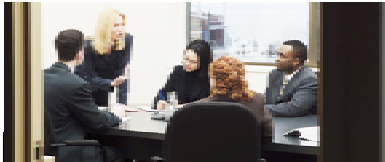


Report:
NORTHERN NEVADA VISIONING DOCUMENT



Presented to:
NORTHERN NEVADA DEVELOPMENT AUTHORITY

REPORT 2: Visioning Document

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Prepared by:



This Visioning Document is the second report in the development of a Strategic Plan for the NorthernNVision project. This report begins with a thorough evaluation of the region's economic development assets and identifies areas of strengths, weaknesses, opportunities, and threats for competing in the global economy. Based on this SWOT analysis, this report then presents an overarching vision for the region, which includes a discussion of the six target industries that should be the focus of future economic development efforts. To conclude, we rate Northern Nevada in a number of characteristics that are shared by globally competitive communities. Excelling in these globally competitive characteristics will bring the region closer to its desired vision.

This is an excellent time to for Northern Nevada to embark on this strategic planning process. The region has experienced strong growth, but that has not come without increased challenges and a reluctance to embrace change. Much of the collective anxiety in each community is a factor of not knowing exactly where the region is headed or how to get there. This report will present an overall economic development vision for the region and the subsequent Strategic Plan (the final report in this project) will outline the steps to be taken. It should be emphasized that this is a regional vision. **The counties that comprise Northern Nevada must always think of themselves as part of a larger region and understand that their actions (or lack thereof) will have an affect on the whole.**

To this end, this report and this NorthernNVision project is conducted with a regional perspective. The closer the counties can move toward working together in a seamless manner, the more prosperous the region will become. A more collaborative effort will begin to breakdown years of mistrust and misunderstandings. Additionally, each county will have a keener understanding of the areas in which it needs improvement and will work together, not in opposition, to make those improvements a reality.

Our Approach to the Visioning Document

The NorthernNVision Visioning Document is comprised of both quantitative and qualitative information. The majority of the quantitative information was compiled in the 1st report (Database of Assets) delivered in this process. This report can be viewed online at the project website, www.NorthernNVision.org. This information was utilized in this report for the selection of target industries, as well as in the assessment of Northern Nevada in the key characteristics shared by globally competitive communities.

The majority of this report, however, is driven by qualitative input. In order to understand the communities and grasp the vision that they have for their future, the AngelouEconomics team conducted numerous focus groups and interviews in the region. Focus groups were conducted in each of the seven counties with local citizens. Focus groups were also conducted with major employers that have local business operations and young professionals living in the region. Finally, numerous one-on-one interviews were conducted with key stakeholders over the course of multiple trips to the region. To summarize, AngelouEconomics met with individuals representing the following groups: **local economic development officials, city and county elected officials and staff, city and county planners and managers, civic leaders, major employers, developers, representatives of both public and private higher education institutions in the area, and many other concerned citizens.**

In addition to the face-to-face public input, **AngelouEconomics also performed online resident and business surveys.** The surveys focused on the perceptions of Northern Nevada area residents, people who work and live in the region, and those who own or operate businesses in the region. The surveys sampled opinions and perceptions from residents, workers, and business managers about growth and development, business climate, infrastructure, livability, education, working environment, and the general economy. **In all, 796 citizens participated in the surveys.** The responses to the survey are presented throughout this report and help drive our discussion. Please visit the project website to view or download the full survey responses.

The Structure of this Report

This report evaluates Northern Nevada's performance in areas that are most critical to global companies. The discussion in this report will provide the necessary framework for the next phase of this strategic planning process in which we recommend improvements that will make the region more attractive to its target industries and propel it to reaching its desired vision. The final Strategic Plan will articulate the path to reach the economic development vision presented in this report and position the community for healthy economic growth.

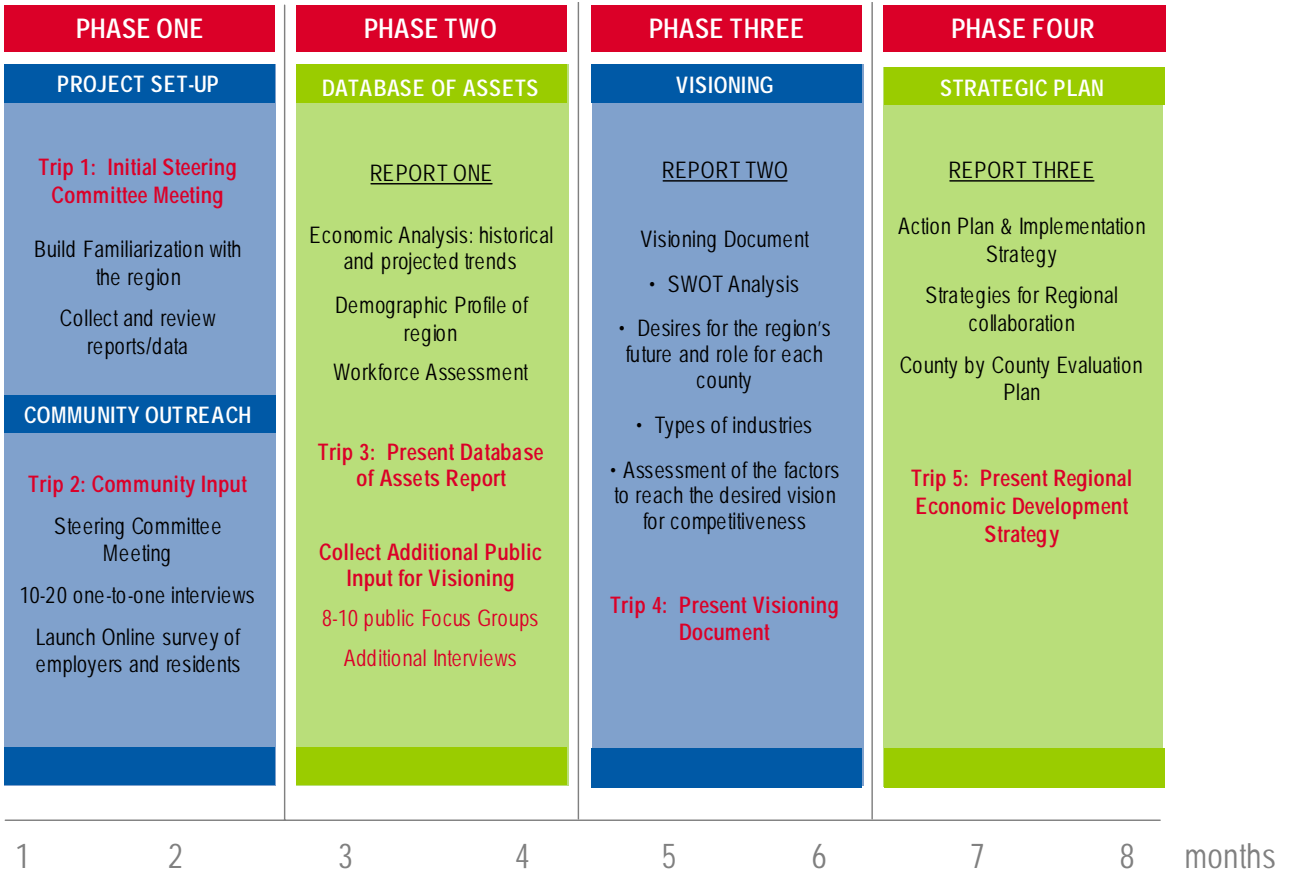
In the first section of the report, we assess the region's strengths, weaknesses, opportunities, and threats. This SWOT analysis is conducted both on a regional level and for each of the seven individual counties. The main purpose of this section is to summarize the current condition and provide a baseline understanding of the assets and challenges facing the region's counties and business community.

In the second section of the report, we outline the vision for Northern Nevada in five areas that are critical for economic development: Workforce & Education, Business Climate & Entrepreneurship, Sites & Infrastructure, Quality of Life, and Economic Development & Marketing. In each of the categories, we present a vision statement for Northern Nevada. In this section, we also present the six target industries that should be the focus of future economic development efforts. The six target industries selected for Northern Nevada are: **Light Advanced Manufacturing, Clean Energy & BioAgriculture, Business & Technology Services, Logistics & Distribution, Tourism & Hospitality, and Regional Health Services.**

In the third section of this report, we evaluate Northern Nevada on the characteristics that are shared by globally competitive communities across the nation and the world. Northern Nevada is rated on a scale of 1 to 5 stars (1=worst, 5=best) for each characteristic. This assessment will allow us to prioritize the recommendations that will be outlined in the Strategic Plan and give the Northern Nevada community a clearly defined and prioritized action plan.

This Visioning Document marks the end of the Phase Three in a four-phase project. The vision, target industries, and assessment developed in this report will be used to develop recommendations in the Strategic Plan. The chart below provides an overview of the strategic plan process for the NorthernNVision project.

NorthernNVision:



The world economy historically was an aggregation of national economies that drove economic growth from within their individual domains. Today, the world economy is driven by the actions of corporations from across the globe. Companies invest in dozens of countries, and abandon their home base if necessary. Communities are no longer competing domestically for investment, but internationally.

Geography is no longer a limitation because of the advent of advanced transportation, the Internet, global adoption of the personal computer, and advances in telecommunications. These developments allow goods and services to be sent virtually anywhere in the world cost-effectively and nearly instantaneously. New technology has thus enabled workers from developing countries to compete efficiently with Americans for a wider variety of jobs, including those in the service sector.

Additionally, half of the world's population, living in China, India, Eastern Europe, and Russia, has been thrust into both the free enterprise system and the global economy in a span of only 15 years. These countries have always had excellent educational systems and skilled workers, but they were isolated from the rest of the world. Now the 3 billion citizens in these countries are competing with America for large-scale industrial development and service-sector employment.

This means that each community engaged in recruiting and retaining today's companies must learn how to compete on the global stage. Each must offer a differentiating set of characteristics that set it apart and above its competitors. In her book *The Nature of Economies*, Jane Jacobs refers to economic development as "differentiation emerging from generality." Simply put, economic development occurs when a business or a location possesses unique characteristics that allow it to stand out from the alternative choices.

Today, economic development is a global competition and only globally competitive communities will move forward.

Guiding Principle of Globally Competitive Communities:

"In this new economy, communities must compete, not with other communities in their region or country, but communities across the world.

A globally competitive community is one that is focused on innovation and the sustainability of economic growth.

This requires the community to recognize the linkages between economic growth, human needs and desires, and resource limitations."

Competitiveness places a community on a foundation for economic prosperity. The Council on Competitiveness has recognized that innovation is the primary driver in competitiveness:



Source: Council on Competitiveness

This model indicates that prosperity is driven from within – created, not inherited. Prosperity is also not dependent on a type of industry, but on how well a community innovates and competes within any industry.

What does this mean for Northern Nevada?

Being globally competitive encompasses much more than jobs and job growth. It captures the notion that **Northern Nevada must be a forward-thinking community that embraces and enhances its unique characteristics**. The vision is that of a community that people want to live in and raise their families and an economic engine that can sustain opportunities for their children, grandchildren, and great-grandchildren.

The Vision for Northern Nevada

The vision that AngelouEconomics has developed for the Northern Nevada region is broken down into 5 areas that are the most important for strong economic development growth. In each of these categories, we present an overarching vision that should guide the efforts of government, economic development, and private sector leaders throughout the 7-County region. These visions are presented in the second section of this report.

- **Business Climate and Entrepreneurship**, which includes factors such as location, business costs, regulatory environment, and access to capital
- **Workforce and Education**, which includes the overall quality and skills of the workforce, and the education and training system in place to improve their skills
- **Sites and Infrastructure**, which includes the availability of land and buildings compatible with an industry's needs, reliable transportation systems, and high quality water, wastewater and power systems
- **Quality of Life**, the tangible and intangible qualities that attract and keep people in a community
- **Economic Development and Marketing**, which examines both the economic development efforts a community undertakes and the overall conditions that help or hinder economic development

Characteristics of a Globally Competitive Community

In order to make this vision tangible and define it further, **AngelouEconomics has identified 22 characteristics of a globally competitive community**. For each of these factors, we provide an assessment of the performance of Northern Nevada that is based on our expertise as site selectors coupled with the data analysis conducted in the first report (Report 1: Database of Assets) and the public input we

received through online surveys, focus groups, and one-on-one interviews conducted in the region. This assessment can be found in the third and final section of this report.

Business Climate and Entrepreneurship

A globally competitive community:

1. Maintains a low cost business environment, or tempers higher costs with incentives
2. Encourages entrepreneurial and small business development through incubators, access to capital, and incentives
3. Promotes integrated clusters of “knowledge-based” industries that capitalize on the region’s assets
4. Promotes business friendly regulations
5. Supports research and development by strengthening ties between researchers and the private sector

Workforce and Education

A globally competitive community:

6. Attracts and retains a diverse workforce that is adequately trained for the region’s industry clusters
7. Attracts and retains a young professional workforce that will form the foundation of future economic and population growth
8. Develops an educational system that adequately prepares students for the workforce
9. Develops an effective workforce development system that has strong linkages and participation with public schools, community colleges, and universities

Sites and Infrastructure

A globally competitive community:

10. Maintains and upgrades transportation infrastructure, including roads, air, rail, and transit systems
11. Ensures adequate utility capacity for economic development
12. Develops strong telecommunications infrastructure
13. Proactively markets supply of “ready to build” sites and available properties

Quality of Life

A globally competitive community:

14. Ensures attainable cost of living and adequate and diverse housing options for residents and target workforce
15. Invests in maintaining and revitalizing core city centers
16. Promotes recreational and natural assets in the community
17. Provides retail choice for residents
18. Provides an abundance of arts and cultural opportunities for residents
19. Promotes a strong sense of community pride

Economic Development and Marketing

A globally competitive community:

20. Builds collaborative support for sustainable economic growth
21. Develops effective tools to retain existing companies and encourages economic development from within the community
22. Develops a strong brand image that differentiates itself from competitors

Certainly, there is no one community that can claim to have mastered all of these characteristics. In fact, focusing on several may actually exclude others. For example, focusing on a low cost tax environment may compromise resources available for arts, recreation, and education. Each characteristic is developed in detail in the final section of this report, along with an assessment of how Northern Nevada currently stacks up.

The Northern Nevada SWOT analysis outlines the strengths, weaknesses, opportunities, and threats that exist across the 7-County region, as well as those unique to each county. This analysis provides the foundation for the remaining portion of this Visioning Report and will be used to develop a vision for the region, identify the key targeted industries that the region can support, and assess the region's current performance in the factors that are critical to becoming a globally competitive community.

Within the section, AngelouEconomics performed a SWOT analysis that identified Northern Nevada's strengths, weaknesses, opportunities, and threats for a number of areas. For the 7-County region, we also identified ten key critical issues that will have the greatest impact on the region's ability to develop into a globally competitive community. In addition to the SWOT analysis conducted on a regional level, we also performed a county-by-county specific SWOT analysis to assess the unique attributes of each of the seven counties.

The results of this analysis will allow us to identify areas in which each county and the region are well positioned for competition and areas needing improvement. For those areas needing improvements, AE will provide recommendations within the Phase Four Strategic Plan.

In the meantime, this comprehensive assessment of strengths, weaknesses, opportunities, and threats lays the foundation for the subsequent sections of this report in which we identify the vision, target industries, and rate the current effectiveness of the region in a range of factors that we consider critical to achieving the goal of becoming a globally competitive community.

The SWOT analysis was conducted based on numerous hours of research, analysis of the NorthernNVision online surveys that were completed by 796 residents and business leaders, public input received during focus groups and interviews, and AngelouEconomics' expertise as economic development site selectors and experience gained by working with nearly 100 past communities.

Seven-County Northern Nevada Region:

THE SEVEN COUNTY REGION

STRENGTHS

- A beautiful, scenic environment and an abundance of recreational opportunities.
- Strong business benefits including attractive tax benefits and low operational costs compared to California.
- WNCC is a strong asset. It is a very proactive community college and desires to have a ubiquitous educational presence in the entire region.
- A growing population bolstered by constant in-migration of new residents.
- Strong sense of community pride.
- Attractive communities to raise a family with low crime rates.
- Good opportunities to start a business for aggressive and hungry entrepreneurs – the competition is not as fierce as in large metropolitan areas.
- Easy access to government officials and elected leaders.

WEAKNESSES

- Limited cooperation between municipal and county governments, and economic development leaders.
- Low educational attainment and a nagging perception that the region doesn't value education to the extent it should.
- Natural resource limitations, namely water availability, will impact the type of development that occurs.
- Low unemployment levels and a tight labor supply is making it difficult for employers to find skilled, capable workers.
- Low wage levels are making the region increasingly unaffordable, especially for young professionals and new families starting out.
- Low awareness of the positive attributes of the region to outside audiences – i.e. businesses and individuals located out of the state.
- No formal entrepreneurship or business networks serving the seven counties.

Seven-County Northern Nevada Region (Continued):

THE SEVEN COUNTY REGION

OPPORTUNITIES

- Promote the attributes and amenities in each of the seven counties for tourism.
- Encourage development of the V&T Railroad to provide a boost to tourism efforts.
- Leverage the ideas and energy of new transplants moving from CA or other places that can apply their own first-hand experience and ideas to shape sustainable growth.
- The large and growing 50+ age group should be viewed as an untapped asset – this group doesn't necessarily want to simply retire and has a strong work ethic and experience.
- Enhance internal communication between the 7 counties and play up each county's unique strengths and attributes in a cohesive marketing message.
- Promote the importance of education at all levels and enhance the education that is provided throughout the seven counties (e.g. world class K-12 programs, enhanced community college presence, increased 4-year degree presence).
- Incentivize the development of a diversified mix of housing, including condos, town homes, and apartments for workers.

THREATS

- The "aging" of the 7-County region could have negative consequences. There is a need to attract and retain young professionals to maintain a spirit of vitality and generate economic opportunities for future generations.
- By not empowering young professionals they have little reason to stay.
- Limited coordination between county governments has caused the lack of a unified direction for the region's economic future.
- There are pockets of citizens throughout the region that are opposed to change.
- There is a sense that infrastructure planning is not proactively keeping pace with growth.
- Lack of region-wide design standards, attractive signage, etc. is hurting the aesthetic appeal of the region.
- Growing inter-county conflicts, namely Churchill Co. vs. Lyon Co. and Carson City vs. Douglas Co. are hampering regionalism.

Critical Issues Facing Northern Nevada

To summarize the SWOT analysis for the 7-County region, AngelouEconomics has identified the following ten critical issues facing the region. We will provide recommendations for mitigating these issues in the final report to be delivered in the NorthernNVision project.

1. **A regional approach and more collaboration across governmental lines must be developed and encouraged.**
2. **The region must place a greater emphasis on the value of education and improve the educational resources and support structures across the region. This should extend from K-12, to community colleges, to developing a stronger 4-year degree presence in the region.**
3. **Strong business-to-business relationships are lacking across the 7-County region. Rather than view each other as intense competitors, business owners need to communicate and collaborate in order to increase the prosperity of all.**
4. **The young professional community needs to be maintained and expanded in order to enhance the region's vitality and ensure future economic growth. Involve this key group in decision-making and leadership and empower them to be involved in the community.**
5. **The region's wage levels are below national averages and are not keeping pace with rising cost of living and housing. The lack of affordable housing and skyrocketing housing costs are exacerbating this issue.**
6. **Due to the lack of large local industry clusters, much of the region's future growth will need to be driven by small business creation and entrepreneurship.**
7. **Many of the counties in the region have a large reliance on sales tax revenues, which makes attracting low wage retail establishments the highest economic development priority.**
8. **The region's limited water availability will affect the types of industries the region can attract and the nature of development that will occur.**
9. **Northern Nevada's economy lacks diversity and is highly dependent on new business from California, which creates a vulnerability to economic shocks.**
10. **Need to emphasize the importance of "place" and promote the development of attractive downtown centers, clean communities, clear design standards, beautification projects, and desirable retail and entertainment amenities that are in keeping with the uniqueness of each community.**

In the following pages, we outline the unique Strengths, Weaknesses, Opportunities, and Threats (SWOT) for each of the seven counties in the region.

Carson City SWOT:

CARSON CITY	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • State government presence provides a stable employment environment. • Very proactive in land use and comprehensive planning. • Combined city and county government makes comprehensive planning more efficient. • The presence of a strong regional hospital. • Good Arts/Culture amenities for an area of its size. • Good educational assets with the home of WNCC's main campus. • Close geographic proximity to Reno/Sparks metro, and Lake Tahoe. 	<ul style="list-style-type: none"> • Lack of diversity in housing options, limited high-density housing. • Lack of design standards along main arterial roads hurt the look and "curb appeal" of the city. • Difficult to find skilled, professional workers because much of the capable workforce pool desires to work for state government.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Strong potential to be regional retail hub because of central location. • Excellent potential for downtown revitalization to become a central entertainment hub for families and young professionals. • Potential for increased business growth in white collar, professional, above average wage paying industries. • Tourism will receive a boost due to V&T Railroad project & Freeway 395. 	<ul style="list-style-type: none"> • Limited land availability, so future growth must be carefully planned. • Rising cost of housing is making the county unaffordable for working population. • Local government's high reliance on sales tax revenue is leading to an uncooperative relationship with neighboring counties. • Long time residents do not necessarily see the tremendous potential that Carson City has to direct its growth and to embrace positive change.

Churchill County SWOT:

CHURCHILL COUNTY	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Abundant land and good water resources. • Excellent outdoor recreation opportunities: hunting, fishing, wildlife viewing, etc. • Strong Arts & Culture amenities, with Native American artists and Churchill Arts Council • Home to Naval Air Station Fallon. • Home to Banner Churchill Community Hospital. • Close to Reno/Sparks metro, yet maintains its rural character. • Lowest unemployment rates in region. 	<ul style="list-style-type: none"> • Perception that some residents are reluctant to embrace change. • Community lacks aesthetic appeal, has no consistent design standards, and limited beautification projects underway. • Low educational attainment (those with bachelor's degrees or higher). • Growing cost of land and housing prices from increased residential development.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Good potential to grow clean energy industry, esp. geothermal and wind. • To Increase the level of cooperation between city and county governments, as well as with Native American tribes and NAS Fallon. • Enhance current downtown redevelopment efforts to improve attractiveness for families and young pros. Look into providing incentives for desirable development. • Earmark locations on U.S. 50 corridor for targeted industry growth. • Continue work with UNR and USDA agricultural researchers to shift to higher dollar, higher yield crops. • Expand the size of the WNCC campus in Fallon. 	<ul style="list-style-type: none"> • Need to diversify the economy to combat declining agriculture industry and to provide employment opportunities for young residents. • City and County governments do not work as closely as they should in planning issues. • Lack of public support for school bond passage is adversely affecting K-12 education. • Resistance to change has limited the development of a cohesive and mutually agreed upon vision for economic development and may be hurting proactive planning efforts.

Douglas County SWOT:

DOUGLAS COUNTY	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Good mix of available land. • Good water resources. • Close geographic proximity to Reno/Sparks metro, Lake Tahoe. • High income levels for residents. • Highest educational attainment levels in the 7-County region. • Scenic environment with tremendous outdoor recreational activities. 	<ul style="list-style-type: none"> • Poor availability of employment opportunities and diversity of job types for local workforce. • Land and housing prices are the highest in Northern Nevada. • Need to continue to bolster the local tax base.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Strong potential to grow local tourism industry, especially in adventure & outdoor recreation. • Good potential to grow clean energy industry, especially geothermal and wind energy. • To attract desirable target industry companies to industrial parks around the airport. • Tap into the large and growing base of retired executives for mentoring young entrepreneurs and funding new business creation. • Revitalization of downtown areas (Minden, Gardnerville) to support vibrant mixed-use and to become a destination for entertainment & boutique shopping. 	<ul style="list-style-type: none"> • Very limited diversity in housing options. Only high-end housing development is encouraged, which doesn't give many options for local workforce. • Need for increased collaboration between local government entities. • Becoming a retirement community for 2nd homeowners. • Need to sustain rural character while providing economic opportunities for residents. • Local government's high reliance on sales tax revenue is leading to an uncooperative relationship with neighboring counties.

Lyon County SWOT:

LYON COUNTY	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Booming population growth along the US 50 corridor - 2nd fastest growing county in Nevada. • Good access to US 50. • Good supply of affordable housing for workforce. • Strong growth in the labor force. • County has the most diversity with a mix of rural, suburban, agricultural, and ranch lands. 	<ul style="list-style-type: none"> • Limited water availability. • Unemployment rate is above regional average. • Low educational attainment levels. • Limited services and amenities for residents – no hospital, public transportation, limited supermarkets, daycare, etc. • Limited educational and recreational opportunities for the county's youth.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Encourage business growth to counterbalance growing residential development – earmark areas in the Co. to be set aside for business and industrial parks. • Governmental bodies (Dayton, Fernley, Yerington, Silver Springs, Smith Valley, Lyon County) can collaborate more and come together under a unified vision. • Enhance the WNCC presence and course offerings. • Create a mindset of entrepreneurship and resources for small businesses. • Reach out to the Native American tribes to work together with city/county government to enhance economic development opportunities. • Place an emphasis on revitalizing city centers to be more attractive for retail, dining, and entertainment development. 	<ul style="list-style-type: none"> • Rapid growth is putting a strain on local infrastructure: roads, sewer, water availability • Economic growth is largely dependent on local housing construction – economy is not as diversified as it should be. • There is a perception that education is not highly valued by residents in the county. • Population projected to grow twice as fast as the region and four times faster than the U.S., which could cause increased strains on local governments. • Risk of becoming bedroom community to employment centers in bordering counties.

Mineral County SWOT:

MINERAL COUNTY	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Low cost location – low land, and labor costs. • Strong sense of community pride, patriotic and friendly people, and a “can do” attitude. • Good road and rail transportation access to California market. • Home to Hawthorne Army Ammunition Depot, which is a strong asset for the community. • Beautiful natural and scenic environment with Walker Lake and the mountains as backdrop. • Ample space for industrial development in industrial park or by cooperating with the Army Depot. • Community leaders are forward thinking with progressive economic development desires. • Strong telecommunications infrastructure for a rural community driven largely by the Army Depot. 	<ul style="list-style-type: none"> • Lowest percentage of population of young professionals (age 25-44) in the region. • Declining labor force and continued forecasted population declines. • Highest unemployment rates in the region. • Lowest income levels and wage levels in the region. • Very low percentage of residents with at least a bachelor’s degree and a high percentage of individuals without a high school diploma. • K-12 schools are perceived as being of poor quality. • Limited supply of quality housing. • Visual appeal of the community is lacking – need to enforce ordinances to maintain community “cleanliness”.

Mineral County SWOT (Continued):

MINERAL COUNTY	
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Good opportunity to grow logistics industry to serve California market. • Airport is underutilized and could be a good asset for expanding the logistics industry. • Potential exists to work more closely with the Army Depot on mutual economic development projects. Under a new “arms” program, the base will be able to lease empty spaces and buildings to commercial entities. • Develop a beautification committee to continue efforts underway to increase the attractiveness of the community. • Emphasize a recommitment to high quality K-12 education. Developing a strong school system with an excellent reputation should be a primary goal for the community. • Good geothermal reserves and capability to grow geothermal energy production. • Develop increased outdoor and recreational tourism related to Walker Lake. 	<ul style="list-style-type: none"> • Continued threat of losing the Army Depot in future rounds of BRAC. • Low percentage of young professionals (age 25-44) and inability to attract and retain this group adversely affects supply and quality of labor force pool and hurts future economic growth. • The declining quality of the K-12 system has a negative impact on the ability of the community to attract young families with school age children. • Community needs to diversify its economic base to ensure that it is sheltered from a potential future closure of the Army Depot.

Pershing County SWOT:

PERSHING COUNTY	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Cost of housing still remains comparatively affordable. • Low business costs – land, labor, and real estate costs are an advantage for attracting new businesses. • Strong K-12 school system (the school district runs its own TV station). • Excellent sense of community pride. • Unique cultural qualities and history with rural country feel. • Presence of highway (proximity to I-80) and rail transportation access. • Abundant land provides “room to grow”. 	<ul style="list-style-type: none"> • Lowest percentage of bachelor’s degree holders and the highest percentage of individuals without a high school diploma (note: this is adversely affected by the presence of the prison in Pershing County). • Decline in labor force since 2000, and projected population decline by 5% through 2010. • Limited telecom infrastructure. • Limited community college presence. • Consistent out-migration of young people.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Experiencing strong industry growth in Health Services and Information Technology Services, which can be leveraged for future growth. • Revitalization of downtown Lovelock to include entertainment options for families and young people and residential opportunities downtown. • Encourage entrepreneurs and small business growth – give this as much attention as attracting large employers. • Expand WNCC’s presence to enhance continuing education opportunities and workforce training. • Enhance the telecom infrastructure (high speed Internet, wireless comm.). 	<ul style="list-style-type: none"> • Highly reliant on natural resource and mining industries, which are declining nationally. • Perception that presence of the prison gives the community an unjustified negative image. • Public services (i.e. fire, police, emergency medical) are being stretched too thin. • Concern that bordering counties are threatening Pershing’s water supply availability.

Storey County SWOT:

STOREY COUNTY	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> •Tahoe Reno Industrial Center (TRIC) provides ample growth opportunity for business and industry. •Good income growth and low unemployment rate over the past 5 years. •Proximity to Reno/Sparks metro area increases business growth prospects. •Positive and steady population growth (not uncontrollable pop. expansion). •Strong cultural and historical identity with Virginia City. •Well diversified balance of industries including mfg, tourism and hospitality, trade, transportation, and utilities. 	<ul style="list-style-type: none"> •Limited water availability. •Home to an older population with below average percentage of early stage workforce in the 25-44 age range. •Below average wages are making it difficult for workers to afford higher costs of living. •The county lacks a hospital or sufficient health services. •Infrastructure is not necessarily in place to handle potential future residential growth.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> •Focus on high-end niche manufacturing sectors for future economic growth (Storey Co. has seen a 71% increase in mfg. employment in the past year alone). •Construct a road from Virginia City to TRIC so that workers can live in the same county in which they work. •Leverage the independent, artistic spirit of the community to develop business growth in arts/culture/tourism. •V&T railroad project will provide a big boost to the local tourism economy. •Develop a premier public school system and add new AP curriculum and athletic fields for students. 	<ul style="list-style-type: none"> •Need to increase communication within communities – there is an “old” vs. “new” friction in the Highlands. •Lack of affordable housing putting a strain on the local workforce; many that work in Storey Co. have to find affordable housing in bordering counties. •Inability to attract and retain young professionals threaten to cause a workforce shortage once baby boomers retire.

The SWOT analysis above lays the foundation for developing the vision of the Northern Nevada region as well as identifying the key role that each county should play in achieving that vision. In order for the 7-County region to collectively benefit, each county must be able to picture how it fits in with the larger economic landscape and understand that its actions contribute both positively and negatively to the good of the region.

Economic development requires that a region strive to excel in five key categories: **(1) Workforce & Education, (2) Business Climate & Entrepreneurship, (3) Sites & Infrastructure, (4) Quality of Life, and (5) Economic Development & Marketing.** With this as background, the vision that AngelouEconomics has crafted for Northern Nevada is made up of individual visions that the region should strive for in each of these areas. In this section, we present these visions for the region.

In addition, it is important to realize that the region's economic development future will be closely tied to the types of employment opportunities that are available for its citizens. To this end, in this section we will also present the six key target industries that should be the focus of economic development efforts in each of the seven counties. These industries were chosen based on data analysis and AngelouEconomics' expertise as site selectors, coupled with an understanding of the assets present in the region to support each industry's growth. Finally, the industries were ultimately screened based on community input in which residents stated the desired industries they would like to see develop in Northern Nevada.

We have also provided guidance regarding which counties are most suited for each particular industry. Not all industries in the final group will locate in every county. Some industries are better positioned for certain counties and are more aligned with the desired development voiced by residents in those counties. Together, though, this list of industries will provide a diverse economic base for the entire region and ample employment opportunities for its current and future residents.

Northern Nevada's Vision from its own citizens

Before AngelouEconomics presents its vision for the region, a good launching point into that discussion is to reveal what citizens revealed regarding their desires for Northern Nevada. These findings were gleaned from the numerous focus groups and interviews conducted with stakeholders across the 7-County region. At the beginning of the planning process, leaders from throughout the 7-County region were asked what they wished for Northern Nevada's future. Here are some of the responses that were given:

- *Northern Nevada will have a prosperous economy that generates opportunity for its citizens, while maintaining its western culture and pioneer heritage.*
- *Northern Nevada will be a place where education, from K-12 to higher education, is highly valued and supported by exceptional public schools and colleges.*
- *Northern Nevada will be a region that is rich in diversity, with a diversity of people, businesses, industries, and employment options.*

-
- *Northern Nevada will maintain its sustainable rural communities.*
 - *Northern Nevada will strive to maintain its vitality by retaining and attracting young people and by providing diverse entertainment and cultural activities for all segments of the population.*

AngelouEconomics' Vision for Northern Nevada

The visions for the future voiced by the region's residents are **progressive, forward looking and convey the balance that the region wishes for its future development.** AngelouEconomics has attempted to capture the spirit and content of these visions by repositioning them to address the five key areas that we have determined to be most critical to economic development success.

Creating a vision for the region in each of these five areas has numerous benefits. First, it allows key stakeholder groups to focus efforts in a more effective way (e.g. Workforce development providers and community colleges focus on improving the skills of the workforce and the educational system). Second, by segmenting the vision in this way, each county can individually look at its performance in each area and identify those aspects in which it already excels and those that are in need of improvement. Finally, it allows the region to develop a more robust vision for the future that is tied very closely to those aspects that are most critical for economic development.

Vision for Business Climate & Entrepreneurship:

Northern Nevada will identify and target a select group of growing, high wage paying industries that will provide diverse employment opportunities and increased prosperity for all citizens in the 7-county region.

These industries will develop by attracting new businesses based on Northern Nevada's strong business assets, by fostering an environment in which local entrepreneurship thrives, and by ensuring that the region's existing businesses are succeeding and expanding their local operations.

Vision for Workforce & Education:

Northern Nevada will develop a well-skilled workforce that will meet the needs of local employers as well as the requirements of the region's future target industry companies.

In order to build and maintain this workforce, the 7-County region will place higher value on education and will develop a world-class educational system, which spans from K-12 to the community college system to an increased 4-year degree presence.

Vision for Sites & Infrastructure:

Northern Nevada will work in a cooperative manner that spans county lines to ensure proper land use planning takes place and that suitable infrastructure and sites exist for future businesses in the region's target industries.

Working together, the region will ensure that the requirements of each county are properly forecasted and met including water resource needs, road and highway transportation capacity, and utility and telecommunications networks.

Vision for Quality of Life:

Northern Nevada's growth will always be tempered with the unwavering commitment to maintaining the region's top asset – its enviable quality of life. The scenic environment and outdoor recreational opportunities will be preserved, and each of the seven counties will develop enhanced arts, culture, and entertainment amenities desired by its citizens.

Coupled with enhancing these attributes, the region must work diligently to ensure that local citizens can afford to both live and work in the community they choose.

Vision for Economic Development & Marketing:

Northern Nevada's economic development efforts will occur on a regional scale with an understanding that the economic prosperity of the entire region will benefit each of the individual counties. City and county governments, as well as regional economic development leaders will strive to work together under a unified approach to economic development.

To support this, the region will understand and market its overarching assets while emphasizing the unique strengths of each individual county and community.

These visions are purposely drafted to be lofty and to be directed at the entire 7-County region. In the beginning of this report, we discussed the fact that the competitive landscape in economic development is now measured on a global basis. Because competitors now exist across the globe, it will be made even more difficult for counties if they are also competing fiercely between each other on the home front. These collections of "visions" convey the critical importance for each of the seven counties to operate as a region. Effective economic development cannot occur if a collaborative, regional approach is not undertaken.

In the final section of this report, we will outline the critical factors that must be in place in order for Northern Nevada to reach its desired vision for the future and we will provide an assessment of where the region currently rates in these factors. **It will be the responsibility of each county to understand where it can improve and to commit itself to taking the appropriate actions.**

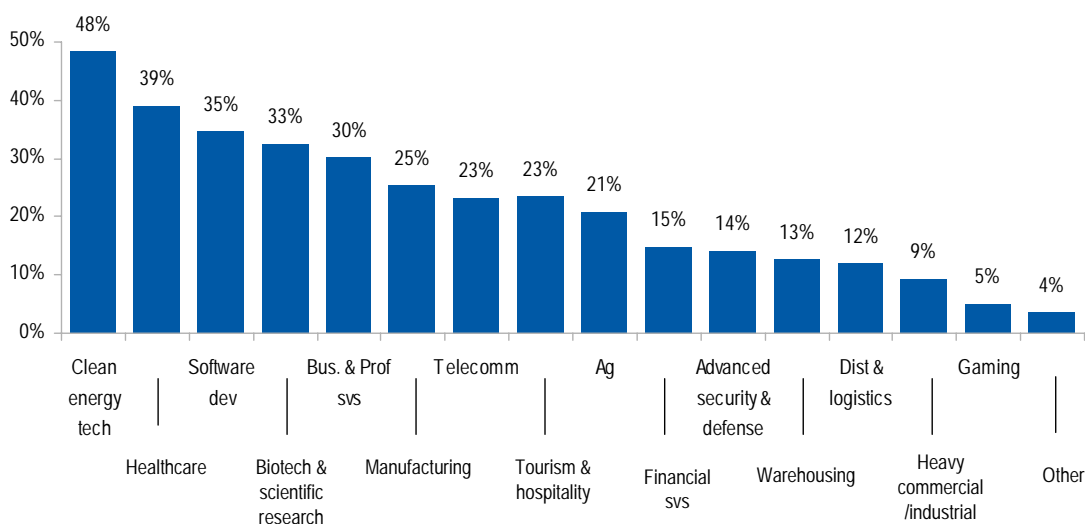
Northern Nevada's Target Industries

In order to achieve the vision for economic prosperity, the region must focus its efforts on a select group of target industries. By targeting, limited resources can be used more efficiently to attract the exact type of industries desired by each county in the region.

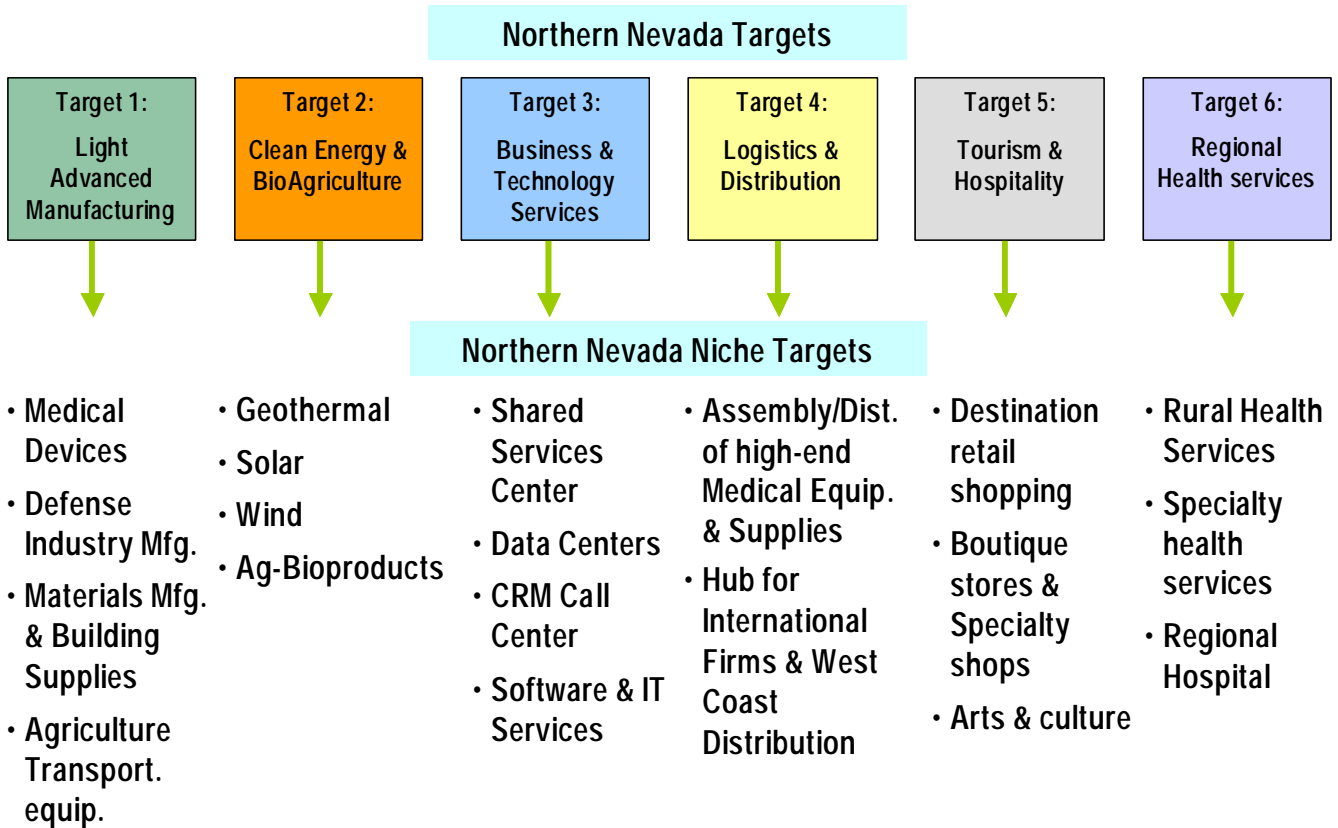
AngelouEconomics has identified six target industries based on a combination of research and an understanding of the types of businesses that each community desires. Please refer to the Appendix section of this report for a full discussion and analysis of the target industry selection process and detailed profiles of each of the final six target industries.

An understanding of the types of target industries the community desires was developed based on input from focus groups and interviewees as well as respondents to the NorthernNVision online survey. The chart below indicates the top industries that Northern Nevadans would like to see develop.

What Industries Would You Like to See Expand or Locate in Northern Nevada?



Based on this input from the community coupled with AngelouEconomics research and expertise as site selectors, we recommend the following six target industries and niche targets for Northern Nevada:



What Will These Targets Look Like?

These types of development will be high quality and of varying footprints. The chart below describes the type of real estate development that will be required by each industry and the projected development timeline for the industry:

Northern Nevada Target Recommendations

	Target is		Real Estate Type					
	Near to Mid-term	Long-term	Small Office	Large Office / Town Center	Flex Industrial / R&D	Large Industrial	Distribution	Agricultural land
Light Advanced Manufacturing	✓				X	X	X	
Clean Energy & BioAgriculture		✓	X		X	X		X
Business & Technology Services	✓		X	X				
Logistics & Distribution	✓				X	X	X	
Tourism & Hospitality	✓		X	X				
Regional Health Services		✓	X	X				

Where will these industries locate?

Not every county is suitable for each final industry. The table below depicts the natural location for each of the six target industries.

	Carson City	Churchill	Douglas	Lyon	Mineral	Pershing	Storey
Light Advanced Manufacturing	X	X	X	X	X	X	X
Clean Energy & BioAgriculture		X	X	X	X	X	
Business & Tech. Services	X	X	X			X	
Logistics & Distribution				X	X	X	X
Tourism & Hospitality	X	X	X	X	X	X	X
Regional Health Services	X	X		X			X

While each of the six target industries could potentially locate in any of the 7 counties, the table above demonstrates where AngelouEconomics believes the most likely locations will be for these industries. This determination was driven by two factors:

- ✓ The assets in each county to support the industry, and
- ✓ The desires of the residents in those counties for the types of businesses they'd like to see in the future

Based on the assets and desires of the overall region, we see a potential fit for Light Advanced Manufacturing and Tourism in all of the seven counties. Locations for the remaining industries were chosen based on a combination of strong local assets and the desire of each county, which was voiced in focus groups and interviews in the region.

Please refer to the [Appendix section of this report](#) for a discussion of the Target Industry Selection process as well as a detailed profile on each of the final six target industries.

In order for Northern Nevada to achieve the vision stated above, the region must strive to improve itself in 22 critical factors shared by globally competitive communities. AE has assessed and rated the region's performance in each of these factors based on research, focus group and interview input, and the responses of the nearly 800 residents and business owners that took the online NorthernNVision surveys. Each of these factors is critical for Northern Nevada in reaching its vision for economic development prosperity.

We have ranked the region's performance in each factor on a scale of 1 to 5 (1=worst, 5=best) based on quantitative and qualitative information as well as our experience in working with numerous other communities.

Business Climate and Entrepreneurship

Business climate is the capacity of the community to support business expansion and development opportunities, as well as to provide an environment in which entrepreneurship can flourish.

With the SWOT analysis in mind, AE has analyzed the gaps that exist in Northern Nevada's business climate and entrepreneurship efforts across the applicable characteristics of a globally competitive community.

FACTOR 1:

Maintains low cost business environment, or tempers higher costs with incentives

Northern Nevada



Business costs, including taxes, labor, occupancy, utilities, and transportation, are scrutinized by site selectors as a critical location criteria. The major tax categories which can make a difference between the selection of one location and another for a particular corporate facility are: property taxes, payroll taxes, corporate income taxes, and government mandated fringe benefit programs such as unemployment insurance and workers compensation taxes. These taxes can vary substantially from one locale to another.

Occupancy costs can also vary dramatically from one location to another depending upon the relative value of real estate, the local business cycle, vacancy rates, available buildings, and the competitiveness of the local real estate market. Areas with a surplus of real estate often see a decline in the relative cost of occupancy as landlords lower prices to entice new tenants.

In order to reduce start-up and operating costs, companies seek assistance through the use of incentives. Neal Wade, president & CEO of the Alabama's Economic Development Partnership says, "There are

numerous factors that come into play in a site selection decision-work force, education and training, infrastructure, cost of operating, access to markets, and business climate are among the most critical considerations. Ultimately, however, it comes down to whether a company is convinced that it can operate more successfully and profitably in your state than any other place.”

Assessment of Northern Nevada

Low cost business climate is generally a strength for the Northern Nevada area. The state of Nevada has been widely praised for its low business costs and Northern Nevada is no exception. In addition, the region has comparatively low wage rates in a diverse section of employment categories. The average Northern Nevada wage is \$32,069, which is 18% below the national average.

Although taxes and labor costs are low, real estate and land costs are relatively high in many of the region's counties. The highest cost counties from a real estate and land cost perspective are Carson City and Douglas County. In order to temper these higher costs, incentives are available from the state that provide partial sales and use tax abatements, modified business tax abatements, and employee training grants.

FACTOR 2:

Encourages entrepreneurial and small business development through incubators, access to capital, and incentives

Northern Nevada



An important way to boost local wage levels and to provide unique opportunities is by empowering area residents to be more entrepreneurially driven. **It is estimated that as much as 70% of future business growth and job development will come from small business ventures.** A globally competitive community possesses the assets to help nurture and develop an entrepreneurial climate. Strong job growth is a key indicator of entrepreneurial success because job growth means that existing companies have expanded, created new demand, and increased disposable incomes.

An important asset is entrepreneurship networks that provide informal ways for local entrepreneurs to meet, discuss issues, and brainstorm solutions. Often, these groups form around specific industries and meet periodically.

As the entrepreneurship climate increases, the region can begin to attract equity capital to area start-ups. Access to early stage equity capital is critical for many businesses. As the local entrepreneurial climate grows, more attention will be paid to the region. First, by angel investors and then by venture capital companies as the region begins to spawn successful new ventures.

Assessment of Northern Nevada

Northern Nevada is served by the Nevada Microenterprise Initiative, which offers programs in Carson City and Fallon. In addition, the Center for Entrepreneurship and Technology has a presence in the Northern Nevada region.

Although the presence of these providers is a good start, **much more can be done in Northern Nevada to foster an entrepreneurial climate.** Equity financing (in the form of venture capital funding or angel investing) within the region is virtually nonexistent. The region should explore the possibility of establishing an **angel investor network** that taps into many of the wealthy retired individuals that may still desire to be involved in the local business landscape, both with the investment of their capital and experience and know-how. In addition, the region lacks any **business incubators** to provide guidance and support to promising young companies and would-be entrepreneurs with promising business plans. Finally, the region lacks strong **small business networks**, which have the capacity to be fostered and promoted by the local counties and economic development groups.

FACTOR 3:

Promotes integrated clusters of “knowledge-based” industries that capitalize on the region’s assets and provide better job opportunities for residents

Northern Nevada



Clusters are highly integrated groups of businesses with strong vertical and horizontal linkages. They categorize businesses by their final product and how these products are related to each other and integrated along the vertical supply chain.

Historically, clusters agglomerated in specific regions of the U.S. due to natural advantages (e.g. natural resources and climate), cost factors (e.g. distance to market, labor costs), and existing transportation infrastructure. **Today, companies are increasingly drawn to regions that can supply the unique workforce they need.** Universities and public sector institutions such as education and training facilities are now major drivers of regional economies. Clusters often mature when businesses expand their relationships with existing supplier firms in a region. As the clusters grow, additional supplier firms are attracted to the region, eventually creating a well-diversified “critical mass” of production, labor, and information.

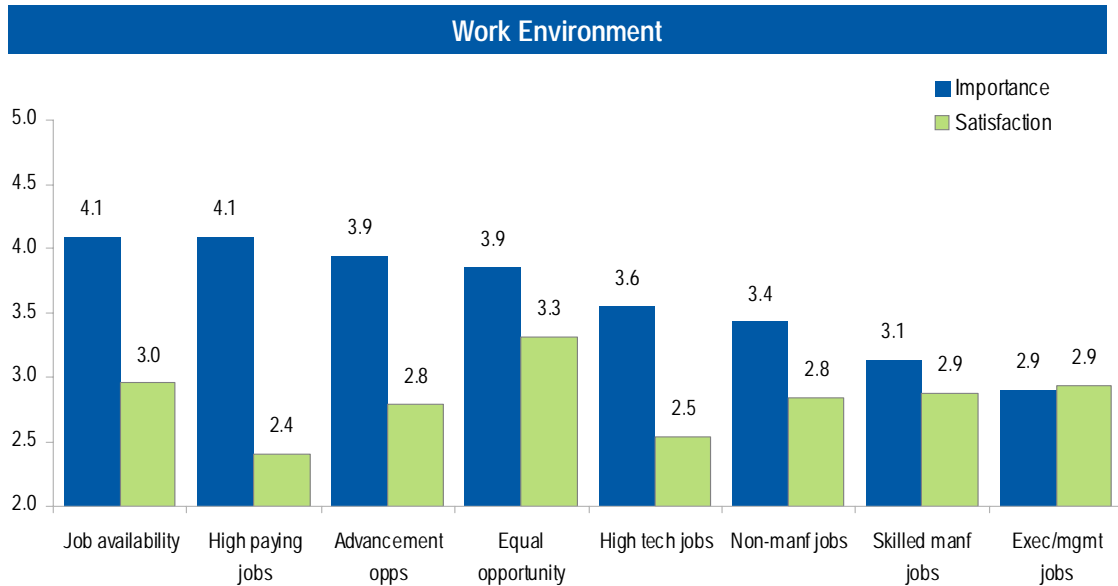
Assessment of Northern Nevada

Currently, neither the Northern Nevada Development Authority (NNDA) nor the individual counties have clearly identified target industries. However, as part of this NorthernNVision project, AE has identified target industries that should be the focus of future economic development efforts. In the final report in this project, we will define strategies for recruiting these industries and provide recommendations to spur their growth.

These targeted industries will position the community to provide a more diverse job base for area residents. Repeatedly, we heard that the lack of depth in the job base and the lack of a diversity of employment options within the region was a critical weakness.

On the NorthernNVision project survey, the largest gap in satisfaction among residents was related to job availability, career advancement opportunities, and the availability of high paying jobs (see chart below). In focus groups and interviews, the availability of high wage, high impact jobs was repeatedly singled out as lacking in the region.

With targeted industries in hand, the region will be able to promote higher wage, higher impact, knowledge-based industries to the global business community and provide better opportunities for its citizens.



Source: AE Survey, Average response on scale of 1 to 5

FACTOR 4: Promotes business friendly regulations

Northern Nevada ★ ★ ★ ★ ☆

Two key elements necessary to facilitate a good business climate is the efficient delivery of government services and the appropriate regulatory and policy tools necessary for business development. Other factors include: looking at how quickly and easily permits are applied for and processed, relative costs of permits, development costs, fees and taxes, and other less quantifiable concerns, such as the customer service orientation of government personnel and elected officials.

Beauracratc regulations and unpredictable, costly, and lengthy permitting processes will discourage business expansion and relocation. Since product cycles are often compressed, the need to rapidly modify and improve corporate facilities is becoming a critical location selection criterion. Communities that have a proven record of fast-tracking projects when necessary are preferred over areas that typically have long permit review procedures. It is a definitive advantage for any area that has a team ready, willing, and able to walk a

company through the process. It stands to reason that this approach saves time, standardizes compliance, and creates a team feeling rather than one that is adversarial.

Assessment of Northern Nevada

According to most business owners and developers, the permitting process in the region is a strength and not overly cumbersome or beauracatic.

However, in order to facilitate the development process, developers that AE spoke to believe that each county should have a **one-stop shop that could handle all of their development questions and a devoted department to shepherd them through the process.** Taking this further, these developers feel that each county should work together to understand each others development process and attempt to streamline and standardize the process across county lines, where possible. They feel that in general the development process is not extremely onerous, but it could be made more clear and unambiguous with this easy to implement solution.

FACTOR 5: Supports research and development by strengthening ties between researchers and the private sector

Northern Nevada



Economic globalization inherent in the “knowledge economy” calls for a higher level of technological competitiveness for most regions. Scientific and technological advances that emerge from research and development propel this “knowledge economy.” This puts research and development as a top priority in the minds of many companies, particularly in the high tech industries.

Current support of universities by industries takes a variety of forms, ranging from casual funding of individual researchers to an industry cluster funding a permanent institute. Strong connections between the private sector and researchers enable corporations to commercialize technologies more quickly and efficiently. Many communities have recognized this important link between research activities and economic growth. In fact, several states have established high-level administrative positions to oversee and support high-tech business incubation and to help technology companies access state and federal technology development resources.

Assessment of Northern Nevada

The Northern Nevada region does not have any major research institutions. **More can be done to link the research efforts occurring in the Reno/Sparks metro with the rural counties.** Although this would be a long-term project, the 7-County region should explore opportunities to partner with UNR or Desert Research Institute (DRI) to develop satellite lab space and research offices throughout Northern Nevada.

Without significant research and development activities that fuel innovation, technological and global competitiveness is at risk.

Workforce and Education

Since human capital and innovation is the key to success in the new economy, skilled, flexible workers are a company's primary assets. No community can be globally competitive without an educated workforce.

With the SWOT analysis in mind, AE has analyzed the gaps that exist in Northern Nevada's workforce and education programs across the applicable characteristics of a globally competitive community.

FACTOR 1:

Attracts and retains a diverse workforce that is adequately trained for the region's industry clusters

Northern Nevada



This characteristic is made up of two primary components: 1) a sufficiently large and growing workforce and 2) a trained workforce. Both components are important in building a globally competitive community.

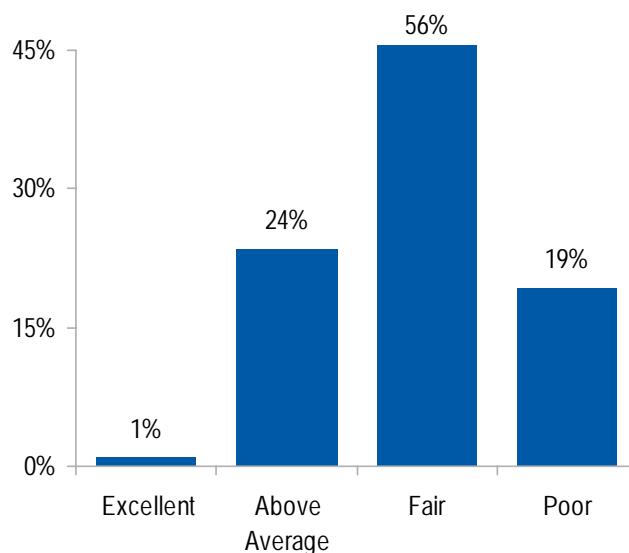
A large and growing workforce is an important criteria for companies in order to be sure that their employment needs are met. A trained workforce, however, may be the most important criteria for any globally competitive community. People drive corporations' successes. Global companies require that any community that becomes home to one of their facilities be able to provide a trained workforce.

Assessment of Northern Nevada

Northern Nevada has experienced steady growth in its labor force. Every county, except Mineral and Pershing, have experienced labor force growth over the past 5 years.

Although the labor force is growing, one of the top complaints from local business owners is the quality of the workforce. When asked to rate the mastery of the skills most important to their industry, business owners reveal that the Northern Nevada workforce is not performing as well as they would like (see chart at right). The lack of a trained workforce was also a common complaint during focus groups and interviews.

Rate the Region's Workforce in Their Mastery of Skills Important to Your Industry



Source: AE Survey

FACTOR 2:

Attracts and retains a young professional workforce that will form the foundation of future economic and population growth

Northern Nevada



A region's economic strength will depend heavily on its ability to attract, retain, and develop a human capital base that is skilled and flexible. Skilled human capital is at a premium in an era when workforce growth is declining. Not only do employees switch jobs more often, the growth rate of that workforce is slowing.

Prior to the entry of the baby boomers to the workforce, the highest workforce median age ever observed was 40.5 in 1962. By 2012, it will be 41.4, well surpassing that previous high.

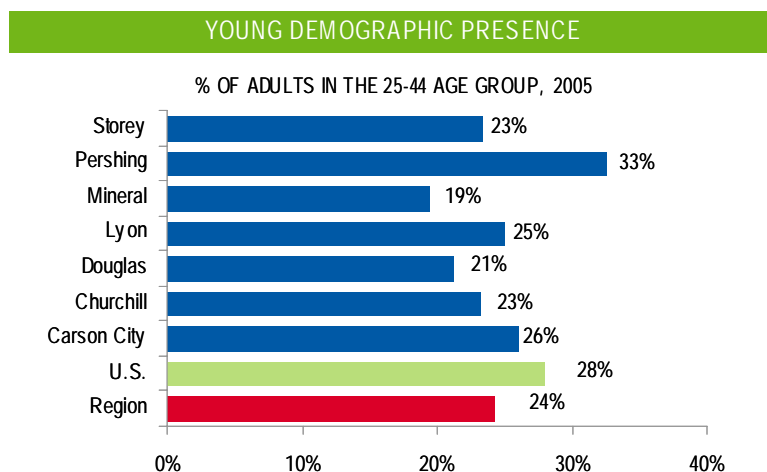
For these reasons, communities are competing furiously amongst themselves to attract and retain the 25-44 age demographic. Next Generation Consulting reports "3 out of every 4 young people under the age of 28 first pick a place to live and then find a job."

Therefore, communities that lack the environment to support their young professionals are at a competitive disadvantage. A case in point: access to human capital drove computer maker Gateway Inc. to relocate its headquarters from North Sioux City, South Dakota to San Diego, California. To grow requires the very best and brightest executives and engineers, and few wanted to call South Dakota home. "San Diego was an excellent move for us, because it's ideal for attracting the kind of talent in the numbers that are required now for us at Gateway," explained John Heubusch, Gateway's vice president of public affairs.

Assessment of Northern Nevada

Attracting and retaining a young professional workforce is clearly a significant challenge for the Northern Nevada region.

- Northern Nevada's percentage of young professionals falls below the national average in nearly all of the seven counties.
- Pershing County exceeds the national average, but this is primarily due to the large young population currently housed at the prison.
- This is a key characteristic of a globally competitive community because most



Source: Census, DDR

technology companies require that at least 33% of a region's population fall into this category.

Input from interviewees, and focus groups (including a focus group held specifically with young professionals) indicated that young professionals do not feel that there "is not a lot for them to do" in many of the communities in Northern Nevada and that there is a perception that some areas seem to be positioning themselves to be "a retirement community." This perception needs to be addressed to create a balance within the community – creating amenities for both the older and younger populations. Young professionals should feel that they have a voice in community issues and be invited to join civic and business organizations.

If this issue is not addressed, Northern Nevada will lose its competitive standing to other communities with a larger young professional workforce.

FACTOR 3:

Develops an educational system that adequately prepares students for the workforce

Northern Nevada



Basic, quality education is a prerequisite for economic development and stability. On a global basis, a recent report from the Basic Education Coalition concluded "no country has achieved sustained economic growth without attaining near universal basic education." Training students in basic hard and soft skills, including the capacity to learn and be taught, is a critical component to their future success in the job market.

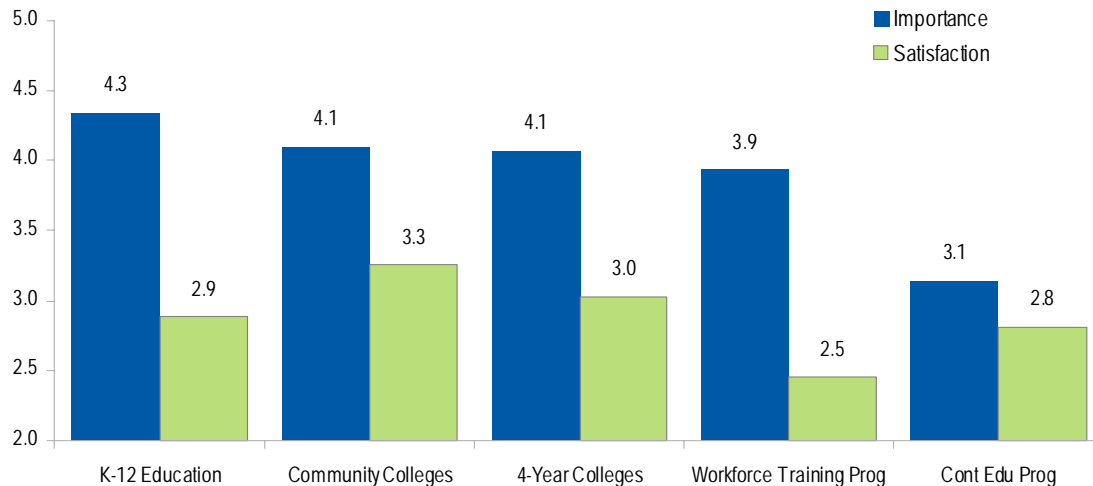
Additionally, quality education is a leading indicator of quality of life within a community. Companies desire to locate in a community where their employees will be guaranteed a good school system for their children. Without this critical component, companies will look elsewhere.

Assessment of Northern Nevada

Although the region's educational attainment in regard to bachelor's degree holders is well below the national average, the region does have a better high school graduation rate than the U.S. This is a positive statistic for the region.

However, input from focus group participants and interviewees indicate that the region does not value the importance of education as much as it should. This is having a negative impact on the quality of the local educational system. When asked to rate importance and satisfaction, K-12 education had the largest gap (see chart below).

Education



Source: AE Survey, Average response on scale of 1 to 5

FACTOR 4:

Develops an effective workforce development system that has strong linkages and participation with public schools, technical schools, community colleges, and universities

Northern Nevada



To create a competitive advantage in a global economy, any community must have an aggressive and forward-thinking plan that integrates workforce and economic development efforts.

National, regional, state, and local economies are facing an increasing crisis in workforce development—the process of identifying and developing the skills needed by businesses, nonprofit and government employers, individuals, communities, and other social institutions. Technological advancements in all economic sectors have accelerated the need for improved technology and business skills among workers at all levels. Lifelong learning is now necessary –not optional – in order to obtain and maintain these skills.

Innovative thinking, increased collaboration, and more integrated processes and systems within workforce and economic development are now required to position oneself competitively for future growth and prosperity.

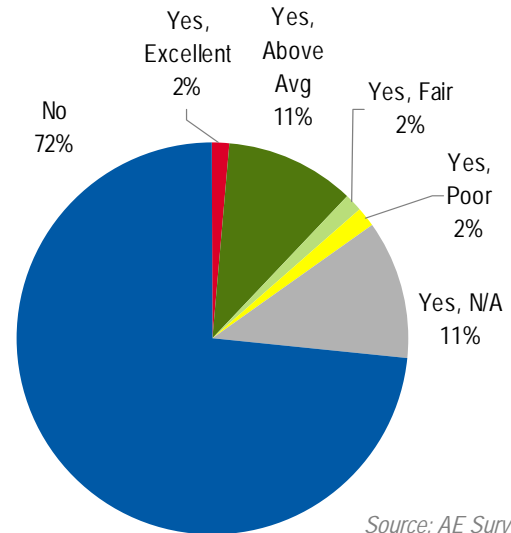
Assessment of Northern Nevada

The Northern Nevada region is well served by the **Western Nevada Community College**. This is a strong asset for the region to provide educational and workforce training options for the region's employers. The community college is very aggressive and proactive in expanding its scope to reach as much of the region as it can. **In focus groups and interviews, many respondents touted WNCC as a key strength for the region.**

However, local workforce development providers seem to be underutilized in the region. 72% of businesses surveyed had not used a workforce development program in the past two years. In addition to the lack of use, the awareness of the various programs is also low among those that responded to the business survey.

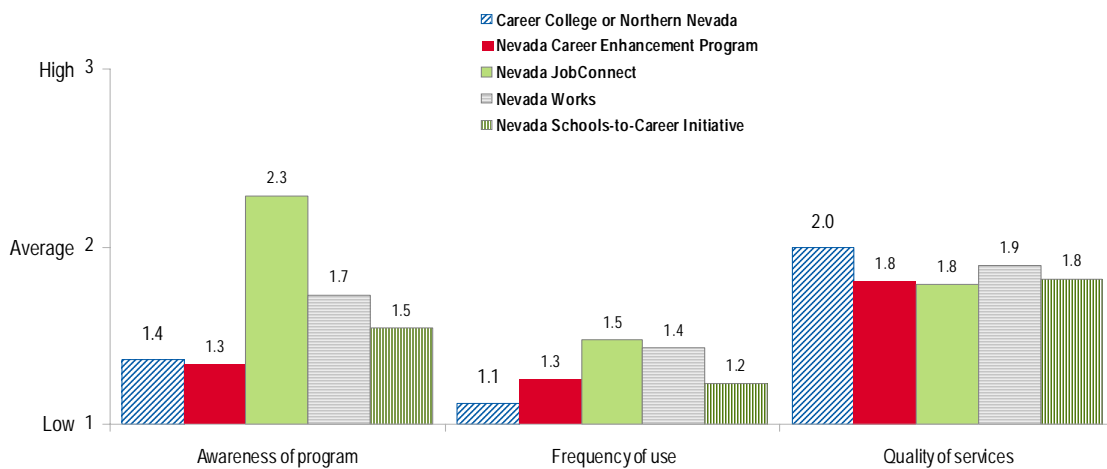
Although individual programs are working well, more can be done to connect these vital programs and promote them to both the 1) private businesses that need them most and 2) K-12 education.

Have You Used Any Workforce Development Programs in Northern Nevada in the Past 2 Years?



Source: AE Survey

Are You Aware of the Following Workforce Development-Related Organizations, Technical Schools or Programs? How Often Do You Use Them? Rate Their Services.



Source: AE Survey

Sites and Infrastructure

Land, buildings, and infrastructure are the basic facilities needed to support any company and community and are, therefore, vital to economic growth.

With the SWOT analysis in mind, AE has analyzed the gaps that exist in Northern Nevada's sites and infrastructure across the applicable characteristics of a globally competitive community.

FACTOR 1:

Maintains and upgrades transportation infrastructure, including roads, air, rail, and transit systems

Northern Nevada



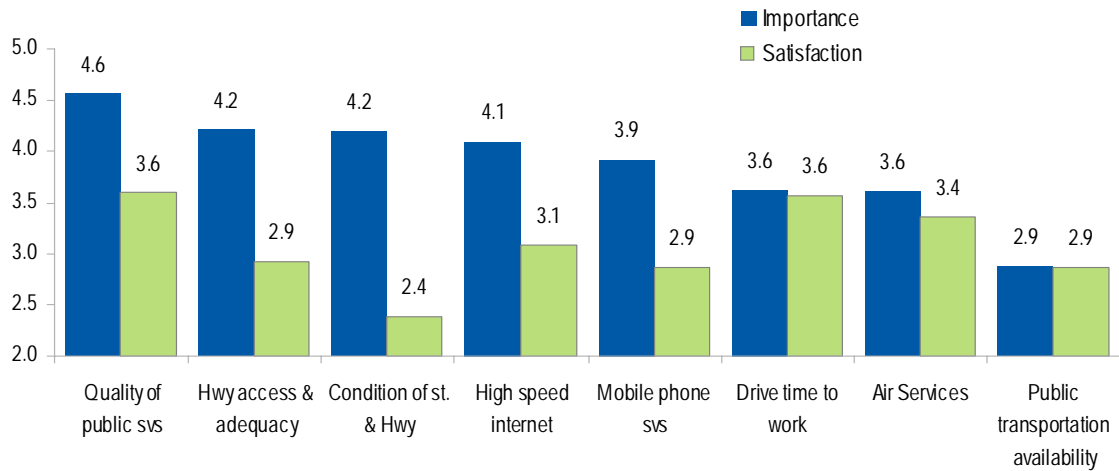
Congestion and mobility are key issues facing public officials. Transportation investments can provide economic development benefits by reducing the cost of transportation for businesses and by expanding the accessibility of firms to suppliers, labor, and consumer markets. Transportation investments can also induce businesses to locate in areas served by the investment. At the scale regional or national scale, productivity improvements resulting from transportation improvements can result in overall economic growth.

Assessment of Northern Nevada

Road congestion is minimal and respondents were not dissatisfied with their commute times to and from work. However, residents were less pleased with highway access and the condition of the region's streets and roads (see chart below). With roadway projects underway throughout the region (including the highway bypass of Carson City and improvements to US 50), the road transportation network should not cause any large impediments to future business growth.

In addition, **the region is well served by rail and air transportation networks.** There are many commuter airports throughout the region and relatively quick access to the Reno Tahoe International airport. Most of the region's industrial parks have rail access, which is an asset for logistics and manufacturing companies.

Infrastructure



Source: AE Survey, Average response on scale of 1 to 5

FACTOR 2: Ensures adequate utility capacity for economic development

Northern Nevada ★ ★ ★ ☆ ☆

Adequate utility capacity is a prerequisite for any business location decision. It is a MUST. Most communities have adequate water, wastewater, gas, and electric capacity for small businesses, but many high-tech and manufacturing companies have special utility needs. Communities that have not prepared to support these companies will not be able to recruit them.

Assessment of Northern Nevada

Overall, the utility service provided by local municipalities, Sierra Pacific Power, and water authorities is sound.

However, growth pressures in many of the fastest growing areas of the region are beginning to put a strain on the water and wastewater infrastructure. **The primary utility issue in the community is centered on water.** Long-term reliable water supply is an issue because of the arid environment in which the region is located. This has been and will continue to be a long-term challenge facing the region. Counties should approach this issue in a more collaborative manner in order to reach mutually beneficial solutions.

FACTOR 3: Develops strong telecommunications infrastructure

Northern Nevada



Wireless infrastructure has been termed “the new frontier in community economic development.” Providing wireless accessibility will be as important in the future as traditional utilities. In fact, most companies today require adequate fiber and wireless infrastructure.

Additionally, community-wide wireless access can provide an environment that attracts and keeps knowledge workers. This infrastructure assists in bridging the digital divide that now exists and affords opportunities to those that can’t afford the cost of wired broadband Internet access. Community-wide access can also improve educational programs at all levels in a way that benefits the entire community.

Assessment of Northern Nevada

The telecommunications infrastructure could be improved across the region. While high-speed Internet access and wireless service is available in some parts of the region, other rural areas are seriously lacking. There are few WiFi hotspots in many communities in the region. The region should take a proactive approach towards making wireless communication ubiquitous across the entire region. This technology is easy and cost effective to deploy and will have substantial benefits for business and tourism development.

FACTOR 4:

Proactively markets supply of “ready to build” sites and available properties

Northern Nevada



Waiting for a prospect to decide on the community before making the investment in infrastructure is a poor strategy that is seldom successful. Large scale, fully serviced sites are also becoming more difficult to find, even when a company has planned far enough in advance to allow for construction of a new facility. As companies expand into the existing supply, it is questionable whether the development community will be able to replace the supply because of the dearth of capital for speculative real estate projects.

Communities that have addressed these problems by finding a way to build spec office or industrial facilities will have an advantage in recruiting new industries.

Assessment of Northern Nevada

NNDA’s website, coupled with the economic development website of Sierra Pacific, are excellent sources of information for available buildings and land and appear to be regularly updated. Information on each of the region’s industrial parks is listed as well as follow-up contact information.

More detailed information on each site would be helpful, with perhaps a printable brochure on each site that contains information about the site, utilities, access to transportation, price, current uses, etc. In addition, a

searchable database of properties and developable land would be a useful tool for site selectors and prospective relocating companies. Finally, very little external marketing is conducted to actively promote the available industrial parks throughout the region.

Quality of Life

Today, global firms are seeking locations that will attract and retain a well-educated work force, and quality of life factors are increasingly important. Communities that offer cultural and recreational opportunities will have competitive advantages over those that do not.

With the SWOT analysis in mind, AE has analyzed the gaps that exist in Northern Nevada's quality of life across the applicable characteristics of a globally competitive community.

FACTOR 1:

Ensures attainable cost of living and adequate and diverse housing options for residents and target workforce

Northern Nevada



Quality of life is significantly enhanced when a community is affordable to live and work. Cost of living is made up of many different factors including housing costs, utility costs, tax burdens, and consumer good prices. A community that is not affordable for the average wage earner is not attractive to companies that need to recruit and retain talented employees. Additionally, workers in highly demanded industries, including teaching and nursing, may require other, selective cost of living adjustments to relocate to more expensive regions.

Housing shortages can hinder economic development within a community. Ensuring housing options that are affordable helps employers attract and retain workers who are able to find housing close to their job, especially if a community is seeking to attract young professionals that have just begun working.

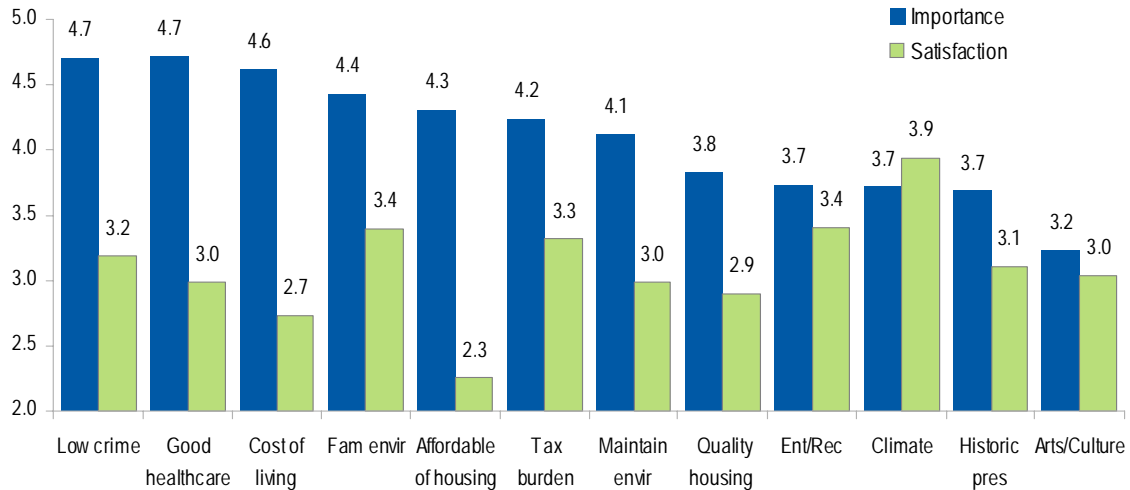
Additionally important is wide variety within the housing stock. Starter and attached homes, master planned communities, and executive style homes are important to companies that employ a wide variety of employees at various salary levels.

Assessment of Northern Nevada

Northern Nevada communities are not taking an active role in ensuring the area remains affordable to its residents and workforce. While much of the escalating housing prices are driven by supply and demand dynamics, proactive measures can be enacted to encourage the development of a diverse mix of housing options. Many communities have worked closely with their large private sector employers to develop affordable housing. Other communities offer incentives for residential developers to build affordable housing, or require that a certain percentage of residential developments be set aside for affordable housing.

Cost of living and the availability of affordable housing are among the biggest challenges facing Northern Nevada. According to the survey, residents had the largest gaps between importance and satisfaction in both affordable housing and cost of living. This is making it increasingly difficult for residents to live in the same community in which they work.

Livability



Source: AE Survey, Average response on scale of 1 to 5

FACTOR 2: Invests in maintaining and revitalizing core city centers

Northern Nevada



Active, beautiful downtowns are an essential quality of successful regions. They provide a space in which locals can convene, create an immediate, visual impression of the health of the local economy, and draw in tourists. A thriving, interesting downtown keeps residents living close and reduces sprawl, helping a community accomplish another important goal – preserving the natural environment and green space.

Successful downtowns also support a knowledge economy and are an integral part of a regional economic development strategy. While companies seek to attract a young professional workforce, these workers are attracted to regions with interesting and vibrant downtowns at their core. There are a number of reasons for this. These employees put an emphasis on living and working in places that are unique, exciting, and tolerant. Diversity is also important to the “creative class”, and vibrant downtowns give them diversity of space, businesses, ideas, and people.

In addition, downtowns also support globally competitive communities because they promote the cross-fertilization of knowledge, experience, and ideas—making it a breeding ground for innovation, and therefore, competitiveness and prosperity.

Assessment of Northern Nevada

Participants in each of the counties in the region all stated **the importance of improving and revitalizing their downtown areas**. This is a positive step, it is clear that the region as a whole understands the importance of maintaining its vibrant city centers.

However, more can be done to actually reinvigorate many of these town centers. Many parts of the region are **still lacking in character and appearance**. A formal approach should be taken in each county to invest in appropriate projects to improve the appearance of city centers through streetscape, lighting, signage, and public space improvements. Additionally, there should be an emphasis on expanding opportunities for young professionals, including nightlife, gathering places, and restaurants.

FACTOR 3: Promotes recreational and natural assets in the community

Northern Nevada

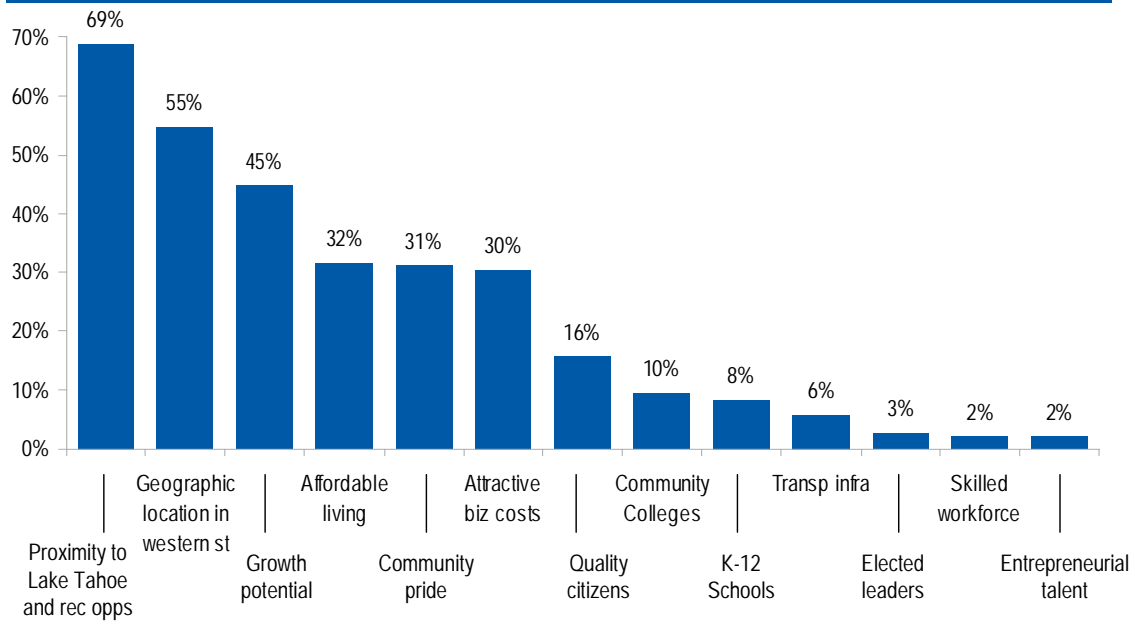


Outdoor recreation is an important factor impacting the location decisions of young professionals. According to Site Selection Magazine, given tight labor markets nationwide, “corporations have recently recognized that quality-of-life factors as recreational opportunities have become increasingly important in terms of staff acquisition, retention and productivity.” They have found that these factors are especially important to IT personnel and younger workers.

Assessment of Northern Nevada

Outdoor recreation activities, scenic beauty, and the natural environment are among the top assets of the Northern Nevada region. This is a strength for all of the counties in the region. The online survey backs this finding; Lake Tahoe and Recreational opportunities were ranked the top asset for the region.

What are Northern Nevada's Greatest Assets?



Source: AE Survey

FACTOR 4: Provides retail choice for residents

Northern Nevada ★ ★ ★ ★ ☆

Quality retail is a key part of a location package demanded by businesses looking to relocate or build new facilities. Businesses expect diverse shopping options because their employees expect it -especially upscale retail in lifestyle centers, local boutiques, and specialty shops.

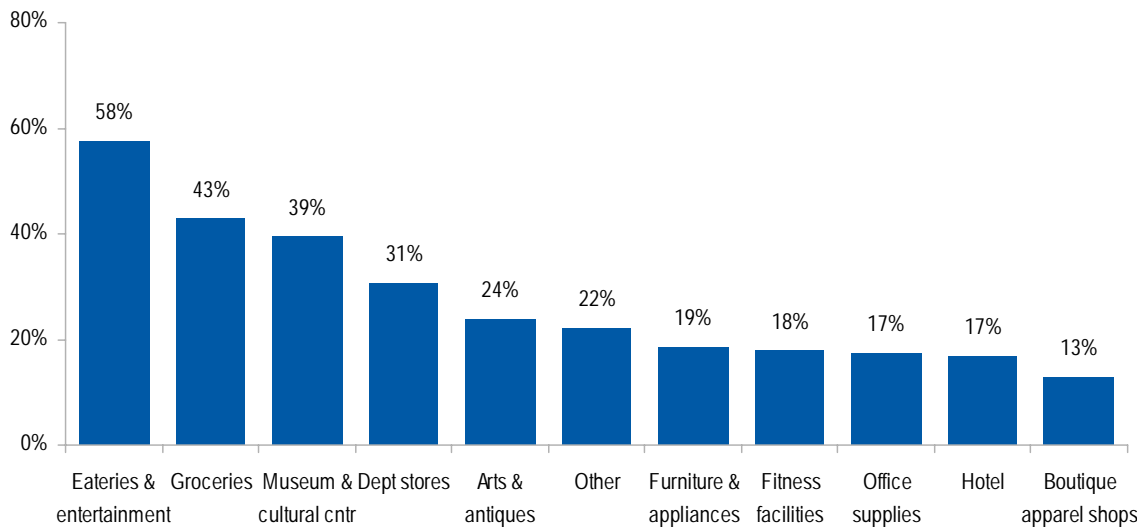
Assessment of Northern Nevada

The availability of retail establishments is not in general a negative for the region. While increased shopping and dining establishments were noted in focus groups in the region's most rural counties, by and large, this was not an overly burdensome issue.

However, **according to survey results, more residents would like to see increased development of restaurants and entertainment.**

We recognize that local officials have little control over the site location decisions of national retailers, but the region can continue to do more to promote the establishment of locally-owned restaurants and entertainment amenities in the region.

What Retail Businesses Would You Like to See Expand or Open in Northern Nevada?



Source: AE Survey

FACTOR 5:

Provides an abundance of arts and cultural opportunities for residents

Northern Nevada



Arts & cultural programs play a part in many aspects of economic development because they can generate revenue through tourism, art, and cultural attractions, serve as a centerpiece for downtown revitalization, make communities more attractive to young professionals, contribute to innovative thinking, and serve as a catalyst for the creation of regional gathering spaces that promote community spirit and pride.

Assessment of Northern Nevada

Arts, culture and the promotion of historical heritage are strong selling points for many communities in Northern Nevada. According to the survey, there was not much gap between the importance and the satisfaction of local arts and cultural amenities.

However, many interviewees and focus group members noted that the cultural offerings were limited to a select demographic and that more offerings for families and young professionals are needed.

The region has a long and proud history of providing arts and cultural opportunities for its residents, **but it must now look to expand the diversity of these offerings as the make-up of the community changes.**

FACTOR 6: Promotes strong sense of community pride

Northern Nevada



Evidence of community pride can be found in many arenas: beautiful public spaces, well-maintained homes, community events and festivals, and active engagement in civic organizations. This sense of pride promotes global competitiveness in two primary ways.

Residents and business owners who are proud of their community will recommend it to other residents and business owners. Proud citizens are extremely effective recruitment tools.

Communities that are vibrant and dynamic will also catch the attention of companies and employees and put themselves on the radar.

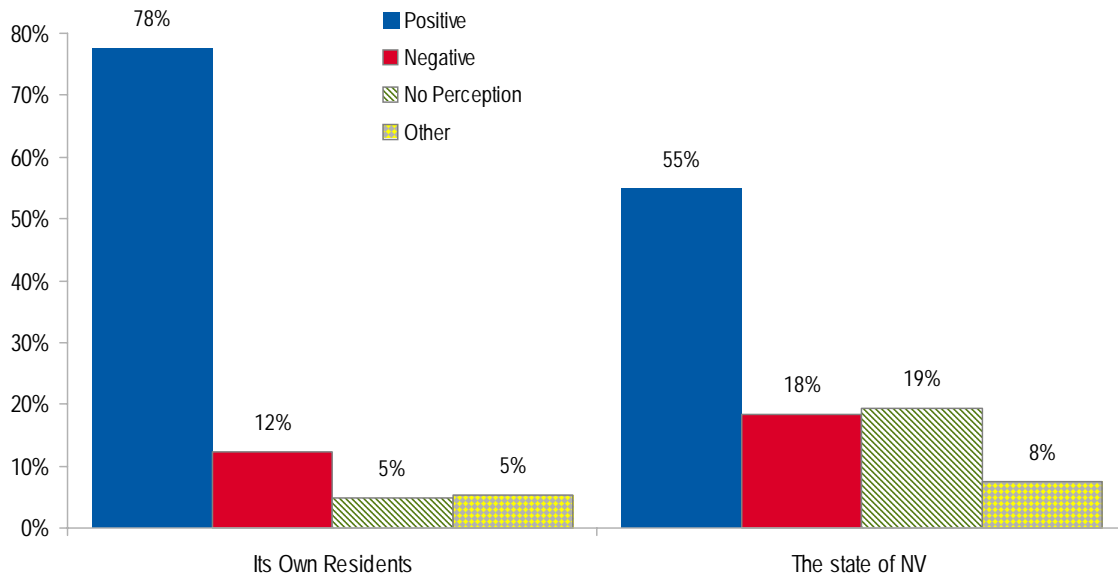
Assessment of Northern Nevada

Northern Nevada communities have a strong sense of pride and that is reflected in the residents' perception of their community. The AE resident survey asked residents whether Northern Nevada has a positive, negative, or neutral perception among its own residents.

- Seventy eight percent of all residents felt the image was positive, while only 12% responded that the perception was negative.
- However, residents don't necessarily feel that others outside the region have as positive a perception. Residents feel that only 55% of those in the state but outside the region have a positive image of their community.

In focus groups and interviews, there was a strong sense of community pride voiced in each of the 7 counties. By and large, the residents of Northern Nevada have very strong positive feelings about the communities in which they live.

What Type of Image Do You Think Northern Nevada Has Among...



Source: AE Survey

Economic Development and Marketing

The efforts of economic development organizations and initiatives, combined with effective marketing programs, position communities for economic success. In this time of fierce global economic competition, coordinated and regional economic development and marketing efforts are of paramount importance.

With the SWOT analysis in mind, AE has analyzed the gaps that exist in Northern Nevada's economic development and marketing programs across the applicable characteristics of a globally competitive community.

FACTOR 1:

Builds regional, collaborative support for sustainable economic growth

Northern Nevada



Creating partnerships, collaborating regionally, and communicating across sectors are the most quickly identified opportunities in the communities in which we work. This also indicates that a truly regional approach may be the most difficult to accomplish. However, regional economic development has many benefits. Regional collaboration can provide the infrastructure for more efficient delivery of public services and more powerful marketing campaigns in the face of dwindling resources. It can bring the community together to work towards a single vision. It is also effective at attracting the attention of global companies. In fact, when global companies identify the initial locations to expand or relocate to, they rarely worry about county or city lines. "Communities" are identified in their regional context and it is regions that must put themselves on the radar of these companies.

Effective regional collaboration must involve public sector officials, business leaders, educational institutions, and civic organizations. In fact, the U.S. Economic Development Administration has now mandated a regional approach to economic development as a requisite for any programs and initiatives that seek funding from the agency.

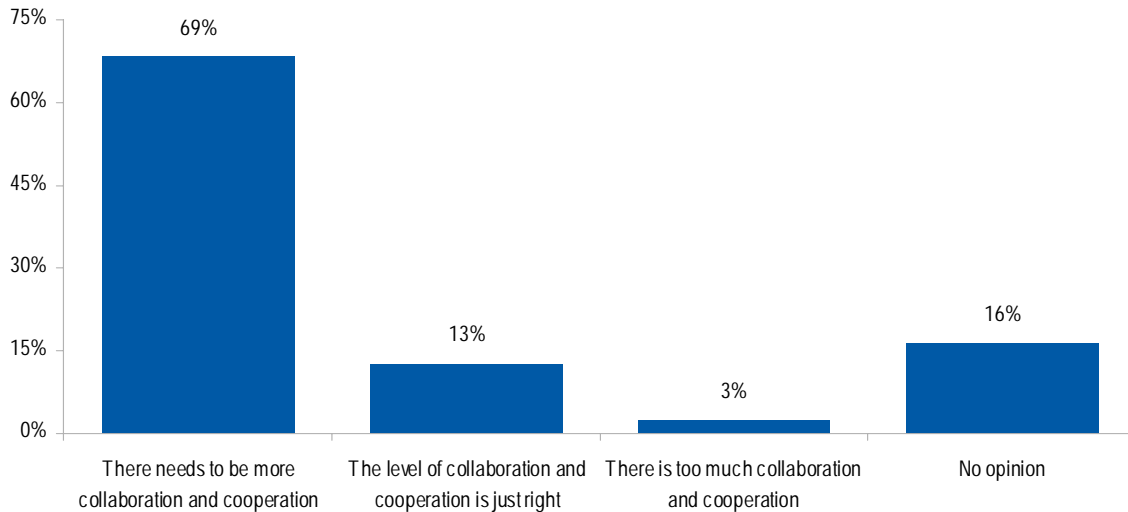
Assessment of Northern Nevada

Through leadership at the Northern Nevada Development Authority, strengthening a regional and collaborative effort has occurred, but it needs to continue through shared efforts between each of the seven counties. As noted in the online survey, most residents feel that the level of collaboration needs to be enhanced across the region. 69% of residents believe that there should be more collaboration and cooperation (see chart below).

Northern Nevada needs to develop a regional identity that promotes its collective assets and negates any liabilities. Promoting the region as attractive from a labor, cost, overall business climate, tourism offerings, and its close proximity to the Reno/Sparks metro area should certainly help gain more response and better awareness. The region should develop a singular strategy with specific tasks and goals outlined for

each community within the region that improve the overall product. A more collaborative effort within the region will also allow for the sharing of resources and alleviate the duplication of efforts.

Describe the Level of Collaboration & Cooperation Between Regional Government Entities?



Source: AE Survey

FACTOR 2:

Develops effective tools to retain existing companies and encourages economic development from within the community

Northern Nevada



The average community derives between 70 and 80% of all new jobs and capital investment from existing, small businesses. In rural areas, this contribution rate is usually higher since business attraction is not as common. Therefore, business retention and small business development programs are essential for a successful community. Yet, existing businesses are often taken for granted by economic development leaders.

There are five components to a successful business retention program:

- Responding to the current needs and problems of existing businesses
- Creating proactive opportunities to show attention to existing businesses
- Conducting one-on-one interviews with business executives to identify company and community issues.
- Providing services to existing businesses to help increase revenue and contribute to the economic growth of the community
- Developing a structure for business to business networking to take place

Assessment of Northern Nevada

The Northern Nevada Development Authority serves as the agency to reach out to existing employers to ensure that their needs are being met and to assist them in their expansion efforts. While their efforts have been a positive step, more can be done. NNDA lacks the necessary resources to effectively staff a comprehensive existing business retention and expansion program. **Economic development officials in each of the seven counties should partner with NNDA to ensure that the needs of their local employers are being met.** These counties have as large a stake in ensuring the success of their homegrown companies. Since approximately 75-80 percent of all jobs created are through existing industries, more attention should be devoted to this effort and increased emphasis should be placed on reaching out to these employers.

Coupled with the need to bolster efforts to existing businesses, **the region should take a formal approach to developing small businesses and nurturing entrepreneurship.** This effort could begin with the creation of a strong business-to-business networking effort to involve the private sector more closely in the development of small businesses.

FACTOR 3: Develops a strong brand image that differentiates itself from competitors

Northern Nevada



Globally competitive communities benefit from engaging in marketing campaigns that promote the entire area and educate/engage the local public about the importance of regional and county economic development initiatives.

It is highly effective for a region to market a single brand to build awareness and differentiate a community from its competitors. This will present a clear message to external audiences and make it easier for them to associate “*who*” and “*what*” the community stands for when it comes to economic development.

Assessment of Northern Nevada

Currently, the Northern Nevada region does not operate under a consistent, overarching brand identity. Northern Nevada’s history is deeply rooted in a pioneer spirit that began with mining and continued with the entrepreneurially driven development of the gaming industry. Perhaps building upon the ‘Pioneer and Entrepreneur’ spirit, or developing a unique brand for the region that each community could utilize for promotional purposes would help differentiate the region and build a cohesive effort throughout the area.

It should be noted that in the development of this brand, it is important to include the Reno/Sparks and Lake Tahoe areas as part of the overall region. Any imaging or messaging should tie closely to these well-known locations.

Over the course of the preceding pages, AE has analyzed Northern Nevada’s strengths, weaknesses, opportunities, and threats. We have also identified the vision of the region and the target industries that will help to drive future economic growth. Finally, we have rated the region on numerous factors that are shared by globally competitive communities and that are critical for Northern Nevada to reach its desired vision for the future.

Based on the analysis, we have ranked the region’s performance in each area on a scale of 1 to 5 (1=worst, 5=best) in order to prioritize the recommendations and actions that will be required of local governmental, business, civic, educational, and economic development leaders. The summary of this assessment is below:

Business Climate

- ★ ☆ ☆ ☆ ☆ Supports research and development by strengthening ties between researchers and the private sector
- ★ ★ ☆ ☆ ☆ Encourages entrepreneurial and small business development through incubators, access to capital, and incentives
- ★ ★ ☆ ☆ ☆ Promotes integrated clusters of “knowledge-based” industries that capitalize on region’s assets and provide better job opportunities for residents
- ★ ★ ★ ☆ ☆ Promotes business friendly regulations
- ★ ★ ★ ★ ☆ Maintains low cost business environment, or tempers higher costs with incentives

Workforce and Education

- ★ ☆ ☆ ☆ ☆ Attracts and retains a young professional workforce that will form the foundation of future economic and population growth
- ★ ★ ☆ ☆ ☆ Attracts and retains a diverse workforce that is adequately trained for region’s industry clusters
- ★ ★ ☆ ☆ ☆ Develops an educational system that adequately prepares students for the workforce
- ★ ★ ★ ☆ ☆ Develops an effective workforce development system that has strong linkages and participation with public schools, technical schools, community colleges, and universities

Sites and Infrastructure

- ★ ★ ★ ☆ ☆ Ensures adequate utility capacity for economic development
- ★ ★ ★ ☆ ☆ Develops strong telecommunications infrastructure
- ★ ★ ★ ☆ ☆ Maintains and upgrades transportation infrastructure, including roads, air, rail, and transit systems
- ★ ★ ★ ★ ☆ Proactively markets supply of “ready to build” sites and available properties

Quality of Life

- ★ ★ ☆ ☆ ☆ Ensures attainable cost of living and adequate and diverse housing options for residents and target workforce
- ★ ★ ★ ☆ ☆ Invests in maintaining and revitalizing core city centers
- ★ ★ ★ ☆ ☆ Provides an abundance of arts and cultural opportunities for residents
- ★ ★ ★ ☆ ☆ Provides retail choice for residents
- ★ ★ ★ ★ ☆ Promotes recreational and natural assets in the community
- ★ ★ ★ ★ ★ Promotes strong sense of community pride

Economic Development and Marketing

- ★ ★ ☆ ☆ ☆ Develops a strong brand image that differentiates itself from competitors
- ★ ★ ☆ ☆ ☆ Builds regional, collaborative support for sustainable economic growth
- ★ ★ ★ ☆ ☆ Develops effective tools to retain existing companies and encourages economic development from within the community

NEXT STEPS

This Northern Nevada Visioning Document is only the second step in the process of developing the Strategic Plan for the NorthernNVision project.

The third and final report in the NorthernNVision project will provide specific recommendations to guide the actions of the region's economic developers as well as city and county public sector leaders and private sector stakeholders.

Target Industry Selection

In the NorthernNVision Database of Assets report (Report 1), AngelouEconomics (AE) analyzed the region's economy, demographics, and tax base to determine which industry sectors should be targeted for future growth. In this appendix, we take a deeper look at the targets identified by AE, describe the selection process and conclude with detailed profiles of each final target industry and the specific niche sectors for which Northern Nevada is best positioned.

INDUSTRY LOCATION ANALYSIS BACKGROUND

Traditionally, the growth of economies has been described in terms of a region's "basic" or "primary" industries. These industries typically export their goods or services outside the region, thereby supporting local industries such as retail, housing construction, and personal services through payroll and local purchases. Primary industries reflect an injection of outside money into the community and have a high economic impact. A typical primary business may create two additional jobs in the local economy for every one job at its facility. For this reason, communities across the country compete to recruit and retain these high-impact, primary businesses.

Manufacturing is a good example of a primary industry, as most customers are found throughout the U.S. and abroad. With segments of the manufacturing industry in decline and business today increasingly global, many more industries are "primary" in their make-up. Distribution centers may serve a multi-state region, back office operations may serve a company's global network of employees, and custom software companies can build Internet applications to serve businesses anywhere in the world. Federal installations such as Army bases or federal research labs are clear examples of how government can be classified as a primary industry. High wage jobs are usually found at national or global companies that are enjoying growth.

While businesses are more global in nature today, rapid gains in technology, telecommunications, and markets continue to alter the location requirements of many companies. Often the speed of business drives corporate location decisions. The competition for top talent is now viewed to be the most important component of a successful company. Today's business environment requires that a community continue to upgrade the technological capabilities of its businesses while expanding the skills of its available workforce. Innovation and change are now the baselines for success.

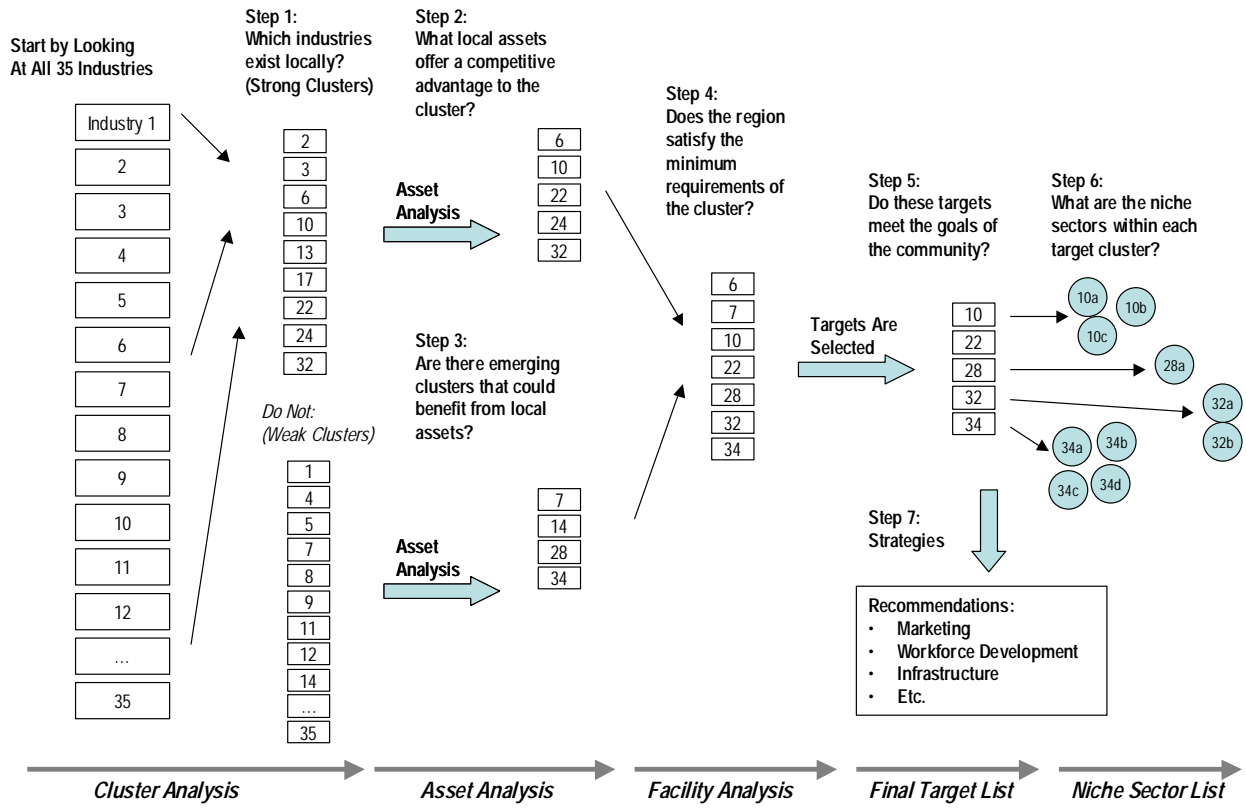
HOW TO SELECT TARGET INDUSTRIES FOR A COMMUNITY

AngelouEconomics employs a combination of quantitative and qualitative analysis in selecting the best target industries for a community. The process is guided by the following four questions:

1. **What industries currently exist locally, and are they growing?** Immediate and obvious target candidates are those experiencing growth within the community or surrounding communities, particularly those growing faster than the national average. The large presence of an industry and a simultaneous lack of growth suggest the region is losing its competitiveness in this industry.
2. **Are there local assets that give specific industries a competitive edge?** Put another way, what local weaknesses/barriers will limit industry growth? Communities are as unique as people. Each one has strengths that companies can leverage to create competitive advantages. These strengths can include such things as workforce skills, tax structure, infrastructure, or market proximity. Our challenge is to identify the key assets in the region that will support growth in a wide range of industries, while continuously working to improve the community “product” (e.g. workforce skills or infrastructure).
3. **Does the community meet the base requirements of the industry?** Many companies will have specific infrastructure and workforce requirements; knowing if the region can meet those requirements is crucial. For example, if the region is lacking water and wastewater capacity or has stringent environmental regulations, the community could be ruled out for food processing and semiconductor manufacturing. Sometimes lack of available land requires a more precise list of targets. Understanding the needs of target companies is essential to recruiting them and keeping them.
4. **Does the industry match the community goals?** The most important criterion is often whether or not the industry matches the stated economic goals of the community. Some communities may want to avoid manufacturing businesses or businesses that pay below average wages. Communities wanting to maintain a small-town appeal, for example, may target homegrown “soft” industries. Others wanting to transition into a more urban, metropolitan setting may focus more on corporate headquarters. Industries that can survive locally will struggle to succeed without the backing of the populace and its elected officials. Likewise, an aggressive marketing campaign and a solid commitment by government to support a target can often overcome specific deficiencies or cost disadvantages.

In many ways, target industry selection is better described as target industry “elimination.” The chart below illustrates AngelouEconomics’ systematic process by which an industry is selected as a target.

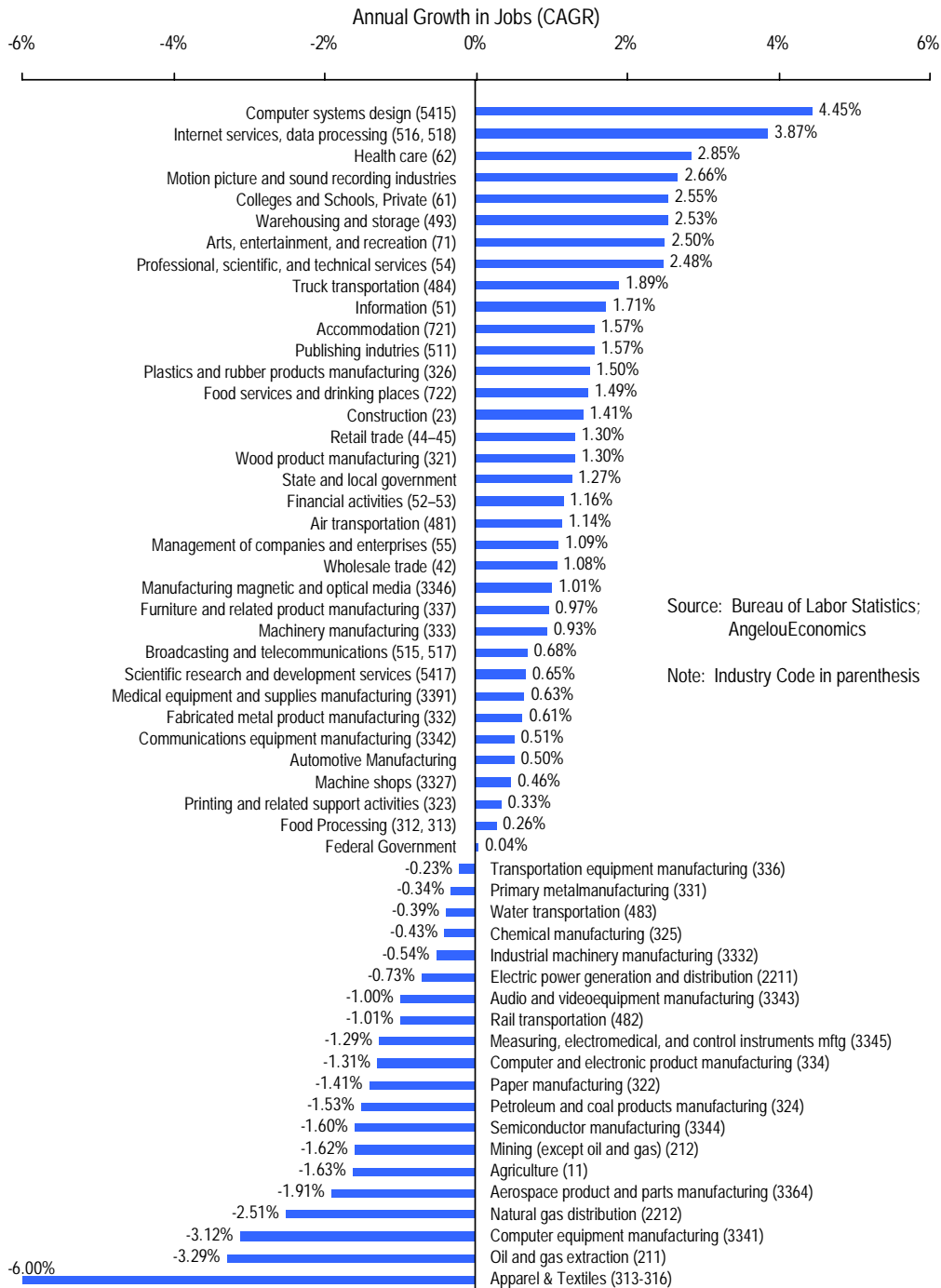
AngelouEconomics Target Selection Process



STEP 1: WHICH INDUSTRIES ARE GROWING NATIONALLY?

In general, communities should target industries that are growing. Targets can include, however, low growth or negative growth industries as well. The following chart shows the anticipated growth trends for specific industries and clusters:

**U.S. Industry Employment Forecast
2002 – 2012**



Source: Bureau of Labor Statistics;
AngelouEconomics

Note: Industry Code in parenthesis

Technology sectors such as those relating to the use of computers and networks promise a high level of growth over the next 10 years. Productivity improvements continue to be felt in traditional companies that adopt new computer technologies. The highest rates of growth will be found in design and service sectors such as **Computer Systems Design** (4.5% per year), **Internet Services and Data Processing** (3.9%), and **Packaged Software Publishers, not custom** (5.3%). **Electronics, Semiconductor, and Computer Manufacturers** will shed jobs as more and more production is moved to low cost facilities overseas.

Healthcare will be a high growth industry, as the aging U.S. population becomes the dominant demographic over the next 20 years. By 2010, nearly 15% of the population will be seniors 65+, a period in one's life in which nearly half of healthcare expenditures occur. The senior population will be growing four times faster than the overall U.S. population by 2015. In 1950, there were 16 workers per retiree; today, the ratio is less than four-to-one, and by 2030, it will be two-to-one. With this massive demographic shift occurring, an estimated 4.4 million jobs will be created in the healthcare industry in the next 10 years, with residential and elderly care receiving the highest rates of growth. **Medical Instruments** and **Scientific R&D** will experience modest growth. **Biotechnology** and **Pharmaceuticals** are expected to see strong employment in the near and long term.

The steady growth of the overall U.S. population will drive the growth of industries that supply, feed, house and entertain us. Distribution of consumer goods will experience high growth: Warehousing and Storage (2.5% per year), Truck Transportation (1.9%), Couriers and Messengers, including overnight freight (3.5%), and Wholesalers (1.8%). Entertainment and tourism/accommodation industries will see high growth, and end-sales industries such as Retail Trade and Restaurants will see moderate growth. The Construction industry usually follows overall economic growth and is expected to experience modest growth.

Local and State Government will see job growth of 1.3%, slightly higher than total population growth (1%), as urbanization continues and federal jobs remain flat. Increasing wealth in the U.S. will require a larger **Financial Services** sector, which will also grow slightly faster than the population.

Manufacturing industries overall can expect continued job losses in the future due to continued technological improvements in the manufacturing process, large scale operations moving overseas, and for some, overall declines in final demand. Smaller, niche manufacturing sectors will see modest growth: **Machinery, Wood Products, Fabricated Metal, Machine Shops, Printing, and Food Processing**. Other sectors that will see falling job levels are **Agriculture, Oil and Gas Extraction and Refining, Chemicals, Mining, Apparel Manufacturing, Aerospace, and Rail Transportation**.

STEP 2: WHAT LOCAL ASSETS OFFER A UNIQUE COMPETITIVE ADVANTAGE TO THE TARGET?

Report 1, the *Database of Assets*, evaluated Northern Nevada on key economic, demographic, and infrastructure factors that limit or support the ability of the region to support a specific industry. Below, we provide a brief list of the local assets that are strengths for industry development and barriers that the region will need to work to mitigate.

We evaluate the region's core assets for industry recruitment and expansion by grouping assets in two categories: **core strengths**, and **barriers**:

Core Strengths

1. Strong business climate: economic growth, and a growing labor force and population base
2. Accessibility to markets: location on the I-80 corridor, proximity to CA, and air service through Reno-Tahoe International Airport
3. Low cost tax climate
4. Good educational training assets through Western Nevada Community College (WNCC)
5. Strong quality of life and community pride makes the region an attractive location to start and raise a family
6. Strong mix of available land throughout the 7-county regional area

Barriers

1. Low educational attainment levels among regional population
2. Low unemployment levels and a tight labor supply
3. Growing cost climate: cost of land, cost of labor, and cost of living/housing are all increasing
4. Natural resource constraints, namely limited water supply
5. Limited current industry clusters and depth in existing clusters
6. Limited entrepreneurship climate

STEP 3: DOES THE COMMUNITY MEET THE BASE REQUIREMENTS OF THE INDUSTRY?

Based on the core strengths and barriers outlined in the previous step, we examine the 7-County region's suitability for a typical business in three areas: (1) Cost Structure, (2) Labor Force, and (3) Infrastructure. If the region meets the requirements of an industry, we place a checkmark. Those that meet industry requirements and offer opportunities for gaining local cluster strength were marked as potential targets. Other targets may meet the industry's requirements, but were not selected. We provide an explanation below.

Target Industry Selection Criteria									
Review of Target Selection Steps									
Industry	National Potential			Regional Strengths				Meets Industry Requirements?	Potential Target?
	Growth Potential?	High Wages?	Relocation Trends?	Cluster Coeff.	Costs	Labor Force	Infra-structure		
Aerospace & Defense	✓	✓		2.66	✓		✓	Yes	Yes
Agriculture				1.19			✓	Yes	Yes
Apparel & Textiles				0.12				No	
Biotechnology	✓	✓	✓	0.36	✓		✓	Yes	Yes
Business & Prof. Svcs.	✓	✓	✓	1.15	✓	✓	✓	Yes	Yes
Chemicals & Plastics		✓		0.77				No	
Civic Enterprises				0.65				No	
Communication Equipment		✓		0.68			✓	No	
Communication Services	✓		✓	1.30		✓	✓	Yes	
Computer Equipment		✓		0.34			✓	No	
Consumer Goods				0.73	✓			No	
Eat/Drink	✓		✓	0.97	✓	✓	✓	Yes	Yes
Electronics		✓	✓	0.90	✓			No	
Energy & Clean Energy Tech	✓	✓	✓	3.46	✓		✓	Yes	Yes
Financial Services	✓	✓	✓	0.73	✓	✓	✓	Yes	Yes
Food Processing	✓		✓	0.15				No	
General Services				0.91	✓	✓		Yes	
Government				1.39	✓	✓	✓	Yes	
Health Services	✓	✓	✓	0.64	✓		✓	Yes	Yes
Higher Ed. & Research	✓	✓		0.27	✓			No	
Hotels & Entertainment	✓		✓	3.08	✓	✓	✓	Yes	Yes
Housing & Construction	✓	✓	✓	1.24	✓	✓	✓	Yes	
Industrial Machinery		✓	✓	1.02	✓		✓	Yes	
Industrial Supplies	✓		✓	0.95	✓	✓	✓	Yes	Yes
Logistics & Distribution	✓		✓	1.05	✓	✓	✓	Yes	Yes
Mass Media		✓		0.50				No	
Material Supplies			✓	0.57	✓	✓		Yes	
Retail	✓		✓	0.87	✓	✓	✓	Yes	
Semiconductors		✓	✓	0.99				No	
Software & IT Svcs.	✓	✓	✓	0.67	✓		✓	Yes	Yes
Transportation Equipment		✓	✓	0.84	✓		✓	Yes	Yes
Transportation Services				0.31		✓		No	
Utilities		✓		0.84		✓	✓	Yes	
Wholesale	✓		✓	0.61	✓	✓	✓	Yes	

For some of the above industries, Northern Nevada meets the location requirements and has a strong local presence. However, the industry was still not selected as a potential target. In these cases there are other negating factors that precluded the industry from final selection. Those factors include:

The industry is not a primary industry - these industries serve the local populace and are driven by population growth and do not serve as suitable targets:

- ✓ Communication Services (locally serving)
- ✓ Housing & Construction
- ✓ Government
- ✓ General Services
- ✓ Retail
- ✓ Utilities

The industry does not meet the goals and desires of the community – these industries do not meet the stated vision of the types of businesses that Northern Nevada residents would like to see in the future (these goals and visions will be discussed in Step 4 below):

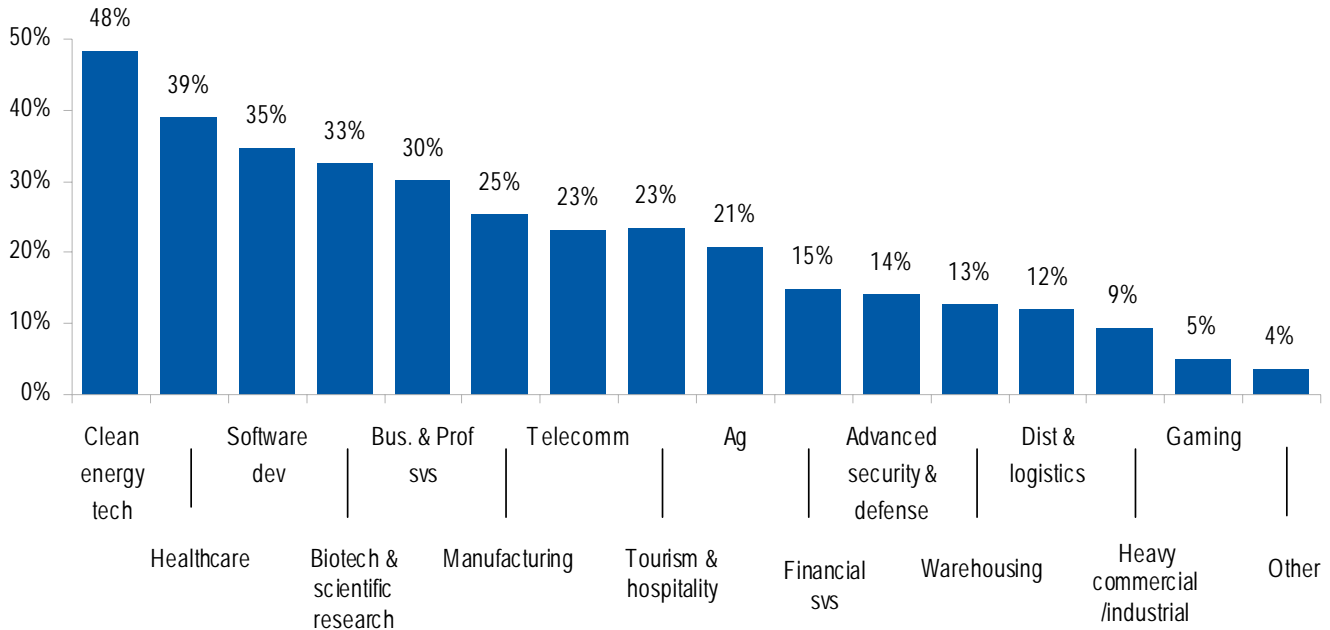
- ✓ Wholesale (low wages)
- ✓ Industrial Machinery

STEP 4: DOES THE TARGET MATCH THE COMMUNITY'S GOALS?

Public opinion and community input is as critical to the industry cluster selection process as data and asset analysis. **The growth of industry clusters requires a community effort.** Local government officials, economic developers, business leaders, and the general public must be **united in their vision and enthusiastic in their support** to grow the region's presence in industry clusters that are unanimously viewed as desirable. This is particularly critical when a region lacks a strong local concentration in a targeted cluster. The lack of cluster concentration does not rule out an industry as a target, but it does indicate that community efforts have to be more focused and enhanced to successfully grow the desired industry locally.

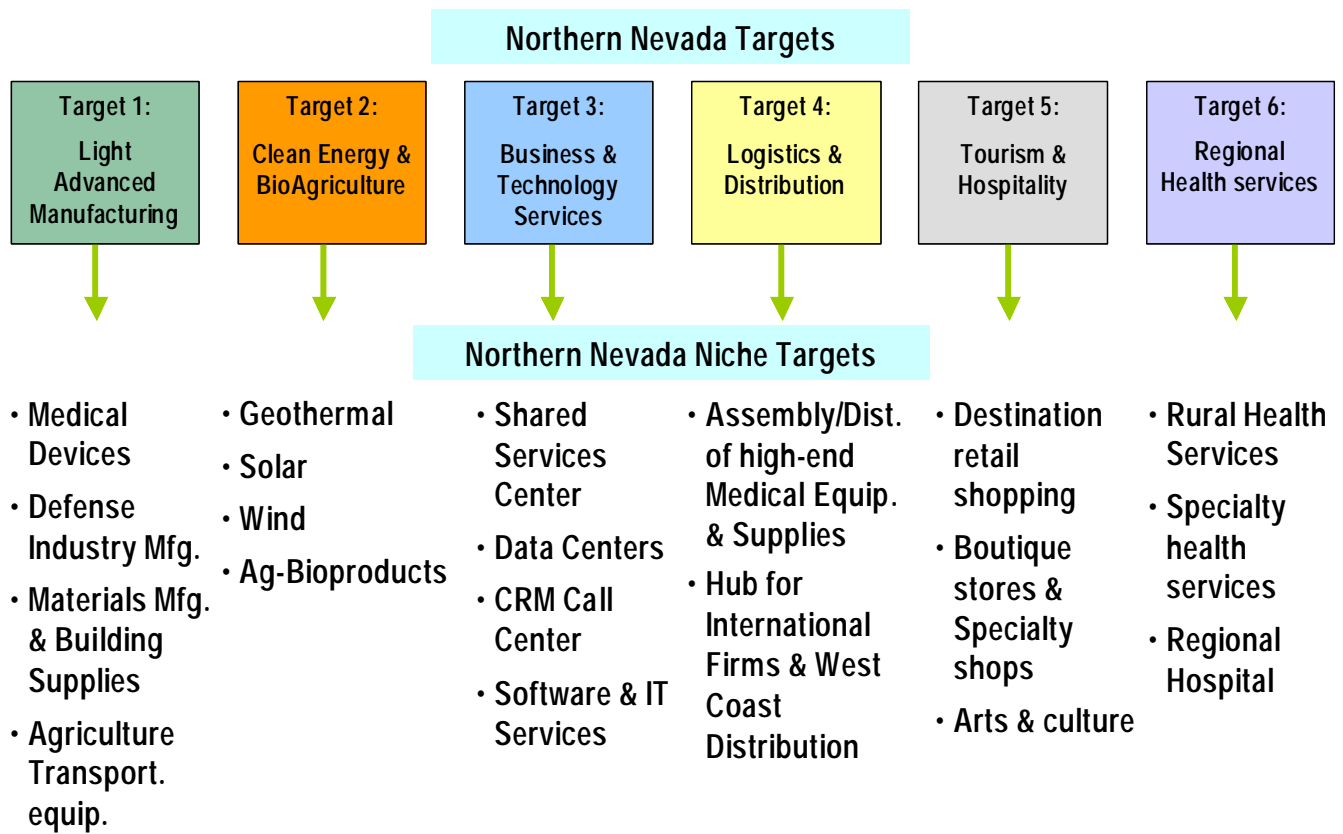
The target industries recommended in this report match well with the community's desires. During focus groups and on the online survey, respondents said they believe that "clean" businesses – such as high tech businesses or businesses that involve services or only some type of equipment assembly – would best meet the economic needs of Northern Nevada and not contradict the overall character of the region. Businesses such as clean energy, healthcare and biotechnology, software and technology services, business services, light manufacturing, and tourism and hospitality all fit in this category. With good planning, facilities for these businesses can fit the character of each of the communities in Northern Nevada.

In the NorthernNVision online survey, respondents were asked to choose three industries from a long list that they would like to see locate or expand in the region. The top industries that were selected were as follows:



Recommended Target List

Based on the preceding selection process, AngelouEconomics recommends that Northern Nevada pursue the following target industries for new investment and job creation in the region:



We profile each target on the following pages and include a description of the industry as well as each niche target in which AE believes Northern Nevada is best suited to attract and grow.

Target 1: Light Advanced Manufacturing

Light (Advanced) Manufacturing is a broad term with various interpretations. For this report, it is the manufacture, assembly, processing, or packing of any product with low levels of air, water, soil, and noise pollution. Such, light manufacturing is a “clean” or “non-smokestack” industry. Advanced manufacturing is generally viewed as a high-technology industry, but is not always comparable with “high-tech manufacturing.” The underlying reason being that in advanced manufacturing, the emphasis is weighted more on the high-tech processes used in production, rather than on the final output of high-tech products.

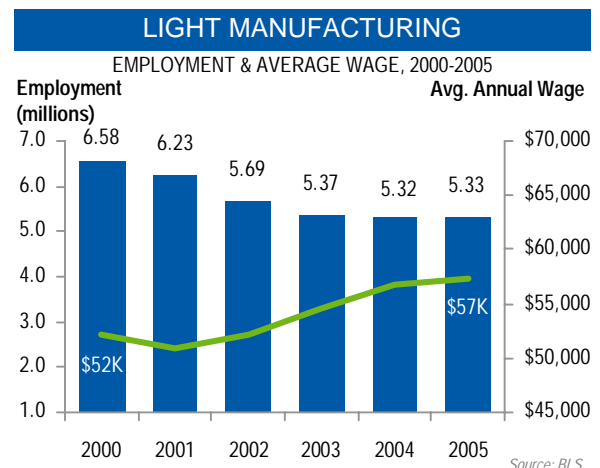
Some of the major industry sectors in the light advanced manufacturing industry include computer equipment, electronics, auto assembly, aerospace, biotech, machinery, pollution control equipment, and medical equipment and instruments. Heavy manufacturing industries (steel, metal smelting, and petroleum refining) are not included in this target definition.

Traditionally, manufacturing has been the cornerstone of economic development due to its high paying jobs, importation of money into the community, and the multiplier effect and spin off of jobs to suppliers and services. While U.S. manufacturing output (dollar value) has consistently grown over the last half-century, manufacturing jobs have been in steady decline due to improvements in manufacturing technologies and processes.

Much concern is raised over the effect of offshoring to low-cost countries. Production wages in Taiwan, for example, are one-quarter of what they are in the U.S. While the U.S. has lost millions of manufacturing jobs in recent years, so has much of the world. In fact, China has lost over 10 million jobs in the past four years, about the same relative share of their manufacturing base as the U.S. It would seem that improvements in technology and the manufacturing process are the largest cause of job losses.

The current decline of manufacturing jobs does not signal the end of U.S. manufacturing. Many inventions and innovations stem from the manufacturing sector’s large investments in research and development. Manufacturing firms fund 60% of the private sector’s R&D investments each year. Several non-cost factors will drive investments in manufacturing in the U.S. for the

LIGHT MANUFACTURING	
NAICS	
333	Machinery Manufacturing
3341	Computer and Peripheral Equipment Mfg
3342	Communications Equipment Manufacturing
3343	Audio and Video Equipment Manufacturing
336	Transportation Equipment Manufacturing
3345	Navigational, Electromedical, and Control Mfg
3391	Medical Equipment Manufacturing
Employment	
5.3 Million Employed - U.S. 2005	
Wage Rates	
\$57,400 Average Annual Wage - U.S. 2005	
Location Criteria	
Well Trained and Educated Workforce	
Low Cost of Labor	
Reliable and Affordable Utilities	
Access to Highways and Airports	



long-term: *access to inputs/resources, delivery time to market, safety regulations, tariffs, security, intellectual property protection, and the customization of consumer products.* Manufacturing still accounts for 14% of the U.S. GDP and 11% of U.S. employment, and will continue to be a major source of wealth and provide exceptional salaries to skilled workers. While it still results in significant inflows of money into a community, the globalization of manufacturing and lower cost of transport are reducing the multiplier effects on local communities.

The government is actively working to cultivate the competitiveness of the U.S. manufacturing industry. Through the Manufacturing Initiative launched by the U.S. Secretary of Commerce and driven by President Bush, the January 2004 report calls on Congress, federal agencies, state and local governments, and the Department of Commerce to act in an effort to foster an environment that will result in the continuing success of American manufacturing. The recommendations contained in the report include:

- Creating the conditions for economic growth and manufacturing investment through tax cuts, tax credits, and incentives for saving
- Lowering the cost of manufacturing in the U.S. by lowering healthcare costs, ensuring affordable and reliable energy, and reducing the burden of lawsuits on the U.S. economy
- Investing in innovation by strengthening the U.S. patent system and promoting cooperation in research
- Strengthening education, retraining, and economic diversification.
- Promoting open markets and fair-trading practices.
- Enhancing the government's focus on manufacturing competitiveness

Manufacturers watch labor costs, but they are not the sole driver of location decisions. Rather, manufacturers seek a workforce balance that minimizes costs while delivering high productivity and quality. According to the U.S. Dept. of Commerce, from 1977 to 2002, productivity in the overall economy grew by 53%, while productivity in the manufacturing sector grew 109%. The Department of Commerce estimates that over 60% of this productivity gain can be attributed to the use of computers.

U.S. manufacturing will remain competitive in capital-intensive industries with plants using advanced robotics and automated processes. U.S. manufacturing production continues to grow in industries such as semiconductors, pharmaceuticals, medical devices, and autos, regardless of employment trends.

The rapid increase in productivity enables the manufacturing industry to create higher-quality goods at lower costs. Over the past 25 years, prices in the overall economy grew by 140%, while prices in the manufacturing industry rose by only 60%. This translates into a better standard of living for American consumers and higher real wages for workers. Rising productivity is a double-edged sword. It is the key to U.S. manufacturing competitiveness in the world economy, however it dampens the need for increased labor at home.

Final Niche Targets for Northern Nevada

Medical Device Manufacturing

Medical device firms design and manufacture surgical and diagnostic equipment for the healthcare field. Products range from CT Scan machines to operating instruments. As with most life science fields, medical device manufacturing is closely regulated, research intensive, and firms have comfortable operating margins. The industry is located in high cost locations such as California and Massachusetts. Device manufacturing is low environmental impact but can require large electric inputs. Land requirements can be significant as well.

The medical device industry will benefit as the health care industry continues to expand. FDA regulations and continued productivity improvements ensures expansion of high value add manufacturing in the U.S.

Defense Industry Manufacturing

Domestic defense manufacturing continues to expand with small- and medium-sized companies benefiting the most. The reorganization of the military is leading to cuts in large-scale weapons systems and an expansion of smaller, lighter, and more affordable alternatives. This focus on new technologies provides opportunities for communities and companies alike.

This niche sector's growth can be greatly enhanced by the underutilized military installation assets that exist in the region. Both Naval Air Station Fallon and the Hawthorne Army Ammunition Depot could be further leveraged to attract private sector defense contracting dollars to their respective communities.

Building Supplies

Building supplies includes high value add segments of the construction products market. The focus of this niche market is on those products that require advanced design, significant handwork and customization, and a high level of detail. Products include custom wood working, such as cabinets and doors, flooring, and similar aesthetic improvements to a home. The construction supply market is tied to the housing market, and both have prospered in recent years. This has been especially true for locations in the Western U.S., such as Northern Nevada. As both the volumes and value of residential construction has increased, the construction supply market has performed very well. This industry is subject to competition from offshore markets, but not to the same degree as other manufacturing. The custom nature of this industry precludes large scale manufacturing, and removes the cost advantage of many offshore locations. The industry is tied to the local and regional home market, and any slowdown will adversely affect industry firms.

Materials Manufacturing

Materials range from exotic to commonplace, though all have familiar uses. Shape-memory alloys, for example, have the ability to remember a predetermined shape, returning back to that shape after repeatedly being bent. Commercial applications for such an odd sounding concept are being found in robotics, biomedical implants, and perhaps the more familiar use, eye glass frames.

More familiar materials include cement and plastics. World consumption of concrete is more than 2.5 tons per person per year. Plastics manufacturing operations become a prime target for economic development efforts due to their strong growth and ability to complement virtually every other industry. Plastic manufacturers often refer to themselves as contract manufacturers due to their ability to supply specialized products to such varied customers as automobile manufacturers, soft drink bottlers, and hospitals.

Agricultural Transportation Equipment Manufacturing

World demand for agricultural machinery and equipment is projected to increase 4.5 percent per year through 2004 to almost US \$60 billion. Increasing demand will be accelerating global economic activity, resulting in stronger demand for agricultural products and firming in prices. This will boost farm incomes and stimulate the purchase of new farm machinery, particularly in developing regions. Northern Nevada offers close proximity to domestic users and good transportation with road and rail access to get products to the large California agriculture market and West Coast ports for export. John Deere is working on designing equipment that can be broken down to fit inside containers to take advantage of low cost back-haul opportunities to Asia. If the technology works, other manufacturers could benefit as well.

Target 2: Clean Energy & Bio-Agriculture

It is often important for a community to include in its portfolio of target industries at least one emerging, potential future growth industry. This type of industry will have a longer time horizon and a higher risk level for local development. However, with that added risk comes the potential reward that the industry could be a powerhouse in the future and provide the community with high wage jobs and large capital investments.

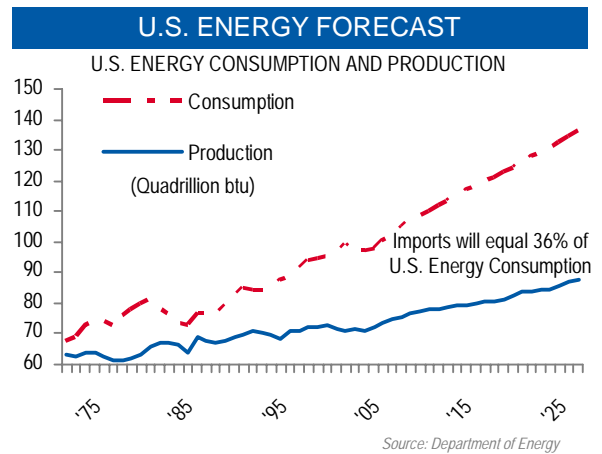
For the purposes of this report, clean energy is defined as technologies that reduce the environmental impact of energy generation. AngelouEconomics considers solar, geothermal, wind, hydrogen fuel cells, and environmental technologies all to be clean energy technologies. Due to the emerging nature of this industry, many of the sectors that comprise this cluster are not specifically defined as belonging to a "clean energy" industry. Rather, they are categorized in traditional industries such as Energy and Natural Resource production, Power Generation, etc.

The energy industry is undergoing rapid change and has become truly multifaceted. Traditional fossil fuel extraction and production is as important as ever, and new technologies are changing the way natural resources are utilized. At the same time, dwindling domestic resources, rising consumption, uncertain international energy supplies, and environmental concerns have forced the United States and others to develop sources of renewable energy production. New energy efficiency technologies are gaining ground, including hybrid automobiles and efficient lighting and appliances. Few argue that the future of the U.S. economy will be highly dependent on access to a readily available supply of reliable, affordable energy. Clean and renewable energy generation and energy efficiency will help meet domestic needs in a responsible manner. Clean energy is the fastest growing segment of the energy industry, with revenues in its three main segments (solar, wind, fuel cells) expected to increase from \$13 billion to \$92 billion over the next decade.

Fossil fuels accounted for 79% of domestic production in 2005, with petroleum accounting for almost all of the country's imports. Nuclear generation accounts for 11.6% of U.S. production, while renewable and clean sources of energy account for 8.6% of U.S. production. Hydroelectric power accounts for the bulk of this U.S. clean energy production. Fractional amounts come from solar, wind, and geothermal generation.

Energy is a long-term growth industry. As the American economy continues to grow, energy consumption will rise. The U.S. population expansion is contributing to increased energy use as well; energy

CLEAN ENERGY	
NAICS	
221111	Hydroelectric Power Generation
221112	Fossil Fuel Electric Power Generation
221113	Nuclear Electric Power Generation
221119	Other Electric Power Generation
334413	Solar cells manufacturing
541380	Testing Laboratories
541710	R&D in Physical, Eng., Life Sciences
Employment	
580 Thousand Employed - U.S. 2005	
Wage Rates	
\$79,000 Average Annual Wage - U.S. 2005	
Location Criteria	
Educated Workforce	
Access to Venture Capital	
Research Institution	
Temperate Weather for Testing	



consumption per capita is expected to rise 17% through 2025. Unfortunately, the United States lacks the domestic resources to meet projected demand. Therefore, the country's energy needs are increasingly met by imports. As demand outgrows supply, prices will rise for both oil and natural gas, in turn leading to increases in energy prices.

Renewable or clean energy has risen as a solution to many of our energy supply problems. Clean energy is widely available domestically, and falling costs have made many technologies feasible today. True to its name, clean energy has a negligible environmental impact when compared to coal and other fossil fuels.

Clean energy products increase energy and natural resource efficiency while reducing the environmental impact of further development. Clean technologies such as energy-efficient appliances and motors, alternative fuel cars, and advanced steel production reduce energy and natural resource consumption while reducing pollution. These technologies also reduce the energy needs of companies and reduce dependence on foreign sources of energy. Additional benefits of these technologies are improved environmental quality, better quality of life, and long-term economic growth.

Niche Targets for Northern Nevada

Geothermal Energy

Geothermal energy technologies use the heat of the earth for energy generation and heating applications. Geothermal energy can be produced from the shallow ground from extremely high temperatures of molten rock called magma found far beneath the Earth's surface.

The upper 10 feet of the Earth's surface maintains a steady temperature between 50° and 60°F. Geothermal heat pumps use this resource to heat and cool buildings. A geothermal heat pump system consists of a heat pump, an air delivery system, and a heat exchanger (a system of pipes buried in the shallow ground near the building). In the winter, the heat pump removes heat from the heat exchanger and pumps it into the building. In the summer, the process is reversed, and the heat pump moves heat from the indoor air into the heat exchanger. The heat removed from the indoor air during the summer can also be used to provide hot water.

Wind

Wind-generated energy is expected to be the second largest source of renewable electricity by 2025, growing over 400% through 2025. Globally, the industry added over 7,000 megawatts of capacity in 2003, and now generates nearly 40,000 megawatts of energy. The wind energy industry recorded 2003 revenues of \$7.5 billion, and is forecast to increase annual revenue to \$48 billion by 2013.

2003 came close to being a record-breaking year in the U.S., with 1,687 MW of wind energy capacity installed. Current capacity stood at 6,374 MW at the end of the year, with utility-scale turbines operating in 30 states. The United States is now the second largest wind energy user in the world after Germany. Leading wind energy states are California (2,043MW), Texas (1,293 MW), Minnesota (563 MW), Iowa (472 MW), and Wyoming (285 MW). More than half of the new capacity installed consisted of GE Wind turbines. Spanish manufacturer Gamesa and Indian manufacturer Suzlon installed their first turbines in the U.S. in 2003.

Solar

Solar energy has the greatest potential of all clean energy applications, but is still years away from large-scale development. About one percent of the surface of the Sahara desert would be sufficient to supply the entire worldwide electricity demand using solar thermal power plants. The solar power industry is comprised of two

competing technologies, photovoltaic and thermal. Both photovoltaic and solar thermal power plants have proven their feasibility in many operating environments at a large number of locations. There are relevant megawatt-size systems for both technologies.

Photovoltaic devices use semiconducting materials to convert solar radiation directly into electricity. In contrast to photovoltaic plants, solar thermal power plants are not based on collecting direct sunlight, but generate electricity from the heat produced by sunlight. Solar thermal is more cost effective than photovoltaic, but during cloud cover can produce no electricity while photovoltaic can produce some energy. Currently, the cost of solar is still too high for mass adoption. Nanotechnologies offer new hope in driving down these costs.

Ag-bioproducts

Food Production now uses biotechnology to modify agricultural feedstocks to be more productive. This could be an enhancement of crop productivity, resistance to disease, or a genetic modification for added human health benefits. In fact, nearly 20% of the total biotechnology industry employment is in agricultural bioscience markets. This represents roughly 200,000 jobs nationwide. Another area of emphasis in the Bio-Agriculture industry is nutraceuticals, which is the use of food or agricultural inputs to provide health and medical benefits, including the prevention and treatment of disease.

This is a particularly good niche sector target for many of the rural, agricultural areas in the 7-County region. Both Churchill and Douglas Counties, in particular, have the potential to promote the growth of this niche sector to enhance the economic productivity of their agricultural lands.

Target 3: Business & Technology Services

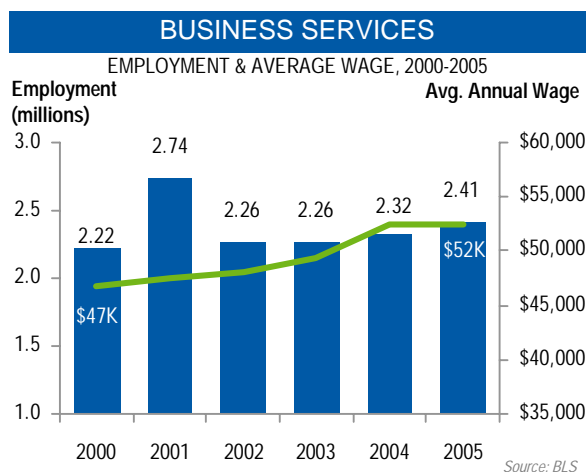
The business and technology services industry is comprised of back-office support operations including call centers, processing facilities, and data processing and storage. The market's fastest-growing segments are back office support for the financial services industry, third party software development, and outsourced information technology operations.

Support staff in the business services industry performs a variety of record-keeping duties. They track revenues coming into and leaving organizations as well as provide customer support. They provide payroll, procurement, and auditing services for their clients. The growing financial services and health care industries will require increasing levels of back office support. Both industries will continue to move these support functions off site or even outsource the operations to third party vendors. Citicorp recently announced the relocation of its core back-office support operations from Lower Manhattan to New Jersey. The fact that some back-office operations still exist in the high cost areas such as New York illustrates the potential for lower-cost communities to recruit these facilities.

BUSINESS & TECHNOLOGY SERVICES	
NAICS	
5182	Data Processing, Hosting
5112	Software Publishers
5161	Internet Publishing and Broadcasting
5181	Internet Service Providers and Web Search Portals
5415	Computer Systems Design and Related Services
5412	Accounting, Tax Preparation
5611	Office Administrative Services
5612	Facilities Support Services
5613	Employment Services
56142	Call Centers
Employment	
15 Million Employed - U.S. 2005	
Wage Rates	
\$57,500 Average Annual Wage - U.S. 2005	
Location Criteria	
Educated Workforce	
Reasonable Utility Rates	
Quality Office Space	

Although the domestic call center industry struggled in 2004 and continues to struggle in 2005, **financial services and customer relationship management (CRM) call centers have been a bright spot.** Many call centers have closed as companies outsource or merge their call center services. Companies increasingly are outsourcing their call center services to offshore entities in countries with large English-speaking populations. India is the most popular destination for call center outsourcing. Strong competition for call centers also comes from Canada, South Africa, Costa Rica, and the Philippines. The recent creation of the National Do Not Call List is a clear threat to the outbound call center industry as fewer sales calls can be placed from within the United States. **Financial service and CRM call centers have been less affected by these changes than the overall call center industry.** They have a higher value add and need to have a closer connection with their end consumers. Thus, they have moved operations overseas with much more caution.

The data processing and storage sector is comprised of computer programming services, data processing, and information retrieval services. Demand for these services is driven by efficiencies derived through computer automation, which is expected to continue



to increase.

Final Niche Targets for Northern Nevada

Shared Services Center

These facilities are generally large scale corporate operations including a wide variety of integrated back office operations. They typically include redundant large data centers for regional or headquarter operations, high value add call center component typically entailing customer relationship management, advanced technical support and high dollar value sales, small to medium processing operations, and small to medium programming operations. These corporate campuses have excellent wages and long term prospects. A shared services center provides high visibility as well.

A shared services center will require large land tracts, and impervious cover can be significant due to parking requirements for a large number of employees. Suitable facilities generally take the form of class 'A' suburban office space and will require the necessary surrounding retail and dining amenities suitable for a professional office worker. A shared services center's operations will be closely connected with its parent corporate headquarters located elsewhere. This close connection will require frequent air travel and thus easy access to a major airport will be important.

Data Storage and Processing (Data Centers)

Data storage and processing operations typically occur in Data Center facilities. Data centers are operations that provide digital information storage for customers and corporate parents. They are composed of clusters of computers and network switching gear that allows efficient and highly reliable transfer of data. Excess capacity exists from the the late 1990s build out, but many corporations have transitioned away from outsourcing data center management and are developing new centers. Data centers are high value operations, pay excellent wages, and are very low impact. Northern Nevada meets most of the rigorous technical requirements of the industry. These facilities are increasing in importance and many are developed with small software development operations.

Data centers are low environmental impact facilities. Air emissions, water consumption, and wastewater discharge are low. Facilities will not require much land, and impervious cover should be limited.

These operations, however, have relatively large electricity and communication / Internet connectivity requirements. Electricity usage will be high and a dedicated, redundant supply will be necessary. In addition, data centers will require connectivity to high speed T1 lines and proximity to fiber optic communication lines.

CRM Call Centers

Strong competition for call centers is coming from offshore locales and is stunting domestic growth in the overall industry. However, call centers focused on customer relationship management (CRM), advanced technical support, or high dollar value sales are less affected by these changes and continue to locate new facilities in the U.S. These facilities are not subject to the same level of competitive pressure as low value-add call center operations. CRM is considered vital for high margin clients, and companies are concerned about potentially upsetting profitable relationships to save money. These operations are typically staffed by college-educated staff, many with further levels of certification. Cost savings realized from off shoring are inadequate given potential risks involved.

As with high tech firms, facilities are typically white-collar operations with above average wages. This segment of the business services sector also has low barriers to entry and employment growth is beginning to rebound.

Software & Information Technology Services

The software industry is comprised of coding/programming services, prepackaged software, customized software, and web-based services. Demand for software is driven by efficiencies derived through computer automation or, in the case of the gaming industry, through entertainment value.

Software firms now have worldwide revenues in excess of \$200 billion. Approximately half of these sales come from software applications, with development tools and infrastructure software splitting the remaining market. Major areas of growth are in data security and business intelligence. Due to the low start-up costs associated with a software firm, many small software companies exist. However, the industry is quickly maturing and many analysts forecast consolidation of these firms. Large software companies such as Microsoft, IBM, and Oracle consistently buy smaller companies.

Target 4: Logistics & Distribution

Logistics and Distribution includes all freight carriers (air, water, trucking, and intermodal) and warehousing. Until recently, most manufacturing firms took responsibility for the warehousing and coordination of their flow materials. More often now, these services are outsourced to develop an advanced just-in-time delivery system.

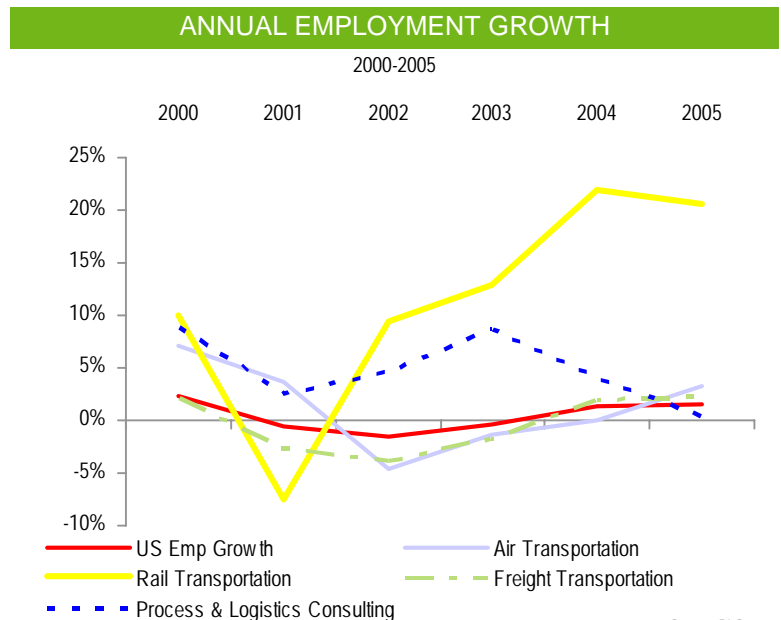
Virtually every product sold moves through the distribution industry, meaning that this industry touches roughly a third of the nation's GDP. The movement and storage of these goods is a \$264 billion industry, and employs 3.1 million people.

As the national economy slowed in 2000, fewer goods were shipped throughout the country causing a sharp decline in demand for distribution services. Industry revenues and profits fell considerably during the downturn, but growth returned in 2003, and continued into the first quarter of 2005. Due to declining industry fortunes, national employment declined by 110,000 from 2000 to 2003, but 2004 and 2005 saw an aggressive period of growth where 140,000 jobs were added. This cyclical effect has begun to reverse itself as U.S. producers increase their activity and consumer expenditures pick up. Large distribution centers continue to rank among the largest new economic development projects in the U.S.

These structural trends are expected to continue as the U.S. becomes more service-oriented. Growing a local distribution sector will be highly dependent on the health of local manufacturing or the market access to a larger end consumer market. As such, most goods are warehoused and shipped from their point of production or near the final destination.

Overall revenues for the logistics and distribution industry are forecast to rise 13% in 2005, faster than GDP growth, and employment levels will grow by 14.8% over the next 10 years, again faster than the overall economy. The fastest growing users of distribution services are expected to be in the following industries: aerospace and

LOGISTICS & DISTRIBUTION	
NAICS	
4842	Specialized Freight Trucking
4881	Support Activities for Air Transportation
4882	Support Activities for Rail Transportation
4883	Support Activities for Water Transportation
4884	Support Activities for Road Transportation
4885	Freight Transportation Arrangement
541614	Process, Physical Distribution, and Logistics
Employment	
3.1 Million Employed - U.S. 2005	
Wage Rates	
\$41,300 Average Annual Wage - U.S. 2005	
Location Criteria	
Well Trained and Educated Workforce	
Transportation Infrastructure	
Low Inventory Tax	
Affordable Land	



defense, industrial equipment, computer equipment, and consumer goods. As manufacturing becomes a smaller share of the national economy, the industry is expected to align more closely with the distribution of consumer goods so proximity to large consumer markets (such as California) will be critical for site location decisions.

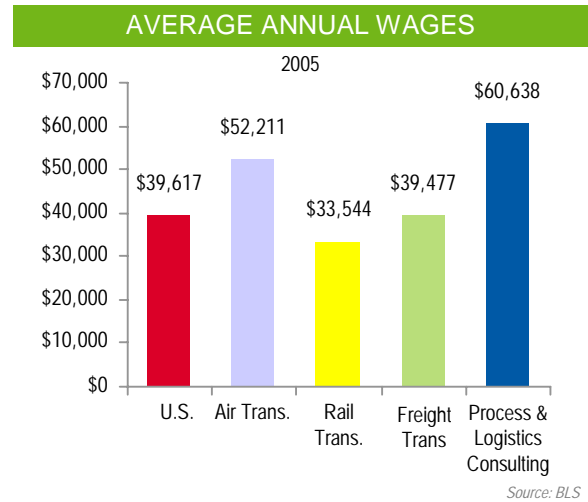
Final Niche Targets for Northern Nevada

Assembly / Distribution of High End Medical Equipment and Supplies

Included in this niche is the assembly and distribution of consumer goods, medical devices and laboratory equipment (defined as Professional Equipment), and drug therapies. The distribution of these products commands some of the highest wages in the industry, far exceeding the national average wage. As the Baby Boomers continue to age and require more medical attention, the assembly and distribution of these supplies will experience remarkable growth. Sales of consumer goods will continue to be strong as products are imported, assembled within the U.S., and then distributed to large consumer markets. Northern Nevada's proximity to California, which is one of the largest end user markets for medical equipment and supplies in the world, gives the region a competitive edge.

Hubs for International Firms and West Coast Distribution

The modern hub continues to grow larger and larger, often exceeding 1 million square feet, employing over 1,000 people, and becoming a major target for state and local economic developers. While there are a number of site selection requirements for a hub, the primary need is access to a large customer base. The selection process begins by targeting a market the retailer would like to expand into or in which it needs distribution services. Once markets are chosen, companies look for a site within 150-200 miles of their optimal location. From that point, site-specific factors are considered, including transportation infrastructure, business climate, and labor supply.



Target 5: Tourism & Hospitality

Restaurants, downtown retail, and destination retail that draw consumers from a larger region have become the mainstays of communities around the country. Many cities are dependent on the tax revenue associated with these stores, and some perceive the steady improvement of retail options as a clear quality of life enhancement. The retail industry continues to transform itself, as tenants seek greater visibility and brand awareness in a heavily saturated retail market. Real estate development and mixed-use construction are becoming an integral part of many retailers' growth plans.

Retail is not typically a target for economic developers. It is generally seen as a locally serving industry that lacks a large economic impact. However, targeting economic development efforts on the retail industry is different than targeting retail establishments. **The goal of developing this target in the Northern Nevada region is to provide the quality of life amenities that are important to build a healthy community and (most importantly) to attract the necessary workforce required by the other target industries.** In addition, establishing a strong retail industry has a positive impact on the growth of tourism in the region, which does provide an injection of outside dollars into the region.

Tourism is one of the nation's largest employers and the third largest retail sales category. Hospitality is also included in this sector. Hospitality provides services such as lodging, entertainment, and restaurants. These industries are closely related and usually interdependent in small communities. While this industry offers low wages it does provide employment opportunities for low skilled individuals and contributes significantly to the region's tax base. The more tourists a region can attract, especially from outside the immediate area, the more visibility and recognition the region will receive.

The retail and tourism industry often go hand in hand. A strong tourism industry will promote the development of retail establishments, especially retail amenities associated with entertainment and dining. Likewise, a strong retail sector acts as a draw and attracts tourists into a region. The retail industry is the second

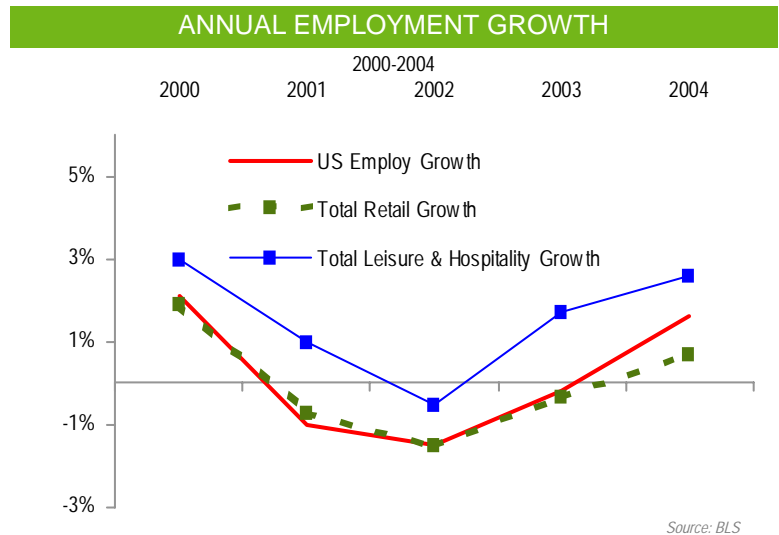
TOURISM & HOSPITALITY	
NAICS	
44-45	Retail Trade
71	Arts, Entertainment, and Recreation
72	Accommodation and Food Services
Employment	
15.0 million employed - U.S. (Retail Trade)	
12.5 Million Employed - U.S. (Hospitality)	
Wage Rates	
\$24,160 Average annual wage (Retail)	
\$20,215 avg. annual wage (Hospitality)	
Location Criteria	
Growing population and above average incomes	
Neighboring Markets	
Young, available workforce	
Reasonable cost of land and commercial space	



Source: BLS

largest industry in the U.S. after manufacturing, employing 11.7% of the workforce and generating \$3.8 trillion in annual sales. The tourism industry falls just behind the retail industry, employing approximately 12.5 million people.

Retail employment is projected to grow by 1.3% annually and should reach 17.3 million by 2012 according to the U.S. Bureau of Labor. An average department store employs 150 people and manager salaries start at \$80,000. Primary growth in retail employment will come from marketing and sales jobs, estimated to increase by 12.9%.



The tourism industry, broadly represented by Accommodations, Food Service and Drinking places, and Arts, Entertainment and Recreation is expected to grow at roughly 1.8% through 2012 and should reach approximately 14.2 million employed.

Retailers and tourism providers help increase the quality of life in the regional community and provide tax revenues. These industries are broadly categorized as the sale of merchandise or related services to the public for personal or household consumption or entertainment including anything from food service to gasoline sales. Low savings rates, inflation rates, widely available credit, and the increasing number of six-figure incomes have stimulated significant growth in retail. In addition, retiring baby boomers with larger levels of disposable income are expected to have an increasingly positive impact on the tourism industry.

The high growth in the retail industry has been seen in the creation of destination shopping centers. "Power towns" or "lifestyles centers" offer shoppers much more than the merchandise on their shelves. They have been replacing traditional malls and usually consist of two or three large anchor stores and many smaller specialty stores in an aesthetic, outdoor setting. Entertainment options also draw customers in to linger and browse the shops. New shopping centers, especially those in urban areas, are devoting up to 40% of gross leaseable area (GLA) to entertainment, restaurants, and movie theaters. Close to residential areas and office buildings, these retail centers often have post offices, day care facilities, and galleries to create a unique kind of community center. Builders have spent 25-30% more on these areas than comparable shopping centers to make them attractive and pleasant. Many of these centers bring in shoppers from over a 15-mile radius.

Final Niche Targets for Northern Nevada

Destination Retail / Shopping

Destination retail/shopping is the last step in the distribution process and pulls customers from a larger geographical region. Retailers are organized to sell end products to the consumer. Retail stores typically operate from a physical store location in high traffic areas and are designed to accommodate and attract a large volume of customers. Destination retail provides a cluster of retail alternatives to neighboring cities, usually through a large mall, shopping district, or retail outlet center.

Boutique stores & Specialty shops

Boutique stores and specialty shops are smaller retail establishments that typically specialize in providing a certain product line of goods for a particular category of customers. For example, a women's clothing boutique would only provide women's clothing and accessories. By specializing in fewer product lines, these boutiques often provide a larger selection and more expertise in the product categories they represent compared to general merchandisers that carry a very broad selection of product categories but do not have the depth of selection in any single product type. Boutiques and specialty stores have become increasingly popular, particularly among consumers with higher disposable incomes that value quality products and excellent sales service.

These specialty stores and boutiques tend to locate in unique and distinctive areas such as quaint downtowns or high density mixed use developments. This is an important niche target that will help spur the revitalization of many of the downtown areas in each of the seven counties in Northern Nevada.

Arts & Culture

Arts and culture encompass the artistic community, cultural institutions, and culturally influenced products and services that attract the masses. Again, the development of attractive downtown settings will be greatly enhanced by the presence of arts and culture amenities.

While industry growth statistics are difficult to quantify, Americans for the Arts estimates the nonprofit arts industry contributed over \$55 billion to the economy in 2004, which is almost 50% greater than in 1994. When including commercial artistic ventures industry revenues are estimated to surpass \$70 billion. Industry growth rates are forecasted to be 20-70% over the next decade depending on the industry sub sector. The long-term trends of increasing disposable income, higher educational attainment levels, and general aging of the population all combine to increase demand for the arts.

Target 6: Regional Health Services

Health Services includes the traditional industry segments involving healthcare: doctor and dentist offices, assisted living, hospitals, as well as specialty cosmetic enhancements and spa related services.

Health Services has been one of the fastest growing industries in the United States for many years. The U.S. healthcare market is estimated to be worth \$1.3 trillion annually and employs 10.8 million. The industry's employment is expected to grow by over 28% between 2002 and 2012, to 16 million. Specific sectors will see even higher growth; the home-based health care sub-market is forecasted to grow by more than 55% by 2012. More health care is needed for the country's large aging population, and rising standards of living will boost demand by the general population even further. Due to the nature of its business, the health services industry is relatively immune to market fluctuations. The elderly population, a group with greater than average healthcare needs, will grow faster than the total population through 2008, increasing demand, especially for home health care, private practice, and personal care.

HEALTH SERVICES	
NAICS	
62	Health Care & Social Assistance
6211	Office of Physicians
6213	Office of Other Health Care Practitioners
6214	Outpatient Care Centers
6216	Home Health Care Services
623	Nursing and Residential Facilities
Employment	
10.8 Million Employed - U.S. 2005	
Wage Rates	
\$36,000 Average Annual Wage - U.S. 2005	
\$1.3 trillion in revenues	
Location Criteria	
Skilled workforce	
Growing population and above average incomes	
Quality Office Space	

The chart below shows typical occupations, growth rates, and wages in the industry.

INDUSTRY OCCUPATIONS		
OCCUPATION	10 YR GROWTH FORECAST	MEDIAN WAGE
HEALTHCARE PRACTITIONERS	26.0%	\$44,360
REGISTERED NURSES	27.3%	\$52,460
OFFICE SUPPORT	6.8%	\$32,440
HEALTHCARE SUPPORT	34.5%	\$25,390
NURSING AIDES	24.9%	\$27,490

Source: BLS

The health services industry consists of the following nine segments:

- Hospitals
- Nursing and residential care facilities
- Offices of physicians
- Offices of dentists
- Home healthcare services
- Offices of other health practitioners

-
- Outpatient care centers
 - Other ambulatory healthcare service, including blood and organ banks and ambulance services
 - Medical and diagnostic laboratories

Final Niche Targets for Northern Nevada

Rural Health Services

Two recommended targets to satisfy the needs of the growing 7-County rural population are home health care and residential care facilities, we describe both below:

Home health care programs

The BLS estimates that home health care employment will jump by 55% between 2002 and 2012. Home health programs help elderly, convalescent, or disabled persons live in their own homes instead of in a health facility. Under the direction of nursing or medical staff, home health aides provide health-related services, such as administering oral medications. They may check patients' pulse rates, temperatures, and respiration rates; help with simple prescribed exercises; keep patients' rooms neat; and help patients move from bed, bathe, dress, and groom. Experienced aides also may assist with medical equipment such as ventilators, which help patients breathe.

Nursing and residential care facilities

The BLS estimates that residential care employment will jump by 25% between 2002 and 2012. Nursing care facilities provide inpatient nursing, rehabilitation, and health-related personal care to those who need continuous nursing care, but do not require hospital services. Nursing aides provide the vast majority of direct care. Other facilities, such as convalescent homes, help patients who need less assistance. Residential care facilities provide around-the-clock social and personal care to children, the elderly, and others who have limited ability to care for themselves. Workers care for residents of assisted-living facilities, alcohol and drug rehabilitation centers, group homes, and halfway houses.

Specialty Health Services

Specialty Health Services includes those services not typically found in hospitals, but are offered by individual, specialized offices. These health services can include rehabilitation, cosmetic surgery, alternative medicine, or even sports medicine. High quality, specialized health services brought to specific areas would leverage the growing high-income areas and expanding population centers in the 7-County region.

Regional Hospital

Expanded hospital availability is needed to match the population growth that is taking place throughout the 7-County region. Strong regional hospitals serve as an excellent anchor within the community enhancing the local quality of life. Future expansions of existing regional hospitals in Churchill County and Carson City as well as the development of a new regional hospital to serve growing populations in Lyon County will provide even more opportunity to make the region a self-sustaining healthcare destination.

This not only provides greater access to much needed health services for the local populace, but it also provides strong employment options for the region's workforce. Coupled with efforts to grow the region's healthcare services, initiatives should be implemented in conjunction with local workforce training providers and the Western Nevada Community College, to train a future healthcare workforce.

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