UNIFY
REGIONALIZE
DIVERSIFY

AN ECONOMIC DEVELOPMENT AGENDA FOR NEVADA

Metropolitan Policy Program at BROOKINGS

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Executive Summary

Nevada stands at a crossroads yet it appears ready to remap its future.

Few would deny that the Great Recession has left the state grappling with a bona-fide "inflection point"—a deciding time.

Nevadans sense that lasting changes in U.S. industry structure, spending patterns, and economic behavior are all shaping a historic national "reset" to adapt to the shifting nature of the global economy, with huge implications for all places.

Likewise, Silver Staters sense that the current slump has not been just a temporary reversal but a challenge to the state's traditional growth model—one that has revealed an economy over-dependent on consumption sectors, prone to booms and busts, and too little invested in innovation and economic diversification.

And yet, for all that Nevadans have been early to recognize that the current slump will beget, in some places, innovation and renewal, and in other places erosion—and so requires action.

In that vein, Nevada leaders have been engaging in an unusually serious discussion about the nature of the Nevada economy; the need for diversification; and ways to unleash the business, technology, and government-sector innovation that will drive growth.

Reflecting this ferment was the passage by the Nevada Legislature of the Economic Development Bill (AB 449) that was signed into law on June 17, 2011 by Gov. Brian Sandoval.

AB 449 is a potential watershed because it undertakes to reorganize and elevate the importance of the state's economic development activities by, first, gathering them within the governor's office and, second, by providing them a first installment of new funding.

But the legislation is also important because it endeavors to place Nevada development work on a modernized new footing. Not only is the state's new Cabinet-level economic development executive director required to craft and implement a proper state economic development plan in the next few months. Also, the legislation conveys into Nevada development practice a new embrace of strategy, fact-driven analysis, and data-driven performance management.

Which is why in spring 2011 the state of Nevada turned to the Metropolitan Policy Program at Brookings, Brookings Mountain West, and SRI International to provide important analytic and policy background for the state's planning.

Intended as a credible third-party analysis of the state's competitive position and economic development opportunities, this report—"Unify / Regionalize / Diversify: An Economic Development Agenda for

Nevada"—speaks to the desire of Nevadans to "get on the same page" by providing a detailed accounting of the state's present situation and most plausible routes toward economic diversification.

To that end, the pages that follow draw on an intense five-month inquiry that sought to define the nature of the economic challenges the state and its major regions face; identify industries and industry clusters that have the highest potential for expansion as part of an economic diversification effort; and suggest policy options that will enable the state, its regions, and the private sector to work more effectively to build a more unified, regionally vibrant, and diversified Nevada.

In keeping with these objectives, this report draws a number of conclusions about the state as it considers ways to build the next Nevada economy:

1. Nevada possesses fundamental economic assets along with serious challenges as it seeks to build the next Nevada economy. To be sure, the recent national recession and sluggish recovery has hit Nevada exceptionally hard. Most notably, the state's heavy reliance on consumption-related sectors such as Construction and Real Estate, Tourism and Gaming, and Retail Trade—all of which are disproportionately affected by swings of the business cycle—has left the state prone to extreme economic volatility and lingering malaise. With that said, though, Nevada possesses substantial strengths—along with some serious deficits—as it considers a renewed economic development push.

In this connection, a systematic SWOT (strengths, weaknesses, opportunities, and threats) assessment reveals considerable assets and opportunities that the state can leverage as it seeks to renew its core industries and diversify by catalyzing growth in emerging ones. (See Figure 1). This assessment (summarized in Chapter III) confirms that Nevada's core strength for economic development has been and will remain its overall business-friendly environment, including low taxes, relatively low costs, light regulation, and ease of business start-up/permitting. Going forward, these advantages will continue to anchor Nevada's value proposition for business investment and economic development as will the state's extensive entertainment and recreation assets, proximity to West Coast population centers, and excellent airport infrastructure. With that said, these assets are not likely to be sufficient to support the kind of growth and investment Nevadans desire given the increasingly determinative role of knowledge, technology, and workforce skill in today's global economy. Key challenges include: spotty economic planning and cooperation; a weak innovation and technology commercialization enterprise; and substantial workforce skills shortfalls.

2. **Seven major industries and some 30 narrower target opportunities—distributed in varying mixes in the state's regions—hold out plausible potential for economic growth and diversification for Nevada.** Building on the SWOT analysis and stakeholder consultation aimed at understanding Nevada's statewide goals, the Brookings-SRI study team conducted an empirically grounded analysis aimed at identifying industries and sub-industries that have the highest potential to restore growth and jobs, spawn innovation in core or emerging sectors, or drive economic diversification. Along these lines, Chapter III of the study recommends the state focus its economic development activities on seven broad industries and 30 narrower target opportunities for growth, innovation, and diversification. (See Figure 2). These industries and target opportunities include:

Figure 1. Nevada Competitiveness SWOT Summary

Strengths	Weaknesses
• Low taxes • Business friendly regulatory climate • Historically 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.)	• Economy is heavily oriented toward consumption-based industries • Lack of proactive, coherent economic development strategy and structures • Workforce skill level is low (though improving) • K-12 educational system is underperforming • Healthcare system is underperforming • Energy costs are relatively high for the region • Land transportation connections can be challenging (in some parts of state) • Innovation inputs and outputs are weak (and there has especially been underinvestment in innovation capacity in Southern Nevada) • Lack of risk capital to invest in start-ups/innovation (although improving) • Real estate bust (devastating to construction)
Opportunities	**Threats**
• Political leadership closely engaged in revamping and renewing economic development activities • Ease and cost of living is attractive compared to neighboring California • Relatively affordable housing and high residential/commercial/industrial vacancy rates • Growing innovation districts in North and South • Large number of tourists/visitors/conventions – an opportunity to "sell" Nevada • Infrastructure for innovation is in place (at UNR, DRI, UNLV), but not at its full potential • Relatively strong science and engineering (S&E) workforce and students in Reno • World-class Internet connectivity opportunities (such as the Switch data center in Las Vegas)	• 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

- ***Tourism, Gaming, and Entertainment*:** Going forward the focus for this massive base industry in Nevada should be on attracting visitors from varied markets with new and diversified offerings as well as leveraging the world-class capabilities that already exist here to create new sources of growth. Target opportunities in this huge sector include: Nevada as the U.S. online gaming center; Las Vegas as the intellectual capital of global gaming; gaming manufacturing; diversifying into niche tourism markets; retirees and second home owners; and film and media development

- ***Health and Medical Services:*** Bringing the low level of medical service production in Nevada just somewhat closer to the national average would generate substantial, stable economic activity and high-quality jobs in the state while improving health outcomes. Target opportunities here include: surgical specializations and stemming the "leakage" of surgical procedures out of state; geriatrics and related services; the disaggregation of medical service delivery; and leveraging a strong medical/health sector to build other emerging industries

- ***Business IT Ecosystems:*** Nevada has a short-term opportunity to create numerous jobs in low-to-moderate-skill business services segments already established in the state while simultaneously capitalizing on under-recognized technology anchors and building an environment to support higher-end IT industry growth over the longer term. Target opportunities include call centers/customer service and back office/BPO/shared services; e-commerce operations/headquarters; data centers; cloud computing/high performance computing; and cyber security

- ***Clean Energy:*** Clean Energy is a high-potential target for Nevada because it capitalizes on the state's renewable resource base, its established geothermal expertise and headquarters strength, its proximity to large energy markets, and its capabilities in construction and project management. Key opportunities include: renewable component manufacturing; export of electricity; advancing and internationalizing geothermal development; and energy efficiency upgrades

- ***Mining, Materials, and Manufacturing:*** Given Nevada's wealth of mineral resources, its history and knowledge base in mining operations, and its existing materials and manufacturing activities, this target industry provides a strategic opportunity for growth, diversification, and innovation. Nevada's mining, materials, and manufacturing industries have common technical expertise and resources that are exchanged between their component sectors and also have synergies with the state's renewables and defense industries. Areas of focus include: expanding participation in upstream mining activities; medium-value mineral supply chain development; manufacture of advanced composite materials; and organizing and marketing of Nevada's manufacturing base

- ***Logistics and Operations:*** Nevada can be a West Coast hub of transport, distribution, and operations because of its locational and geographic advantages for easily reaching the entire Western U.S. Solid infrastructure, lower costs and regulatory hurdles (relative to neighboring states), lower congestion, and overall ease of doing business add to the value proposition. Focus opportunities include: warehousing and distribution; advanced logistics; air cargo; integrated manufacturing-distribution, assembly manufacturing, and food processing operations; and freight transportation (ground and rail)

- ***Aerospace and Defense:*** Finally, Nevada has a solid base of defense expertise, with a particular focus on testing and training, and the state's geographic characteristics and low population density enable extensive testing operations. The state can build on this base of infrastructure and

expertise to solidify an important role for the Aerospace and Defense industry in its economic future. Target opportunities include: unmanned aerial vehicle (UAV) supply, assembly, and testing; and maintenance, repair and overhaul (MRO) of aircraft systems

Figure 2. Summary of Recommended Industries and Target Opportunities for Nevada

1. Tourism, Gaming, and Entertainment
- 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

2. Health and Medical Services
- 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

3. Business IT Ecosystems
- Call centers/customer service and back office/BPO/shared services
- E-commerce operations/headquarters
- Data centers
- Cloud computing/high-performance computing
- Cyber security

4. Clean Energy
- Renewable component manufacturing
- Expanding transmission capacity
- Advancing and internationalizing geothermal development
- Energy efficiency upgrading

5. Mining, Materials, and Manufacturing
- Expanding participation in upstream mining activities
- Medium-value mineral supply chain development
- Manufacture of advanced composite materials
- Organizing and marketing of manufacturing base

6. Logistics and Operations
- Warehousing and distribution
- Advanced logistics
- Air cargo
- Integrated manufacturing-distribution, assembly manufacturing, and food processing operations
- Freight transportation (ground and rail)

7. Aerospace and Defense
- Unmanned Aerial Vehicle (UAV) supply, assembly, and testing
- Maintenance, Repair, and Overhaul (MRO) of aircraft systems

It bears noting, meanwhile, that these industries and niches hold out a broad range of possible development and growth paths through their projected yield of a collective 80,000 to 125,000 jobs in the next five years (See Appendix C). Tourism, Gaming, and Entertainment, for example, may not seem to embody the goal of "diversification" into wholly new, high-value activities. However, the sheer size of this base sector that means that even with its modest projected 2011–2016 growth rate it will likely be the

largest near-term contributor of new positions among the recommended target industries. At the same time, the sector—far from representing "business-as-usual"—contains multiple sub-centers that hold out the possibility of valuable innovation and new growth. By contrast, while Business IT Ecosystems remains small, the variety and technology intensity of its projected longer-term job prospects make it a worthy focus.

It is also worth noting that the recommended industries and target opportunities do not occur evenly across the state. Instead, the target industries occur in unique mixes in the state's regions.

Current concentrations of expertise and existing firms (or strong potential for industry growth and development) in **Northern Nevada** suggest that the state and its northern partners should focus their economic development work especially on niches within Clean Energy; Mining, Materials, and Manufacturing; Logistics and Operations; Aerospace and Defense; and Business IT Ecosystems. By contrast, state and regional leaders should build on **Southern Nevada** particular opportunities in Tourism, Gaming, and Entertainment; Business IT Ecosystems; Health and Medical Services; Energy Efficiency; and Logistics and Operations. For its part, finally, state and local leaders attending to the economic future of **Rural Nevada** can build on strong bases in Mining, Materials, and Manufacturing; Tourism, Gaming, and Entertainment; and Clean Energy.

One final observation: Not all of Nevada's growth potential resides within the discreet target industries and segments focused on within this analysis. Other industries and segments may also contain, or see emerge, high-potential activity centers. For that reason, the state should remain open to new developments and fact-based business proposals about them. For example, at least three areas of economic activity outside of the seven priority industries merit additional mention even now. These include: Agriculture and Food Processing; Water and "Water Tech;" and Financial and "Intangible" Enterprises.

3. To leverage the state's opportunities, meanwhile, Nevada needs to upgrade its diffuse economic development system so that the state at once leads more vigorously, empowers its regions more fully, and also sets a state-wide platform for new growth. In this vein, this report calls for the state to "Unify," "Regionalize," and "Diversify" as follows:

- **Unify: Install an operating system for 21st *century economic development.*** First, the state needs to put in place the basic elements of a state-of-the-art statewide economic development operating system—just as AB 449 requires. Currently Nevada lacks such a system. Therefore, the state should move decisively to set out a clear and unified model for pursuing growth. Such a framework will entail both leadership from the top and decentralization to the regions, as well as the provision of better information. Along these lines, Chapter V of the report calls on the state to:

    - Set out a compelling strategy for innovation and diversification—and lead
    - Structure effective partnerships with and among regional actors—including regional development authorities (RDAs), strong non-profits, and the state's municipalities
    - Build the information base and use it to drive performance

    To set out the strategy and lead the state should: Produce a compelling state plan for economic diversification; brand and communicate the new vision relentlessly; help the regions align with the

strategy; and name industry-specific "sector champions" to spearhead cluster development in its regions. Finally, the state should deploy the Catalyst Fund to build target sectors and clusters.

To restructure its partnerships and improve their workings in the regions the state should: Use RDA selection to promote aligned collaborative execution and use RDA funding and performance management to drive impact and reward achievement. The state should also create prizes, innovation grants, or competitions to spur creative initiatives.

And to enhance the information base and use it to drive performance the state should: Improve the basic availability of economic development information and use these new information resources to define and drive success.

- ***Regionalize: Support smart sector strategies in the regions.*** Secondly, the state needs to foster and contribute to "bottom-up" sector initiatives in its regions. Nevada's regions are not only the true hubs of the state's economy but are also full of business, civic, academic, and economic development leaders able to promote growth and diversification. Given that, the state should support Nevada's regional development efforts as they develop sector- and region-specific strategies to spur growth, innovation, and job creation. To this end, Chapter VI of the report argues that Nevada should:

    - Support convenings of target industry and cluster actors in the regions—and their planning
    - Support well-conceived cluster initiatives in the regions
    - Support other types of bottom-up sector development, including regional innovation districts, business plans, and regional export plans
    - Align the state's existing economic development policies, programs, and initiatives with the regions' sector strategies and cluster initiatives

  To help convene regional industry networks and clusters—and support their planning—the state should: Foster cluster organization in target sectors; join working meetings with sector associations and business leaders in the regions; task "sector champions" to work with regional clusters.

  To support well-conceived cluster initiatives the state should: establish a competitive grant program to support cluster initiatives at all stages with planning grants, start-up and technical assistance grants, and competitive program grants.

  The state should also support other approaches to bottom-up sector development like regional business planning, regional export plans, and regional innovation districts.

  And finally the state should work to align its existing programs across departments by: prioritizing collaborative applications to program offerings; tuning department and program objectives to cluster needs; and organizing incoming federal resources to help coordinate local efforts.

- ***Diversify: Set a platform for higher-value growth through innovation and global engagement.*** Finally, since Nevada's regions can't "go it alone," the state needs to set the stage for broad-based growth by investing in effective innovation and commercialization infrastructure, attending to the state's global engagement, and working to align its education and workforce training efforts to its new economic strategy. Along these lines Chapter VII recommends that the state:

    - Bolster capacity for innovation and commercialization
    - Expand global engagement particularly with rising nations
    - Align higher education and workforce development resources for innovation and diversification

    To bolster its innovation capacity the state should: Make strategic investments in "impact scholars"; incentivize university-industry research collaboration; boost industry R&D through competitive tax incentives; leverage federal resources to catalyze high-impact R&D; and assist small business in winning SBIR/STTR funds. Likewise, the state should develop a strong commercialization infrastructure by developing relevant intermediary, networks, and support mechanisms and increasing access to risk capital.

    To expand Nevada's global engagement, the state should: Make global engagement a key priority by providing robust leadership, setting goals, and reaching out proactively to targeted exporters and foreign direct investors. The state should make FDI an explicit component of Nevada's global engagement policy and use it to build out target clusters. To support its efforts, the state should build the global engagement information base and use it to educate stakeholders. Finally, the state should leverage resources of other organizations involved in export promotion and FDI attraction and advocate at the federal level on behalf of global engagement priorities like infrastructure and visa processing.

    And to align higher education and workforce development to strategic economic opportunities, the state should: Raise standards throughout the K-12 system over the longer term; leverage community colleges to deliver a skilled workforce; expand research universities' role in workforce development; and reorganize and re-energize the state's workforce investment system.

Figure 3. Unify | Regionalize | Diversify: Policy Recommendations for Nevada

Legend: $ = $0-$50,000 $$ = $50,000-$250,000 $$$ = $250,000-$1 million $$$$ = >$1 million
Immediate = within 3-12 months Near-term = within 1-2 years Long-term = > 2 years

Unify: Install an Operating System for 21st Century Economic Development

Set a strategy for innovation and diversification—and lead		
RECOMMENDATION:	Produce a compelling state plan for economic diversification through innovation	Immediate $
RECOMMENDATION:	Brand and communicate the new direction	Immediate $
RECOMMENDATION:	Help the regions align with the state's economic development strategy	Immediate $$
RECOMMENDATION:	Name industry-specific "sector champions" to spearhead cluster development	Immediate $$
RECOMMENDATION:	Deploy the Catalyst Fund to build target sectors and clusters	Immediate $$$$
Structure partnerships with and among regional actors		
RECOMMENDATION:	Use RDA selection to promote aligned, collaborative execution	Immediate $
RECOMMENDATION:	Use RDA funding and performance management to drive impact and reward achievement	Near-term $
RECOMMENDATION:	Create prizes, innovation grants, or competitions to incite creative partner initiatives	Near-term $ - $$$
Build the information base and use it to drive performance		
RECOMMENDATION:	Improve the range of economic development information available	Near-term $$
RECOMMENDATION:	Improve the packaging of economic development information	Near-term $$
RECOMMENDATION:	Use information to define and drive success	Near-term $

Regionalize: Support Smart Sector Strategies in the Regions

Support convenings of target industry and cluster actors in the regions		
RECOMMENDATION:	Foster cluster organizations in target sectors	Immediate $
RECOMMENDATION:	Speak at sector convenings and join working meetings with sector associations or business leaders	Immediate $
RECOMMENDATION:	Task "sector champions" to work with regional clusters	Immediate $
Support smart, well-conceived cluster initiatives in the regions		
RECOMMENDATION:	Establish a competitive grant program to support cluster initiatives	Near-term $$$
Support other approaches to bottom-up sector development		
RECOMMENDATION:	Encourage regional business planning in regions	Near-term $$

RECOMMENDATION:	Support the development of regional export plans to boost global engagement	Near-term $$
RECOMMENDATION:	Use policy levers to support the building-out of a finite number of regional innovation districts	Near-term $$
Align the state's existing policies and programs with a cluster-based, regional approach		
RECOMMENDATION:	Prioritize collaborative applications in awarding competitive grants	Near-term $
RECOMMENDATION:	Tune department and program objectives and offerings to cluster needs	Immediate $
RECOMMENDATION:	Organize incoming federal resources to help coordinate local cluster-building efforts	Immediate $

Diversify: Set a Platform for Sustainable Growth through Innovation

Bolster innovation and accelerate commercialization		
RECOMMENDATION:	Make strategic investments in "impact scholars" to boost research output and new discoveries	Near-term $$$$
RECOMMENDATION:	Incentivize university-industry research collaboration	Near-term $$
RECOMMENDATION:	Boost industry R&D through competitive tax incentives	Near-term $$$
RECOMMENDATION:	Leverage federal resources to catalyze high-impact R&D	Near-term $
RECOMMENDATION:	Assist small business in winning SBIR/STTR funds	Near-term $
RECOMMENDATION:	Develop strong commercialization infrastructure, networks, and support mechanisms and establish an intermediary	Near-term $$$
RECOMMENDATION:	Increase access to risk capital	Long-term $$$$
Expand global engagement particularly with rising nations		
RECOMMENDATION:	Make international trade and global engagement a key priority	Immediate $
RECOMMENDATION:	Make FDI an explicit component of the state's global engagement agenda	Immediate $
RECOMMENDATION:	Build the global engagement information base and use it to educate stakeholders	Immediate $$
RECOMMENDATION:	Leverage resources of other organizations involved in export promotion and FDI attraction	Immediate $
RECOMMENDATION:	Advocate on behalf of global engagement priorities	Immediate $
Align higher education and workforce development to strategic economic opportunities		
RECOMMENDATION:	Raise STEM standards throughout the K-12 system	Long-term $$$$
RECOMMENDATION:	Leverage community colleges to deliver a skilled workforce	Near-term $$$
RECOMMENDATION:	Expand research universities' role in workforce development	Near-term $$$
RECOMMENDATION:	Reorganize and re-energize the workforce investment system	Near-term $$$

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In the end, this report assumes wholeheartedly that renewal and diversification through innovation is possible in Nevada. To be sure, there is much work to be done. A strong state economic development plan needs to be crafted and followed, requiring hard decisions and painstaking execution.

There will also need to be plenty of careful staging and collaboration as the state moves to address the nearer-term, lower-cost work of putting in place a top-quality operating system for 21st century economic development at the same time as it prepares to tackle the heavier lifts of setting a platform for longer-term growth. Constructing a top-flight innovation and commercialization system will be a major task. So will expanding global engagement and better aligning the education and workforce training system to the state's new sector strategies. Ideally, system improvement in the next year or two will ensure that future investments are maximized.

Yet, while this hard work might seem like a hard task at a difficult time, the study team is confident that the moment is right. Having spoken with scores of Nevadans during the course of this work the team emerges from the process deeply impressed by the shared sense of commitment and good will evident among the state's business, civic, government, and economic development leaders.

Focused by challenge, Nevadans seem ready to reach for a new future.