

Nevada Industry and Competitiveness Analysis

Identification of Industry Opportunities

Interim Technical Report – Executive Summary

September 9, 2011



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PURPOSE AND GOALS FOR THIS STUDY

The State of Nevada stands at a critical juncture, chastened by serious economic challenges but in reach of real opportunity.

The state's recent economic volatility, its causes, and its impacts have been well-documented and thoroughly discussed over recent months, as state leaders and stakeholders have begun to coalesce on the need to put the state on a sustainable growth path. The strategy and actions to achieve this new course are yet to be determined and require careful, data-informed analysis and strategy-setting. What is clear is that Nevada has considerable economic opportunities, and the assets and potential to harness them to spark an economic renewal.

The time has come for the state to act on the basis of known facts.

To this end, SRI International has been commissioned by the State of Nevada to work with the Brookings Institution and Brookings Mountain West to conduct rigorous, objective industry research/analysis and to assist in crafting a new economic growth and target industry development agenda for the State of Nevada and its major metro areas.

With significant bipartisan agreement in place among state leadership about the need for economic renewal in Nevada, this study is intended to provide a comprehensive, authoritative analysis of the composition, performance, and prospects of Nevada's key and emerging industries. The analysis is employing a data- and market research-driven approach – thereby establishing an objective basis upon which to develop widespread, shared understanding of current economic realities. This interim report has been created to obtain feedback from the project steering committee before a final message report that recommends an action-oriented strategy is published in November 2011. The analysis presented here, combined with collaborative input from key stakeholders in the public and private sectors, will form the basis for devising a strategy to address the deep challenges that Nevada and its metro areas face, and will also provide a foundation of guidance for the new state-level Advisory Council, Board, and Office of Economic Development (currently being formed under the auspices of AB 449).

Within this interim technical document, the project team has identified a series of leading opportunities for meaningful near-term and medium-to-long-term industry development and job creation opportunities in the State of Nevada and its two metro areas.

There have already been a number of notable, broad-based efforts at the state level to assess Nevada's ongoing challenges and to lay out new plans and priorities.¹ In addition, industry analyses and plans have been developed in different regions of the state to guide regional economic development efforts.² This study has benefitted from the information, insights, and findings from those studies, and it aims to support those efforts and to provide state-level coherence in the industry development priorities and strategic economic direction for the State's economic leadership.

Central to the report's work is a clarification of the key challenges facing the State of Nevada and the implied goals it should embrace, as well as the identification high-potential industry growth opportunities. On the first point, the realities and implied necessary responses engulfing the state remain stark. Through extensive data analysis, research, and stakeholder consultation (combined with a review of other major state and regional studies), the SRI/Brookings team has identified four overarching challenges and goals for the State of Nevada and its metro and rural regions. These goals are highlighted in the box on the following page, and they provide an important framework for identifying the highest-potential industry opportunities for Nevada to nurture and develop as pillars of the state's economic future. Along those lines, previous investigations for this project have concluded that the State of Nevada urgently needs to:

- Restore growth and jobs
- Diversify its economy
- Catalyze innovation in core and emerging industries
- Build new pillars of growth

In short, the research conducted to date has provided an up-to-date baseline of data for better understanding those goals (and the challenges they address). More importantly, this research has also provided the groundwork for identifying considerable assets and opportunities that the State of Nevada can build upon to identify new pillars of economic growth, catalyze innovation, and renew and reposition its core industries.

¹ Notable studies/strategies that have informed this initiative include: *Envisioning Nevada's Future: Goals & Strategies for Advancing Our Quality of Life*, Nevada Vision Stakeholder Group and Moody's Analytics (September 2010); *New Nevada Taskforce Report on Initiatives* (March 2011); *The Silver Spark for Nevada: Sustainable Innovation Leading a Vital Economic Renaissance*, Nevada Institute for Renewable Energy Commercialization, commissioned by the Nevada Commission on Economic Development (March 2011); and *Technology Strategy for Nevada*, Battelle Memorial Institute (December 2000).

² Regional studies/strategies include: *Target2010 Reports*, Economic Development Authority of Western Nevada (2006); *Targeted Industry Study Update*, City of Henderson Economic Development Department (June 2005); *South Nevada Regional Economic Study*, Southern Nevada Regional Planning Coalition (November 2006); *Regional Economic Development Study: Strategic Recommendations for Cluster Development*, Southern Nevada Regional Planning Coalition (March 2008).

Statewide Goals Guiding the Identification of Industry Opportunities

- 1. Restoring growth and jobs.** Following the recent period of extreme economic volatility and recession, Nevada must restore growth and jobs in a strategic and future-oriented way, especially in order to maintain and improve quality of life for the state's citizens. Given that the state's two major metro areas account for around 94% of the state's jobs, pursuing appropriate targets of opportunity in Las Vegas and Reno/Carson City will make great strides towards catalyzing a new growth trajectory for the entire state.
- 2. Diversifying the economy.** Consumption-oriented industries (construction/real estate, tourism/gaming, and retail trade) have traditionally been the core drivers of growth in Nevada's economy. While these strengths have served the state well in periods of economic expansion, they have also made the state more susceptible to extreme volatility and recession (as evidenced by the massive job losses over the last several years). In looking to the future, Nevada needs to support development of a more diversified economy, in order to spur long-term growth and provide a cushion against future economic cycles.
- 3. Catalyzing innovation in core and emerging industries.** Nevada's reliance on its core consumption-based industries has meant that its technology- and knowledge-based industries have not always received the attention and support offered by many other states around the nation. As a result, Nevada's performance on a number of indicators of innovation activity has lagged most states and the national average. Nevada needs to step up its policies and programs supporting the development of critical high-tech and knowledge-based jobs, industries, and entrepreneurship in order to build the innovation ecosystem necessary to be competitive in the future economy. Innovation is critical for the future competitiveness of *all* industries (not just those typically labeled "high-tech").
- 4. Building new pillars of growth.** Nevada's economy is already starting to recover from the recent downturn, and future growth projections for the state are solid (and well above national averages). However, the extremely high growth figures achieved in the last decade are no longer viable, and the state's traditional industries can no longer serve reliably as the primary drivers of job growth and expansion. Job gains in the coming years are likely to come from a broad cross-section of industries, and Nevada needs to think strategically about how it can cultivate these new industries – simultaneously building off of its traditional economic strengths and pivoting toward new high-potential drivers of growth.

INDUSTRY OPPORTUNITIES FOR NEVADA

NEVADA COMPETITIVENESS SWOT

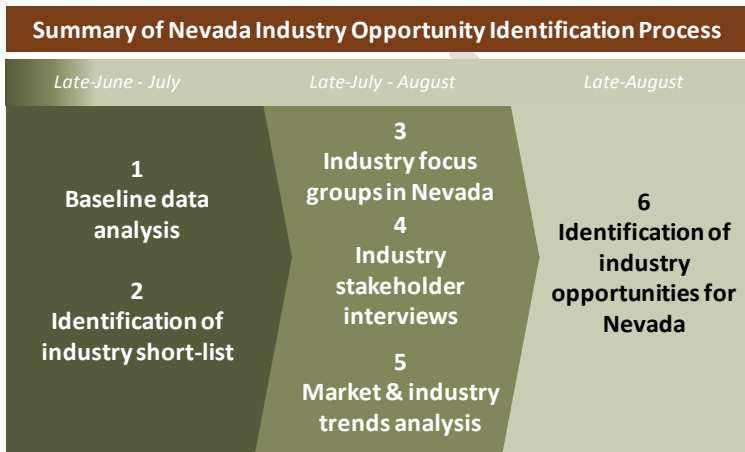
SRI/Brookings compiled a summary SWOT (strengths, weaknesses, opportunities, and threats) analysis for Nevada’s economy to establish the background and context for identifying strategic industry opportunities in the state. This SWOT analysis synthesizes the qualitative and quantitative inputs gathered by the SRI/Brookings team through a series of research efforts, including: stakeholder interviews, focus groups, economic foundations benchmarking of the Las Vegas and Reno metro areas, and a quantitative innovation systems analysis.

Nevada Competitiveness SWOT Summary

Strengths	Weaknesses
<ul style="list-style-type: none"> • Low taxes • Business friendly regulatory climate • Historically has been a high-growth economy • Good quality of life (although this is under-recognized) • Extensive entertainment and recreation assets • Proximity to West Coast population centers, markets, transportation routes, and ports • Excellent airport infrastructure (in both Las Vegas and Reno) • Excellent natural and physical resources (for mining, energy, etc.) 	<ul style="list-style-type: none"> • Economy is heavily oriented toward consumption-based industries • Lack of proactive, coherent economic development strategy and structures • Workforce skill level is low (esp. at higher education levels, although this has been improving) • K-12 educational system is underperforming • Healthcare system is underperforming • Energy costs are expensive (relative to other Western states) • Land transportation connections can be challenging (in some parts of state) • Innovation inputs and outputs are weak (especially in Las Vegas) • Lack of risk capital to invest in start-ups/innovation • Real estate bust (devastating to construction)
Opportunities	Threats
<ul style="list-style-type: none"> • Political leadership closely engaged in revamping and renewing economic development activities • Ease and cost of living is attractive compared to neighboring California • Relatively affordable residential real estate and high vacancy rates (residential and commercial/industrial) • Growing urban/arts districts in Las Vegas and Reno • Large number of tourists/visitors/conventions – an opportunity to “sell” Nevada for future workforce/residents/businesses • Infrastructure for innovation is in place (at UNR, DRI, UNLV), but not at its full potential • Relatively strong Science & Engineering (S&E) workforce and students in Reno • World-class Internet connectivity opportunities (such as the Switch data center in Las Vegas) 	<ul style="list-style-type: none"> • Extreme economic cycles and volatility • Projected growth in the core consumption-based industries will not be sufficient to drive recovery • Limited state economic development resources dispersed through fragmented regional efforts • High unemployment • Underinvestment in higher education and lack of a top-tier Carnegie-ranked research university • Existing image issues can be a barrier in attracting higher-skilled workforce • Federal land ownership can hinder land usage/development in much of the state • Water shortages

METHODOLOGY FOR IDENTIFYING NEVADA’S INDUSTRY OPPORTUNITIES

SRI/Brookings has used a step-by-step, iterative process to arrive at a set of seven recommended high-potential industry opportunities for the State of Nevada. Key inputs to this process included: on-the-ground insights from Nevada stakeholders (through interviews and focus groups); review of Nevada’s existing capacity and competitive advantages; research on national and global market trends; quantitative analysis of Nevada’s past and projected industry trends; and review of existing regional studies and analyses. The goal through this process was to arrive at a list of recommended industry opportunities for Nevada that are **future-oriented** and **growth-oriented**, but also **reality-based** (i.e., they are grounded in the unique assets/advantages that Nevada already possesses or can feasibly nurture).³ In short, the recommended industry opportunities must answer a number of key requirements that link with the key statewide goals outlined above:



- Can the industry drive job-creation and recovery from the effects of the recent recession?
- Over the longer-term, can the industry generate economic diversification (reducing Nevada’s dependence on its three core consumption-based industries, and ramping up production-oriented activities in the state)?
- Does the industry opportunity support innovation-based development, thereby enhancing Nevada’s future competitiveness?
- Does Nevada have the competitive advantages and locational assets necessary to compete in this industry (or, if not, can Nevada build up the necessary assets over the longer term)? As such, can the industry realistically serve as a new future pillar of economic growth in the state?

The seven industry opportunities recommended in this report (and summarized below) represent a broad range of possible development and growth paths – some of which can generate short-term, immediate results, while others will require significantly longer-time frames and larger investments. In addition, the industry opportunities will require different development approaches – some are primarily industry attraction efforts, while others require focusing on start-ups and company growth from within the state. As such, these opportunities are expected to generate varying impacts within

³ More details about the industry identification process and the research inputs utilized are provided in *Section III* of this report.

Nevada – some can support significant job creation, while others represent opportunities for diversifying into emerging, higher-tech and innovative sectors (but may yield limited jobs in the short-term). Each of these factors should be taken into consideration when prioritizing and setting out strategies to pursue these industry opportunities moving forward.

SUMMARY OF RECOMMENDED INDUSTRY OPPORTUNITIES FOR NEVADA

Tourism, Gaming, & Entertainment

Target Opportunities

- Nevada as the U.S. online gaming center (should Congress move to legalize it)
- Las Vegas as the intellectual capital of global gaming
- Gaming manufacturing
- Diversifying into niche tourism markets
- Retirees and second home owners
- Film and media

Industry Advantages and Business Case

- A dominant exporter, employer, and anchor industry for other sectors
- A strong brand to capture projected growth markets
- Highly competitive infrastructure, assets, and financial resources
- Strong human resources and innovation capacity

Industry Constraints

- Current U.S. law prohibiting online gambling
- Onerous U.S. tourist visa procedures for international visitors
- Land transport congestion discouraging visitors from California
- Lack of tax credit to attract film production

Health & Medical Services

Target Opportunities

- Surgical specialties
- Geriatrics and related services
- Disaggregation of medical service delivery, creating new opportunities for middle-skill jobs
- Leveraging a strong medical/health sector to build other emerging industries

Industry Advantages and Business Case

- Large industry cluster with rising demand aligned with demographic trends
- Capturing market leakage and reversing the import of health services
- New institutions have brought increased patient care and research capabilities
- Increased investment in and attention on the health/medical workforce
- Improving quality of life for Nevada residents

Industry Constraints

- Lack of a medical school in Las Vegas, the largest medical market in the state
- Vertically integrated market with a dominant, single payer
- High percentage of Medicare patients and low reimbursement rates
- The uncertainty of the legality of the PPACA going forward
- Gaps between graduates and the workforce needs of the industry

IT & Business Services

Target Opportunities

- Call centers/customer service and Back office/BPO/shared services
- E-commerce operations/headquarters
- Cloud computing/high-performance computing and data centers
- Cyber security

Industry Advantages and Business Case

- Strong and growing base of moderate-skill business services and IT-related activities
- Strong (but under-marketed) IT industry anchors
- World-class Internet infrastructure and other locational advantages

Industry Constraints

- Nevada has lagged other states in building this industry
- Need to improve the state's image and assets for attracting a creative class and high-tech workforce
- Relatively small (but growing) high-tech workforce
- Additional support for entrepreneurship and startups is needed

Renewable Energy

Target Opportunities

- Renewable component manufacturing
- Expanding transmission capacity
- Advancing and internationalizing geothermal development

Industry Advantages and Business Case

- Nevada is at the epicenter of geothermal energy development in the United State
- High level of incident solar energy
- High potential for wind energy capture
- Nevada's renewable manufacturing has attracted foreign investment to the state
- Nevada is proximate to a large amount of energy demand

Industry Constraints

- Renewable projects require a lengthy and onerous licensing process
- Incentives for renewable power generation have not been very predictable
- Limited transmission capacity has constrained renewable development
- Difficulty in obtaining financing for geothermal projects

Mining, Materials, & Manufacturing

Target Opportunities

- Expanding participation in upstream mining activities
- Medium-value mineral supply chain development
- Manufacture of advanced composite materials
- Organizing and marketing of manufacturing base

Industry Advantages and Business Case

- The presence of significant mineral resources in the state
- Strong geosciences knowledge base
- Nevada has demonstrated manufacturing strengths in several areas, such as gaming, food, metals, and plastics

Industry Constraints

- State and Federal land-use policies hinder the growth of the mining industry
- Fragmented manufacturing industry
- Limited pool of high-skilled workforce
- Limited water resources

Logistics, Distribution, Transportation, & Related Manufacturing Operations

Target Opportunities

The overarching opportunity is to serve as a West Coast hub of operations for the following segments:

- Warehousing and distribution
- Advanced logistics
- Air cargo
- Integrated manufacturing-distribution and assembly manufacturing operations
- Freight transportation (ground and rail)

Industry Advantages and Business Case

- Locational and geographic advantages, including easy access major West Coast markets
- Strong existing infrastructure, including airports, road and rail connections, and available land for industrial/warehouse space
- Cost and regulatory advantages

Industry Constraints

- Workforce availability is weaker at higher skill levels
- Need to improve business retention and expansion support for companies investing in Nevada
- High energy costs and water availability issues

Aerospace & Defense

Target Opportunities

- Unmanned Aerial Vehicle (UAV) supply, assembly, and testing
- Maintenance, Repair & Overhaul (MRO) of aircraft systems

Industry Advantages and Business Case

- Existing base of defense expertise
- Existing test ranges and infrastructure required to test aerospace systems
- Nevada's geography and low population density are well suited for A&D system testing

Industry Constraints

- Tough competition from established, larger defense contractors
- Limited collaboration amongst A&D companies, or with Nevada universities, on workforce training and research
- Tax-related barriers for aircraft and components