home Equity with Required Occupation or "HERO" Program is designed exclusively for households in which at least one member is a police officer, nurse, teacher, firefighter, or active member of the armed services. HERO combines below-market rate first and second mortgage products for the purchase of a home (including down payment and closing costs). To date, more than 270 New Mexico families have achieved the dream of homeownership with about $40 million in HERO loans. MFA estimates that $2 million will leverage $30 million in below-market mortgage loans and down payment assistance to these targeted professionals. Increasingly many "essential" workers cannot afford to live in the communities in which they serve. This program enables these hard-working professionals to more easily qualify to purchase a home.

4. **Homebuyer Education Program Appropriation ($1 million).** Basic consumer financial literacy and pre-purchase counseling are consistently mentioned as needs by the builder, lender, and realtor communities. In October 2007, the Governor's Task Force on

Mortgage Lending emphasized the need for funding for these activities in its report and recommendations. Foreclosures hurt New Mexico's real estate markets and weaken communities; education could prevent future foreclosures. MFA will work to identify best practices and develop a basic curriculum standard for statewide use.

5. **New Mexico Affordable Housing Tax Credit Amendment.** Currently, the New Mexico Affordable Housing Tax Credit does not allow state tax credits to be allocated for affordable rental housing projects in counties with populations greater than 100,000. MFA proposes removing this prohibition. As land, building, and energy costs continue to outpace the increase in wages and funding sources available for all types of housing development, funding flexibility is paramount. Restricting the tax credit in this way impedes the development of quality rental housing in larger communities that tend to need more rental housing. The erosion of federal Low Income Housing Tax Credit markets poses a new challenge for affordable rental housing developers. A squeeze in credit prices will exacerbate the demand for limited gap funding. If the state tax credit were more flexible, it would help fill some of the funding gaps we anticipate in the rental housing development market.

6. **Regional Housing Authority Reform – Phase II.** Although the regional housing authorities were originally intended to bridge "gaps" in New Mexico's affordable housing delivery system, significant shortfalls exist. The regional housing authority reform legislation enacted in 2007 has greatly improved oversight and accountability of the regional housing authorities, and the agencies involved in these efforts—DFA, MFA, and the State Investment Council—have learned much in the last year. As a result of the 2007 legislation, MFA has been tasked with providing a comprehensive review and analysis of the regional housing authorities and with making strategic recommendations as to how to expand the delivery of affordable housing services in a regional approach throughout the state. Community Strategies Institute has been engaged to assist MFA in conducting this review and developing recommendations, some of which may entail follow-up regional housing authority reform legislation, as well as additional appropriations to further support oversight and reorganizational activities.

Implementation

Cluster-Focused Strategy

The manner in which *Progress through Partnering* was established (as a cooperative agreement among seven local governments), and a major part of REDI's scope of work (proposing regional projects for implementation in the next 10 years), inherently define it as a public sector led effort based on projects. As described in the RFP for the Regional Economic Development Strategic Plan, these projects may include workforce development, training and education programs; transportation and communications infrastructure; housing initiatives; and other infrastructure to support business and industry. Initial and continued collaboration to identify, fund and implement regional projects is a logical way for the public sector to develop a strong foundation for economic development. Two of the four strategic areas that REDI has identified (Human Capital and Infrastructure) directly relate to such projects, and a third area (Public Policy) also lends critical support to economic development and falls within the public sector's domain. Benefits of a public sector led, projects based strategy include: 1) more effective funding of projects in light of shrinking federal and state resources, 2) economies of scale and cost reduction for the seven regional partners, and 3) better regional communication and relationships. The primary activities under a public sector, project-based model would include quarterly meetings of the regional partners; an Annual State of the Region Conference to prioritize regional projects and develop a regional policy agenda, learn about new trends in economic development, and evaluate the past year's economic indicators; and ongoing educational events.
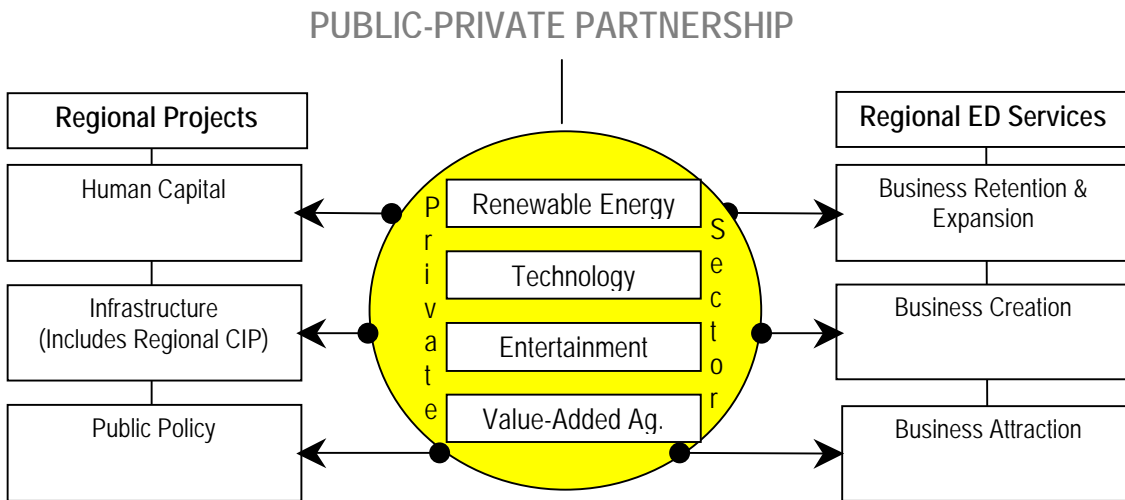
As the REDI process progressed, discussions with regional partners revealed an interest in regional economic development services. While some regional partners were involved in business attraction, retention and expansion activities, others had no funding to do so. There is a significant gap in business attraction, since, according to the NM Partnership, northern NM has been relatively inactive in responding to PROs (prospective recruitment opportunities). But a regional approach is important beyond the need to fill gaps in existing services. The benefits of regional approach for business attraction, retention, expansion and creation include the ability to: 1) demonstrate a combined labor force, 2) provide multiple location options for new and existing businesses, and 3) leverage regional assets to attract, retain, grow and create more businesses.

To focus the discussion about regional economic development services, REDI identified ten clusters which were either established or emerging in the region. As described in the Introduction of this Plan, stakeholders prioritized four of these ten clusters—Renewable Energy and Green Industry, Technology, Media and High Value/Value Added Agriculture. As the REDI process continued, it became apparent that these selections were sound. REDI's four target clusters resonate well with the target industries and projects identified by individual jurisdictions in the region, as well as with statewide industry clusters and projects. And there is a considerable amount of synergy among the four industry clusters, lending to greater opportunities to leverage the clusters together.

In the fall of 2008, the REDI Economic Development Services Team proposed that REDI's organizing principle be the four target clusters. This approach would be most effective at

strengthening the private sector, an action which is critical to improving northern NM's economy. The target clusters would define REDI's regional economic development services and its regional projects and initiatives. This accomplishes two key objectives: 1) it makes the private sector, rather than the public sector, the focal point of REDI and 2) provides an objective mechanism for prioritizing projects and services. Up until this point, it was unclear how projects would be prioritized in a region with many competing needs, limited resources, no substantial history of regional cooperation, and inequalities which pit criteria such as return on investment and need against one another.

Figure 14: Proposed REDI Structure

PUBLIC-PRIVATE PARTNERSHIP

Regional Projects		Regional ED Services
Human Capital	Renewable Energy	Business Retention & Expansion
Infrastructure (Includes Regional CIP)	Technology / Entertainment	Business Creation
Public Policy	Value-Added Ag.	Business Attraction

The focus on target clusters provided a filter through which to prioritize the multitude of economic development issues and needs expressed by stakeholders in REDI's organic planning process. As is widely recognized, success of an effort such as REDI rests heavily on its ability to show early, concrete results, and this requires a winnowing of the "universe" to core projects that match with REDI's objectives. With a cluster focus, REDI can now define its mission: **to develop and strengthen the target clusters of Renewable Energy/Clean Industry, Media, Technology and High Value/Value Added Agriculture in northern NM.**

As shown on the following page, this Plan suggests the following mechanism for determining what projects and initiatives will become priorities for REDI, and which ones REDI will support. It is highly recommended that REDI's focus remain on projects and initiatives that meet all of the three following criteria: 1) support one or more target clusters, 2) are regional in nature, and 3) do not duplicate the efforts of other entities. REDI can and should play a supporting role in projects and initiatives that support the target clusters, but are local in nature and/or already have an entity in place to initiate or implement the effort. REDI can also consider playing a supporting role in projects and initiatives which focus on REDI's broader group of industry clusters.

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Figure 15: Prioritization Mechanism for REDI Projects and Initiatives

REDI PRIORITY   REDI SUPPORTED

◄───►

V.	Support one or more target clusters	VIII.	Support one or more target or other clusters
VI.	Regional in nature	IX.	Local in nature
VII.	Does not duplicate existing efforts		
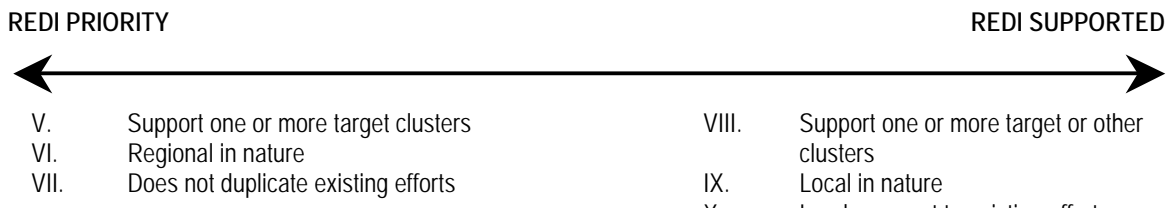
REDI's Implementation Summary on page 113 uses this mechanism to organize the various efforts described in this Plan into those that are REDI priorities, which are then matched with potential funding sources, and those which REDI supports. It should be understood that the mechanism allows for many areas of gray, to provide REDI with flexibility for determining its priorities. For example, the Regional Broadband Project is comprised of various phases of deployment which could be considered individual local projects. However, when grouped as a phased, regional project, REDI can establish broadband as a high priority and create efficiencies and economies of scale that could not be realized otherwise. Another example is High Value/Value Added Agriculture, for which numerous support and technical assistance organizations and entities exist. Depending on the outcomes of the cluster strategy for Agriculture, REDI could play a leadership role in the development of high-value alfalfa crops, for example, or in integrating Agriculture with the other three clusters. However, if the cluster becomes solely focused on local and regional markets for existing products, REDI would play more of a supporting role in the efforts of existing agricultural organizations, farmers markets and commercial kitchens. Similarly, REDI's "supporting" role can vary substantially in scope, depending on the importance of the effort and the needs of the partnership or initiative.

Public-Private Partnership

A requirement of the Regional Economic Development Plan is to provide a *mechanism* for sustainable implementation of the initiatives outlined in the Plan. Once REDI's focus on target clusters was determined, it became imperative that the implementation mechanism include private sector involvement and leadership. This is best described in the following best practices for successful clusters:

- Successful clusters are *private sector* driven. This means that solutions to competitive constraints should be commercial in nature, and not depend on government intervention.
- Successful clusters are *market* driven. This means having an assessment of cluster competitiveness based on an understanding of the target market and the success factors for competing in it.
- Successful clusters exploit and create competitive advantages, including the potential for regions (or sub regions) to specialize in specific market segments within the cluster.
- Successful clusters increase competitiveness by building connections, relationships and partnerships among firms and public institutions in strategic areas and for strategic

activities. This implies an understanding of the value chain for each cluster, as well as the relationships of the cluster with capital, support services, workforce and policy institutions.

In September 2008, the REDI project team proposed a public-private partnership as the implementation mechanism for REDI. By using a public-private partnership as its implementation strategy, REDI offers a unique opportunity to change the paradigm of economic development in northern NM from one in which individual programs compete with each other for limited government and grant funding, to one that is driven by market opportunity and private sector investment.

It is estimated that a public-private partnership will require approximately one year of planning, during which time financial contributions from potential private sector partners and other funding sources will be secured to determine the feasibility and the scope of the effort. This will occur in 2009, along with work on REDI priority projects shown in the Implementation Summary on 113. Operational funding for 2009 will primarily come from contributions from the regional partners, including sustaining funding from Los Alamos County and matches made by the other regional partners. Thus, 2010 is actually the first year of the public-private partnership and the launch of economic development services. It is recommended that a minimum funding level of $500,000 be set for 2010 onward, with room for upward growth in the coming years.

The governance model employed by public-private partnerships for economic development typically includes a governing council or board made up of both public and private sector representatives. These representatives approve work plans and monitor the performance of the effort, usually on an annual basis, and are not involved in day to day operations. Funding for public-private partnerships is typically generated through a membership structure, through which pubic and private members pay annual dues for various services. Both San Diego Connect and the Greater Phoenix Economic Council have multi-level membership programs of $20,000 and above (Platinum), $10,000 to $20,000 (Gold) and $5,000 to $10,000 (Silver), with each level having associated benefits. REDI could consider creating additional levels on both ends, such as $40,000 and above (Turquoise) and $2,500 to $5,000 (Bronze). Governance and funding are linked in the sense that Platinum level members typically receive preferential consideration for board or council memberships. Various levels of research services, networking and site hosting opportunities are typically associated with each level. In REDI's case, core services would include targeted business attraction; business retention, expansion and creation efforts and partnerships; priority initiatives in public policy and human capital; all of which is focused on developing and strengthening the target clusters. Networking opportunities, research/Market Intelligence services, and potentially Board positions would vary depending on the membership level.

In San Diego, the structure works this way: 27 platinum members pay dues of $20,000 ($540,000), 33 "gold" members pay $10,000 ($330,000), and 45 "silver" members pay $5,000 ($225,000), for a total of over $1 million from membership dues. As shown in the table below, it is anticipated that the public-private partnership would begin with near equal proportions of financial contributions from the public and private sectors, and would be partially supported with grant funding during the three year start-up phase. Private sector contributions would increase in proportion over time, replacing, and later exceeding, the grant funding. Initially, the REDI project team has estimated that a total minimum contribution from the regional partners should be set at $150,000, or an average of $20,000-$25,000 per partner per year.

Table 10: Example of Increased Private Sector Investment in Public Private Partnership

BUDGET BY FUNDING SOURCE	START-UP PERIOD			2013	2014
	2010	2011	2012		
Estimated Budget	$500,000	$550,000	$550,000	$600,000	$600,000
Funding Sources:					
Regional Partners	$150,000 (30%)	$150,000 (27%)	$150,000 (27%)	$150,000 (25%)	$150,000 (25%)
Private Sector	$150,000 (30%)	$150,000 (27%)	$200,000 (36%)	$250,000 (42%)	$250,000 (42%)
Grants	$200,000 (40%)	$150,000 (27%)	$100,000 (18%)		
Corporate Sponsorships		$100,000 (18%)	$100,000 (18%)	$200,000 (33%)	$200,000 (33%)

The regional partners have expressed interest in a funding structure based on population, which can certainly be considered. The benefit of the membership approach is that it allows members to buy in at the level at which they are comfortable and the level at which they can afford, and is easier to administer because it provides a seamless structure for both public and private sector members.

As mentioned above, public–private partnerships are not new and have been successful in other regions of the US. For this reason, they are recommended as a proven model through which to implement regional economic development. It is important to note, however, that in the case of northern NM, there will be challenges associated with implementation of REDI through a public-private partnership. All of these challenges are rooted in historic, pervasive issues that can, but will be difficult to, change:

1. A history of government-led economic development and a private sector mentality that looks to government to assume risk
2. Little to no history of regional cooperation
3. Some communities with little history of investment of economic development
4. Competition for limited resources

Irrespective of the success of implementing a public-private partnership, the goals of REDI and the importance of its projects and initiatives should not be lost. In the future, REDI may evolve into a private sector led organization, or a REDI partner may assume responsibility for implementing parts of this Plan. These should be considered positive steps toward reaching our goals and an indication of evolution and growth. In short, it is less important who implements this Plan, and more important that it be implemented.

Table 11: REDI Implementation Summary

REDI PRIORITY PROJECTS & INITIATIVES	COST	STRATEGIC AREA	POTENTIAL FUNDING SOURCES	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
One-Time Projects & Initiatives													
1. Regional Broadband	$105,000	Infrastructure	Assessment: CDBG, NMFA, Regional Partners										
	Unknown		Deployment: EDA, USDA, State of NM PP Partnership, Bonds										
2. Regional Workforce Assessment	$150,000	Human Capital	EDA (statewide), City of Santa Fe, Regional Partners										
3. Regional Cluster Strategies	$80,000	ED Services	CDBG, EDA, USDA, NMEDD, McCune Regional Partners, Private Sector										
Ongoing Activities	$500,000		Membership Dues										
1. Business Development		ED Services	Membership Dues										
2. Location Neutral Ecosystem		ED Services	Membership Dues										
3. State of the Region Conference: Regional CIP and Policy Agenda		Infrastructure	Registration Fees										
4. Research/Market Intel Services		ED Services	Membership Dues										
5. Networking Opportunities/Events		ED Services	Membership Dues										
7. Partnerships with Schools, Colleges, NALWDB		Human Capital	Regional Partners (2009) for Outreach Membership Dues for Implementation										
8. Policy Initiatives (State of NM)		Public Policy	Regional Partners (2009)										
Amendments to LEDA			Membership Dues										
Location Neutral Incentives													
Community Involvement Tax Credit													
Local Gov. Program for RE/EE													
Rural Film Tax Rebate (+5%)													
Expand Production Zone in NNM													
Early Stage Tech Business Prog.													

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REDI PRIORITY PROJECTS & INITIATIVES	COST	STRATEGIC AREA	POTENTIAL FUNDING SOURCES	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
8. Policy Initiatives (Federal Level)		Public Policy	Regional Partners (2009)										
Reauthorize SBIR			Membership Dues										
EDA Infrastructure Program													
PILT Program													
Federal Jobs Training Programs													
America Competes Act													
State Broadband Funding													

REDI SUPPORTED PROJECTS & INITIATIVES	COST	STRATEGIC AREA	LEAD ENTITY	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Renewable Energy/Green Industry													
1. SERPA	$3 M	Human Capital	Northern NM College										
2. SFCC STC		Human Capital	Santa Fe Community College										
3. UNM-Taos Solar Programs		Human Capital	UNM-Taos										
4. Amendments to RETA		Public Policy	RETA, EMNRD										
5. Increase Innovation Fund $10M		Public Policy	EMNRD										
6. Double PTC for Wind/Biomass,		Public Policy	EMNRD, CCAE										
Solar		Public Policy											
Double per Facility Cap for Solar													
7. Low Interest Loans for PV		Public Policy	CCAE, EMNRD										
8. Feed-In Tariffs		Public Policy	Coalition for Clean Affordable Energy										
Media													
1. Santa Fe County Media Park		Infrastructure	Santa Fe County										
2. TCA "Black Box"		Infrastructure	Town of Taos										
3. Protect Existing Film Incentives		Public Policy	Film Industry, NM Film Office										
Technology													
1. Española Business Incubator		Infrastructure	City of Española										
2. Rio Arriba Industrial Park		Infrastructure	Rio Arriba County										
3. Taos High-Tech Space/Incubator		Infrastructure	Town of Taos										
4. SF Innovation Park/SF Complex		Infrastructure	City of Santa Fe										
5. $5M for Business Incubators		Public Policy	NM IDEA										

REDI SUPPORTED PROJECTS & INITIATIVES	COST	STRATEGIC AREA	LEAD ENTITY	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
High Value/Value Added Agriculture													
1. Española Community Market	TBA	Infrastructure	Greater Española CDC		▓	▓	▓						
2. Agriculture Distribution/Storage		Infrastructure	Farm to Table	▓	▓	▓							
3. Farmers Markets/Com Kitchens		Infrastructure	Various	▓	▓	▓							
4. Rio Arriba Water Rights Projects		Infrastructure	Rio Arriba County	▓	▓	▓							
5. Restricted Retail Package Liquor License		Public Policy	Taos County Chamber of Commerce										
6. Expand Farm to Restaurant and School Programs		Public Policy	Farm to Table	▓	▓	▓							
7. Trust Fund for Agriculture		Public Policy	NM Food & Agriculture Policy Council	▓	▓	▓							
8. Increased TA & Marketing		Public Policy	ACI	▓	▓	▓							
9. Adequate Funding for NMDA/ Livestock Board		Public Policy	ACI	▓	▓								
Other													
1. Education Reform		Public Policy	Various	▓	▓	▓							
2. Protect/Expand LANL Funding		Public Policy	Community Coalition to Support LANL										
3. Extend Water Leases to 40 Yrs Water Banking for Over Diversions		Public Policy	NMEDD		▓	▓							
4. MFA Legislative Agenda		Public Policy	MFA	▓									

Performance Measures

A performance measure is an established performance level that an organization seeks to achieve. Of the many measures that can be used to evaluate the overall economic health of the region, many are impacted by externalities outside of the control of an economic development effort. For this reason, the following performance measures were chosen for their direct association with two of REDI's goals: *Diversify the Economy* and *Increase the Number of High-Paying Jobs*. These performance measures are long term and could take 25 years or more to achieve. However, they should be monitored on an annual basis to ensure progress and to evaluate REDI's effectiveness.

1. Increase the percentage of private sector employment in northern NM to more than 80%.

2. Increase competitiveness by closing the gap between percentage of private sector employment in northern NM and the US in NAICS codes that represent REDI's target industry clusters. Closing this gap with the US requires the creation of a total of 5,105 jobs over a 25-year period in the following NAICS codes:

   - 51: Information
   - 5415: Computer Systems Design and Related Services
   - 31-33: Manufacturing
   - 54: Technical and Professional Services
   - 54161: Management Consulting Services
   - 55: Management of Companies

3. Close the gap between income and poverty levels in northern NM and the US by ensuring that the average wage of all jobs created exceeds $40,000 per year.

Methodology

REDI's performance measures were developed by comparing northern NM and New Mexico to the US and five "benchmark MSAs" (Metropolitan Statistical Areas). The MSAs include Albuquerque, Phoenix, Denver, San Diego and Raleigh. Albuquerque, Phoenix and Denver were chosen because they are southwestern cities with developed economies that share some of northern NM's opportunities and constraints. The economic development efforts of these three MSAs are models for REDI, in that they focus on many of the same target sectors. Albuquerque, Phoenix and Denver can also be viewed as competitors for REDI, but also may be likely partners for value chain development in REDI's target clusters.

San Diego and Raleigh were chosen because San Diego Connect and the Research Triangle Park (RTP) are both technology-based initiatives which serve as models for NNM Connect. Mary Walshock spearheaded San Diego Connect and has served as an advisor for NNMConnect. David Blevin, who was involved with RTP, recently relocated to northern NM and is working in the venture capital arena. Both individuals have articulated similarities between northern NM today and San Diego and Raleigh 25 years ago, when San Diego Connect and RTP were initiated. In the words of Mary Walshock, San Diego and Raleigh had two primary industries: government and tourism. The

key to success in both cases was the presence of accessible, world class research institutions, similar to what LANL is attempting to achieve under its new management. After 25 years of successful economic development efforts, San Diego and Raleigh represent solid benchmarks against which REDI can measure its own progress.

Regional Profile by Sector

Government vs. Private Sector Employment. Government dependence has been a concern for REDI stakeholders, particularly in light of potential cutbacks in funding at Los Alamos National Laboratory (LANL), which employs approximately 10,000 people. Nationally, and in most of the five benchmark MSAs, private sector employment makes up approximately 85% of employment, with government jobs comprising 15%. New Mexico's government dependence is reflected in its ratio of private sector to government employment, 78% to 22%. In northern NM, only Taos County is less government dependent than New Mexico as a whole, with approximately 80% private sector employment and 20% government employment. Two of the region's counties are even more dependent on government jobs, with private sector to government employment ratios of 72% to 28% in Santa Fe County and 56% to 44% in Rio Arriba County. Los Alamos County's statistic is misleading in that LANL's 2006 change in management moved approximately 10,000 jobs into the private sector. These jobs were previously classified under government in the State of California, because LANL was managed by the University of California Davis. So while Los Alamos shows private sector employment of 90%, if LANL's 10,000 employees were moved back into government, the ratio of private sector to government employment would be 35% to 65%.

Between 2001 and 2007, the percentage of private sector jobs in New Mexico, Santa Fe and Rio Arriba Counties has remained stable or fallen slightly. This is also true for Los Alamos County if employment at LANL is counted as government employment in 2001 and 2007. Only Taos County has increased its percentage of private sector jobs between 2001 and 2007, from 79% to 81%.

The purpose of REDI's goal *Diversify the Economy* is not to decrease the number of government jobs, which typically pay well, are stable in number and offer good benefits. Instead, the purpose of this goal is to strengthen the private sector and catalyze northern NM's significant government assets into private sector opportunities. Therefore, a 25-year goal for REDI should be to grow the private sector to more than 80% of total employment. It should be noted, however, that this recommendation is made in concert with job creation targets focused on economic base, higher-paying sectors, as discussed below.

Private Sector Employment by NAICS Code. In addition to higher government employment, New Mexico and northern NM have significant differences with the US as a whole and with benchmark MSAs in terms of the size of industry sectors in NAICS. The state and the region have a high concentration of jobs in the low-wage industries of Accommodations and Food Service and Retail Trade. While Accommodations and Food Service employs 10% of private sector workers in the US, it employs between 15% (Rio Arriba County) and 24% (Taos County) in northern NM. Similarly, Retail Trade employs 14% of private sector workers in the US, but between 16% (Taos County) and 22% (Rio Arriba County) in northern NM. Los Alamos County is the exception to this rule because it is dependent on one large employer. In fact, Accommodation and Food Service and Retail Trade employ only 4% and 2%, respectively, of private sector workers in Los Alamos

County, which has resulted in significant retail investment to curb leakage, strengthen the tax base and improve community vitality. Benchmark MSAs have employment very close to the US for both sectors: between 10% and 12% for Accommodations and Food Service and between 12% and 14% for Retail Trade.

Another area where New Mexico and northern NM differ from the US and benchmark MSAs is the size of the Manufacturing sector. New Mexico has never had a manufacturing base, but has made up some ground with recruitment of Intel, solar and aerospace manufacturers in Albuquerque. Today, Manufacturing makes up approximately 6% of all employment in New Mexico, compared to 12% in the US. It should be noted that the benchmark MSAs are not established manufacturing centers, but rather knowledge-based economies. Nevertheless, Manufacturing employment ranges from 7% to 9% for all five. Northern NM is particularly weak in this area, with Manufacturing employment ranging from 1% in Taos County to 4% in Rio Arriba County. This is not surprising, given the geographic isolation of the region and its limited access to major transportation.

New Mexico's Advanced Service Sector is also smaller than that of the US or the benchmark MSAs. While New Mexico and Albuquerque outperform the US for employment in *54: Technical and Professional Services*, northern NM counties underperform. Employment in Technical and Professional Services ranges from 3% in Rio Arriba County to 6% in Santa Fe County. This can be compared to 7% nationally and between 9% and 10% in most benchmark MSAs. New Mexico and the northern counties also are underrepresented in *52: Finance and Insurance* and in *55: Management of Companies and Enterprises*.

These differences between New Mexico/northern NM and the US/benchmark MSAs point to a major cause of New Mexico's low incomes. Incomes are dragged down by overrepresentation in Food Service and Accommodations and Retail Trade, two of the lowest paying sectors, and underrepresentation in Manufacturing and Advanced Services, two of the highest paying sectors. Because REDI's target industry clusters are associated with higher-paying NAICS codes, they have the dual effect of creating new jobs and raising incomes in the region.

Table 12: Percent Employment by Sector

Covered Employment	US	NM	Los Alamos	Rio Arriba	Santa Fe	Taos	Albuq. MSA	Denver MSA	Phoenix MSA	Raleigh MSA	San Diego MSA
Private	84.23%	77.57%	90.25%	56.22%	71.84%	80.90%	80.69%	86.21%	87.74%	81.70%	83.34%
Government	15.77%	22.43%	9.75%	43.78%	28.16%	19.10%	19.31%	13.79%	12.26%	18.30%	16.66%
Private by NAICS											
11: Agriculture	1.02%	1.70%	ND	0.97%	0.26%	0.11%	0.16%	0.16%	0.57%	ND	0.99%
21: Mining, Oil &Gas	0.58%	3.04%	ND	1.38%	0.33%	4.50%	0.05%	0.79%	0.20%	ND	0.04%
22: Utilities	0.48%	0.67%	-	1.68%	0.24%	1.26%	0.23%	0.34%	0.54%	ND	0.62%
23: Construction	6.63%	9.27%	2.21%	9.37%	9.95%	10.07%	9.83%	8.00%	10.21%	9.63%	7.87%
31:33: Manufacturing	12.13%	5.82%	ND	3.96%	2.26%	1.32%	7.67%	6.76%	8.33%	7.91%	9.32%
42: Wholesale Trade	5.25%	3.73%	0.42%	1.60%	2.57%	1.04%	4.32%	6.28%	5.21%	5.45%	4.04%
44-45: Retail Trade	13.60%	15.06%	2.43%	22.12%	18.86%	15.57%	14.52%	12.08%	14.19%	14.12%	13.51%
48-49: Trans & Warehousing	3.76%	2.97%	0.14%	2.25%	1.17%	0.73%	3.11%	4.27%	3.46%	ND	1.97%
51: Information	2.66%	2.51%	0.63%	1.11%	3.57%	1.55%	3.07%	4.54%	1.88%	4.05%	3.45%
52: Finance & Insurance	5.26%	3.55%	1.96%	3.58%	3.78%	3.21%	3.93%	ND	6.80%	4.02%	4.56%
53: Real Estate, Rental & Leasing	1.89%	1.77%	0.60%	0.93%	2.27%	2.72%	1.94%	2.50%	2.40%	2.22%	2.74%
54: Technical & Professional Services	6.70%	8.75%	67.23%	2.96%	6.03%	5.23%	10.04%	9.33%	6.02%	9.41%	10.20%
55: Management	1.61%	0.91%	ND	ND	0.53%	ND	1.24%	2.13%	1.38%	2.58%	1.48%
56: Administrative & Waste Services	7.35%	7.37%	14.38%	ND	5.22%	1.14%	9.52%	8.53%	12.07%	9.31%	7.96%
61: Education Services	2.00%	1.13%	0.52%	0.59%	3.14%	0.97%	ND	1.66%	1.78%	1.69%	1.87%
62: Health Care & Social Assistance	13.52%	14.51%	5.83%	26.25%	15.41%	17.44%	ND	10.29%	10.46%	9.89%	9.71%
71: Arts, Entertain. & Recreation	1.71%	1.34%	0.63%	0.47%	2.12%	5.25%	ND	1.95%	1.55%	1.57%	2.23%
72: Accommodations and Food Service	9.95%	12.44%	3.71%	15.44%	17.38%	23.83%	ND	10.22%	9.72%	9.93%	12.32%
81: Other Services except Public Admin	3.89%	3.46%	1.53%	2.28%	4.92%	3.72%	3.34%	3.42%	3.13%	3.92%	5.04%
99: Unclassified	0.19%	0.01%	0.00%	0.02%	0.01%	0.01%	0.03%	0.01%	0.12%	0.60%	0.08%

Source: US Bureau of Labor Statistics, 2007
ND= Not Disclosed

Job Creation

This plan recommends job creation targets as a direct indicator of REDI's success in implementing its mission—*to develop and strengthen the target clusters*—and to ensure return on investment for members of the public-private partnership. Job creation targets should be evaluated on an annual basis at the REDI State of the Region Conference and should also be updated and refined upon conclusion of the Regional Cluster Strategies, which will provide additional information to inform this analysis. REDI's job creation targets are based on employment in NAICS (North American Industrial Classification System) codes that represent REDI's target clusters. Employment comparisons are made among northern NM's counties, the State of New Mexico, the US and the five "benchmark MSAs" discussed in Methodology, above.

Table 13: Job Creation Target Summary

Cluster	Indicator (NAICS Code)	% NNM Employment (Baseline)	% US or NM* Employment (Target)	Jobs Needed (Gap)
Renewable Energy/ Green Industry		1.49%	1.64%	120
Media				
Film, Music, New Media	51: Information	2.53%	2.66%	100
IT, New Media	5415: Computer Systems Design	0.46%	1.20%	580
Technology	31-33: Manufacturing	1.82%	5.82%*	3,170
	54: Technical and Professional Services	5.6%	6.70%	-
Support Services	55: Management of Companies and 54161: Management Consulting Services	0.25%	0.53%	1,135
Goal: 25-Year Job Creation Target				5,105
Jobs per Year				204

**The actual jobs needed to increase employment to 6.7% in 54: Technical and Professional Services is 690. However, the 580 jobs in IT and New Media are subtracted from this total, as are half (568) of the 1,135 Management jobs in support services, resulting in no additional jobs needed.

The above job creation targets are based on the goal of northern NM attaining or exceeding the same percentage of private sector employment as the US for NAICS codes associated with each of REDI's target clusters. This would position northern NM to be competitive with the benchmark MSAs, which typically have higher percentages of private sector employment in these NAICS codes than the US. As explained in further detail for each cluster, to close this gap with the US would require the creation of a total of 5,105 new jobs or 204 jobs per year over a 25-year period. This target falls within the range of the number of jobs that would be created by estimating reasonable targets for business creation, expansion and attraction, as follows:

Business Creation: 3-4 start-ups per year at 2-3 jobs each	6-12 jobs
Business Expansion: 5 per year at 20 jobs each	100 jobs
Business Attraction: 2-4 per year at 50 jobs each	100-200 jobs
	206-309 jobs per year

There are two important things to note about this job creation target:

- While an annual estimate is provided, it is likely that fewer jobs will be created in REDI's start-up years than in later years, when the effort is established and the clusters begin to grow organically to critical mass.

- The success of creating jobs will depend greatly on the level at which REDI is funded. *Cost per job* is a somewhat subjective indicator that is typically defined by the entity managing the project or effort. For purposes of this discussion, cost per job includes direct operating costs only, although infrastructure provided to attract a company or funding from outside sources such as grants or loans can be included. For example, if a cost per job of $9,000 is applied to this analysis, REDI's job creation target would drop to 1,398 jobs over 25 years, or 56 jobs per year. This number will vary if the cost per job is actually lower than anticipated, or if REDI is funded at a higher level. In any case, job creation targets should be revisited when REDI's funding levels are determined, to ensure that performance expectations are realistic in light of funding.

Table 14: Average Annual Pay

NAICS	US	NM
NAICS Indicators		
31-33: Manufacturing	$53,489	$47,442
51: Information	$69,140	$38,647
54: Technical and Professional Services	$72,033	$64,327
5415: Computer Systems Design and Related Services	$87,888	$69,924
55: Management of Companies	$95,519	$53,009
54161: Management Consulting Services	$68,244	$23,122
Media Cluster		
5112: Software Publishers	$113,759	$71,989
512: Motion Picture and Sound Recording Industries	$55,315	$25,750
51211: Motion Picture and Video Production	$80,008	$31,926
51212: Motion Picture and Video Distribution	$91,178	$7,642
51219: Postproduction and Other Related Industries	$78,278	$44,525
5122: Sound Recording Industries	$72,536	$39,045
51223: Music Publishers	$78,978	ND
518: Data Processing, Hosting and Related Services	$73,322	$35,015
5415: Computer Systems Design and Related Services	$87,888	$69,924
541511: Custom Computer Programming Services	$90,988	$88,194
Technology Cluster		
333: Machinery Manufacturing	$56,242	$47,013
334: Computer and Electronic Product Manufacturing	$85,562	$73,679
335: Electrical Equipment and Appliance Manufacturing	$51,689	$30,130
3391: Medical Equipment and Supplies Manufacturing	$57,215	$33,156
54133: Engineering Services	$76,287	$68,069
54138: Testing Laboratories	$65,211	$53,329
54142: Industrial Design Services	$64,589	$40,552
5417: Scientific Research and Development Services	$91,034	$81,253
6215: Medical and Diagnostic Laboratories	$52,247	$50,640
Renewable Energy and Green Industry		
236: Construction of Buildings	$51,693	$38,455
238: Specialty Trade Contractors	$43,204	$34,576
333: Machinery Manufacturing	$47,013	$47,013
4237: Hardware and Plumbing Merchant Wholesalers	$53,937	$53,841
4238: Machinery and Supply Merchant Wholesalers	$56,042	$50,909
2122: Power Generation and Supply	$86,333	$71,933
54131: Architectural Services	$70,812	$52,580
54135: Building Inspection Services	$44,210	$35,831
Support Services		
54161: Management Consulting Services	$80,885	$53,568
5411: Legal Services	$76,819	$57,095
5412: Accounting and Bookkeeping Services	$54,167	$34,984
54163: Marketing Consulting Services	$68,244	$23,122
5418: Advertising, PR and Related Services	$64,049	$32,242

Source: US Bureau of Labor Statistics, 2007

As shown at left, some sectors associated with REDI's target clusters have annual pay of less than $40,000 in New Mexico, although all have annual pay greater than $40,000 in the US. For the purpose of REDI, high-paying jobs are defined as those paying a minimum of $40,000 for the region outside of Los Alamos County, based on a 15% to 25% increase in the annual average wage for each county. While Los Alamos' average annual wage is currently $63,295, Los Alamos County's own economic development study cites $55,000 as a more realistic wage target that will not dilute the economy[10] and that does not conflict with Los Alamos County's current efforts to create more retail

[10] *Creating a Sustainable Los Alamos*, POLICOM Corporation, August 2004.

business to address leakage and encourage community vitality.

Table 15: Annual Average Wage

County	Annual Wage, 2007	15% Inc.	25% Inc.	Wage Target
Los Alamos County	$63,295	$72,789	$79,119	$55,000
Rio Arriba County	$25,494	$29,318	$31,868	$40,000
Santa Fe County	$34,914	$40,151	$43,643	$40,000
Taos County	$25,857	$29,736	$32,321	$40,000

Media Cluster. The Media Cluster is defined by the NAICS codes at right, which can be attributed to the four segments of the cluster. However, because data for NAICS codes longer than two digits is often not disclosed due to the small number of employers in the region, this Plan uses NAICS *51: Information* and *5415: Computer Systems Design and Related Services* to establish a baseline. As shown in the table below, employment in *51:Information* makes up 2.66% of all private sector employment in the US, and between 3% and 4% of private sector employment for most benchmark MSAs. *Information* employment in New Mexico and the four-county region is consistent with US employment, but falls below the percentage of employment for most benchmark MSAs. Also, the majority of *51:*

> **Media Cluster NAICS Codes**
>
> **Film**
> 512: Motion Picture and Sound Recording Industries
> 51211: Motion Picture and Video Production
> 51212: Motion Picture and Video Distribution
> 51219: Postproduction and Other Related Industries
>
> **Music**
> 5122: Sound Recording Industries
> 51223: Music Publishers
>
> **Information Technology**
> 5112: Software Publishers
> 518: Data Processing, Hosting and Related Services
> 5415: Computer Systems Design and Related Services
> 541511: Custom Computer Programming Services
>
> **New Media**
> All Media Cluster NAICS Codes

Information employment is concentrated in Santa Fe County, with much smaller percentages in the rest of the region. ***For northern NM to achieve 2.66% employment in 51: Information, the region would have to create 100 new jobs in this sector.***

New Mexico and northern NM underperform significantly in their rate of employment for Information Technology, which is reflected in NAICS *5415: Computer Systems Design and Related Services*. New Mexico and northern NM's employment in this sector is about 0.50%, much lower than 1.20% in the US, and between 2% and 3% for some of the benchmark MSAs. This is particularly significant because *5415: Computer Systems Design and Related Services* represents a concentration of very high-paying jobs. ***For northern NM to achieve 1.20% in employment in this sector, 580 new jobs would have to be created in 5415: Computer Systems Design and Related Services.***

Table 16: Employment in the Media Cluster

Jurisdiction	All Private Sector Employment	51: Information	5145: Computer Systems Design
US	114,012,221	3,029,789 2.66%	1,367,115 1.20%
Albuquerque	308,126	9,459 3.07%	2,214 0.72%
Denver	1,056,496	47,963 4.54%	21,471 2.73%
Phoenix	1,645,479	30,854 1.88%	13,881 0.84%
San Diego	1,101,128	37,971 3.45%	15,917 1.45%
Raleigh	412,909	16,712 4.05%	9,463 29%
NM	637,255	15,991 2.51%	3,491 0.55%
Los Alamos	16,259	103 0.63%	65 0.40%
Rio Arriba	6,320	70 1.11%	60 0.95%
Santa Fe	47,348	1,688 3.75%	220 0.46%
Taos	9,201	143 1.55%	22 0.24%
NNM Region	79,128	2,004 2.53%	367 0.46%

Source: US Bureau of Labor Statistics, 2007

Technology Cluster. The Technology Cluster is defined by the NAICS Codes at right, which fall under various two digit codes. New Mexico's strength in this cluster is clearly displayed by having a higher percentage of employment in the Technology Cluster (7%) than all benchmark MSAs except San Diego (8%). Albuquerque outperforms all benchmark MSAs, with 9% of its employment in Technology.

Technology NAICS Codes

333: Machinery Manufacturing
334: Computer and Electronic Product Manufacturing
335: Electrical Equipment and Appliance Manufacturing
3391: Medical Equipment and Supplies Manufacturing
54133: Engineering Services
54138: Testing Laboratories
54142: Industrial Design Services
5417: Scientific Research and Development Services
6215: Medical and Diagnostic Laboratories

Table 17: Employment in the Technology Cluster

Jurisdiction	All Private Sector Employment	31-33: Manufacturing	54: Technical & Professional Services
US	114,012,221	13,833,022 12.13%	7,635,062 6.70%
Albuquerque	308,126	23,624 7.67%	30,938 10.04%
Denver	1,056,496	71,453 6.76%	98,583 9.33%
Phoenix	1,645,479	137,044 8.33%	98,990 6.02%
San Diego	1,101,128	102,644 9.32%	112,284 10.20%
Raleigh	412,909	32,679 7.91%	38,839 9.41%
NM	637,255	37,062 5.82%	55,772 8.75%
Los Alamos	16,259	55,772 8.75%	10,931 67.23%
Rio Arriba	6,320	250 3.96%	187 2.96%
Santa Fe	47,348	1,068 2.26%	2,854 6.03%
Taos	9,201	121 1.32%	481 5.23%
NNM Region	79,128	1,439 1.82%	3,522 5.60%

Source: US Bureau of Labor Statistics, 2007

Because data for NAICS codes longer than two digits is often not disclosed due to the small number of employers in the region, it is difficult to estimate the size of this cluster in northern NM and its respective counties. The only county for which an estimate is possible is Los Alamos County, where the 10,931 employees classified under *54: Technical and Professional Services* are primarily employed by LANL, resulting in approximately 67% of jobs in Los Alamos County falling within the Technology Cluster. Such a high percentage of Technology employment is far from typical, and skews the results for the rest of the region.

To set a baseline for the Technology cluster in northern NM, private sector employment in *54: Technical and Professional Services* and 31-*33: Manufacturing* are used. Clearly, northern NM lags far behind New Mexico, Albuquerque and the benchmark MSAs in Manufacturing. *Over three thousand new jobs in Manufacturing are needed for northern NM to match only the state's employment level in Manufacturing of 5.82%.* Northern NM has a respectable percentage of employment in the high wage sector of *54: Technical and Professional Services*, but still falls behind New Mexico, Albuquerque and all benchmark MSAs when Los Alamos County is removed from the equation. *To match the US employment level in Technical and Professional Services, northern NM would have to add 690 jobs.* Please note that 690 is the total for new jobs in Technical and Professional Services, and that other job creation targets in NAICS 54 count toward this goal. Because of the challenges with adding such a great number of manufacturing jobs, it is anticipated that the balance of jobs not created in Manufacturing could be created in

Technical and Professional Services, a sector in which northern NM and New Mexico have greater advantages.

Renewable Energy and Green Industry Cluster. It is very difficult to establish a baseline for the Renewable Energy and Green Industry Cluster because NAICS codes do not provide a way to distinguish "green" from conventional jobs. For example, it is not possible to know what percentage of jobs in the Utilities sector are devoted to renewable energy or how many architects specialize in green building. As a result, this analysis defines the cluster by using the same NAICS codes as known green businesses in the region listed in Appendix A of this Plan. It then assumes that 20% of those businesses are green, and 80% are not. As shown below, there is almost no variation among the benchmark MSAs, the US, New Mexico and northern NM counties when this methodology is applied. *Northern NM could easily reach the US' employment level in this cluster by adding 120 jobs.*

Table 18: Estimated Employment in the Renewable Energy and Green Industry Cluster

NAICS	US	Albuq.	Denver	Phoenix	San Diego	Raleigh
All Private Sector Covered Employment	11,4012,221	637,255	308,126	1,056,496	1,645,479	1,101,128
236: Construction of Buildings	1,764,448	7,321	15,478	30,438	20,560	8,573
238: Specialty Trade Contractors	4,811,143	19,312	59,127	115,826	56,603	27,093
333: Machinery Manufacturing	1,183,461	668	ND	6,606	7,496	ND
4237: Hardware and Plumbing Merchant Wholesalers	256,037	ND	ND	ND	1,916	ND
4238: Machinery and Supply Merchant Wholesalers	688,588	1,549	6,654	7,755	3,330	3,708
2211: Power Generation and Supply	395,970	590	2,961	ND	ND	1,245
54131: Architectural Services	214,112	944	2,991	ND	2,680	1,069
54135: Building Inspection Services	17,972	63	250	ND	228	77
Total	9,331,731	30,447	87,461	160,625	92,846	41,765
20% of Total	1,866,346	6,089	17,492	32,125	18,569	8,353
Percent of Total Employment	1.64%	1.98%	1.66%	1.95%	1.69%	2.02%
NAICS	NM	Los Alamos	Rio Arriba	Santa Fe	Taos	Region
All Private Sector Covered Employment	637,255	16,259	6,320	47,348	9,201	79,128
236: Construction of Buildings	15,796	172	208	1767	574	
238: Specialty Trade Contractors	33,152	158	275	2127	305	
333: Machinery Manufacturing	1,412	-	ND	ND	-	
4237: Hardware and Plumbing Merchant Wholesalers	1,069	ND	-	38	23	
4238: Machinery and Supply Merchant Wholesalers	4,170	ND	ND	74	ND	
2211: Power Generation and Supply	3,215	-	ND	ND	ND	
54131: Architectural Services	1,276	ND	ND	135	15	
54135: Building Inspection Services	138	ND	ND	15	ND	
Total	60,228	330	483	4,156	917	
20% of Total	12,046	66	97	831	183	1,177
Percent of Total Employment	1.89%	0.41%	1.53%	1.76%	1.99%	1.49%

Source: US Bureau of Labor Statistics, 2007

Support Services. The work of REDI's Economic Development Services Team indicated that northern NM was lacking in key support services—including management, legal and accounting—to support the target clusters. In addition, this Plan illustrates a gap in the marketing and distribution level of the value chain for all clusters. The following table compares the percentage of private sector employees in these support services for the US, benchmark MSAs, New Mexico and the four-county region to validate these findings.

Table 19: Employment in Selected Support Services

NAICS	US	Albuq.	Denver	Phoenix	San Diego	Raleigh
54161: Management Consulting Services and 55: Management of Companies and Enterprises	2,582,573 2.27%	974 1.49%	8,277 2.91%	14,412 2.26%	8,761 2.27%	3,095 3.33%
5411: Legal Services	1,174,328 1.03%	ND	12,451 1.18%	12,813 0.78%	12,662 1.15%	4,504 1.09%
5412: Accounting and Bookkeeping Services	927,985 0.81%	ND	9,960 0.94%	15,333 0.93%	7,245 0.66%	3,085 0.75%
54163: Marketing Consulting Services and 5148: Advertising, PR and Related Services	605,586 0.53%	ND	1,570 0.15%	8,954 0.54%	6,009 0.55%	ND
NAICS	NM	Los Alamos	Rio Arriba	Santa Fe	Taos	Region
54161: Management Consulting Services and 55: Management of Companies and Enterprises	8,521 1.34%	14 0.09%	ND	619 1.31%	28 0.30%	661 0.84%
5411: Legal Services	5,652 0.89%	10 0.06%	27 0.43%	655 1.38%	79 0.86%	771 0.97%
5412: Accounting and Bookkeeping Services	4,084 0.64%	26 0.16%	17 0.27%	299 0.63%	54 0.59%	396 0.50%
54163: Marketing Consulting Services and 5148: Advertising, PR and Related Services	2,051 0.32%	ND	ND	109 0.23%	31 0.34%	140 0.25%

The following conclusions can be drawn from the table above:

1. Approximately 1% of private sector employees in the US and benchmark MSAs work in legal services. New Mexico and the region as a whole have a similar percentage of employment in legal services, although the REDI planning process did indicate a need for lawyers specializing in the film industry.

2. Accountants represent close to 1% of private sector employees in the US and the benchmark MSAs, but only 0.50% in northern NM. It should be noted that accountants are actually overrepresented in Santa Fe County, but greatly underrepresented in Los Alamos and Rio Arriba counties.

3. While marketing and advertising makes up 0.50% of private sector employment in the US and benchmark MSAs, it comprises a slightly smaller percentage in New Mexico and northern NM. This validates the gap in the marketing and distribution level of the value chain that emerged with all target clusters.

4. The greatest concern with northern NM's support services is Management. Nationally, management represents over 2% of private sector employment, and is sometimes greater in the benchmark MSAs. In New Mexico, however, Management hovers around 1% of

private sector employment. This figure drops in northern NM outside of Santa Fe, resulting in 0.84% of all private sector employment in the region. *To reach the US employment level for Management of 2.27%, northern NM would have to add 1,135 new jobs between 55: Management of Companies and Enterprises and 54161: Management Consulting Services.* This would essentially double employment in Management in northern NM.

Income

Largely focused on high-paying jobs, job creation through REDI should impact incomes positively in northern NM. This Plan uses several measures of income, as described below:

Median household income[11] is the median of the sum of money income received in the calendar year by all household members 15 years old and over, including household members not related to the householder, people living alone, and other nonfamily household members. Included in the total are amounts reported separately for wage or salary income; net self-employment income; interest, dividends, or net rental or royalty income or income from estates and trusts; Social Security or Railroad Retirement income; Supplemental Security Income (SSI); public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income. Since answers to income questions are frequently based on memory and not on records, many people tend to forget minor or sporadic sources of income and, therefore, underreport their income. Underreporting tends to be more pronounced for income sources that are not derived from earnings, such as public assistance, interest, dividends, and net rental income.

Per capita income[12] is the mean money income computed for every man, woman, and child in a geographic area. It is derived by dividing the total income of all people 15 years old and over in a geographic area by the total population in that area. Income is not collected for people under 15 years old even though those people are included in the denominator of per capita income. Unlike median household income, which is estimated annually for states and counties, per capita income is available only for 1999.

Average Annual Wage[13] is calculated by taking the total wages (payroll) and dividing by the average annual employment. This measure refers to "covered employment," which includes most full and part-time private and government wage and salary workers covered by unemployment programs. In New Mexico, about 97% of nonagricultural workers are covered by New Mexico's Unemployment Compensation Law. Exclusions are as follows: insurance and real estate agents on commission; services performed for a school, college or university by a student enrolled and attending classes at that institution; services performed in the employment of a church or convention or association of churches; most railroad workers; the self-employed; unpaid volunteers or family workers; members of the military; and services performed in agricultural labor when the employing unit does not meet the employment and payroll requirement for coverage. Prior to June 2006, Los Alamos National Laboratory (LANL) workers were also excluded because they were

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[11] Definition for per capita income from the US Census Bureau.
[12] Definition for median household income from the US Census Bureau.
[13] Definition for annual average wage from the US Bureau of Labor Statistics and UNM Bureau of Business and Economic Research.

employees of the State of California and were covered under California rather than New Mexico UI law. However, in June 2006 Los Alamos National Security, LLC, (a group of private and public organizations) replaced the University of California as the management and operating contractor at LANL. As a result, LANL was assigned to the Technical and Professional Services Sector and lab employment was recorded as covered employment for the first time.

Income Comparison among US States. As shown in Table 20, New Mexico has historically ranked low in comparison to other states for different measures of income. New Mexico's per capita income and annual average wages are roughly $7,000 lower than the US, and its median household income is roughly $9,000 lower. In 2007, New Mexico ranked 43rd for per capita income of $31,474, compared to per capita income in the US of $38,611. New Mexico's median household income of $41,452 ranked 44th among the states in 2007, compared to US median household income of $50,740. And in 2006, New Mexico ranked 38th for average annual wages of $34,484, as compared to $41,991 in the US. New Mexico has made some progress since 2000 in improving its rankings among the states. Between 2000 and 2007, New Mexico's ranking for per capita income moved from 47th to 43rd, and it had the fourth highest increase of per capita income of the states, at 42.14%. However, New Mexico's rank for median household income and average annual wage was unchanged between 2000 and 2007.

Income Comparison among New Mexico Counties. New Mexico is essentially bifurcated into two sets of counties, one of which ranks above state measures of income, and one of which ranks below. The six counties that rank above New Mexico's income levels for at least two of the three measures discussed in this section include Los Alamos, Santa Fe, Bernalillo and Sandoval counties, as well as the oil and gas producing counties of Lea and Eddy. Los Alamos County has higher incomes on all three measures than the US, and Santa Fe County has higher per capita income than US. Rio Arriba and Taos counties fall in the lower half of New Mexico's counties, although they do not rank at the bottom. In comparison to New Mexico, Rio Arriba's per capita income is roughly $3,000 lower, its median household income is roughly $6,000 lower, and its average annual wage is about $9,000 lower. Taos County has a per capita income $1,300 lower than New Mexico, a median household income $6,500 than New Mexico and an average annual wage $9,000 lower than New Mexico. As a result, there is great disparity in incomes in the four-county region, with wealthier residents concentrated in Los Alamos and Santa Fe counties, and poorer residents concentrated in Rio Arriba and Taos counties. The following paragraphs discuss different income measures in four-county region.

Los Alamos and Santa Fe counties have the highest per capita incomes in New Mexico, at $56,928 and $42,363, respectively. Taos County's per capita income ranks seventh of all New Mexico counties, at $28,696, with Rio Arriba ranking 21st of all counties at $23,976. Significantly, Taos County ranks highest in New Mexico for per capita income growth between 2000 and 2006, at 59.31% (annual rate of 9.88%). Other counties which ranked high in per capita income growth were those experiencing recent development of their oil and gas industries, such as Eddy and Lea counties. Santa Fe and Rio Arriba counties ranked 8th and 10th for per capita income growth for the same period, at 43.01% and 40.71%, respectively, with an annual increase of approximately 7%. Los Alamos grew at a lower rate of 36.50%, or 6% on an annual basis.

Los Alamos and Santa Fe counties rank first and third in New Mexico for median household income, at $80,383 and $40,737, respectively. Rio Arriba County ranks 11th, at $34,364, and Taos

County ranks 17th at $31,100. All four counties fell within the top ten for median family income growth between 2000 and 2005. Rio Arriba County ranked first at 17.37% (annual rate of 3.47%), Taos and Los Alamos counties ranked fourth and fifth at 15.29% and 15.00% (annual rate of approximately 3%), and Santa Fe County ranked eighth at 12.25% (annual rate of 2.45%).

Los Alamos County ranks first in New Mexico for average annual wages, at $63,295. Santa Fe County's annual average wage of $34,419 causes it to rank seventh for this indicator, lower than its ranking for per capita or median household income. This is due to Santa Fe's high concentration of tourism-related jobs, many of which pay lower wages. Taos and Rio Arriba counties' rankings also drop for average annual wage; both fall in the lowest 10 counties in NM annual wages. Taos ranks 24th with an average annual wage of $25,857, and Rio Arriba ranks 27th with an average annual wage of $25,494. None of the four counties rank particularly high for average annual wage growth from 2000 to 2006. Taos County ranks 9th at 24.49% (annual rate of 4.91%) and Santa Fe ranks 14th at 27.05% (annual rate of 4.50%). Average annual wages grew by 24.50% and 19.37%, respectively, in Los Alamos and Rio Arriba counties, with annual rates of 4% and 3%.

Table 20: Income Comparison Among the States

State	2000 Per Capita Income	2007 Per Capita Income	Percent Change 2000-07	2007 Rank	2000 Med. HH Income	2007 Med. HH Income	Percent Change, 2000-07	Rank 2007	2000 Avg. Annual Wage	2006 Avg. Annual Wage	Percent Change, 2000-06	2007 Rank
United States	$29,845	$38,611	29.37%		$41,486	$50,740	22.31%		$34,718	$41,991	22.05%	
Alabama	23,767	32,404	36.34%	42	33,433	40,554	21.30%	46	28,453	35,461	20.95%	33
Alaska	29,869	40,352	35.10%	15	52,906	64,333	21.60%	4	34,584	42,150	24.63%	12
Arizona	25,653	33,029	28.75%	40	38,547	49,889	29.42%	22	32,263	39,686	21.88%	21
Arkansas	21,926	30,060	37.10%	48	33,188	38,134	14.90%	48	25,784	31,663	23.01%	46
California	32,462	41,571	28.06%	7	46,617	59,948	28.60%	8	40,397	48,027	22.80%	5
Colorado	33,361	41,042	23.02%	10	46,391	55,212	19.01%	12	36,478	42,926	18.89%	11
Connecticut	41,492	54,117	30.43%	1	54,129	65,967	21.87%	3	44,484	53,757	17.68%	2
Delaware	30,869	40,608	31.55%	12	47,695	54,610	14.50%	15	35,750	45,342	20.85%	7
Dist. of Col.	40,403	61,092	51.21%	NA	40,926	54,317	32.72%	NA	52,634	69,124	26.83%	NA
Florida	28,508	38,444	34.85%	20	38,054	47,804	25.62%	27	30,296	38,226	31.33%	23
Georgia	27,987	33,457	19.54%	38	41,295	49,136	18.99%	23	33,687	39,969	26.18%	19
Hawaii	28,435	39,239	38.00%	18	51,587	63,746	23.57%	5	30,541	38,775	18.65%	22
Idaho	24,077	31,197	29.57%	44	37,569	46,253	23.11%	34	27,094	32,225	26.96%	45
Illinois	32,186	40,322	25.28%	16	45,708	54,124	18.41%	16	37,440	45,032	18.94%	8
Indiana	27,133	33,616	23.89%	37	40,794	47,448	16.31%	30	30,401	35,924	20.28%	32
Iowa	26,556	35,023	31.88%	27	38,179	47,292	23.87%	32	27,282	33,465	18.17%	42
Kansas	27,691	36,768	32.78%	22	40,264	47,451	17.85%	29	28,766	35,298	22.66%	34
Kentucky	24,412	31,111	27.44%	46	32,862	40,267	22.53%	47	28,174	34,849	22.71%	35
Louisiana	23,081	34,756	50.58%	31	30,985	40,926	32.08%	45	27,333	35,961	23.69%	31
Maine	25,973	33,722	29.83%	35	36,608	45,888	25.35%	35	27,240	33,365	31.57%	43
Maryland	34,261	46,021	34.32%	5	52,447	68,080	29.81%	1	35,976	46,061	22.49%	6
Massachusetts	37,750	49,082	30.02%	3	49,801	62,365	25.23%	7	43,218	51,196	28.03%	3
Michigan	29,554	35,086	18.72%	26	43,387	47,950	10.52%	26	36,340	41,561	18.46%	15
Minnesota	32,014	41,034	28.18%	11	47,753	55,802	16.86%	10	34,660	41,328	14.37%	16
Mississippi	21,007	28,845	37.31%	50	32,728	36,338	11.03%	50	24,724	30,678	19.24%	48
Missouri	27,242	34,389	26.24%	32	37,145	45,114	21.45%	36	30,802	36,643	24.08%	28
Montana	22,933	32,458	41.53%	41	33,103	43,531	31.50%	39	24,084	30,534	18.96%	49
Nebraska	27,624	36,471	32.03%	24	37,379	47,085	25.97%	31	27,724	33,917	26.78%	40
Nevada	30,433	40,480	33.01%	13	42,401	55,062	29.86%	14	32,778	40,693	22.34%	17
New Hampshire	33,399	41,512	24.29%	8	50,969	62,369	22.37%	6	33,945	41,674	24.15%	14
New Jersey	38,372	49,194	28.20%	2	54,276	67,035	23.51%	2	42,899	50,773	22.77%	4
New Mexico	22,143	31,474	42.14%	43	33,428	41,452	24.00%	44	27,567	34,484	18.35%	38
New York	34,901	47,385	35.77%	4	43,735	53,514	22.36%	18	44,737	54,605	25.09%	1
North Carolina	27,064	33,636	24.28%	36	37,784	44,670	18.22%	37	30,568	37,075	22.06%	26
North Dakota	25,103	34,846	38.81%	29	34,376	43,753	27.28%	38	24,348	31,047	21.29%	47
Ohio	28,206	34,874	23.64%	28	39,745	46,597	17.24%	33	31,913	37,871	27.51%	24
Oklahoma	24,409	34,153	39.92%	33	34,135	41,567	21.77%	43	26,564	33,676	18.67%	41
Oregon	28,096	34,784	23.80%	30	39,090	48,730	24.66%	24	32,215	37,251	26.77%	25
Pennsylvania	29,696	38,788	30.62%	19	39,661	48,576	22.48%	25	33,299	40,402	15.63%	18
Rhode Island	29,213	39,463	35.09%	17	43,778	53,568	22.36%	17	31,912	39,751	21.33%	20
South Carolina	24,423	31,013	26.98%	47	36,439	43,329	18.91%	41	27,712	33,958	24.56%	39
South Dakota	25,721	33,905	31.82%	34	34,840	43,424	24.64%	40	24,323	29,951	22.54%	50
Tennessee	26,095	33,280	27.53%	39	36,559	42,367	15.89%	42	29,966	36,937	23.14%	27
Texas	28,314	37,187	31.34%	21	39,398	47,548	20.69%	28	34,346	41,918	23.26%	13
Utah	23,864	31,189	30.69%	45	45,536	55,109	21.02%	13	28,823	34,837	20.87%	36
Vermont	27,681	36,670	32.47%	23	40,505	49,907	23.21%	21	28,161	34,725	23.31%	37
Virginia	31,083	41,347	33.02%	9	47,125	59,562	26.39%	9	34,763	43,958	26.45%	9
Washington	31,777	40,414	27.18%	14	45,246	55,591	22.86%	11	37,423	43,727	16.85%	10
West Virginia	21,904	29,537	34.85%	49	29,089	37,060	27.40%	49	26,335	32,249	22.46%	44
Wisconsin	28,570	36,047	26.17%	25	42,209	50,578	19.83%	20	30,087	36,142	20.12%	30
Wyoming	28,469	43,226	51.84%	6	38,614	51,731	33.97%	19	26,602	36,312	36.50%	29

Source: Per Capita Income and Annual Average Wages from US Department of Commerce, Bureau of Economic Analysis. Median Household Income from US Census American Community Survey.

Table 21: Income Comparison Among New Mexico Counties

NM County	2000 Per Capita Income	2006 Per Capita Income	Percent Change, 2000-06	2006 Rank	2000 Med. HH Income	2005 Med. HH Income	Percent Change, 2000-05	2005 Rank	2000 Avg. Annual Wage	2006 Avg. Annual Wage	Percent Change, 2000-06	2005 Rank
NM	$22,143	$29,929	35.16%		$34,487	$37,603	9.04%		$27,567	$34,484	25.09%	
Bernalillo	27,064	34,495	27.46%	3	39,072	42,584	8.99%	4	29,736	37,252	25.28%	3
Catron	14,361	19,400	35.09%	30	23,788	25,917	8.95%	29	21,631	27,267	26.06%	14
Chaves	19,018	26,378	38.70%	11	28,724	32,124	11.84%	14	22,829	27,814	21.84%	13
Cibola	14,950	20,671	38.27%	27	27,396	31,670	15.60%	16	20,808	27,101	30.24%	16
Colfax	19,906	26,266	31.95%	12	31,098	33,791	8.66%	12	20,709	26,488	27.91%	19
Curry	20,619	28,173	36.64%	9	29,703	33,548	12.94%	13	24,432	30,888	26.42%	8
De Baca	17,615	23,544	33.66%	22	25,794	27,682	7.32%	24	19,531	23,052	18.03%	33
Dona Ana	17,827	24,293	36.27%	16	29,647	30,482	2.82%	19	23,152	29,244	26.31%	12
Eddy	20,608	32,382	57.13%	4	31,913	37,001	15.94%	6	26,809	36,792	37.24%	4
Grant	18,719	25,629	36.91%	15	30,315	31,041	2.39%	18	22,864	26,990	18.05%	17
Guadalupe	13,336	17,047	27.83%	33	24,562	26,205	6.69%	28	21,566	25,177	16.74%	30
Harding	18,305	17,849	-2.49%	32	26,217	27,018	3.06%	25	19,496	26,116	33.96%	22
Hidalgo	15,890	22,917	44.22%	24	24,689	25,039	1.42%	31	20,281	27,157	33.90%	15
Lea	20,008	30,261	51.24%	5	31,686	35,737	12.78%	8	25,947	36,758	41.67%	5
Lincoln	19,002	24,281	27.78%	17	32,192	35,621	10.65%	9	19,858	25,467	28.25%	28
Los Alamos	41,706	56,928	36.50%	1	80,383	92,439	15.00%	1	50,841	63,295	24.50%	1
Luna	14,599	20,246	38.68%	28	21,546	23,130	7.35%	33	19,720	25,723	30.44%	25
McKinley	13,611	19,769	45.24%	29	25,745	27,833	8.11%	23	24,618	29,350	19.22%	11
Mora	13,380	18,037	34.81%	31	23,817	26,611	11.73%	27	20,507	25,720	25.42%	26
Otero	16,934	22,798	34.63%	25	30,777	34,422	11.84%	10	24,135	30,868	27.90%	9
Quay	18,922	24,150	27.63%	19	24,948	25,649	2.81%	30	21,042	26,311	25.04%	20
Rio Arriba	17,039	23,976	40.71%	21	29,279	34,364	17.37%	11	21,357	25,494	19.37%	27
Roosevelt	19,129	25,999	35.91%	13	26,978	29,674	9.99%	21	20,511	25,280	23.25%	29
San Juan	18,999	27,155	42.93%	10	33,791	36,796	8.89%	7	27,410	35,752	30.43%	6
San Miguel	16,500	24,211	46.73%	18	25,889	28,221	9.01%	22	20,597	25,915	25.82%	23
Sandoval	23,768	28,484	19.84%	8	43,608	48,087	10.27%	2	36,257	37,405	3.17%	2
Santa Fe	29,623	42,363	43.01%	2	40,787	45,786	12.26%	3	27,489	34,914	27.01%	7
Sierra	17,170	22,577	31.49%	26	23,883	23,902	0.08%	32	19,520	24,115	23.54%	31
Socorro	15,424	23,275	50.90%	23	24,102	26,994	12.00%	26	22,486	29,514	31.26%	10
Taos	18,013	28,696	59.31%	7	26,976	31,100	15.29%	17	19,969	25,857	29.49%	24
Torrance	17,661	24,030	36.06%	20	29,927	31,673	5.83%	15	20,869	26,571	27.32%	18
Union	23,894	29,149	21.99%	6	29,217	29,869	2.23%	20	18,766	23,691	26.24%	32
Valencia	20,543	25,906	26.11%	14	34,921	38,968	11.59%	5	22,284	26,241	17.76%	21

Source: US Census Total Population Estimates, New Mexico Counties: 2000 to 2007
Source: UNM Bureau of Business and Economic Research, New Mexico County Population Projections 2000-2030

Poverty

The poverty rate is another indicator of the relative wealth (or poverty) of a community's residents. Families and persons are classified as *below poverty* if their total family income or individual income was less than the poverty threshold specified for the applicable family size, age of householder, and number of related children under 18 present[14].

Just as New Mexico has ranked low by national standards for income measures, it has historically ranked high for poverty. In 2007, NM ranked third in the nation for the percentage of persons falling below the poverty level. New Mexico's poverty rate is 18.1%, 5.1 percentage points higher than the US rate of 13.0%. Mississippi (20.6%) and Louisiana (18.6%) are the only two states with higher poverty rates than New Mexico. The lowest poverty rates in the nation fall just at or below 8.0%, in states like New Hampshire, Connecticut and Hawaii.

Within New Mexico, most of the counties with high incomes also have the lowest poverty rates. In 2005, Los Alamos, Sandoval, Santa Fe and Bernalillo counties had poverty rates below the state average of 18.4%. However, it should be noted that even among these higher income counties, all except Los Alamos have poverty rates that approach or equal the national poverty rate. For example, Santa Fe County's poverty rate of 12.8% falls just below the national rate. Rio Arriba and Taos counties have poverty rates that exceed those in New Mexico, 21.1% and 19.8%, respectively, but as with income, are not the lowest in the state. New Mexico's highest poverty counties exceed 30% poverty and include Socorro, McKinley and Luna counties. Of all New Mexico counties, it should be noted that Taos County's poverty rate decreased the most between 2000 and 2005 falling 1.7%

Table 22: Poverty Rates for New Mexico Counties

NM County	2000 Below Poverty Level	2005 Below Poverty Level	Percent Change, 2000-06	2005 Rank
NM	17.3	18.4	1.1	
Bernalillo	13.0	13.8	0.8	30
Catron	22.3	22.5	0.2	13
Chaves	21.3	22.1	0.8	14
Cibola	22.1	24.0	1.9	11
Colfax	15.8	16.9	1.1	26
Curry	19.0	19.5	0.5	21
De Baca	20.6	19.1	-1.5	23
Dona Ana	23.6	26.8	3.2	6
Eddy	18.0	19.5	1.5	22
Grant	18.3	19.6	1.3	20
Guadalupe	21.8	24.3	2.5	10
Harding	14.7	16.5	1.8	29
Hidalgo	25.2	26.9	1.7	5
Lea	18.2	16.8	-1.4	27
Lincoln	17.5	16.7	-0.8	28
Los Alamos	2.7	3.3	0.6	33
Luna	28.2	31.7	3.5	3
McKinley	29.1	33.9	4.8	2
Mora	24.2	23.0	-1.2	12
Otero	16.6	17.4	0.8	25
Quay	22.4	21.8	-0.6	15
Rio Arriba	18.3	21.1	2.8	16
Roosevelt	22.7	24.7	2.0	9
San Juan	18.7	17.5	-1.2	24
San Miguel	23.7	28.1	4.4	4
Sandoval	11.8	11.5	-0.3	32
Santa Fe	12.3	12.8	0.5	31
Sierra	22.2	25.3	3.1	8
Socorro	27.9	34.0	6.1	1
Taos	21.5	19.8	-1.7	19
Torrance	22.5	25.8	3.3	7
Union	17.0	20.3	3.3	18
Valencia	15.9	20.8	4.9	17

Source: US Census Bureau: Small Area Income and Poverty Estimates (SAIPE)

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[14] Below Poverty definition from the US Census Bureau.

Income and Poverty Performance Measure. Because income and poverty rates can reflect many things beyond the success of an economic development program, it is recommended that income, median and poverty rates be monitored to indicate improvements in standard of living and resident wealth. Rather than set numerical targets, REDI recommends monitoring county performance in relation to US[15] and New Mexico statistics. The table below shows incomes and poverty rates at the county level, and the "gap" (in red) between statistics for the counties, New Mexico and the US. A plus sign indicates an increase in income is needed, and a minus sign indicates a reduction in poverty is needed. REDI recommends that each county make incremental progress toward closing its gaps with New Mexico and the US each year, with the ultimate goal of meeting or surpassing US statistics for each measure by the end of the 25-year plan period. Please note that Los Alamos County has already surpassed US statistics for every measure, as has Santa Fe County for per capita income and poverty rate. In these cases, statistics will be monitored to ensure that both counties maintain or improve their positions relative to New Mexico and US statistics for each measure.

Table 23: Gap for Income and Poverty Measures

Jurisdiction	Per Capita Income (2006)	Median HH Income (2005)	Average Annual Wage (2006)	Poverty Rate (2005)
US	$36,714	$46,242	$40,172	13.30%
NM	$29,929	$37,603	$34,484	18.10%
Los Alamos	$56,928	$92,439	$63,295	3.30%
Gap with US	$20,214	$46,197	$23,123	10.00%
Gap with NM	$26,999	$54,836	$28,811	14.80%
Rio Arriba	$23,976	$34,364	$25,494	21.10%
Gap with US	+$12,738	+$11,787	+$14,678	-7.80%
Gap with NM	+$5,953	+$3,239	+8,990	-3.00%
Santa Fe	$42,363	$45,786	$34,914	12.80%
Gap with US	$5,649	+$456	+$5,258	0.50%
Gap with NM	$12,434	$8,183	$430	5.30%
Taos	$28,696	$31,100	$25,857	19.80%
Gap with US	+$8,018	+$15,152	+$14,315	-6.50%
Gap with NM	+$1,233	+$6,503	+$8,627	-1.70%

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[15] Please note that US statistics match the year for which data is available at the County level. For this reason, data does not match 2007 statistics presented earlier in this section.

Appendix A: Target Cluster Employers

Note: Data on NAICS Codes, number of employees and location of the business is provided where available. For businesses not the New Mexico Department of Workforce Solutions LASER Employer database, descriptions of businesses are substituted for NAICS codes when available.

<u>RENEWABLE ENERGY/GREEN</u>
<u>INDUSTRY BUSINESSES</u>

Solar Equipment and Installation	*NAICS Code/Description*	*Employees*	*Location*
ADI Solar Electric	SOLAR ENERGY EQUIPMENT-WHOLESALE	1-4	Santa Fe
	423720 - Plumbing Goods Merchant Wholesalers		
Althouse Inc	*Energy Efficiency, Biomass systems*		Santa Fe
Cedar Mountain Solar	SOLAR ENERGY EQUIPMENT-WHOLESALE	10-19	Santa Fe
	423720 - Plumbing Goods Merchant Wholesalers		
	238220 - Plumbing, Heating, and Air-Conditioning		
Dahl Plumbing and Solar	SOLAR ENERGY EQUIPMENT-WHOLESALE	1-4	Santa Fe
	423720 - Plumbing Goods Merchant Wholesalers		
Energy Concepts	PV/Wind System Installation		Sapello
Positive Energy	SOLAR ENERGY EQUIPMENT-WHOLESALE	1-4	Santa Fe
	423720 - Plumbing Goods Merchant Wholesalers		
	423830 - Industrial Machinery Merchant Whsle		
Solar Age of Northern NM	SOLAR ENERGY EQUIPMENT-WHOLESALE	1-4	Santa Fe
	423720 - Plumbing Goods Merchant Wholesalers		
	238220 - Plumbing, Heating, and Air-Conditioning		
Solar Wise LLC	SOLAR ENERGY EQUIPMENT-WHOLESALE	1-4	Santa Fe
	423720 - Plumbing Goods Merchant Wholesalers		
Solar Ray	SOLAR ENERGY EQUIPMENT-WHOLESALE	1-4	Taos
	423720 - Plumbing Goods Merchant Wholesalers		
	333414 - Heating Equipment, ex. Warm Air Furnaces		
Solar Survival Sales	SOLAR ENERGY EQUIPMENT-WHOLESALE	5-9	Tres Piedras
	423720 - Plumbing Goods Merchant Wholesalers		
Sunvolt Solar Electric	Solar System Installation		Santa Fe
Valverde Energy	Plumbing Contractors	10-19	Los Alamos
	238220 - Plumbing, Heating, and Air-Conditioning		
	238210 - Electrical Contractors		
	238220 - Plumbing, Heating, and Air-Conditioning,		
	423720 - Plumbing Goods Merchant Wholesalers		

Green Building	*NAICS Code/Description*	*Employees*	*Location*
Ecobuilders	Remodeling & Repairing Building Contractors		
	236118 - Residential Remodelers	5-9	El Prado
EcoNest Building Company	Residential Design and Building		Tesuque
Earthship Biotecture	Home Design and Planning Service	5-9	Tres Piedras
	541310 - Architectural Services		
	721110 - Hotels (except Casino Hotels) and Motels		
Earthwrights Design	Water Harvesting Design		Santa Fe
Living Designs Group	Architects	10-19	Taos
	541310 - Architectural Services		
Fine Gardens Sustainable Urban	Landscape Designers	1-4	Santa Fe
	541320 - Landscape Architectural Services		
Green Builders	Radon Testing and Correction	1-4	Taos

	541380 - Testing Laboratories		
	236115 - New Single-Family Housing Construction		
	531390 - Other Activities Related to Real Estate		
Palo Santo Designs	Green Building Residential Contractor		Santa Fe,
SF Sustainable LLC	Home Builders	1-4	Santa Fe
	236115 - New Single-Family Housing Construction		
Solar Smith LLC	General Contractors	1-4	Santa Fe
	236115 - New Single-Family Housing Construction		
Brother Sun/US Sky	Window glazing manufacturing, wholesale		Santa Fe

Manufacturing	*NAICS Code/Description*	*Employees*	*Location*
Bluenergy Solarwind	*R&D in Germany, mfg. at SFBI (wind turbines w/ solar)*		Santa Fe
CleanAir Systems Inc.	Emissions control technologies manufacturer		
Conergy Inc.	SOLAR ENERGY EQUIPMENT-MANUFACTURERS	50-99	Santa Fe
	333414 - Heating Equipment, ex. Warm Air Furnaces		
	541613 - Marketing Consulting Services		
	423720 - Plumbing Goods Merchant Wholesalers		
Eartheasy	Manufacturers	1-4	Los Alamos
	339999 - All Other Miscellaneous Manufacturing		
Savio Engineering	Water Feature Manufacturer		Santa Fe

Research and Development	*NAICS Code/Description*	*Employees*	*Location*
Earthstone	*Recycled glass technology, also mfg. and distribution*		Santa Fe
Energy Related Devices	*Fuel cells, solar cells, etc.*		Los Alamos
EQ Solaris	*R&D Solar*		Los Alamos
Morphic Corporation	*Fuel cell components, wind power, energy systems, ship propulsion*		Los Alamos
Los Alamos Renewable Energy (Solarec, Sundrop Fuels)	*Solar technology to make synthetic fuels*		Pojoaque
Renewable Energy Corp	*Energy research (biomass)*	5-9	Santa Fe
	Energy Management Systems and Products		
	238220 - Plumbing, Heating, and Air-Conditioning		
Solar Energy Ltd.	*Renewable Energy R&D*		Los Alamos
Sustainable Resources, Inc.	*Solar and desalinization technology*	1-4	Santa Fe
	Energy Conservation and Management Consultants		
	541612 - Human Resource Consulting Services		
Sunbelt Biofuels	Conversion of biomass to ethanol		Santa Fe

FILM BUSINESSES   *Taken from NM Film Office Website*

Vendors	*NAICS Code/Description*	*Employees*	*Location*
Downey Gallery	*Art Galleries, Artists*		Santa Fe
Wiford Gallery	*Art Galleries, Artists*		Santa Fe
J Fine Art	*Art Galleries, Artists*		Taos
Gryphon Helicopters	*Aviation Services*		Santa Fe
Santa Fe Jets, Inc.	*Aviation Services*		Santa Fe
Brave New Food	*Catering*		Santa Fe
Curbside Cafe	*Catering*		Santa Fe
Exchange Communications	*Communications Equipment and Services*		Santa Fe
Mountainair Films	*Communications Equipment and Services*		Santa Fe
Deal Excavating	*Construction Company and Services*		Santa Fe
Southwest Metal Products	*Communications Equipment and Services*		Santa Fe
Weldon Construction	*Communications Equipment and Services*		Santa Fe
Swims of Taos	*Costume Shops, Rentals and Sales*		Taos
Hogel's Theatrical Supplies	*Costume Shops, Rentals and Sales*		Santa Fe
Mr. Packer	*Delivery and Shipping Services*		Santa Fe
Shotmaker	*Equipment (Other) and Expendables*		Santa Fe
Tom Berto Movie Livestock	*Equipment (Other) and Expendables*		Santa Fe
Jack Sinclair	*Equipment (Other) and Expendables*		Santa Fe
Dead Horse Studio	*Equipment: Camera, Sound and Video*		Taos
Serious Grippage and Light Company	*Equipment: Grip and Lighting*		Santa Fe
Ted Carlin	*Fire Suppression and Safety*		Santa Fe
Wildfire Support Team	*Fire Suppression and Safety*		Santa Fe
House of Old Things	*Furniture Rentals and Sales*		Santa Fe
Flaming Gecko Business Services	*Graphic and Web Design*		Santa Fe
David Dirks	*Legal Services, Entertainment Law*		Santa Fe
Susan Tungate	*Legal Services, Entertainment Law*		Santa Fe
Dawn Burniel	*Make-Up and Hair Supply*		Santa Fe
Lange Burnett	*Make-Up and Hair Supply*		Santa Fe
Alicia Friedman	*Make-Up and Hair Supply*		Santa Fe
Angelique Ortiz	*Make-Up and Hair Supply*		Santa Fe
Deidre Parness	*Make-Up and Hair Supply*		Santa Fe
Cynthia Stevens	*Make-Up and Hair Supply*		Santa Fe
Barbara McIntyre	*Production Offices, Leasing*		Santa Fe
Downey Gallery	*Prop Design, Rental and Sales*		Santa Fe
Santa Fe Greenhouses	*Prop Design, Rental and Sales*		Santa Fe
Simply Classic Gourmet Gift Baskets	*Public Relations, Marketing*		Santa Fe
Betsy Model	*Public Relations, Marketing*		Santa Fe
Institute of American Indian Arts	*Screening Facilities, Projection Services*		Santa Fe
Youngbear Investigations & VIP Protection Services	*Security*		Santa Fe
Bonanza Creek Film Locations	*Standing Sets*		Santa Fe
Julien McRoberts Photography	*Stock Photography/Stock Footage*		Santa Fe
Santa Fe Models	*Talent Agent/Agency*		Santa Fe
Pure Talent	*Talent Agent/Agency*		Santa Fe
Aria Studios and Agency	*Talent Agent/Agency*		Santa Fe
A&M Agency	*Talent Agent/Agency*		Santa Fe
Qdriver.com	*Vehicle Leasing and Rentals*		Santa Fe

Film Production Companies	NAICS Code/Description	Employees	Location
A New Mexico Film Production Service	Production Companies, Film		Pecos
Lightningwood Pictures	Production Companies, Film		Santa Fe
The Sky Horse Company	Production Companies, Film		Santa Fe
HDNM Entertainment	Production Companies, Film		Santa Fe
Route 66 Studios	Production Companies, Film		Lamy
Robert Leibovit Entertainment	Production Companies, Film		Santa Fe
Talmark Productions	Production Companies, Film		Santa Fe
Mountainair Films	Production Companies, Film		Santa Fe
New West Media Production Inc.	Production Companies, Video		Santa Fe
Becker Video Productions	Production Companies, Video		Santa Fe
Rotation Films	Production Companies, Video		Santa Fe
HD Solutions	Production Companies, Video		Santa Fe

Digital/Multimedia	NAICS Code/Description	Employees	Location
Dominic Capello Studiolo	Animation/Animation Services		Santa Fe
Flamdoodle Animation	Animation/Animation Services		
	Computer Generated Imagery		
	Digital Graphics and Design		Santa Fe
	Digital Multimedia		
The Skyhorse Company	Digital Multimedia		Santa Fe
New Papyrus Group, Inc.	Computer Generated Imagery		San Cristobal
HD Solutions	Digital Editor/Editing Services		Santa Fe
	Production Company, Digital Media		
Jacob Felix	Digital Graphics and Design		Santa Fe
HDNM Entertainment	Digital Multimedia		Santa Fe
Spirit Productions	Production Company, Digital Media		Santa Fe

Post Production	NAICS Code/Description	Employees	Location
Earway Productions	Audio Post Production		Santa Fe
	Editor, Sound		
Dead Horse Studio	Audio Post Production		Taos
	Voice Over		
Squeaky Reel	Audio Post Production		Santa Fe
New West Media Foundation Inc.	Editing Services		Santa Fe
Debra Anderson	Editing Services		Santa Fe
	Editor, Film and/or Video		
Lightningwood Pictures	Editing Services		Santa Fe
	Editor, Film and/or Video		
The Skyhorse Company	Editing Services		Santa Fe
HDNM Entertainment	Editing Services		Santa Fe
Nicole Auckerman	Editor, Assistant, Film		Santa Fe
Ryan Chavez	Editor, Assistant, Film		Lamy
Rotation Films	Editor, Film and/or Video		Santa Fe
Ed Ratke	Editor, Film and/or Video		Santa Fe
Ron Alan Cohen	Music Services		Santa Fe
Divilicious Productions	Music Services		Santa Fe
Pablo Ancuna	Music Services		Santa Fe
Edward Solteo	Voice Over		Taos

MEDIA BUSINESSES

Motion Picture & Video Production	_NAICS Code/Description_	_Employees_	_Location_
Adobe Vision	Video Production and Taping Service 512110 - Motion Picture and Video Production 453998 - Store Retailers Not Specified Elsewhere	1-4	Santa Fe
Available Light Production	Motion Picture Producers and Studios 512110 - Motion Picture and Video Production	1-4	Santa Fe
Bruce Lewis--Way Out West	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Santa Fe
Candyce's Copying& Video Services	Video Production and Taping Service 512110 - Motion Picture and Video Production 334612 - Audio and Video Media Reproduction	1-4	Ranchos de Taos
CNS Communication	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Santa Fe
Delighted Eye Video	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Santa Fe
Dual Films	Motion Picture Producers and Studios 512110 - Motion Picture and Video Production	1-4	Santa Fe
Empress Studios LLC	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Santa Fe
Ghera Associates Global	Film Studio Production Facilities 512110 - Motion Picture and Video Production 512110 - Motion Picture and Video Production	1-4	Santa Fe
Graceline Productions LLC	Video Production and Taping Service 512110 - Motion Picture and Video Production 334612 - Audio and Video Media Reproduction	1-4	Santa Fe
Grassroots Video	Video Tape Duplication Service 512110 - Motion Picture and Video Production	1-4	Taos
Grossman Productions Legal	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Santa Fe
HDNM Entertainment LLC	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Santa Fe
IPC Video	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Ranchos de Taos
Kokopele Productions	Motion Picture Producers and Studios 512110 - Motion Picture and Video Production 451220 - Record, CD, and Tape Stores 512110 - Motion Picture and Video Production	1-4	Santa Fe
Light Works Media	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Santa Fe
Lightningwood Pictures	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Santa Fe
Luminaria	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Santa Fe
Mark Ruiz Video Productions	Video Production and Taping Service 512110 - Motion Picture and Video Production	1-4	Santa Fe

Company	Service		Location
Morgonn Bryant Video Productions	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
	541921 - Photography Studios, Portrait		
Mountainair Films	Motion Picture Producers and Studios	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
Mundo Bravo Video	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
	541921 - Photography Studios, Portrait		
R3 Productions Inc	Video Production and Taping Service	1-4	Cerrillos
	512110 - Motion Picture and Video Production		
Rainbows End Video Productions	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
Redquyn Zoom Productions	Video Production and Taping Service	10-19	Santa Fe
	512110 - Motion Picture and Video Production		
	711110 - Theater Companies and Dinner Theaters		
Reflections on DVD	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
	518210 - Data Processing and Related Services		
	541921 - Photography Studios, Portrait		
Sagebrush Productions Inc	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
Santa Fe Media and Education Center	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
Scenic Vision	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
	541921 - Photography Studios, Portrait		
	541922 - Commercial Photography,		
	453998 - Store Retailers Not Specified Elsewhere		
Screenwriting Conference	Motion Picture Producers and Studios	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
	512191 - Teleproduction & Postproduction Services		
Suncloud Productions	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
Taos Video Works	Video Production and Taping Service	1-4	Taos
	512110 - Motion Picture and Video Production		
Thunder Road Productions	Motion Picture Producers and Studios	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
Townsend-Weiss Productions	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
Tymely Production	Video Production and Taping Service	1-4	Taos
	512110 - Motion Picture and Video Production		
Video Magic	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
Video Santa Fe	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
	541921 - Photography Studios, Portrait		
Viewpoint Productions	Video Production and Taping Service	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
	512191 - Teleproduction & Postproduction Services		
Way Out West Motion Pictures	Motion Picture Producers and Studios	1-4	Santa Fe
	512110 - Motion Picture and Video Production		

Whirling Rainbow Productions	Motion Picture Producers and Studios	5-9	Santa Fe
	512110 - Motion Picture and Video Production		
Zia Film Distribution	Motion Picture Producers and Studios	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
	512120 - Motion Picture and Video Distribution		

Multimedia and Animation	*NAICS Code/Description*	*Employees*	*Location*
Advanced Simulations Group	*Simulation software for business modeling*		Santa Fe
Darkling Simulations	*3D, Animation*		Santa Fe
Flamdoodle Animation	Animated Film Services	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
Gevin Studios	Animated Film Services	1-4	Santa Fe
	512110 - Motion Picture and Video Production		
Figaro Systems	Audio Visual Consultants	5-9	Santa Fe
	711510 - Independent Artists/Writers/Performers		
Loft 4 Digital Media Studio	Multimedia (Mfg.)	1-4	Santa Fe
	511199 - All Other Publishers		
Meadows Media	Multimedia (Mfg)	1-4	Santa Fe
	511199 - All Other Publishers		
Multimedia International	Multimedia (Mfg)	1-4	Santa Fe
	511199 - All Other Publishers		
On Target Media	Multimedia (Mfg)		Santa Fe
	511199 - All Other Publishers		

Teleproduction & Postproduction	*NAICS Code/Description*	*Employees*	*Location*
About the West Location Services	Motion Picture Servicing	1-4	Santa Fe
	512191 - Teleproduction & Postproduction Services		
	512110 - Motion Picture and Video Production		
Becker Video Productions	Video Tape Editing	1-4	Santa Fe
	512191 - Teleproduction & Postproduction Services		
	512110 - Motion Picture and Video Production		
Capital Video Services	Video Tape Duplication Service	1-4	Santa Fe
	334612 - Audio and Video Media Reproduction		
	512110 - Motion Picture and Video Production		
	512191 - Teleproduction & Postproduction Services		
Cine Video Productions	Video Tape Duplication Service	5-9	Santa Fe
	334612 - Audio and Video Media Reproduction		
Muse Media	Video Tape Editing	1-4	Santa Fe
	512191 - Teleproduction & Postproduction Services		
Santa Fe Digital Post LLC	Video Tape Editing	1-4	Santa Fe
	512191 - Teleproduction & Postproduction Services		

Music	*NAICS Code/Description*	*Employees*	*Location*
Adobe Recording	Recording Studios	1-4	Santa Fe
	512240 - Sound Recording Studios		
D7 Productions	Recording Studios	1-4	Santa Fe
	512240 - Sound Recording Studios		
Dead Horse Studios	Recording Studios	1-4	Taos
	512240 - Sound Recording Studios		
	512110 - Motion Picture and Video Production		
Great Day Productions	Recording Studios	1-4	Santa Fe

	512240 - Sound Recording Studios		
MJ 313 Sound Studio	Recording Studios	1-4	Santa Fe
	512240 - Sound Recording Studios		
Rainbow Cassette Studio	Recording Studios	1-4	Taos
	512240 - Sound Recording Studios		
	334612 - Audio and Video Media Reproduction		
Rancho Digital	Recording Studios	1-4	Santa Fe
	512240 - Sound Recording Studios		
Sandscape Publications	Music Publishers (Mfg)	1-4	Santa Fe
	512230 - Music Publishers		
Santa Fe Soundworks	Recording Studios	1-4	Santa Fe
	512240 - Sound Recording Studios		
Soulfood Music and Media	Recording Studios	1-4	Santa Fe
	512240 - Sound Recording Studios		
Sound Choice Production	Recording Studios	1-4	Santa Fe
	512240 - Sound Recording Studios		
	711190 - Other Performing Arts Companies		
Sound Lab	Recording Studios	1-4	Santa Fe
	512240 - Sound Recording Studios		
Stepbridge Studios	Recording Studios	1-4	Taos
	512240 - Sound Recording Studios		
	512110 - Motion Picture and Video Production		
Vault	Recording Studios	1-4	Taos
	512240 - Sound Recording Studios		
	512110 - Motion Picture and Video Production		

Computer Programming	*NAICS Code/Description*	*Employees*	*Location*
Abba Technologies	Computers-Systems Designers & Consultants	1-4	Los Alamos
	541511 - Custom Computer Programming Services		
Apojen Technologies	Computers-Systems Designers & Consultants	10-19	Los Alamos
	541511 - Custom Computer Programming Services		
	541330 - Engineering Services		
Blue Stone	Computers-Systems Designers & Consultants	1-4	Santa Fe
	541511 - Custom Computer Programming Services		
CamNet		5-9	Taos
CNSI	Computers-Systems Designers & Consultants	1-4	Los Alamos
	541511 - Custom Computer Programming Services		
Computer Medics LLC	Computers-Systems Designers & Consultants	1-4	Santa Fe
	541511 - Custom Computer Programming Services		
	811212 - Computer and Office Machine Repair		
	611420 - Computer Training,		
	541519 - Other Computer Related Services		
Digital Equipment Corp	Computers-Systems Designers & Consultants	1-4	Los Alamos
	541511 - Custom Computer Programming Services		
	443120 - Computer and Software Stores		
DotFoil Computer Services			Santa Fe
Enterprise Computing Systems	Computers-Systems Designers & Consultants	1-4	Los Alamos
	541511 - Custom Computer Programming Services		
	811212 - Computer and Office Machine Repair		

Company	NAICS Code/Description	Employees	Location
Hake Computer Services	541519 - Other Computer Related Services Computer Services	1-4	Santa Fe
High Valley Software	541511 - Custom Computer Programming Services Computers-Systems Designers & Consultants	1-4	Santa Fe
Information Technologies Inc	541511 - Custom Computer Programming Services Computer Services	5-9	Santa Fe
In-House Computer	541511 - Custom Computer Programming Services 443120 - Computer and Software Stores Computers-Systems Designers & Consultants	1-4	Santa Fe
Inmerge Software	541511 - Custom Computer Programming Services 811212 - Computer and Office Machine Repair Computers-Systems Designers & Consultants	1-4	Santa Fe
Jemez Computer Consulting	541511 - Custom Computer Programming Services Computers-Systems Designers & Consultants	1-4	Santa Fe
	541511 - Custom Computer Programming Services 443112 - Radio, TV & Other Electronics Stores 517110 - Wired Telecommunications Carriers, 811213 - Communication Equipment Repair		
MacFuture		1-4	Santa Fe
Network 24/7		1-4	Santa Fe
Networking Inc		1-4	Santa Fe
Newman Consulting		1-4	Santa Fe
Osborne PC Consulting		1-4	Taos
Pantactics LLC		1-4	Santa Fe
Pinon PC Support		1-4	Santa Fe
Powerpro Computer LLC		1-4	Santa Fe
Productive Data Systems	Computer Programming Services	1-4	Espanola
	541511 - Custom Computer Programming Services		
Radstone Technology Corp		1-4	Santa Fe
Rexray Vision Computer Services		1-4	Santa Fe
Santa Fe Computer Works			Santa Fe
SC Corp Inc		1-4	Santa Fe
Soft Net Technology Corp	IT Services	1-4	Santa Fe
	541511 - Custom Computer Program. Services		
Solo Computers		1-4	Santa Fe
Strike Any Key Computer		1-4	Santa Fe
Sun & Sun Inc		1-4	Santa Fe
Sun Microsystems	Computers--Networking	1-4	Los Alamos
	541519 - Other Computer Related Services 443120 - Computer and Software Stores		
Supercomputer		1-4	Santa Fe
Truenet Computer Technology	Computers-Systems Designers & Consultants	1-4	Espanola
	541511 - Custom Computer Programming Services		
Unique Perspectives LTD		1-4	Taos
Wired Nation		1-4	Santa Fe

Software	_NAICS Code/Description_	_Employees_	_Location_
Bentley Systems	Publishers-Computer Software (Mfg.)	1-4	Santa Fe
	511199 - All Other Publishers		
Chaparral Systems Corporation	Traffic and transportation software		Santa Fe
Deep Web Technologies	Computer Software	1-4	Santa Fe

Company	NAICS Code/Description	Employees	Location
	443120 - Computer and Software Stores		
	541511 - Custom Computer Programming Services		
Digital Publications	*Software Publisher*	1-4	Los Alamos
	Business Management Consultants		
	541614 - Process & Logistics Consulting Services		
	541511 - Custom Computer Programming Services		
Doxcelerate	Computer Software	5-9	Santa Fe
	443120 - Computer and Software Stores		
	541511 - Custom Computer Programming Services		
Eagle Eye Software			
Ergotech Development Inc.	Computer Software	1-4	Los Alamos
	443120 - Computer and Software Stores		
	541511 - Custom Computer Programming Services		
Flow Science	Computer Software	20-49	Santa Fe
	443120 - Computer and Software Stores		
	541511 - Custom Computer Programming Services		
Ergotech Development Inc.	Computer Software	1-4	Los Alamos
Knowledge Reef			Santa Fe
Information Assets Management			Los Alamos
Motivity			Santa Fe
Numerix	Publishers-Computer Software (Mfg.)	50-99	Santa Fe
	511199 - All Other Publishers		
Packet Analytics	Network Security Software		Santa Fe
Prois	Computer Software	1-4	Taos
	443120 - Computer and Software Stores		
	541511 - Custom Computer Programming Services		
SieraD	Scientific hardware and software		Santa Fe
Strategic Analytics	Computer Software	10-19	Santa Fe
	443120 - Computer and Software Stores		
TAK Technology	Computer Software		Rutherton
	443120 - Computer and Software Stores		
	541511 - Custom Computer Programming Services		
Trans Fidelity	Computer Software	1-4	Santa Fe
	443120 - Computer and Software Stores		
	541511 - Custom Computer Programming Services		
Universal Business Computing	Computer Software	1-4	Taos
	443120 - Computer and Software Stores		
Veriscape	*Software*		Los Alamos
Vista Control Systems	Computer Software	1-4	Los Alamos
	443120 - Computer and Software Stores		
	541511 - Custom Computer Programming Services		
	541511 - Custom Computer Programming Services		

Other	*NAICS Code/Description*	*Employees*	*Location*
Beyond6 Sigma	Manufacturers-Agents & Representatives	1-4	Santa Fe
	423990 - All Other Durable Goods Merchant Whsle		
IT Connect	Networking, Installation	5-9	Santa Fe
Qforma	Financial Advisory Service	10-19	Santa Fe
	523930 - Investment Advice		
Redfish Group	Business Management Consultants	5-9	Santa Fe
	541614 - Process & Logistics Consulting Services		

TECHNOLOGY BUSINESSES

Research and Development	NAICS Code/Description	Employees	Location
Acoustic Cytometry Systems			Santa Fe
Adept Science & Technologies	R&D support, technology development for petroleum, gas and related industries		Los Alamos
Advec Corp.	Scientists—Consulting 541690 - Other Technical Consulting Services *Energy—Nuclear, Federal Contracts*	1-4	Los Alamos
Alion	Engineers—Consulting 541330 - Engineering Services *Services range from IT to Nuclear Science to Ind Tech*	5-9	Los Alamos
Apjet	Industrial Equip and Supplies, Wholesale 423830 - Industrial Machinery Merchant Whsle *Plasma*	10-19	Santa Fe
Atmocean	Laboratories—Research and Development 541711 - Unknown Industry	10-19	Santa Fe
Caldera Pharmaceuticals			Los Alamos
Cytodyn			
DNA Consulting	Business Management Consultants 541614 - Process & Logistics Consulting Services 621511 - Medical Laboratories	1-4	Santa Fe
Elemetric			
Fast Ditch			
FLUTE			
Genzyme Genetics	Biotechnology Products & Services 541711 - Unknown Industry 339112 - Surgical and Medical Instrument Mfg 541380 - Testing Laboratories	240-499	Santa Fe
Global Ecotechnics	Business Management Consultants 541614 - Process & Logistics Consulting Services	5-9	Santa Fe
Heffter Research Institute	Medical Research 541711 - Unknown Industry	1-4	Santa Fe
Honeywell Federal Management and Technology	Aerospace Industries (Mfg.) 334511 - Search, Detection & Navigation Instruments 541330 - Engineering Services	20-49	Los Alamos
Hytec/Imtec	Engineers—Consulting 541330 - Engineering Services	20-49	Los Alamos
Jemez Technology	Security Control Equipment & Systems (Whol.) 423610 - Wiring & Equipment Merchant Wholesalers	5-9	Los Alamos
JP Accelerator Works	Engineers—Consulting 541330 - Engineering Services *Linear Accelerator*	5-9 1-4	Los Alamos Espanola
Knoll Bioproducts	Environmental Products & Supplies (Whol.) 423990 – All Other Durable Goods Merchant Whsle	1-4	
Millennium Medical	Physicians & Surgeons Equipment and Supplies (Mfg.) 339112 - Surgical and Medical Instrument Mfg 334290 - Other Communications Equipment Mfg	1-4	Santa Fe
Pulse Systems	Lasers--Equipment and Service (Wholesale) 423610 - Wiring & Equipment Merchant Wholesalers 339112 - Surgical and Medical Instrument Mfg 335999 - Miscellaneous Electrical Equipment	1-4	Los Alamos
Purecolor	Nonclassified Establishments	1-4	Santa Fe

		Employees	Location
Retriever Technologies	Scanning Service 518210 - Data Processing and Related Services	1-4	Santa Fe
SAIC	Scientists—Consulting 541690 - Other Technical Consulting Services	1-4	Pojoaque
Santa Fe Science and Technology	Nonclassified Establishments 999999 – Unclassified	1-4	Santa Fe
Southwest Sciences Inc	Laboratories—Research and Development 541711 - Unknown Industry *Polymers*	10-19	Santa Fe
Sparks Mechanical			
Spectra Gases	*Chemical*		
Star Cryoelectronics	Electronic Research & Development 541711 - Unknown Industry 334419 - Other Electronic Component Mfg. 423610 - Wiring & Equipment Merchant Whls.	5-9	Santa Fe
Superior Electric	Fiber Optics-Equipment & Systems (Mfg.) 335921 - Fiber Optic Cable Manufacturing 238210 - Electrical Contractors 811212 - Computer and Office Machine Repair		Espanola
Taos Techsonics	Laboratory Analytical Instruments (Mfgs) 334516 - Analytical Laboratory Instruments 334220 - Broadcast & Wireless Communication Equip 423610 - Wiring & Equipment Merchant Wholesalers	1-4	El Prado
Tektronics	Electronic Instruments—Wholesale 423610 - Wiring & Equipment Merchant Wholesalers	1-4	Los Alamos
Vista Photonics	Contractors 238990 - All Other Specialty Trade Contractors	1-4	Santa Fe
Vista Therapeutics			

Management Companies

		Employees	Location
Kortegaard Engineering	Business Management Consultants 541614 - Process & Logistics Consulting Services	1-4	Los Alamos
PM Tech	Business Management Consultants 541614 - Process & Logistics Consulting Services	10-19	Los Alamos
Tech. Mgt. Consulting Services	Business Management Consultants 541614 - Process & Logistics Consulting Services	10-19	Los Alamos
Time Solutions Corp.	Business Management Consultants 541614 - Process & Logistics Consulting Services	5-9	Los Alamos
Tech Source Inc.	Business Management Consultants 541614 - Process & Logistics Consulting Services 541330 - Engineering Services	1-4	Santa Fe
TMC Group	Executive Mgt. & Technology Strategy Consulting		Santa Fe

Engineers & Scientific Consultants	*NAICS Code/Description*	*Employees*	*Location*
Ares Corp	Engineers—Consulting 541330 - Engineering Services *IT*	20-49	Los Alamos Santa Fe
BLE Inc.	Engineers—Consulting 541330 - Engineering Services	1-4	Los Alamos
Computersite Engineering	Engineers—Consulting 541330 - Engineering Services	1-4	Santa Fe
Coyote Aerospace	Scientists—Consulting 541690 - Other Technical Consulting Services	1-4	Los Alamos
DMJMH & N	Engineers—Consulting	20-49	

Company	NAICS Code/Description	Employees	Location
E2 Consulting Engineers	541330 - Engineering Services Engineers—Consulting	1-4	Los Alamos
Geo Test Inc.	541330 - Engineering Services Engineers—Geotechnical	20-49	Santa Fe
H&P Inc.	541330 - Engineering Services 541380 - Testing Laboratories Engineers—Consulting	20-49	Los Alamos
High Mesa Petrographics	541330 - Engineering Services Scientists—Consulting	1-4	Los Alamos
High-Tech E&D	541690 - Other Technical Consulting Services Engineers—Mechanical	1-4	Santa Fe
Jacobs Engineering Group	541330 - Engineering Services Engineers—Consulting	5-9	Los Alamos
Los Alamos Technical Associates	541330 - Engineering Services Engineers—Consulting	50-99	Los Alamos
Merrick & Co.	541330 - Engineering Services Engineers—Electrical	50-99	Los Alamos
National Security Technologies	541330 - Engineering Services Integrated Services: Homeland Security/Defense, Environmental Management, Operations/Infrastructure		Los Alamos
Natural Systems International	Engineers—Consulting	5-9	Santa Fe
Nukove Scientific Consulting	541330 - Engineering Services Scientists—Consulting	1-4	Taos
Portage International	541690 - Other Technical Consulting Services Engineers—Consulting	20-49	Los Alamos
Pro 2 Serve Technologies	541330 - Engineering Services 115310 - Support Activities for Forestry Engineers—Consulting	10-19	Los Alamos
Robinson Aviation	541330 - Engineering Services		Santa Fe
Santa Fe Energy Research	Engineers—Industrial	1-4	Santa Fe
Sarafina Technical Consulting	541330 - Engineering Services Engineers—Environmental	1-4	Santa Fe
Scientech Inc	541330 - Engineering Services Engineers—Consulting	5-9	Los Alamos
Southwest Composites	541330 - Engineering Services Engineers—Consulting	1-4	Taos
Systems Engineering & Services	541330 - Engineering Services Engineers	1-4	Santa Fe
Tetra-Tech	541330 - Engineering Services Engineers—Consulting	10-19	Santa Fe
URS	541330 - Engineering Services Engineers—Consulting	5-9	Los Alamos
	541330 - Engineering Services 541711 - Unknown Industry		

Manufacturing & Suppliers	_NAICS Code/Description_	_Employees_	_Location_
Eberline Instruments	Laboratory Instruments Manufacturing	50-99	Santa Fe
EcoSensors	Ozone and VOC Instrument Manufacturing		Santa Fe
Fluore Science	Business Management Consultants 541614 - Process & Logistics Consulting Services	1-4	Espanola
Hand Precision Machining	Machine Shops (Mfg.) 332710 - Machine Shops	10-19	Los Alamos
Output Dynamics	Machine Shops (Mfg.) 332710 - Machine Shops 332811 - Metal Heat Treating 333515 - Machine Tool Cutters and Accessories	10-19	Los Alamos

Santa Fe Machine & Fabrication	Machine Shops (Mfg.) 332710 - Machine Shops	1-4	Santa Fe
Taos Engineering Machine Shop	Machinery-Rebuilding & Repairing (Whol.) 423830 - Industrial Machinery Merchant Whsle 333999 - Miscellaneous General Purpose Machinery	1-4	Taos
Yeamans Machine Shop	Machine Shops (Mfg.) 332710 - Machine Shops	5-9	Los Alamos

AGRICULTURE BUSINESSES

Farms and Ranches	NAICS Code/Description	Employees	Location
Alexander LLC	Ranches 112990 - All Other Animal Production	1-4	Santa Fe
Bridges Farm	Farms 111998 - All Other Miscellaneous Crop Farming	1-4	Santa Fe
Camino de Paz	Farms 111998 - All Other Miscellaneous Crop Farming	1-4	Santa Cruz
Casados Farms	DRIED/DEHYDRATED FRUITS VEGETABLES (MFR) 311423 - Dried and Dehydrated Food Manufacturing 311230 - Breakfast Cereal Manufacturing 311211 - Flour Milling, 311999 - All Other Miscellaneous Food Mfg	10-19	San Juan Pueblo
Creamland Dairies	Dairies (Milk) 112120 - Dairy Cattle and Milk Production	10-19	Santa Fe
Casados Farms	DRIED/DEHYDRATED FRUITS VEGETABLES (MFR)	10-19	San Juan Pueblo
El Rito Horse Farm	Farms 111998 - All Other Miscellaneous Crop Farming	1-4	El Rito
Founders Ranch	Ranches 112990 - All Other Animal Production	1-4	Edgewood
Gallina del Sol Farm	Farms 111998 - All Other Miscellaneous Crop Farming	1-4	Stanley
Goose Down Farms	Farms 111998 - All Other Miscellaneous Crop Farming	5-9	Lamy
Plaza Blanca Ranch	Ranches 112990 - All Other Animal Production	1-4	Abiquiu
Quinlan Ranch	Ranches 112990 - All Other Animal Production	1-4	Chama
Rancho de los Luceros	Ranches 112990 - All Other Animal Production	1-4	Velarde
Rancho de Oso Pardo	Ranches 112990 - All Other Animal Production	1-4	Chama
Ranchos de Taos Presbyterian	Ranches 112990 - All Other Animal Production	1-4	Ranchos de Taos
Saddleback Ranch	Ranches 112990 - All Other Animal Production	1-4	Lamy
San Cristobal Ranch	Ranches 112990 - All Other Animal Production	1-4	Lamy
Sanders Partners Inc	Ranches 112990 - All Other Animal Production	10-19	Lamy
Tennis Ranch of Taos	Ranches 112990 - All Other Animal Production	1-4	Taos
Waltrip Ranches	Ranches 112990 - All Other Animal Production	1-4	Questa

Wineries	NAICS Code/Description	Employees	Location
Balagana Winery	Wineries--Manufacturers 312130 - Wineries	1-4	Los Alamos
Black Mesa Winery	Wineries--Manufacturers 312130 - Wineries	1-4	Velarde
Boutique Wines of New Mexico	Wines Wholesale 424820 - Wine and Spirit Merchant Wholesalers	10-19	Santa Fe
Crawford Malone Fine Wines	Wines Wholesale 424820 - Wine and Spirit Merchant Wholesalers	1-4	Santa Fe
Chimayo Ridge	Wineries--Manufacturers 312130 - Wineries	1-4	Chimayo
Falcon Meadery & Winery	Wineries--Manufacturers 312130 - Wineries	5-9	Santa Fe
Fiasco Fine Wines	Wines Wholesale 424820 - Wine and Spirit Merchant Wholesalers	1-4	Santa Fe
La Chiripada Winery	Wineries--Manufacturers 312130 - Wineries	1-4	Dixon
Little Canyon Wine	Wines Wholesale 424820 - Wine and Spirit Merchant Wholesalers	1-4	Santa Fe
Los Luceros Winery	Wineries--Manufacturers 312130 - Wineries	1-4	Alcalde
Santa Fe Vineyards	Wineries--Manufacturers 312130 - Wineries	1-4	Espanola
Southern Wines and Spirits	Liquors Wholesale 424820 - Wine and Spirit Merchant Wholesalers 312140 - Distilleries	20-49	Santa Fe
Vivac Winery and Art Studio	Wineries--Manufacturers 312130 - Wineries	1-4	Espanola
Winemark Distributing and Import	Wines Wholesale 424820 - Wine and Spirit Merchant Wholesalers	1-4	Santa Fe

Food Manufacturing	NAICS Code/Description	Employees	Location
Alicia's Tortilleria	Mexican Food Products Mfg (Tamales) 424410 - General Line Grocery Merchant Whsle	1-4	Santa Fe
El Merendero Inc	Mexican Food Products Mfg (Tamales) 311999 - All Other Miscellaneous Food Mfg 424410 - General Line Grocery Merchant Whsle	20-49	Santa Fe
Keen Ridge Farms	BEANS PEAS LENTILS & ETC-DRIED (MFRS) 311423 - Dried and Dehydrated Food Manufacturing	1-4	Santa Fe
North of the Border	Food Products and Manufacturers 311999 - All Other Miscellaneous Food Mfg 424420 - Packaged Frozen Food Merchant Whsle	1-4	Tesuque
Santa Fe Ole Food Company	Food Products and Manufacturers 311999 - All Other Miscellaneous Food Mfg 424420 - Packaged Frozen Food Merchant Whsle	1-4	Santa Fe
Santa Fe Seasons	PICKLED FRUITS/VEGS & DRESSINGS (MFRS) 311421 - Fruit and Vegetable Canning 311421 - Fruit and Vegetable Canning 311942 - Spice and Extract Manufacturing, 424420 - Packaged Frozen Food Merchant Whsle	1-4	Santa Fe
Tortillera Chabelita	Food Products and Manufacturers	1-4	Santa Fe

311999 - All Other Miscellaneous Food Mfg

Wholesale	NAICS Code/Description	Employees	Location
Blue Mountain Honey	Honey--Wholesale 424490 - Other Grocery Product Merchant Whsle	1-4	Questa
Carnivore Store	Meat--Wholesale 424470 - Meat & Meat Product Merchant Wholesalers	1-4	Santa Fe
Maywood International	Exporters Wholesale 423990 - All Other Durable Goods Merchant Whsle	5-9	Santa Fe
Prevatt Farms	Livestock Dealers—Wholesale 424520 - Livestock Merchant Wholesalers	1-4	El Rito
Rancho Las Lagunas	Hay and Alfalfa—Wholesale 424910 - Farm Supplies Merchant Wholesalers	5-9	Santa Fe
Santa Fe Natural Tobacco	Cigar, Cigarette and Tobacco Dealers—Wholesale 424910 - Farm Supplies Merchant Wholesalers	100-249	Santa Fe
Shamrock Foods	Grocers--Wholesale 424410 - General Line Grocery Merchant Whsle	5-9	Santa Fe
Taos Roasters Inc	Coffee Roasting--Wholesale 424490 - Other Grocery Product Merchant Whsle 311920 - Coffee and Tea Manufacturing	1-4	Taos
Tobacco Mart of Espanola	Cigar, Cigarette and Tobacco Dealers—Wholesale 424910 - Farm Supplies Merchant Wholesalers	1-4	Espanola

Retail	NAICS Code/Description	Employees	Location
Armando's Carne Seca de Santa	Meat--Retail 445210 - Meat Markets	1-4	Espanola
Eve's Farm	Fruits, Vegetables and Produce—Retail 445230 - Fruit and Vegetable Markets	1-4	Velarde
Just the Best	Fruits, Vegetables and Produce—Retail 445230 - Fruit and Vegetable Markets	10-19	Santa Fe
Pablo's Beef Jerky	Meat--Retail 445210 - Meat Markets	1-4	Santa Fe
Padilla's Meat Cutting	Meat Cutting Service 445210 - Meat Markets	1-4	Arroyo Hondo
Santa Fe Farmer's Market Institute	Fruits, Vegetables and Produce—Retail 445230 - Fruit and Vegetable Markets	5-9	Santa Fe
Zia Onion Sales	Fruits, Vegetables and Produce—Retail 445230 - Fruit and Vegetable Markets	1-4	Santa Fe

Support Services	NAICS Code/Description	Employees	Location
Taos Soil and Water Conservation	Farm Management Service 115116 - Farm Management Services	1-4	Taos
Youth Activity Center	Agricultural Consultants 541690 - Other Technical Consulting Services 624190 - Other Individual and Family Services	1-4	Los Alamos

Suppliers and Services	NAICS Code/Description	Employees	Location
Anazasi Gold LLC	Soil Conditioners—Wholesale	5-9	Taos
	424910 - Farm Supplies Merchant Wholesalers		
Chamisa Feeds	Feed Dealers--Wholesale	1-4	Taos
	424910 - Farm Supplies Merchant Wholesalers		
Country Farm Supply	Feed Dealers--Wholesale	1-4	Espanola
	424910 - Farm Supplies Merchant Wholesalers		
	448140 - Family Clothing Stores		
	444220 - Nursery, Garden & Farm Supply Stores		
	448110 - Men's Clothing Stores		
Edgewood Feed and Supply	Feed Dealers--Wholesale	1-4	Edgewood
	424910 - Farm Supplies Merchant Wholesalers		
Embudo Valley Organics	Feed Dealers--Wholesale	1-4	Embudo
	424910 - Farm Supplies Merchant Wholesalers		
Feed Bin	Feed Dealers--Wholesale	5-9	Santa Fe
	424910 - Farm Supplies Merchant Wholesalers		
	451110 - Sporting Goods Stores		
	453910 - Pet and Pet Supplies Stores		
Monte Vista Fuel & Feed Company	Feed Dealers--Wholesale	1-4	Santa Fe
	424910 - Farm Supplies Merchant Wholesalers		
	423390 - Other Construction Supply Merchant Whsle		
	454319 - Other Fuel Dealers		
	453910 - Pet and Pet Supplies Stores		
Nathan's All Types Trailers	Feed Dealers--Wholesale	1-4	Espanola
	424910 - Farm Supplies Merchant Wholesalers		
	423390 - Other Construction Supply Merchant Whsle		
	423820 - Farm & Garden Equip Merchant Wholesalers		
	424910 - Farm Supplies Merchant Wholesalers		
Tipuani	Farming Service	1-4	Santa Fe
	115116 - Farm Management Services		
Taos Mountain Range Feed	Feed Dealers--Wholesale	1-4	Taos
	424910 - Farm Supplies Merchant Wholesalers		
	444190 - Other Building Material Dealers		
	424910 - Farm Supplies Merchant Wholesalers		
	444220 - Nursery, Garden & Farm Supply Stores		
Thompson, Erik	Farming Service	1-4	Edgewood
	115116 - Farm Management Services		
Valley Feed and Mercantile	Feed Dealers--Wholesale	1-4	Los Ojos
	424910 - Farm Supplies Merchant Wholesalers		
XLK Farming Inc.	Farming Service	1-4	Edgewood
	115116 - Farm Management Services		

Textiles

Suppliers and Services	NAICS Code/Description	Employees	Location
Taos Mountain Woolworks	Nonwoven Fabrics—Manufacturers	1-4	Taos
	313230 - Nonwoven Fabric Mills		
Xochi Inc.	Fabrics Manufacturers	1-4	Santa Fe
	313210 - Broadwoven Fabric Mills		
	423990 - All Other Durable Goods Merchant Whsle		
	313312 - Textile and Fabric Finishing (except Bro,		
	423220 - Home Furnishing Merchant Wholesalers		

WOOD PRODUCT BUSINESSES

Sawmills & Manufacturing	NAICS Code/Description	Employees	Location
Cordova, Abe	Sawmills 321113 - Sawmills	5-9	Questa
Garage Cabinets Inc	Garage Cabinets and Organizers—Wholesale 423310 - Lumber and Wood Merchant Wholesalers	1-4	Santa Fe
Harmel Hardwoods	Hardwood Flooring Manufacturers 321918 - Other Millwork (including Flooring) 442210 - Floor Covering Stores 423220 - Home Furnishing Merchant Wholesalers	1-4	Santa Fe
Hurd Logging	Logging Manufacturers 113310 - Logging	1-4	Chama
Jimbremac Svs. Hardwood Floors	Hardwood Flooring Manufacturers 321918 - Other Millwork (including Flooring) 238330 - Flooring Contractors	1-4	Los Alamos
Kuykendall Lumber	Sawmills and Planing Mills—General (Mfg) 321113 - Sawmills	5-9	Tres Piedras
Olguin Sawmill and Firewood	Sawmills and Planing Mills—General (Mfg) 321113 - Sawmills 113310 - Logging 444110 - Home Centers 444190 - Other Building Material Dealers	5-9	El Prado
Puertas de Santa Fe	Millwork Manufacturers 321918 - Other Millwork (including Flooring) 337110 - Wood Kitchen Cabinets and Countertops 423310 - Lumber and Wood Merchant Wholesalers, 337110 - Wood Kitchen Cabinets and Countertops	1-4	Santa Fe
Quality Wood Products	Sawmills 321113 - Sawmills	1-4	Chama
Spotted Owl Timber	Sawmills 321113 - Sawmills 321912 - Cut Stock, Resawing Lumber, and Planing 444190 - Other Building Material Dealers 424990 - Other Nondurable Goods Merchant Whsle	5-9	Santa Fe
W H Moore Cash Lumber	Logging Manufacturers 113310 - Logging 321113 - Sawmills 444190 - Other Building Material Dealers	1-4	Espanola
Wood Tech Corp	Millwork Manufacturers 321918 - Other Millwork (including Flooring)	1-4	Santa Fe

Furniture	NAICS Code/Description	Employees	Location
Abydos	Furniture—Designers and Custom Builders 337122 - Nonupholstered Wood Household Furniture	1-4	Ranchos de Taos
Bill Light Woodworking	Furniture—Designers and Custom Builders 337122 - Nonupholstered Wood Household Furniture	1-4	Santa Fe
Carpinteros	Furniture—Designers and Custom Builders 337122 - Nonupholstered Wood Household Furniture	1-4	Santa Fe
Creative Woods by Fred Romero	Furniture—Designers and Custom Builders	1-4	Espanola

	337122 - Nonupholstered Wood Household Furniture		
	337127 - Institutional Furniture Manufacturing,		
	337110 - Wood Kitchen Cabinets and Countertops		
	238350 - Finish Carpentry Contractors		
David Burling Fine Furniture	Furniture—Designers and Custom Builders	1-4	Lamy
	337122 - Nonupholstered Wood Household Furniture		
Fin del Sendero Inc	Wood—Household Furn—Ex Upholestered (Mfg)	1-4	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
Futon Woodworks	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
Galisteo Home Furnishings	Furniture—Designers and Custom Builders	5-9	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
	453310 - Used Merchandise Stores		
	442110 - Furniture Stores		
Heart and Sould Custom Furniture	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
Kozlowski Woodworks	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
La Compania Antigua	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
	444190 - Other Building Material Dealers		
Old Santa Fe Furniture	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
Pacheco Woodworks	Furniture—Designers and Custom Builders	1-4	Taos
	337122 - Nonupholstered Wood Household Furniture		
Pearl and Guld Ltd.	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
Ray Fisher Custom Furniture	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
Robert Lavadie Woodworker	Wood—Household Furn—Ex Upholestered (Mfg)	1-4	Taos
	337122 - Nonupholstered Wood Household Furniture		
Rock Ridge Studio	Furniture—Designers and Custom Builders	1-4	Lamy
	337122 - Nonupholstered Wood Household Furniture		
	337110 - Wood Kitchen Cabinets and Countertops		
San Marcos Custom Furniture	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
	444190 - Other Building Material Dealers		
Santa Fe Studio Furniture	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 - Nonupholstered Wood Household Furniture		
Santa Fe Woodworks	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 – Nonupholstered Wood Household Furniture		
	321999 – Miscellaneous Wood Product Manufacturing		
	238350 – Finish Carpentry Contractors		
	811420 – Reupholstery and Furniture Repair		
South Capitol Furniture	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 – Nonupholstered Wood Household Furniture		
Southwest Spanish Craftsman	Furniture—Designers and Custom Builders	5-9	Santa Fe
	337122 – Nonupholstered Wood Household Furniture		
Szantho Woodworks	Furniture—Designers and Custom Builders	1-4	Santa Fe
	337122 – Nonupholstered Wood Household Furniture		
Tesuque Design	Furniture—Designers and Custom Builders	1-4	Santa Fe

| Westwink Furniture | 337122 – Nonupholstered Wood Household Furniture Furniture—Designers and Custom Builders 337122 – Nonupholstered Wood Household Furniture | 1-4 | Santa Fe |

Appendix B: State and Regional Profile, May 2008

New Mexico's Strengths and Weaknesses

In 2008, the Corporation for Enterprise Development (CFED) recently released its 20th *Development Report Card for the States.* This report uses 67 measures to provide an assessment of economic development for each state by assigning grades in three areas: 1) Performance (economic climate for a wage-earner), 2) Business Vitality (economic climate for a business), and 3) Development Capacity (how a state is positioned for the future). Rankings are computed by comparing states against each other, so that a ranking of "1" indicates a state is highest for a certain indicator, and a ranking of "50" indicates the state is lowest for that indicator.

<table>
<tr><td>CFED 2007 Report Card for NM</td></tr>
</table>

Greatest Needs

2	Better-paying jobs
3	Educational system improvements
4	Lower rates of uninsured
5	Increase health care professionals
6	Broadband coverage

Opportunities

Renewable Energy
~~Tech Transfer/Commercialization~~

In 2007, only Connecticut and Delaware earned all As, with Massachusetts, Minnesota, Wisconsin, and two western states, Colorado and Utah, earning As and Bs. New Mexico improved its rankings from earlier years, but still only earned an overall grade of D, with grades of D for Performance and Development, and C for Business Vitality. CFED's rankings for New Mexico, shown on the following page, are used in this report as a starting point for evaluating the strengths and weaknesses of the state and those of the northern NM region.

Employment and Job Growth. New Mexico's greatest strength is its employment growth, one of the two areas in which it received As. New Mexico ranks in the top ten of states for short and long-term employment growth, and ranks first and second in the nation for change in new companies and number of new companies. This indicates that New Mexico as a whole is doing an excellent job creating new jobs and attracting new companies to the state. However, the majority of new companies are locating in urban areas such as Albuquerque, Rio Rancho, Las Cruces, and in southern NM. The NM Partnership reports that no new companies that it has worked with have located in northern NM, north of Santa Fe.

Income and Poverty. Despite job growth, New Mexico's income and poverty statistics remain among the lowest in the nation. The state ranks 49th in income and working poor, and only slightly higher for income distribution. Incomes for the northern NM region outside of Los Alamos and Santa Fe lag behind those of New Mexico. Clearly, New Mexico, and northern NM in particular, needs to improve its ability to attract higher-wage, skilled jobs.

Entrepreneurial Energy. New Mexico also received an A in entrepreneurial energy, based on the increase in new companies from previous years and its high technology industry employment, which is 12th in the nation. Despite its high rating, New Mexico lagged behind the rest of the nation in several other indicators, including start-up job creation, industrial diversity and loans to small business. Northern NM is fortunate to have several entrepreneurial and small business initiatives taking place which provide a variety of services to entrepreneurs. However, stakeholders in the region recognize, and CFED's rankings suggest, that policy support for small business is lacking in New Mexico and needs to be improved to support this vibrant and growing area of the economy.

CFED INDICATOR	STRENGTHS	AVG. PERFORMANCE	WEAKNESSES
Employment	Employment Growth (7, 9) Private Sector Layoffs (2)		Unemployment Rate (34)
Earnings & Job Quality		Avg Annual Pay Growth (22) Involuntary PT Emp (26)	Average Annual Pay (41) Employer Health Insurance (50) Working Poor (49)
Equity		Rural/Urban Disparity (20)	Poverty Rate (49) Income Distribution (46) Income Dist. Change (43)
Quality of Life	Net Migration (16)	Homeownership Rate (24) Voting Rate (28)	Uninsured Low Income Child (38) Teen Pregnancy (49) Charitable Giving (42) Crime Rate (41) Infant Mortality (15) Heart Disease (9)
Resource Efficiency	Greenhouse Gas Emissions (40) Vehicle Miles Traveled (44)	Per Capita Energy Use (30)	Alternative Energy Use (48) Rate of Recycled Waste (41) Toxic Release Inventory (14)
Bus. Competitiveness	New Companies (2)	Mfg. Investment (27)	Strength of Traded Sector (48)
Entrepreneurial Energy	Change in New Companies (1) Tech. Industry Employment (12)		Business Closings (36) Industrial Diversity (39) Start-Up Job Creation (31) Initial Public Offerings (38)
Human Resources		K-12 Expenditures (27)	Reading Proficiency (48) Math Proficiency (50) Average Teacher Salary (41) HS Completion Rate (38) HS Attainment (37) College Attainment (39)
Financial Resources	Venture Capital Invest. (15) SBIC Financing (17)		Income from Interest, Dividends, Rent (45) Loans to Small Businesses (35)
Infra. Resources	Highway Performance (4)		Bridge Deficiency (11) Urban Mass Transit (35) Electronic Public Services (45)
Amenity Resources & Natural Capital		Energy Costs (29) Aff. Urban Housing (27)	Prof. Health Shortages (48) Cropland to Other Uses (6) Air Pollution (14)
Innovation Assets	PhDs, Scientists, Engineers (1) Grad Students Sci/Eng (8) Academic R&D (19) Federal R&D (1) SBIR Grants (6)	Patents Issued (28)	Broadband Access (45) Private R&D (37) Royalties & Licenses (43) Bus. created via Univ. R&D (38)

Source: 2007 Development Report Card for the States, CFED

Physical Infrastructure. New Mexico received its only B for infrastructure, with roads rated high and mass transit rated low. CFED did not rate public water and wastewater systems, which represent great needs throughout northern NM. Significantly, broadband access was rated 45th in the nation, among the 5 worst in the country. This range of infrastructure strengths and weaknesses indicates the need to target and prioritize certain infrastructure improvements for northern NM.

Human Resources. Human resources, commonly referred to as "workforce," is one of the three areas where New Mexico received an F, largely due to the state's poor educational system. New Mexico ranks dead last in the nation for math proficiency, second to last for reading proficiency, and among the 10 states paying the lowest teacher's salaries. It fares only slightly better for high school attainment, high school completion and college attainment. Given that urban school districts typically outperform those in rural areas, it is clear that educational improvement must be addressed for northern NM's economy to improve.

Health Care. CFED addresses health care indicators in several categories. If all health care indicators were combined in one category, they would result in another F for New Mexico. New Mexico is dead last in the nation for employer-provided insurance, 49th for teen pregnancy, 48th for professional health shortages, and 38th for uninsured low-income children. With the exception of Los Alamos County, northern NM has higher percentages of uninsured and indigent populations than the state as a whole.

Resource Efficiency. New Mexico received a D for resource efficiency, an embarrassing rating when one considers the state's great potential for the development and use of solar and wind energy. The state ranked 48th for use of alternative energy and 41st for rate of recycled waste.

Innovation Assets. New Mexico received a C for innovation assets, which is essentially an average of the tremendous resources of New Mexico's federal laboratories, and the lack of success in converting these assets into private sector opportunities that create benefits in the community. New Mexico ranks first in the nation for the number of PhD's, scientists and engineers, as well as for federal research and development. It is also in the top ten for SBIR grants and graduate students in science and engineering. On the other side of the equation, the state ranks 37th in private research and development and 43rd in royalties and licenses. Academic research and development is relatively high at 19, while the number of businesses created by academic research and development is somewhat low at 38. Clearly, New Mexico is missing a great opportunity to translate its government-funded assets into a diversified economy that provides better jobs and a more educated workforce.

Regional Profile

Unlike most geographic regions that pursue regional economic development efforts, northern NM is neither homogenous nor dominated by a single industry. While in the past, diversity has

PRIORITIES FOR NORTHERN NM COUNTIES, BASED ON US CENSUS DATA	Los Alamos	Rio Arriba	Santa Fe	Taos
Retain and attract youth and young families	███		███	███
Retain and attract greater racial diversity	███			
Raise incomes		███		███
Lower poverty level		███		███
Provide affordable housing	███		███	███
Improve graduation rates		███		
Increase college graduates		███		

sometimes been a barrier to achieving regional cooperation, it can also be transformed into opportunities for economic success by building upon strengths and targeting weaknesses. Based upon the most recent US census data and projections from the UNM Bureau of Business and Economic Research (BBER), the following profile provides a snapshot northern NM, its strengths, weaknesses and opportunities.

Population Growth. Recent population growth varies widely in northern NM, ranging from slight negative growth in Rio Arriba County (-0.59%) to high population growth in Santa Fe County (10.14%). It should be noted that UNM's Bureau of Business and Economic Research (BBER) projects higher growth than US Census Estimates for all of the northern counties except Taos. Therefore it is conceivable that all northern counties, including Rio Arriba, have experienced positive population growth since 2000.
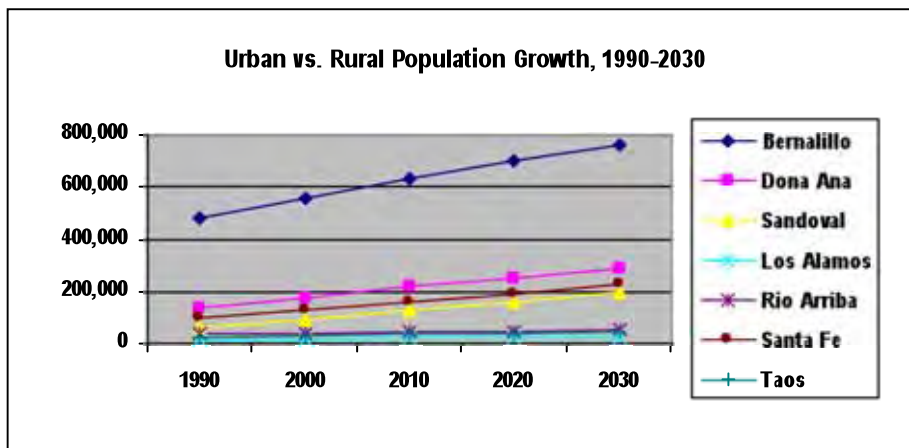
Source: BBER Population Projections

From 2000 to 2030, BBER projects that New Mexico will grow approximately 7%, but at a declining rate. According to BBER, "Even with a slower population growth rate, New Mexico will become more urbanized. The metropolitan areas will increase their demographic dominance as they further enhance their economic supremacy. Unless economic development programs address the current imbalance between metropolitan and non-metropolitan areas in the state, the former will drain population from the latter areas." (*New Mexico County Population Projections, July 1, 2000 – July 1, 2030*, BBER) The much higher growth rates of urbanized counties such as Bernalillo, Sandoval, Doña Ana and Santa Fe are shown in the chart above, in contrast to the nearly flat growth of rural counties in northern NM. Los Alamos County, which is considered an urban county, is also projected to experience relatively flat growth.

Most of northern NM generally follows state and national trends for age cohorts. The extreme exception to this rule is Los Alamos County, whose youth population (12.5%) is half that of New Mexico and the US, and whose senior population (22.7%) is nearly double that of New Mexico and the US. Santa Fe and Taos counties have slightly older populations than the state or the US, with fewer children under 5, less youth under age 18, and slightly more persons over age 65. Rio Arriba County has a different profile, with more children under 5, more youth under age 18, and an average number of seniors. This is likely due to a high number of Native Americans in Rio Arriba County, who have higher birth rates and younger populations than other racial groups.

Stakeholders in the region are concerned about youth and young families leaving the more rural areas of the state for better employment opportunities in the urban areas. This perception is substantiated by BBER's population projections, and by out-migration of college educated New Mexicans to other states. The New Mexico Department of Workforce Solutions reports that 18% of college-educated people left New Mexico between 1990 and 2000, indicating a weak demand for an educated labor force. (*2007 State of New Mexico Workforce Report*, New Mexico Department of Workforce Solutions)

Finally, substantial shifts in age groups are projected for New Mexico due to the aging of the baby boomer generation. BBER predicts that this will result in new areas of conflict because racial and ethnic groups are aging at different rates. While the Anglos will dominate the elderly population, minorities will be concentrated in the youth population and the labor force. Expectedly, the needs for new nursing homes, assisted living arrangements and the high cost of medical care will compete for limited resources with education, childcare and employment. Ominously, BBER predicts, "[t]he economic implications of an aging population become even more problematic if the labor force is poorly educated and wages are low." (*New Mexico County Population Projections, July 1, 2000 – July 1, 2030*, BBER)

Educational Attainment. According to the 2000 Census, New Mexico falls slightly below the US in terms of educational attainment. However, three of the four counties in the four-county area outperform the state as a whole. Los Alamos and Santa Fe Counties have higher percentages of high school graduates and persons with a bachelor's degree or higher than the US, and Taos County is consistent with the national average for high school graduates and bachelor's degrees. Only Rio Arriba County ranks lower than both state and national averages, graduating only 73% of its residents from high school and 15% with post-secondary degrees.

Diversity. The number of New Mexicans who are Hispanic or Latino (44%) is nearly three times the national average of 14.8%. Three of the counties in the region have even higher percentages of Hispanic population, with Rio Arriba County at 72.2%, Taos County at 55.5% and Santa Fe County at 49.5%. These three counties also rank higher than the state for persons who speak Spanish as their primary language at home. Rio Arriba and Taos Counties have very low percentage of foreign born residents, indicating that Spanish-speakers are long-time residents of Hispanic descent. Santa Fe County, conversely, has a higher percentage of foreign born residents, indicating that some Spanish speakers may be immigrants from other countries. Finally, Los Alamos County's population of Hispanic residents (13.6%) is slightly lower than that for the US as a whole, and its percentage of Spanish-speakers (6%) is much lower than the rate for other counties in the region, the state and the nation. Its percentage of foreign born residents is lower than state and national

averages; however, it is higher than the rate for foreign born residents in Rio Arriba and Taos Counties.

DEMOGRAPHIC & ECONOMIC INDICATORS	United States	New Mexico	Los Alamos County	Rio Arriba County	Santa Fe County	Taos County
Population						
Population (2006)	299,398,484	1,954,599	19,022	40,949	142,407	31,832
Population Growth (2000-06)	6.4%	7.45%	3.7%	-0.59%	10.14%	6.18%
Building Permits (2006)	1,838,903	13,573	44	13	417	318
Persons under 5 years old (2006)	6.8%	7.3%	5.2%	8.1%	5.7%	5.8%
Persons under 18 years old (2006)	24.6%	26.0%	12.5%	27.0%	21.7%	21.4%
Persons 65 and older (2006)	12.4%	12.4%	22.7%	12.4%	12.5%	14.8%
Employment						
Unemployment Rate (12/07)	4.9%	3.1%	1.7%	3.9%	2.4%	4.1%
Civilian Labor Force (12/07)	138,100,000	944,063	10,439	21,233	77,965	17,968
Civilian Work Force per Capita	46%	48%	55%	52%	55%	56%
Income						
Per Capita Income (2005)	$34,495	$27,889	$54,134	$23,203	$37,934	$25,817
Median HH Income (2005, SAIPE)	$46,242	$37,603	$92,439	$34,364	$45,786	$31,100
Poverty Rate (2005, SAIPE)	13.3%	18.4%	3.3%	21.1%	12.8%	19.8%
Retail Sales per Capita (2002)	$10,610	$9,880	$5,060	$6,090	$13,484	$8,389
Federal Spending (2004, $1000)	$2,143,781,727	$19,863,967	$1,989,896	$316,435	$1,180,726	$213,624
Housing Characteristics						
Owner-occupied housing units	66.2%	70.0%	78.6%	81.6%	68.6%	75.5%
Renter-occupied housing units	33.8%	30.0%	21.4%	18.4%	31.4%	24.5%
Cost burdened home owners	21.8%	21.9%	8.5%	20.8%	26.6%	25.4%
Cost burdened renters	36.8%	37.6%	24.0%	27.5%	41.9%	43.5%
Social Characteristics						
High school graduates	80.4%	78.9%	96.3%	73.0%	84.5%	79.1%
Bachelor's degree or higher	24.4%	23.5%	60.5%	15.4%	36.9%	25.4%
White (2006)	80.1%	84.6%	91.8%	82.9%	92.8%	90.5%
Hispanic or Latino (2006)	14.8%	44.0%	13.6%	72.2%	49.5%	55.0%
American Indian/Alaska Native (2006)	1.0%	9.8%	0.8%	15.2%	3.4%	7.0%
Foreign born	11.1%	8.2%	6.7%	3.7%	10.1%	4.1%
Speak Spanish at home	10.7%	28.7%	5.8%	59.8%	33.0%	48.2%

Source: 2000 US Census, unless otherwise indicated

The percentage of Native American and Alaska Natives in New Mexico (9.8%) is significantly higher than for the US as a whole (1%). In the four-county region, only Rio Arriba County has a Native American population (15.2%) that exceeds the state average. Rio Arriba County is home to the Pueblos of Santa Clara and Ohkay Owingeh, as well as part of the Jicarilla Apache Nation. Native Americans make up 7% of the population in Taos County, where the Pueblos of Taos and Picuris are located. Santa Fe County is home to several small Pueblos, including Nambe, Tesuque, Pojoaque and San Ildefonso. Native Americans make up 3.4% of Santa Fe County's population and 0.8% of Los Alamos County's population.

Income. In the areas of income and poverty, there is great disparity within the four-county region. New Mexico has lower incomes and a higher poverty rate than the US as a whole, and Rio Arriba and Taos Counties have even lower incomes and higher poverty rates than New Mexico. The informal economy is strong in Taos and Rio Arriba Counties, where subsistence agriculture, livestock raising, timber harvesting, and cash and barter activities are common. This, in part, accounts for the lower incomes and higher poverty rates in these two counties, although wages in formal employment sectors are also very low. Santa Fe County has incomes and poverty levels on par with the national average, and better than the state average. Los Alamos County is the extreme exception, with incomes levels that far exceed the national average and a poverty rate of only 3.3%.

Homeownership rates are often used as an economic indicator. A higher percentage of residents own their homes in New Mexico than in the US as a whole, at 70% vs. 66%. Three of the counties in the four-county region have even higher rates of homeownership: 81.5% for Rio Arriba, 79% for Los Alamos, and 75.5% for Taos. Santa Fe County has a homeownership rate lower than the state average, but higher than the national average. While homeownership rates in the four-county region are encouraging, it should be noted that with the exception of Los Alamos County, they do not correlate with income levels. Rio Arriba and Taos Counties, for example, have very high rates of homeownership but very low income levels. Homeownership in these counties is more indicative of families that have passed their homes on from generation to generation, rather than of purchasing power.

Cost burden, defined as households paying more than 30% of their income in housing and associated costs, is slightly higher in New Mexico than for the US. Santa Fe and Taos Counties have ever higher rates of cost burden for both homeowners and renters. Rio Arriba County's cost burden rate is lower than both the state and national averages, due to housing being more affordable in this area. Finally, cost burden is well below state and national averages for Los Alamos County, reflecting the higher incomes in the area.

Employment. Per capita, all four counties in northern NM have a higher percentage of people in the workforce, ranging from 52% to 56%, than New Mexico (48%) and the US (46%). However, all counties in northern NM have unemployment rates that are lower than national and state averages, meaning that very few people are available to fill jobs. Unemployment ranges from 1.7% in Los Alamos to 3.9% in Rio Arriba County, figures which are lower than the 4.9% US unemployment rate and the 4.1% New Mexico unemployment rate.

As shown in the chart above, unemployment has dropped dramatically in New Mexico and its counties over the past ten years. New Mexico's annual unemployment rate reached a ten year low in 2007, at 3.5%, decreasing from a high of 6.6% in 1997. 2007 also represented a ten-year low for all northern NM counties except Los Alamos. Taos County reached 4.7% unemployment, down nearly ten percentage points from its ten year high of 15.2% in 1997. Rio Arriba County reached 4.4% in 2007, down from 11.2% in 1997. With a low of 2.8% in 2007 and a high of 4.4% in 1997, Santa Fe County reveals an identical pattern, but with more stable employment over time. Los Alamos' unemployment rate has remained near or under 3% for all ten years, peaking in 2000 at 3.1% and reaching a low of 1.6% in 1999.

Unemployment Rate over 10 Years
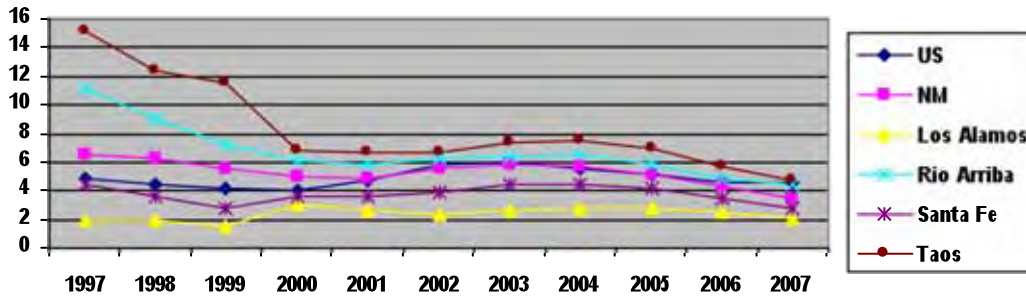
Source: New Mexico Department of Workforce Solutions

New Mexico's unemployment trends do not closely mirror the US, whose low of 4.0% came in 2000 and whose high of 6.0% was reached in 2003. Differences between the US and NM reflect deliberate, structural change in New Mexico in the provision of new jobs. New Mexico has come from having the highest unemployment rate in the country in 1997 to achieving an average unemployment rate lower than that of the US ten years later.

As New Mexico First pointed out at its recent Town Hall on Rural-Urban Economic Development, having a low unemployment rate is a mixed blessing. While it means that many people have jobs, low unemployment makes it difficult for employers to expand their business or create more jobs, simply because there are not workers available to fill them. It is difficult to identify workforce for business recruitment or expansion with New Mexico's 3.5% unemployment rate, much less with the lower rates found in northern NM. However, the perception of significant underemployment in northern NM may provide additional employees not represented in the unemployment rate.

There are a number of reasons why the unemployment rate is so low, but simple demographics lead the list. As 76 million baby boomers nationally reach retirement age, 2008 marks the first year when the number of people leaving the workforce for retirement is greater than the number of qualified young people coming in. In rural areas, this imbalance is even greater, as many young people leave their communities for college or jobs and never return. National projections suggest that, while the amount of labor needed will continue to increase steadily, the amount of labor available will no longer be able to keep up with the demand. In sum, our state and nation have a problem. Without a labor pool, there may be very limited economic growth. As more baby boomers retire, the problem may escalate.