

Regional Economic Study: Strategic Recommendations for Cluster Development

Southern Nevada Regional Planning Coalition

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Theodore Roosevelt Institute Fellows:

Dr. Alan Schlottmann
Dr. Robert Schmidt
Dr. Edward Feser
Dr. Arthur Denzau

Advisory Team:

Jackie Kerby Moore
Executive Director
Sandia Science and Technology Park
Past President, AURP

Bruce Wright
Chief Operating Officer
University of Arizona Science and Technology Park
Founder, Arizona Center for Innovation

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EXECUTIVE SUMMARY

Introduction

Pursuant to a long run strategy for the region's economic development in Southern Nevada, the Southern Nevada Regional Planning Coalition (SNRPC) has identified business cluster development consisting of interrelated companies, industries, and institutions as a key factor in economic development. Across the country it is now widely accepted that economic success depends on the competitiveness of a region's key suppliers, service providers, sources of capital equipment, and even recognition of best-practices of direct competitors. Best practice economic development strategies aim to nurture clusters of linked industries and to exploit synergies between clusters and related institutions (higher education, non-profit research and development and labs, and business development agencies).

As barriers to business location fall, it is clear that Southern Nevada has an opportunity to both develop and attract a more diverse set of clusters. Central to long term prosperity and economic diversification is the development of leading industry clusters that seek competitive advantage through continued innovation, highly skilled and productive workers, and the utilization of advanced infrastructure and technology.

Our recent analysis of business clusters for SNRPC identified a set of target industry clusters for Southern Nevada that build upon our existing strengths and suggests new opportunities and emerging technologies. In a restructuring economy such as Southern Nevada, traditional industries remain dominant, and knowledge-intensive sectors dependent on strong local linkages are only beginning to attain critical mass. Therefore, these target business clusters were identified within a value-chain cluster analysis which can contribute insights the typical approach cannot.

The SNRPC analysis of emerging clusters suggests selected opportunities within eight detailed clusters.

These target clusters are:

- Hospital and Health Related Cluster: Service Provision and Manufacturing
- Regional Offices Cluster: Southwestern and Other Headquarter Functions
- Homeland Security Cluster: Complementary Services and Manufacturing

- Research and Development Cluster: Synergistic and Complementary to Other Target Clusters
- Education and Training Institutions Cluster
- Information and Communications Technology Cluster
- Life Sciences Cluster
- Selected Sustainability Technologies: Emerging Clusters

Given the observations above, the principal purpose of this report is to elaborate a set of strategic policy recommendations consistent with success of targeted cluster development. At the heart of these recommendations is the fundamental concept that improved cooperation among community stakeholders with aligned interests are required to create the innovative environment necessary for success. Recent trends in Southern Nevada have been encouraging, and provide a solid base for future action.

Strategic Recommendations for Successful Cluster Development in Southern Nevada

Our strategic recommendations to achieve targeted cluster development utilize extensive new data on the targeted clusters to formulate our strategic recommendations. This includes a consideration, where possible, of the disaggregated sub-industries which comprise the aggregate cluster.

Any set of specific strategic recommendations to assist in the success of targeted cluster development will, not surprisingly, have some overlap and complementarities. However, the set of recommendations for targeted cluster development presented below tend to lie within five areas:

- Recommendations designed to enhance land availability specifically targeted for economic development
- Recommendations on land use related to logistical facilities for regional goods movement to include an inland port
- Recommendations for intensified development of current regional best practices
- Recommendations concerning workforce housing that augment and concur with SNRPC initiatives
- Recommendations for SNRPC to serve as the regional voice for political entities on regional initiatives

Given the importance of occupational training to successful cluster development, we also provide a closing set of observations related to positive trends within CCSD and CSN:

- Recommendations for increased information access on current programs.

Each set will be presented in turn with overlap and complementarities noted.

Principle Recommendations: Enhancing Land Availability

The first three recommendations below are complementary to each other:

- Consistent with plans for economic development and community planning, consider a regional approach for direct land releases to communities (as modeled on the proposed [Henderson] “Nevada Land Transitions Act”). This would allow a process for communities to deed restrict planned land releases for specifically zoned uses.
- Consider a possible extension to SNPLMA (without opening up the legislative act itself) for land releases specifically designated for economic development and business clusters. This would allow the deed restricted land releases by communities to be held in trust, a land bank arrangement, or similar structure to allow deferred payment until sale. BLM transfers could thus be held in stewardship until development agreements consistent with community planning were in place.
- Explore a redefinition of the provision of “fair market value” to allow for an appraisal process which recognizes differential land prices by type of zoning. The appraisals could then be held fixed for a specific length of time with periodic readjustment.

The fourth recommendation is designed to ensure that possible direct sales of property for economic development and community planning needs are developed in a timely manner rather than held in a vacant state for speculative purposes. Currently, after auction, jurisdictions and developers often enter into a development agreement where timely provisions for development can be negotiated. However, BLM land under SNPLMA must be sold at auction and no developer time constraints exist if a jurisdiction could request BLM for a direct sale for a specific purpose related to an overall economic development plan. For example, specific parcels related to economic development or redevelopment purposes for such concepts as medical districts or university districts should be possible as direct sales with re-enter provisions where the land would revert back to the federal government or its designee (with refund provisions).

This recommendation could be limited to specific types of deed restricted land, allow quite wide and significant exceptions, have appropriate safeguards, and is not intended to interfere with private entity management. It is simply recognition that possible direct sales have a specific purpose and speculation is not one of these.

- Expand provisions for direct sales with specifically defined purposes of development and redevelopment with a schedule of performance which may include reasonable re-enter provisions where the land would revert back to the federal government or its designee (with provisions for refund) should the development not meet agreed upon milestones.

The fifth recommendation will be discussed in more detail below in this report, but is directly related to the SNRPC workforce housing committee and is thus initially presented here.

- Investigate an enhancement to SNPLMA to allow expanded uses and more inclusive definitions of workforce housing as currently proposed by the SNRPC workforce housing committee for 7B Amendments. These proposed measures include the “7 Principles of Change” being produced by the SNRPC workforce housing committee.

Principle Recommendations: Inland Port and Regional Goods Movement

- Amend the process of land transfer discussed above to allow communities to deed restrict planned land releases for regional freight centers and logistics centers. Regional goods movement requires warehousing and distribution space in order to provide long-term goods handling at competitive rates and to promote cluster development. Utilize such land as a strategy to build regional freight centers as part of a complementary economic development strategy.
- Explore the feasibility of and reserve land necessary for development of an inland port terminal for facilitation of containerized shipping in conjunction with one or more ports in California. This would serve as a means to attract businesses to the Las Vegas Valley which rely heavily on containerized shipping as a critical source of import and export transportation.
- Explore the potential for public private partnerships as innovative financial sources related to the above proposals. These arrangements have worked particularly well for transportation related projects.

Principal Recommendations: Current Best Practices

- Continue expansion and innovative ideas related to the world marketplace concept into other industries per the concept of World Market Center to capitalize on the advantages of a Las Vegas location and world interest. This builds on the unique Las Vegas assets of hotel rooms, restaurants, entertainment, and general environment for conduct of trade, yet diversifying the economy into new industry clusters. Emerging ideas include but are not limited to jewelry, sports, and Pacific Rim trade.
- Reexamine the existing SNRPC infill plan and identified strategies for infill development to target the Hospital and Health Related Cluster and Regional Offices Cluster and their related clusters as a niche for infill and urban redevelopment.

Principal Recommendations: Workforce Housing

- As previously stated, amend the SNPLMA consistent with recommendations of the SNRPC workforce housing committee to allow expanded uses and more inclusive definitions of workforce housing as currently proposed by the SNRPC committee on workforce housing for 7B Amendments. These proposed measures include the “7 Principles of Change” being produced by the SNRPC workforce housing committee.
- Maintain a workforce housing committee of SNRPC to provide a direct liaison for Southern Nevada to: 1) the new HUD initiatives on affordable workforce housing solutions; and 2) future State of Nevada legislative initiatives to include workforce housing definitions and projects utilizing Tax Increment Financing and other identified funding sources. These include strategies specifically related to infill and redevelopment and best practices from municipalities across the nation.
- Research development of technologies and manufacturing of low cost and modular housing technologies in an effort to increase supplies of attainable and affordable housing and build a new industry for the Valley.

Principle Recommendations: Cooperation and Coordination

- Establish a formal committee structure under the SNRPC Board to present clear and unambiguous public messages on regional land use. The purpose of the committee is to represent a strong unified speaking voice for Southern Nevada on policy issues of regional economic development and community planning to the State and Federal governments and agencies. The exact form of this committee will be determined by SNRPC members and the Board. It could, for example, take the form of the Board and a Chief Executive Committee of major elected officials such as the Mayors and Chair of the Clark County Commission, expand to include chief officers of regional organizations as the Nevada Development Authority (NDA) and the Regional Transportation Commission (RTC), etc. However, it should have as a fundamental goal the concept that when it does decide to address a specific regional issue that its message will represent the unified political sense of our community.
- If such a powerful committee is organized under SNRPC, then pursue a formal subcommittee mechanism where the Directors of Economic Development and Directors of Community Planning can bring forth regional recommendations that transcend individual jurisdictional responsibilities.

Selected Thoughts on Improving Technical Education Information

- The CCSD website has to juggle everything from basic information on all aspects of school life to curriculum and everything in between. Currently, a parent or student who visits the CCSD website can find separate information on magnet schools, the official CCSD clusters of career and technical education, and various press information on A-TECH.

We would recommend that CCSD provide an easier to use integrated “single button” link on technical careers that would make information gathering less daunting.

Bundling their current technical education information into one link could also prove useful to SNRPC members and the NDA.

I. INTRODUCTION

Pursuant to a long run strategy for economic development in Southern Nevada, the Southern Nevada Regional Planning Coalition (SNRPC) has identified business cluster development consisting of interrelated companies, industries, and institutions as a key factor in economic development. Across the country, it is now widely accepted that economic success depends on the competitiveness of a region's key suppliers, service providers, sources of capital equipment, and even recognition of best-practices of direct competitors. Best practice economic development aims to nurture clusters of linked industries and to exploit synergies between clusters and related institutions (higher education, non-profit research and development and labs, and business development agencies).

Current forecasts of growth in Nevada [and Southern Nevada] suggest employment patterns dominated by Southern Nevada's current [world-class] hospitality, recreation and entertainment cluster. Clearly our community is a world city in terms of the hospitality and entertainment sector. The forecasts of job growth in this sector over the short time period leading to 2011 are extraordinary. Historically, Southern Nevada has seen significant growth in this cluster and all forecasts suggest that it will remain the dominant cluster.

As barriers to business location fall, it is clear that Southern Nevada has an opportunity to both develop and attract a more diverse set of clusters. Central to long term prosperity and economic diversification is the development of leading industry clusters that seek competitive advantage through continued innovation, highly skilled and productive workers, and the utilization of advanced infrastructure and technology.

Our recent analysis of business clusters for SNRPC identified a set of target industry clusters for Southern Nevada that build upon our existing strengths and suggests new opportunities and emerging technologies.¹ In a restructuring economy such as Southern Nevada—one in which traditional industries remain dominant and knowledge-intensive sectors dependent on strong local linkages are only beginning to attain critical mass, these target business clusters were identified within a value-chain cluster analysis which can contribute insights the typical approach cannot.

Specifically, while the usual analytical approach focuses mainly on what a region *does have* at the current time, the value-chain cluster approach for SNRPC identifies what is emerging and what an economy *could have*, perhaps with

¹ "Southern Nevada Regional Economic Study", Theodore Roosevelt Institute for SNRPC, November 2006. This report is available online at <http://www.snrpc.org/>. An extensive set of data sets related to this report were also provided to SNRPC.

properly focused technology policy. For example, it is well-known that hospitality, entertainment and recreation form a key cluster in Southern Nevada. The more important question is how higher technology and higher wage industry segments can be developed in conjunction with the vigor and success of this dominant cluster. The identified clusters for development stem from this analytical approach and philosophy.

However, the prior research also identified a set of potential constraints that could interfere with economic diversification through cluster development. Three general factors impacting economic development and targeted cluster were identified. These three factors were key occupations required to support targeted cluster development, the issue of land availability in Southern Nevada, and the emerging issue of workforce housing availability. In the collective view of the SNRPC Board and its members, what was required in future work was not another report per se but a need to focus on a set of key strategy recommendations required to pursue the clusters already identified.

Given the observation above, the principal purpose of this report is to elaborate a set of strategic policy recommendations consistent with success of targeted cluster development. At the heart of these recommendations is the fundamental concept that improved cooperation among community stakeholders with aligned interests are required to create the innovative and creative environment necessary for success. Recent trends in Southern Nevada have been encouraging, and provide a solid base for future action.

We have utilized extensive new data on the targeted clusters to formulate our strategic recommendations. This includes a consideration, where possible, of the disaggregated sub-industries which comprise the aggregate cluster. The primary source material that we have utilized includes:

- Individual company reports from proprietary ratings services as Mergent Industrial (to include Business Services, Professional Services), Standard & Poor's Corporate Profiles, IBIS Risk Rating Reports (to include both the exhaustive Company and Sector analyses).²
- Industry analyses from the proprietary ratings services listed above.
- Investment data from the National Venture Capital Association through Pricewaterhouse Coopers.
- Corporate reports from selected SEC filings
- Regional studies on targeted clusters and successful technological development including TRI development research on the City of Los

² This set of data forms the most extensive national company database available, much of it subject to proprietary use agreements. We also gratefully acknowledge use of materials developed for the Department of Commerce, State of North Carolina.

Angeles and the states of North Carolina (including Research Triangle Park), California, and Ohio.

- Consulting with individuals from the NDA and SNRPC members such as the RTC, and officers and members of selected local organizations such as Technology Ventures Association, Southern Nevada Medical Industry Coalition, and the Nevada Biotechnology & Biosciences Consortium
- Transportation consulting with RTC, Union Pacific Railroad, and intermodal multi-state shippers of The Intermodal Association of North America

This report is organized as follows. In Section II, a summary and discussion of target clusters for Southern Nevada are presented. Recommendations to improve successful development of these clusters form the fundamental basis of this report. These recommendations are presented in Section III. Also included in this section is an overview of how the cluster methodology is linked to these recommendations. The final section, Section IV, presents a summary.



II. TARGETED CLUSTERS FOR SOUTHERN NEVADA

The purpose of this section of the report is to present both a summary of the targeted clusters for Southern Nevada and a discussion of salient points.³

The targeted clusters for Southern Nevada are based upon a value-chain cluster methodology. A basic definition for the SNRPC concept of cluster selection is shown in the table below compared to traditional approaches.

Table 1 The Basic SNRPC Cluster Methodology	
Sector (or Industry)	A sector or industry is a group of enterprises that manufacture similar products, as typically defined, for example, under the North American Industry Classification System (NAICS) codes.
Industry cluster	A group of business enterprises and non-business organizations for whom membership within the group is an important element of each member firm’s individual competitiveness. Binding the cluster together are buyer or supplier relationships or perhaps common technologies.
SNRPC Value-chain industry cluster	A value chain cluster is an industry cluster identified as an extended buyer-supplier chain. It includes final market producers, and first, second and third tier suppliers that directly and indirectly engage in trade. It is comprised of multiple sectors or industries connected by flows of goods and services stronger than those linking them to the other sectors of the national economy. It also suggests potentials, where enterprises may or may not presently trade with each other, although such trade could possibly occur in the future.

³ See the full report for details, TRI (2006), op. cit.

Part of the selection process for Southern Nevada involved the obvious observation that Southern Nevada is forecast to have significant future population growth.⁴ However, it is important to note that the significant population growth forecast for Southern Nevada has three critical interactions with future service provision and principles of business location.

Specifically, the demographic trends for Nevada (and our region) have several important implications for business recruitment:

- Nevada's doubling of population will result in a "law of large numbers" where local location will be desirable compared to shipping to Nevada from elsewhere [such as with a bottling plant]. This reflects the economies of scale inherent in prepared food and beverage manufacturing.
- The growth of Nevada's senior population needs to be recognized as it relates to growth in the provision of hospital and health relates services.
- It is important to note that firms committed to serving the Southwest [Southern California, Nevada, Arizona, and Utah] will increasingly have transportation incentives to locate in Southern Nevada. This is due to the role of Southern Nevada as a "transportation network focus" given road networks, differential population growth noted above, and accepted transportation modeling as used by location consultants. As Southern Nevada's population grows relative to its neighbors, there is an explicit economic incentive for business location in Southern Nevada for servicing the multi-state area.

Our analysis thus identified a set of target industry clusters for Southern Nevada based upon both demographic trends and the value-chain cluster approach.

Implicit in our approach towards economic diversification is the concept, endorsed by a growing body of empirical research, that a strong base of science and technology is a necessary foundation for sustained diversity. The view rests on three major arguments. First is the notion that with increasingly open national and international markets, local areas must seek competitive advantage in America's knowledge infrastructure, including its private and public R&D institutions, educated workforce, tradition of risk-taking and entrepreneurship, advanced physical infrastructure, and stable and transparent social and political institutions.

The second argument for a close link between technology and regional economic performance is based on studies of recent sector growth trends. For example, a

⁴ The future demographics of Southern Nevada facing SNRPC are dealt with in detail in the section "Demographics: Fundamentals of Growth", TRI, op. cit.

series of studies have documented higher growth in high- tech and related employment compared to employment in the rest of the economy over the last decade. In this regard, Southern Nevada has been atypical due to significant growth in its hospitality, recreation, and entertainment cluster. Certainly not all industries cited by various studies as “technology-intensive” are posting significant employment or output gains. Indeed, some tech sectors faced significant declines during the 1990s. But even with uncertainty over the recent recession as well as how best to define the technology sector most studies show gains in technology-related employment have been strong relative to other industries over the last decade.

The third argument for technology as a key to regional economic development is that technology-related activity must necessarily cluster in specific regions because knowledge spillovers are *localized*. Innovations initially occur in companies, universities, and laboratories located in specific places. The subsequent spread (or diffusion) of such innovations, as well as the spillovers they generate, may occur more readily among economic actors located in close proximity, either because the innovation is tacit in nature or because its successful utilization requires an element of hands-on learning-by-doing. Technology businesses locate near other high tech companies and R&D performers in order to share in the spillovers, further enhancing the attractiveness of the growing cluster for still more high tech enterprises. The cluster expands through a process of cumulative advance.

In general, Southern Nevada has unique cluster opportunities due to its spatial location, forecasted population growth, tax climate relative to major competitive locations in adjoining states, and current world-class hospitality cluster. This allows favorable cluster development for Southern Nevada that does not appear as “emerging” within national or Western data. ⁵

Current Strengths: General Categories

First, our research reconfirms the basic attractiveness of Southern Nevada for current industry targets as:

- Administrative and Back Office Services

⁵ Relevant references here would include Alan Schlottmann and Henry W. Herzog Jr., *Industry Location and Public Policy*, University of Tennessee Press; D. R. Sule, *Manufacturing Facilities: Location, Planning, and Design*, PWS Publishing; Allen J. Scott, *Technopolis: High-Technology Industry and Regional Development in Southern California*, University of California Press; Vittorio Chiesa and Davide Chiaroni, *Industrial Clusters In Biotechnology: Driving Forces, Development Processes And Management Practices*, and Mario A. Maggiano *Clustering Dynamics and the Location of High-Tech-Firms*, Physica-Verlag Heidelberg Press.

- Distribution Centers
- Furniture Mart Supplier and Related Services
- Potential Public Higher Education Research Park Expansion

Impact of Demographic Changes: General Categories

Our population forecasts and other demographic changes and spatial networking both reinforce and suggest including:

- Education Services [Public and Private]
- Hospital and Health Related
- Research and Development
- Regional Offices
- Senior Services

Detailed Clusters

Our analysis of emerging clusters relative to our community **and** both of the criteria above suggests selected opportunities within eight detailed clusters.

These target clusters are:

- Hospital and Health Related Cluster: Service Provision and Manufacturing
- Regional Offices Cluster: Southwestern and Other Headquarter Functions
- Homeland Security Cluster: Complementary Services and Manufacturing
- Research and Development Cluster: Synergistic and Complementary to Other Target Clusters
- Education and Training Institutions Cluster
- Information and Communications Technology Cluster
- Life Sciences Cluster

Each of the target clusters above will be presented in turn.

Hospital and Health Related Cluster: Service Provision and Manufacturing

The hospital and health related cluster significantly expands the traditional concepts of health services. This cluster explicitly contains several sub-clusters within the targeted sectors.⁶ Three important implications of this cluster to note are the development of:

- Medical Niche to include wellness centers for targeted populations [women, seniors] as well as specialty clinics.
- A substitution of medical services within Southern Nevada from the current Southern California market.
- A significant higher technology manufacturing component.

It is also of interest to note the joint linkages with three other target clusters discussed below:

- The complimentary cluster below [*Life Sciences*] directly supports this cluster with mutually beneficial linkages.
- The development of a *Research and Development* cluster contains individual sectors integrated with this cluster.
- Regional professional development is, of course, implied as part of the *Education and Training Institutions* cluster.

The growth of general hospital and medical services tends, of course, to mirror changes in population growth and changes in cohort composition [for example, seniors in the community].

However, the success to date of the Nevada Cancer Institute suggests that similar niche medical opportunities can be developed. This opportunity can be identified along three separate lines. Each will be discussed in turn.

⁶ All tables below show detailed industry sub-sectors by so-called NAICS codes. NAICS stands for the commonly used “North American Industry Classification System” which provides uniform way to classify companies and industries into categories. The very detailed information on NAICS is available at <http://www.census.gov/epcd/www/naics.html>

First, the need for specialized treatment centers for the current local [and forecasted] population suggests that such facility re-location or development can be encouraged. Senior services could also be addressed.

Second, a significant amount of current elective surgery is often undertaken in Southern California. With the specialized entertainment and related amenities associated with Southern Nevada’s hospitality cluster, development of such facilities in Southern Nevada would be attractive to both patients and their families.

Third, and related to both points made immediately above, the trend to wellness centers [such as Senior’s and Women’s] appears to be a significant opportunity for local development efforts. This is particularly true given forecasted population growth in these two cohorts.

All of these factors also suggest that as this cluster is developed that Southern Nevada has the significant likelihood of developing a reputation as site for associated medical trials and testing. However, such a reputation is predicated, of course, on the development of facility infrastructure.

Table 2
Hospital and Health Related Cluster

Cluster	NAICS⁷
Specialty (except Psychiatric & Substance Abuse) Hospitals/Clinics	6223
Outpatient Care Centers	6214
General Medical & Surgical Hospitals	6221
Offices of Physical, Occupational & Speech Therapists, & Audiologists	62134
Offices of physicians, dentists, & other health practitioners	6211-3
	6214-5
Other ambulatory health care services	6219
Electromedical apparatus manufacturing	334510
Pharmaceutical & medicine manufacturing	3254
Surgical & medical instrument mfg	339112
Surgical appliance & supplies mfg	339113
Facilities support services	5612
Services to buildings & dwellings	5617

⁷ As noted above (footnote 5), NAICS is a commonly used system to classify industries (North American Industry Classification System).

Environmental & other technical consulting services	54162-9
Business support services	5614
Testing Laboratories	541380

Regional Offices Cluster: Southwestern and Other Headquarter Functions

The regional office cluster supports a much more expanded concept of “office” than current market conditions in that it targets regional headquarter functions.

There are four reasons that our research suggests that a regional office cluster is a strong candidate for development in Southern Nevada. Each of these reasons will be discussed in turn.

As previously noted above, our estimates of population growth for Southern Nevada show us as still continuing very strong growth. This population growth will act as a type of demographic “law of large numbers” that reinforces the location of such regional offices, particularly as related industrial growth related to “numbers” occurs. For example, bottling plants, food manufacture [such as Frito-Lay] will reach a tipping point for facility location in Southern Nevada as we approach 2010.

Second, as noted, the relative growth of population in California, Utah, Arizona, and Nevada shifts the “centroid” of network distribution towards Southern Nevada both for goods movements and potential services location [relative to Southern California].

Third, existing tax advantages suggest a strong push to site such facilities in our community. This point takes on more importance over time as regional population growth favors location in Southern Nevada.

Finally, a regional office cluster uses significant inter-sector trade flows from an existing dominant local cluster [hospitality and related services]. This further reinforces regional office.

It is interesting to note that a specialized sub-sector in this area could be represented by financial services. With a growing presence of specialized services to support the financial sector from an *education and training institutions cluster* [see below], the attractiveness of Southern Nevada is enhanced. The average income in financial services exceeds national averages, and the [income] tax advantages of our community are significant.

Counterbalancing factors that need to be considered are, of course, home prices relative to alternative locations and the less definable concept of community reputation. However as we approach 2030, the implied population growth [and tax advantages] to push such development from Southern California appears dominant. Similarly, in order to easily service Southern California as well as Southern Nevada [and Utah], fundamental network location suggests that Southern Nevada will be able to compete with the Phoenix area.

Table 3
Regional Offices Cluster

Cluster	NAICS
Credit Intermediation and Related Activities	522
Securities, Commodity Contracts, and Other Financial Investments and Related Activities	523
Insurance Carriers and Related Activities	524
Corporate Offices	551114
Corporate, Subsidiary, and Regional Managing Offices	551114
Direct Health and Medical Insurance Carriers	524114

Homeland Security Cluster: Complementary Services and Manufacturing

By their very nature, emerging clusters are those without a long established pattern of historical data to identify past performance and trends. However, based upon inter-sector trade flows and linkages, emerging technologies, and demographic trends, a set of emerging industry clusters can be identified that are appropriate for potential development targets. As a specific example, even as late as 1998, few studies identified emerging clusters at the national level such as homeland security or related sub-clusters such as data security. Both of these potential clusters have not only developed but, in addition, appear highly appropriate for Southern Nevada based upon our methodology.

The concerns over identify theft, national security, and human and natural disasters has raised increasing concern over fundamental questions of data and information security. The issues of facility location with secure data warehousing, particularly for financial records and personnel records, has become increasingly important.^[4]

^[4] The OECD [in Europe] has recently begun study of not only common security protocols but also ways in which inter-country data can be safely stored.

As is well appreciated, Southern Nevada has limited exposure to traditional natural disasters. In addition, our community has high quality communications capabilities and existing technology strengths in security via our hospitality and gaming industries.

It is important to note that an effort to develop this sub-cluster ties directly into efforts to develop the two clusters of *Regional Offices [above]* and *ICT [below]*. It is important to note these synergies within economic development.

**Table 4
Homeland Security Cluster**

Cluster	NAICS
Optical Instrument and Lens Manufacturing	333314
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing***	33451
Professional Scientific and Technical Services****	541
Software Publishers	511210
Custom Computer Programming Services	541511
Computer Systems Design Services	541512
Computer Facilities Management Services	541513
Other Computer Related Services	541519

The manufacturing targets include the two specific elements below:

**Table 4b
Homeland Security Cluster Manufacturing Targets**

*** Includes:

Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	334515
Analytical Laboratory Instrument Manufacturing	334516
Other Measuring and Controlling Device Manufacturing	334519

Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	334511
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****** Includes:**

Testing Laboratories	541380
Environmental Consulting Services	54162
Other Technical Consulting Services	541690
Research and Development in the Physical, Engineering, and Life Sciences	54171

Research and Development Cluster: Synergistic and Complementary to Above Target Clusters

NOTE: Industry targets are included in clusters above under “Hospitals and Health Related” and “Homeland Security”.

Testing laboratories appears under both clusters as do selected professional consulting services and basic research and development in the sciences.

Education and Training Institutions Cluster

Initially, the identification of an education services cluster follows a similar logic to that for regional office as discussed above. For example, expanding population suggests an increased demand for such services related to both formal programs in public education and for programs in private facilities. However, there are additional issues that suggest development of such a cluster.

First, historically, the higher education system has not developed a range of competing private institutions in the Valley [as contrasted to Southern California]. This leaves much more of a competitive environment for niche opportunities in Southern Nevada than elsewhere both for exiting programs and potential expansion. The City of Henderson has pursued this target over the past five years and has been very successful, attracting institutions such as Regis University and Touro University.

Second, the current review of vocational technology programs at the secondary education level in the Clark County School District (CCSD) suggest possibilities for both private education services on their own and as potential future partners

with CCSD. Vocational education to support targeted cluster development should result in public-private opportunities within this cluster.

Third, the *regional offices cluster* in general and activities related specifically to financial services require ongoing training in management and marketing services and financial education. These activities not only require continuing educational services but, in addition, specialized staff training. This again appears to be an instance where a set of individual clusters has synergistic interactive effects.

Fourth, the high technology component in both the *hospital and health related cluster* and the *homeland security cluster* imply a complimentary research function to potential educational research.

Table 5
Education and Training Institutions Cluster

Cluster	NAICS
Junior Colleges	6112
Colleges, Universities, & Professional Schools	6113
Technical & Trade Schools	6115
Other Schools & Instruction	6116
Business Schools & Computer & Management Training	6114
Educational Support Services	6117

Information and Communications Technology Cluster

The growth and development of the cluster in information and communication technologies (ICT) has in itself become a major new industrial complex. This cluster is the underpinning of what is loosely termed both “knowledge-based societies” and the concept of a “creative class.”

The fundamental research of these new technologies is often based at major United States and European research facilities and at both private companies and major research universities in computing technology and specialized engineering.

The suggested value-chain cluster for Southern Nevada is as follows and shown in the table below:

Table 6
Information and Communications Technology Cluster

Cluster	NAICS
Data processing services	5182
Other computer related services, including facilities management	541513-9
Computer systems design services	541512
Software publishers	5112
Custom computer programming services	541511
Information services	516 519 5181
Telecommunications	517
Cable networks & program distribution	5152

Emerging ICT Sub-Cluster: Virtual Meeting Technology and the Case for Southern Nevada

The ICT cluster contains elements of an emerging new sub-cluster that is highly appropriate for discussion in Southern Nevada.

There is a tantalizing possibility to wrap the new technologies as they become available within ICT to create a technological [virtual] meeting sub-cluster. With an unparalleled physical location for entertainment and similar attributes when meetings are necessary combined with quality airline access for potential participants, this new meeting technology niche is possible. First-time entrants will have a prime mover advantage, but the investment may be seen as risky given that the exact configuration and cost of new technologies remains uncertain.

It is very interesting to note that the total number of jobs by high tech occupation associated with major complexes of ICT is relatively small. Thus, development of this cluster is certainly feasible for Southern Nevada. Several examples illustrate this point:

- Systems analysts who analyze science, engineering, and business issues are concentrated in the two top areas of the Boston-Cambridge Mass. area and the San Jose-Sunnyvale- Santa Clara Ca. area. Yet the total occupational employment in each of these two areas is both less than 9,600 jobs.

- Systems software engineers who engage in research, design, and development are concentrated in the San Jose-Sunnyvale- Santa Clara, CA area and New Jersey-Pennsylvania market and yet total employment in each area is less than 3,600 jobs.
- Finally, except for the San Jose-Sunnyvale- Santa Clara Ca. area, application software engineers at major ICT centers represent individual area employment levels of less than 500 jobs.

With the location advantages of Southern Nevada, initial success with this target cluster has the potential to lead to a broader recognition of the SNRPC area for location.

Life Sciences Cluster

Within the quite broad concept of Life Sciences, five *feasible* opportunities for Southern Nevada appear to be:

- Pharmaceuticals
- Medical devices [to include Optics]
- Instrumentation
- Diagnostics
- Biotechnology research and ancillary services

The **first four** of these potential targets are included in the clusters identified above, namely:

Table 7	
Life Sciences Clusters	
<i>Pharmaceuticals</i>	NAICS
Pharmaceutical & medicine manufacturing	3254
<i>Medical Devices</i>	
Electromedical apparatus manufacturing	334510
Surgical & medical instrument manufacturing	339112
Surgical appliance & supplies manufacturing	339113
<i>Including</i>	
Optical Instrument and Lens Manufacturing	333314

Instrumentation	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	33451
Specific Instrumentation Targets	
	With Emphasis On
Instrument Manufacturing, Measuring and Testing Electricity and Electrical Signals	334515
Analytical Laboratory Instrument Manufacturing	334516
Other Measuring and Controlling Device Manufacturing	334519
Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	334511

The **fifth target** [Biotechnology research and ancillary services], although feasible, may require public investment that may be beyond the capability of individual governments within our community. The primary business environment of Southern Nevada is a very positive location advantage compared, for example, to California. However, the nature of research linkages in this sector needs to be recognized and discussed within the community.

Specifically, based upon major dominant firms located in California and elsewhere, this industry target has a close relationship with the broad industry definition of “Research and Development in the Physical, Engineering, and Life Sciences [NAICS 541710]”. It is important to note that the research and development industry associated with biotechnology research includes a set of specialized research facilities dominated by a set of five research services. These five services are:

- *Bacteriological research and development laboratories or services*
- *Biology research and development laboratories or services*
- *Biotechnology research and development laboratories or services*
- *Plant biology/biotechnology research and development laboratories or services*
- *Cancer research laboratories or services [utilizing the above]*

The Nevada Cancer Institute and related community initiatives are an important step towards the above. Yet the commitment and struggle to see a successful Nevada Cancer Institute illustrates the level of commitment required to expect local economic development to attract a true biotechnology cluster.

Selected Sustainability Technologies: Future Cluster Potential

The events of 9/11 terrorist bombings as well as the natural disasters and resultant economic impacts of Hurricane Katrina have increased the demand for sustainability technologies throughout the United States. Nevada is uniquely positioned to capture this market due its unique climatology and geology.

Two identifiable sectors include:

- Selected solar industry components such as cells and panels [within 334413, 333414].
- Electric Power Generation, Transmission and Distribution [2211].

However, there is significant amount of activity in Southern Nevada in this sector that does not easily fit into easily definable categories. This represents a unique opportunity for Southern Nevada to create meaningful public partnerships with the federal government to exploit these advantages. A summary follows.

Nevada is progressing on innovative applications for three unique areas:

Renewable and Alternative Energy - Nevada has all the desirable renewable energy sources and facilities to become a significant player in the renewable and alternative energy market. The state's prominence as an ideal "living laboratory" for validation of alternate energy technologies is attracting companies into the state.

Environmental Technologies - Nevada is at the forefront of innovation and commercialization in environmental technologies. The federal R&D funds flowing into Nevada have shaped the competitive base of companies and facilities operating in this sector. Companies operating in the sector have demonstrated capabilities in environmental bioremediation (bio/phyto remediation), waste management (solid waste management and wastewater treatment), and bio-security.

Disaster Mitigation and Management - Nevada is a prominent location in the region for expertise in disaster mitigation and management. Prevalence of world-class infrastructural facilities drives this growing prominence. Many of Nevada's technology businesses are collaborating with the infrastructure and the U.S. Departments of Defense and Energy to develop innovative products and services.

III. STRATEGIC RECOMMENDATIONS: SUCCESSFUL CLUSTER DEVELOPMENT IN SOUTHERN NEVADA

The TRI strategic recommendations are designed to provide a set of direct policy actions for consideration by SNRPC and its members. It is important to place these recommendations within the framework of our approach. The TRI experience in economic development has emphasized practical public policy amenable to policy action. Thus, we do not follow two possible paths in these recommendations.

First, we do not repeat a number of very high level recommendations that espouse general principles that are indeed correct but have very little direct policy implications. For example, both TRI and SNRPC would agree that it is important for our community to be flexible and responsive, to innovate rather than imitate, and to lead rather than follow. However, the fundamental issue is, of course, how to translate these lofty principles into realistic policy recommendations. In the view of the TRI study team, SNRPC has already translated these high level concepts into action through its forward looking recognition of targeted cluster development. The recommendations below are designed to facilitate that development.

Second, in general, we do not offer recommendations that rely on massive “new” State funding sources such as the doubling of current State expenditures but rather strategies that can be directly implemented by our community. For example, TRI, SNRPC, and our community understand the importance and need for an excellent educational system, particularly for technical skills related to targeted cluster development.⁸ Thus, a commitment to the educational needs of Southern Nevada is obviously crucial. However, the recommendations below on educational cooperation are designed to provide direct benefits related to cluster development.

As noted above, our strategic recommendations to achieve targeted cluster development utilize extensive new data on the targeted clusters to formulate our strategic recommendations. This includes a consideration, where possible, of the disaggregated sub-industries which comprise the aggregate cluster. The primary source material that we have utilized includes:

⁸ The TRI occupational matrix provided to SNRPC provides highly detailed occupation by industry cluster requirements. Even a cursory glance at the occupational matrix shows the importance of technical education and scientific occupations.

- Individual company reports from proprietary ratings services as Mergent Industrial (to include Business Services, Professional Services), Standard & Poor's Corporate Profiles, IBIS Risk Rating Reports (to include both the exhaustive Company and Sector analyses).
- Industry analyses from the proprietary ratings services listed above.
- Investment data from the National Venture Capital Association through Pricewaterhouse Coopers.
- Corporate reports from selected SEC filings
- Regional studies on targeted clusters and successful technological development including TRI development research on the City of Los Angeles and the states of North Carolina (including Research Triangle Park), California, and Ohio.
- Consulting with individuals from SNRPC members as NDA, RTC and officers and members of selected local trade organizations as Technology Ventures Association, Southern Nevada Medical Industry Coalition, the Nevada Biotechnology & Biosciences Consortium
- Transportation consulting with RTC, Union Pacific Railroad, and intermodal multi-state shippers of The Intermodal Association of North America

Any set of specific strategic recommendations to assist in the success of targeted cluster development will, not surprisingly, have some overlap and complementarities. However, the set of recommendations for targeted cluster development presented below tend to lie within six areas:

- *Recommendations to enhance land availability specifically targeted to economic development*
- *Recommendations on land use related to logistical facilities for regional goods movement to include an inland port*
- *Recommendations for intensified development of current regional best practices*
- *Recommendations concerning workforce housing that augment and concur with SNRPC initiatives*
- *Recommendations for SNRPC to serve as the regional voice for political entities on regional initiatives*

Given the importance of occupational training to successful cluster development, we also provide a closing set of observations related to positive trends within CCSD and CSN:

- *Recommendations for increased information access on current programs.*

Each set of recommendations will be presented in turn with overlap and complementarities noted.

Enhancing Land Availability Targeted to Economic Development

In order to provide a perspective for the recommendations below, it is necessary to briefly review the Southern Nevada Public Lands Management Act (SNPLMA).

In 1998, the population of the entire State of Nevada was approximately 1.87 million persons with 67% of the population living in Clark County.⁹ The Bellagio resort casino initially opened in 1998 with properties as Paris-Las Vegas scheduled to open the following year.

In order to provide a future framework for land development and public land management, in October 1998 the Southern Nevada Public Lands Management Act (SNPLMA) became law. By historical standards, this might be still considered recent legislation.¹⁰

However, the explosive growth in Southern Nevada in less than a decade makes 1998 appear to be more distant than recent. By 2006 alone, the population of Clark County (approximately 1.874 million persons) actually exceeded the entire population of the State of Nevada in 1998 with almost 72% of the 2006 State population residing in Clark County.

The growth of Southern Nevada suggests that enhancements to land availability targeted to economic development be considered in order to foster future cluster development.

In previous work [TRI (2006)] several potential land use constraints on future cluster development were identified. These potential land use constraints related to the availability of both industrial land and land for basic logistic services (as warehousing and distribution) and related problems such as the potential for land release purchases held for speculative purposes rather than development.

In our opinion, many of these concerns are mirrored in the provisions of the currently proposed “Southern Nevada Limited Transition Area Act”. This proposed legislation has been in progress for quite some time and relates

⁹ Historical demographic data is available in TRI (2006), op.cit.

¹⁰ Since that time there have been, of course, a series of related public laws. These are available in detail as full-length documents at the SNPLMA website (including recent interpretations of law): <http://www.nv.blm.gov/snplma/legislation/default.htm>.

specifically to a proposed property transfer for economic development to the City of Henderson.¹¹ We believe that our recommendations below are consistent with this proposed legislation and both broaden and extend its underlying principles.

We believe that it will be difficult for Southern Nevada to attain its goals of targeted cluster development and economic diversification without serious discussion of land availability tied specifically to economic development.

Principle Recommendations: Enhancing Land Availability

The first three recommendations below are complementary to each other:

- Consistent with plans for economic development and community planning, consider a regional approach for direct land releases to communities (as modeled on the proposed [Henderson] “Nevada Land Transitions Act”). This would allow a process for communities to deed restrict planned land releases for specifically zoned uses.
- Consider a possible extension to SNPLMA (without opening up the legislative act itself) for land releases specifically designated for economic development and business clusters. This would allow the deed restricted land releases by communities to be held in trust, a land bank arrangement, or similar structure to allow deferred payment until sale. BLM transfers could thus be held in stewardship until development agreements consistent with community planning were in place.
- Explore a redefinition of the provision of “fair market value” to allow for an appraisal process which recognizes differential land prices by type of zoning. The appraisals could then be held fixed for a specific length of time with periodic readjustment.

The fourth recommendation is designed to ensure that possible direct sales of property for economic development and community planning needs are developed in a timely manner rather than held in a vacant state for speculative purposes. Currently, after auction, jurisdictions and developers often enter into a development agreement where timely provisions for development can be negotiated. However, BLM land under SNPLMA must be sold at auction and no developer time constraints exist if a jurisdiction could request BLM for a direct sale for a specific purpose related to an overall economic development plan. For example, specific parcels related to economic development or redevelopment

¹¹ A 2007 update of the proposed legislation is available from Senator Harry Reid’s office whose assistance we gratefully acknowledge.

purposes for such concepts as medical districts or university districts should be possible as direct sales with re-enter provisions where the land would revert back to the federal government or its designee (with refund provisions) should the development not meet agreed upon milestones.

This recommendation could be limited to specific types of deed restricted land, allow quite wide and significant exceptions, have appropriate safeguards, and is not intended to interfere with private entity management. It is simply recognition that possible direct sales have a specific purpose and speculation is not one of these.

- Expand provisions for direct sales with specifically defined purposes of development and redevelopment with a schedule of performance which may include reasonable re-enter provisions where the land would revert back to the federal government or its designee (with provisions for refund). The refund would be for the original purchase price.

The fifth recommendation will be discussed in more detail below in this report, but is directly related to the SNRPC workforce housing committee and is thus initially presented here.

- Investigate an enhancement to SNPLMA to allow expanded uses and more inclusive definitions of workforce housing as currently proposed by the SNRPC workforce housing committee for 7B Amendments. These proposed measures include the “7 Principles of Change” being produced by the SNRPC workforce housing committee.

Development for Regional Goods Movement and a Potential Inland Port

One potential constraint identified for successful targeted cluster development in prior work [TRI (2006)] was future land availability for logistics functions as warehousing and distribution facilities. In general terminology, this issue relates directly to the concept of regional goods movement.

It might appear at first glance that a discussion of warehousing and distribution facilities is a bit “old fashioned” when discussing targeted cluster development that includes technologically based economic growth. However, the State of New York has now allocated direct State revenues to develop “shovel ready” sites for three general types of critical companies: High technology manufacturing, Business and technology parks, and Warehouse/distribution/logistics sites.¹² It

¹² The legislation to provide significant public funds for these activities is contained in the recent 2006/7 Round Four development plan of the State. An interesting discussion of

is interesting to note the use of the terms high tech and logistics in the same sentence and action plan.

The complementarities of logistics functions and successful cluster development have often been overlooked.¹³ Regional goods movement requires warehousing and distribution space in order to provide long-term goods handling at competitive rates.¹⁴ More importantly, regional freight centers can provide a complementary economic development strategy to targeted cluster development.

A second regional goods movement issue relates to the potential for the Las Vegas Valley to develop as an inland port. Inland ports are now generally seen as critical to any major business which relies heavily on containerized shipping as a critical source of imports and exports.¹⁵ Not only does an inland port have the obvious potential to facilitate goods movements in multi-mode transportation but, in addition, to develop value-added service companies through the supply chain.¹⁶⁻ ¹⁷ It is also important to recognize that successful inland port development appears to be particularly successful when organized as a public-private partnership.¹⁸

Each of the recommendations below is in agreement with the freight issues and rail issues identified by RTC in the recent Complete Regional Transportation Plan 2006-2030.¹⁹

“why warehousing” is contained in “Development Profile for Warehouse, Distribution, Logistics Center Sites”, State of New York, 2006.

¹³ For an interesting recent discussion of trends in distribution and manufacturing, see the September 2007 issue of *Modern Materials Handling* (Reed Business Information).

¹⁴ For example, business leaders in Southern California have been working with local governments and the State to formulate a future strategy for regional goods movement [Southern California Regional Strategy for Goods Movement: A Plan for Action]. As TRI has discussed in several presentations, forecasts of regional growth implicitly assume normal costs of regional goods movement for manufacturers, service providers, and final goods deliveries to households. If this is not correct, then forecasted economic growth at reasonable prices is by definition too optimistic.

¹⁵ Currently, the free trade zone for Las Vegas (FTZ No. 89 Clark County) is administered by NDA as the grantee.

¹⁶ One of the better discussions of these ideas is in the advisory services report of The Urban Land Institute to Southern Dallas County Texas, 2006.

¹⁷ We acknowledge expert discussion with members of The Intermodal Association of North America.

¹⁸ For example, Kansas City SmartPort Inc. More specifically, see the case studies related to transportation in the recent “Case Studies of Transportation Public-Private Partnerships in the United States”, US Department of Transportation, 2007.

¹⁹ In particular, the congestion problems and air quality problems identified by RTC with major freight traffic originating out-of-state could be partially alleviated. The RTC identification of rail constraints is very well taken and the inland port concept noted

Principle Recommendations: Inland Port and Regional Goods Movement

- Amend the process of land transfer discussed above to allow communities to deed restrict planned land releases for regional freight centers and logistics centers. Regional goods movement requires warehousing and distribution space in order to provide long-term goods handling at competitive rates and to promote cluster development. Utilize such land as a strategy to build regional freight centers as part of a complementary economic development strategy.
- Explore the feasibility of and reserve land necessary for development of an inland port terminal for facilitation of containerized shipping in conjunction with one or more ports in California. This would serve as a means to attract businesses to the Las Vegas valley which rely heavily on containerized shipping as a critical source of import and export transportation.
- Explore the potential for public private partnerships as innovative financial sources related to the above proposals. These arrangements have worked particularly well for transportation related projects.

Intensified Development of Current Regional Best Practices

As is well-known, Las Vegas is one of the most recognized names in the world and represents an extraordinarily known world brand. Given our world recognized hospitality and entertainment cluster, Las Vegas has been successful in building upon this recognition as not only a major meeting place but a business marketplace for industries such as furniture (World Market Center). In our experience, we are unaware of any other major city which has been able to leverage its reputation in a similar manner. There do not appear to be any constraints to further development along these lines using the World Market Center concept as a general guideline.

In 2001, SNRPC completed a plan for infill development which included a regional vision and recommendations for success.²⁰ Many of the concepts of infill development are, of course, applicable to the general concept of redevelopment areas or districts. It is important to recall that two of the identified target clusters (Hospital and Health and Regional Offices) are particularly consistent with these

below could provide additional tonnage handling capacity. Specifically, see Chapter Two and Chapter Four of the RTC Plan.

²⁰ SNRPC “Infill Study Plan” (2001). This report is publicly available at the SNRPC website <http://www.snrpc.org/Reports/InfillDevelopmentPlan.pdf>

prior recommendations. Since issuance of the 2001 SNRPC report, The Urban Land Institute has released a series of publications detailing the manner in which vertical development in infill and redevelopment districts is also smart growth. By their very nature, the identified target clusters of Hospital and Health and Regional Offices are often vertical build projects. It seems a natural extension of the 2001 SNRPC plan to target these uses for infill and redevelopment.

Principal Recommendations: Current Best Practices

- Continue expansion and innovative ideas related to the world marketplace concept into other industries per the concept of World Market Center to capitalize on the advantages of a Las Vegas location and world interest. This builds on the unique Las Vegas assets of hotel rooms, restaurants, entertainment, and general environment for conduct of trade, yet diversifying the economy into new industry clusters. Emerging ideas include but are not limited to jewelry, sports, and Pacific Rim trade.
- Reexamine the existing SNRPC plan for infill development to target the Hospital and Health Related Cluster and Regional Offices Cluster and their related clusters as a niche for infill and urban redevelopment.

Workforce Housing as a Determinant of Successful Cluster Development

Both nationally and in Southern Nevada there have been a multitude of concerns expressed over the lack of affordable workforce housing. SNRPC has taken an active role in addressing these issues, both documenting the extent of the problem (SNRPC Southern Nevada Workforce Housing Study, 2006 and SNRPC Jobs-Housing Balance Study [In progress]) and in suggesting solutions through the current SNRPC working committee on proposed SNPLMA (7B) Amendments.

Based upon our work with NDA on potential firm relocations, the experience of SNRPC directors of economic and business development, and our national research on business and firm location and work with HUD, we previously identified the cost and availability of affordable workforce housing as a potential emerging constraint to successful cluster development.

The leadership role of SNRPC on exploring solutions to workforce housing needs is commendable and an excellent example of regional coordination on an important issue. The proposal of the SNRPC to amend the SNPLMA to better address current housing realities in Southern Nevada is noteworthy and, in our opinion, absolutely essential.

The recommendations below are designed simply to augment the current SNRPC approach to workforce housing.

It is also important to note that the proposals of the SNRPC committee on workforce housing may stimulate an important national discussion of possible changes to the working definitions of income limits in current HUD programs. For example, one potential SNRPC request is that SNPLMA be amended so that the well-known 80% AMI (average median income) rule is raised to 120% of the AMI. This commonly used 80% AMI rule is part of income definitions in most HUD programs as well as within SNPLMA.

There has been an increasing trend for the modular home industry as part of the “factory built” housing industry to adopt new technologies and design trends. It appears that the reality of so-called manufactured homes may have outpaced the traditional perceptions of this industry. The Urban Land Institute has recently explored new trend in manufactured housing, including displays at the 2007 Fall Urban Land Institute Meeting.²¹ In addition, recent TRI research (2007) for HUD has shown that the characteristics of satisfaction of manufactured homes and site-built housing are actually quite similar and a function of ownership.²² More importantly, community impacts appear to be related more to renting than to the type of housing.

Principal Recommendations: Workforce Housing

- As previously stated, amend the SNPLMA consistent with recommendations of the SNRPC workforce housing committee to allow expanded uses and more inclusive definitions of workforce housing as currently proposed by SNRPC for 7B Amendments.
- Maintain a liaison for Southern Nevada to the new HUD initiatives on affordable workforce housing solutions. HUD has established a new Regulatory Barriers Clearinghouse (RBC) to provide strategies for reform related to state and local regulatory barriers. These include strategies

²¹ ULI Fall Meeting, October 23-26, Las Vegas will have two outdoor displays from Champion Enterprises. Champion is building the modular home community in Fort Lewis, Washington which has captured national attention. Also see the article in *Urban Land*, ULI, September 2007 on manufactured housing.

²² TRI report by A. Schlottmann and T. Boehm, *Is Manufactured Housing a Good Alternative for Low-Income Families? Evidence from the American Housing Survey*

specifically related to infill and redevelopment and best practices from municipalities across the county as to what actually works.

- Target development of technologies and manufacturing of low cost and modular housing technologies in an effort to increase supplies of attainable and affordable housing and build a new industry for the Valley.

Cooperation and Coordination: SNRPC as Southern Nevada's Unified Voice

In 2006, a series of worldwide conferences were held dealing with best practices of regions which had attained various degrees of success creating innovative economic development.²³ Cluster development forms a key development strategy in all regions.

The one striking element across all areas (whether Scotland, Quebec, Finland, etc.) to the TRI study team was the element of cooperation among local governments. This is hardly a new concept and has, of course, been repeated numerous times in the past. However, it seems to represent a universal element of the foundation for success.

It also appears that regions with successful emerging cluster development have a unified voice to speak on regional political issues that transcend individual jurisdictions. Certainly there are always issues of local competition, but for overarching regional concerns it does appear that a unified organizational voice is quite useful in dealing with other (“higher”) political entities.

In Southern Nevada, our community has a successful set of identifiable agencies that transcend jurisdictions and act as regional policy agencies. RTC has been an important source for regional transportation planning and proposing solutions, NDA has acted as a successful regional marketing, recruiting, and business information source, SNWA provides leadership on water issues, and SNRPC has served to explore regional issues from infill development to transportation and air quality as well as open space and economic development.

However, we now as a region face the future with concerns in areas as targeted cluster development, workforce housing, and transportation planning that ultimately involve political issues.

²³For example, see “Clever Practices to Boost the Creative and Innovative Potential of Regions”, Creativity World Forum-Ghent, Belgium November 2006, Arthur D. Little. TRI was an invited participant at several policy workshops.

All of the above concerns fundamentally involve regional land use coordination. The 2001 SNRPC “Southern Nevada Regional Policy Plan” noted a need for improved regional land use coordination. This concern was repeated in the 2004 final report of the SNRPC Growth Summit.²⁴ To summarize both of these reports from our perspective, initiatives and problems having regional significance will require regional coordination at the SNRPC level.

Consider, for example, the concept of amending aspects of the SNPLMA with respect to workforce housing. There does not appear to be any other single entity in Southern Nevada that could become a strong regional voice with the potential of SNRPC. Without a unified voice there is a real possibility that any regional message could become easily fragmented among individual members of SNRPC.

The topic of a regional organization assuming the role of the unified regional voice for Southern Nevada on land use coordination and development issues was recently addressed at the 2007 Lied Roundtable on economic diversification.²⁵ A range of community groups from industry, government, and education met in four separate sessions over two days to explore constraints on economic diversification and possible solutions. It is important to note that in each of the sessions, participants independently noted the lack of an organization to act as a strong unified voice. As one well-respected community leader noted, “They [non-local political entities or agencies] can keep calling someone [City of Las Vegas, City of Henderson, City of North Las Vegas, Clark County, etc.] until they get what they think they heard even if they heard it wrong.”

No other organization was identified at the Lied Roundtable except SNRPC that had as much potential to become the required strong unified regional voice for Southern Nevada.²⁶ The NDA, and current members of SNRPC such as the RTC, already have extensive advisory boards and executive boards of business and educational leaders in Southern Nevada. These contacts can provide direct input to SNRPC from the perspectives of industry and education.

Principle Recommendations: Cooperation and Coordination

- Establish a formal committee structure under the SNRPC Board to present clear and unambiguous public messages on regional land use. The purpose

²⁴ Both of the reports from 2001 and 2004 respectively are available directly at the SNRPC website in summary form and complete report.

²⁵ The white paper from the 2007 Lied Roundtable is scheduled to be released by the Lied Institute for Real Estate Studies in late fall 2007.

²⁶ Other organizations were respected for their work and reputations but were not seen as the best to speak with an implicit political voice which represented all SNRPC members.

of the committee is to represent a strong unified speaking voice for Southern Nevada on policy issues of regional economic development and community planning to the State and Federal governments and agencies. The exact form of this committee will be determined by SNRPC members. It could, for example, take the form of the Board and a Chief Executive Committee of major elected officials such as the Mayors and Chair of the Clark County Commission, expand to include chief officers of regional organizations as NDA and RTC, etc. However, it should have as a fundamental goal the concept that when it does decide to address a specific regional issue that its message will represent the unified political sense of our community.

- If such a powerful committee is organized under SNRPC, then pursue a formal subcommittee mechanism where the Directors of Economic Development and Directors of Community Planning can bring forth regional concerns that transcend individual jurisdictional responsibilities.

Selected Thoughts on Improving Technical Education Information

As discussed in our previous report, a solid educational base for technical training is essential for both direct cluster development and ancillary second and third tier suppliers that directly and indirectly engage in trade with targeted clusters. Clearly we unambiguously support efforts to broaden and deepen technical education as both essential and sensible economic development policy. As an obvious example, the Hospital and Health Related Cluster simply cannot exist without trained health professionals.

Thus, we are excited about recent positive trends in technical education at the Clark County School District (CCSD) and the College of Southern Nevada (CSN) and feel it important to note their progress. In this respect, several items should be noted:²⁷

CSN and CCSD are increasingly coordinating program development and facility use through such avenues as the joint technical skills committee,

Industry involvement with scholarship funds to CSN for CCSD graduates is increasing such as the recent ten-year commitment of SNARCA,

²⁷ A special thanks for assistance (and enthusiasm) is acknowledged to Dr. Michael Spangler, Dean, School of Advanced and Applied Technologies, CSN. . We also acknowledge very helpful conversations with the division of Career and Technical Education, CCSD.

CCSD is broadening their general clusters of career and technical education into the more recognizable concept of magnet schools.

However, in our opinion, the general community recognition of technical career options and progress at CCSD and CSN does not appear to be commensurate with recent actual progress. In a simple sense, their success does not always appear to be reflected in their marketing information.

- The CCSD website has to juggle everything from basic information on all aspects of school life to curriculum and everything in between. Currently, a parent or student who visits the CCSD website can find separate information on magnet schools, the official CCSD clusters of career and technical education, and various press information on A-TECH.

We would recommend that CCSD provide an easier to use integrated “single button” link on technical careers that would make information gathering less daunting.

Bundling their current technical education information into one link could also prove useful to SNRPC members as NDA.

CSN and its schools and divisions do an excellent job of curriculum and course description at the CSN website. However, the website does not always reflect their successful interaction with industry. These successes range from excellent interactions with the photography industry to actually providing facilities for formal GM training programs. It would prove useful to provide a more aggressive website design to market student (and parents) for specific sectors and programs.

- CSN should redesign their website to highlight their growing interaction with industry including joint training programs, close industry support to include increasing scholarship opportunities, and involvement with long run economic growth of community employers.

This enhanced information should also provide a useful tool for NDA and the governmental economic development programs in their representation of our region to potential firm relocations.



**SUMMARY AND POLICY
RECOMMENDATIONS**

Pursuant to a long run strategy for economic development in Southern Nevada, the Southern Nevada Regional Planning Coalition (SNRPC) has identified business cluster development consisting of interrelated companies, industries, and institutions as a key factor in economic development. Across the country it is now widely accepted that economic success depends on the competitiveness of a region's key suppliers, service providers, sources of capital equipment, and even recognition of best-practices of direct competitors. Best practice economic development aims to nurture clusters of linked industries and to exploit synergies between clusters and related institutions (higher education, non-profit research and development and labs, and business development agencies).

Our recent analysis of business clusters for SNRPC identified a set of target industry clusters for Southern Nevada that build upon our existing strengths and suggests new opportunities and emerging technologies. In a restructuring economy such as Southern Nevada—one in which traditional industries remain dominant and knowledge-intensive sectors dependent on strong local linkages are only beginning to attain critical mass, these target business clusters were identified within a value-chain cluster analysis which can contribute insights the typical approach cannot.

The principal purpose of this report is to elaborate a set of strategic policy recommendations consistent with success of targeted cluster development. At the heart of these recommendations is the fundamental concept that improved cooperation among community stakeholders with aligned interests are required to create the innovative environment necessary for success. Recent trends in Southern Nevada have been encouraging, and provide a solid base for future action.

The set of specific strategic recommendations in this report are designed to assist in the success of targeted cluster development. Not surprisingly, there are some overlap and complementarities in the recommendations. However, the set of recommendations for targeted cluster development tend to lie within five areas:

- *Recommendations designed to enhance land availability specifically targeted for economic development*
- *Recommendations on land use related to logistical facilities for regional goods movement to include an inland port*

- *Recommendations for intensified development of current regional best practices*
- *Recommendations concerning workforce housing that augment and concur with SNRPC initiatives*
- *Recommendations for SNRPC to serve as the regional voice for political entities on regional initiatives*

Given the importance of occupational training to successful cluster development, we also provide a closing set of observations related to positive trends within CCSD and CSN:

- *Recommendations for increased information access on current programs.*