The SILVER Spark for Nevada

Sustainable Innovation Leading a Vital Economic Renaissance

A Report to The NEVADA COMMISSION ON ECONOMIC DEVELOPMENT

March 2011
Purpose

It’s no secret that the national economic downturn has hit Nevada hard - and that Nevada desperately needs to create more jobs.

The Nevada Commission on Economic Development (NCED) is tasked with doing that for Nevadans, and it directed the Nevada Institute of Renewable Energy Commercialization (NIREC) to complete a review of the current Nevada innovation and commercialization ecosystem and then recommend changes to help accelerate the creation of new technology-based jobs within the State.

Economic growth is increasingly dependent upon the transition of ideas from public and private sector research to the market place, thereby creating new enterprises and accompanying employment around clusters of demonstrated competencies. The lack of a robust innovation and commercialization ecosystem leaves a state behind the curve in a knowledge-based economy, and Nevada is clearly struggling to compete both nationally and globally for new economy jobs.

The ‘SILVER’ Spark is designed to drive more innovation in Nevada, enhance the commercialization ecosystem and accelerate company formation. All of which is intended specifically to further diversify the State’s economy and create new jobs for Nevadans. Failure to do so will relegate the State to a less-than-desirable future.

Authors

Walt Borland
Executive-In-Residence
NIREC

James A. Croce
President and CEO
NIREC

Richard Seline
Principal
Regionnovate, LLC
P R E F A C E

Nevada. A State of stark contrasts, with historic booms and devastating busts experienced throughout its modern history. A State frequently forced to reinvent itself as ever-evolving circumstances have demanded. A State that has been driven to the edge time after time and, yet again and again, has managed to discover another way to prosper. A State that now finds itself in a precarious position as the “Great Recession” hit it harder than any other and has left it struggling to recover.

We all know the statistics. In many cases, Nevada often ranks highest where one wants to be ranked low, and it ranks lowest where one wants to be ranked high. And amongst its immediate neighbors, Arizona, California, Idaho, Oregon and Utah, and its western brethren, Colorado, Montana, New Mexico and Wyoming, it is struggling once again to redefine itself.

Dwelling on the negatives, however, ignores the abundance of positives. The bright lights, the glitz and the sounds of money changing hands may dominate the impressions of many, but it overlooks an important reality. There is more to Nevada than most may realize. There is admittedly still gold in the hills, but there is also economic potential in aggressively mining and processing its intellectual property into new technology-based enterprises.

As you will conclude by reading the following report, Nevada can successfully build a globally-competitive economic engine based on innovation and entrepreneurship through the commercialization of research, discovery, and development. It will, however, require changes in how the State operates, by uniting the many competing visions, missions and goals found statewide. Although the seventh largest state geographically, Nevada is only the thirty-fifth most populous state in the Union. So it must also find a unique way to focus its admittedly stretched resources on a strategic set of priorities to successfully diversify its economy.

The question being asked by Nevadan’s across the state is whether we are ready to begin building yet another new chapter in Nevada’s storied history. As stated in the Nevada Vision Stakeholder Group (NVSG) report released in September 2010: “While Nevada’s challenges were put into sharper focus by the recession, these issues have been known and discussed for many years.”

Innovation efforts in Nevada still remain fractured and underfunded. Numerous organizations throughout the State are directly and indirectly involved in innovation. However, there are few physical “Centers of Excellence” for these organizations to collaborate in either northern or southern Nevada let alone within any of the rural counties. With some exception, current efforts at leveraging innovation into sustainable enterprises are by and large chaotic, with results being driven more by serendipity than design.
The plethora of well-intentioned organizations throughout Nevada are typically resource-constrained and unable to singularly solve the “wicked problems” that can accelerate economic transformation through innovation. Most struggle even in the best of times simply to generate sustainable revenue. Limited operating budgets result in a scarcity of dollars to invest in badly needed programs. While Nevada is, by some, considered a place for innovation and entrepreneurial activities, it cannot legitimately lay claim to such a brand today, especially as it pertains to the creation of high-tech startups. This reality must change for Nevada to compete in a globally competitive knowledge-based economy.

As the NVSG report concluded: “Tight state and local budgets notwithstanding, now is the time to make the structural changes and investments Nevada needs, lest its obstacles become insurmountable in the years ahead.” The following report suggests that the window of opportunity is fleeting, likely to be only a few years and certainly not decades.

The ‘SILVER’ Spark proposes an approach to do exactly what so many across the State have suggested must be done for so long—transform the State’s legacy economy and create new-economy jobs. It advocates the application of sustainable innovation to lead a vital economic renaissance through the following three major transformational actions:

- Drive more public and private innovation in the State.
- Improve the State-wide commercialization ecosystem.
- Accelerate entrepreneurial activity throughout Nevada.

Examples of successful transformational programs abound. Other states such as Arizona, Colorado, Georgia, Kansas, Michigan, Montana, New Mexico, Ohio, Pennsylvania, Utah and Texas have all driven major changes to their economies through programmatic investments in innovation, commercialization, and entrepreneurship. However, another state’s successful “big idea” will not necessarily be equally successful in Nevada.

Nevada is uniquely Nevadan.

From its world-class gaming facilities to its innovative laboratories, Nevada is still a place where dreams can become reality. Nevada itself is collectively a gigantic open source laboratory. It is a place where a scientific theory, an educated hypothesis or sometimes little more than conjecture can change everything in a spark.

It is time for Nevada to reclaim its innovation brand!
EXECUTIVE SUMMARY

Background

Nevada’s economy has gone from boom to bust in the past decade, and it remains in a struggle to recover from the Great Recession. Key findings from the myriad of previous reports, data analysis, and ongoing discussions all lead to the same conclusion: ensuring Nevada’s long-term economic competitiveness requires a more strategic approach to the State’s investment in people, infrastructure and economic opportunity.

Furthermore, organizing economic growth prospects by identifiable key commercialization strengths must become an adopted message and proactive agenda for elected officials and a broad range of private sector collaborators, leaders, investors and partners.

What is the greatest threat facing Nevadans and their economic competitiveness in 2011? The answer: ensuring opportunities for employment and income growth based on the strength of their skills, access to critical support infrastructure and a hospitable climate for 21st century businesses (both existing and new) to flourish. However, on-going fiscal threats to improving economic development, education and workforce infrastructure severely challenge these aspirations.

From the work completed by the Battelle Memorial Institute in 2000 to the Nevada 2.0 Conference in January 2011, the accumulation of data and facts discussed in Section III and listed in Appendix F have proven that Nevada must change its recipe for how it accumulates and invests its limited financial and human capital. Economic, societal and technological turbulence is now a norm in the global economy; building a resilient, offensive, growth-oriented platform and sustainable implementation plan is no longer an option for Nevada - it is now a necessity.

A general proposition for sustainable innovation to lead a vital economic renaissance (the ‘SILVER’ Spark) is simple: Nevada cannot invest in those opportunities that will make it nationally and globally competitive while continuing to invest in non-productive programs, under-funding critical initiatives, and assuming traditional, legacy business sectors are sufficient to ensure the prosperity of its citizens. During previous good times there were numerous opportunities to transform Nevada’s economy; during the current fiscal crisis pursuing these opportunities becomes even more relevant and vital to the future economic success of Nevada.

Scope

The Nevada Institute for Renewable Energy Commercialization (NIREC) was directed by the Nevada Commission on Economic Development (NCED) in November, 2010 to complete an assessment of the innovation and commercialization ecosystem in Nevada and recommend improvements designed to accelerate job creation.

The ‘SILVER’ Spark is derived from completing an assessment of Nevada’s capabilities to produce intellectual property, its physical assets and commercialization support infrastructure, along with studying relevant benchmarks and best practices in support of accelerating innovation, commercialization and entrepreneurship across the U.S. and abroad.

To further support this effort, NIREC retained the services of Regioninnovate LLC, based on the body of work conducted by its Principal, Richard Seline, in the states of Alabama, Arizona, Florida, Iowa, Kansas, Pennsylvania, Tennessee, Texas, Utah and other regions in the U.S. over the past decade. Through Regioninnovate’s participation in this effort, NIREC has endeavored to capture and present an assessment of Nevada’s current and future competitiveness for economic growth through increased innovation and the commercialization of ideas, technologies, products, and services.

The ‘SILVER’ Spark was accordingly developed based on the following methodology:

1. Capture and assessment of all previous reports on Nevada’s economic, demographic, fiscal, policy-related and regional industry sector
investments, programs and initiatives, including determination of progress based on recommendations from each report; and

2. High-level analysis of Nevada’s current industry clusters as well as growth-oriented innovation strategies in support of new product, service and intellectual property development across academic and corporate interests; and

3. Asset mapping of unique infrastructure, facilities, institutions, operations and programs that – if properly coordinated and networked – could greatly accelerate the achievement of results derived from the ‘SILVER’ Spark; and

4. Identification of clusters of competency, knowledge and skills that distinguish Nevada from other locations, leading to a finite list of specific targets of opportunity based upon the Evolution of Economic Development Strategies for Nevada State’s competitive advantages; and

5. Capture and assessment of best practices, benchmarked programs and competitor state approaches to economic development, innovation capacity building, research and commercialization, incentives and investments along with structural responses to barriers and limitations.

This assessment has also relied upon conversations, interviews and feedback from a number of Nevada’s private and public sector thought leaders, to gain vital insights, subject matter expertise and leadership expectations for advancing recommendations.

The ‘SILVER’ Spark seeks to lay a foundation for a transformative innovation-based and commercialization-intensive economic development “game-changer” for Nevadans and their future. With the recent Nevada 2.0 Conference and subsequent focus on relevant state innovation and commercialization models such as Utah’s USTAR program, the ‘SILVER’ Spark provides some figurative rocket fuel and navigational tools to enable “lift-off” on the journey to a more prosperous economic future for Nevada.

However, the ‘SILVER’ Spark is not all-encompassing and is therefore not meant to singularly drive Nevada’s entire economic development strategy. Traditional economic development strategies associated with marketing to, and attracting large businesses outside Nevada, for example, remain outside the scope of this study. A solid strategy to increase the production or acquisition of intellectual property resulting in organically grown technology-based startups, however, will only enhance traditional economic development practices.

No doubt, however, global forces have resulted in a shift in economic development practices in the U.S. to a greater reliance on a state or region’s capacity to innovate and commercialize new products and services based upon intellectual property either generated within or acquired from public or private sector R & D operations. The figure below depicts this evolution in economic development.

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**Evolution of Economic Development Strategies for Nevada:**

**From Where We Are…**

| Promoting business relocation based on incentives, local costs of doing business, competitive wage rates, typical offerings | Attracting business value chains, vendor-suppliers around tech sectors contained within limited proximity of commercial interests (clusters) | Supporting any business and industry sector that provides growth solutions to specific challenges across several geographies and skills |

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Leading to A Broad Portfolio of Commercialization Outcomes, Jobs, and Growth

Given the numerous reports and analyses that have been produced in Nevada over the past ten or more years, we have paid careful attention not to repeat the voluminous amount of prior work and assessment. Rather the ‘SILVER’ Spark frames the critical actions and implementation steps that must now be advanced for an innovative and competitive Nevada to exist in the near-term.

Innovation and Commercialization

In assessing Nevada’s innovation strengths, counting the number of patents produced is far less important than determining the recipients and subsequent use of such intellectual property. In reviewing several Nevada System of Higher Education (NSHE) reports and briefing materials, the current aggregate academic production of intellectual property—disclosures, patents, and licensing revenues—is presently insufficient in and of itself to support a commercialization culture.

Consequently, focusing exclusively on the academic research enterprise in Nevada to spur innovation and commercialization would be a mistake. Forming collaborations with Federal and private sector chief science, chief research, and chief technology officers both inside and outside Nevada will serve to jump-start the state’s commercialization engines.

Commercialization is discussed in more detail in Section IV, but in its broadest term it is the placing of a strategic bet on the knowledge economy and the vital elements of the innovation ecosystem throughout Nevada by internal and external investors—both in the public and private sectors—to accelerate economic diversification.

Clusters of Knowledge

What has driven the so-called knowledge economy is the alignment and blurring of the lines across disciplines, technologies and even the industries that have been the staples of the U.S. and global business landscape during the 20th century. As discussed in
Section VI and explored further in Appendix B, elements of scientific and technological ‘threads’ now blend to foster new products, services, and occupations on a daily basis.

These fast-moving trends are causing constant disruptions to business models. As an example, biotechnology and energy, nanotechnology and manufacturing are cross-fertilizing in research laboratories and on product development whiteboards around the world. In promoting a Nevada technology-based economic development strategy, we must assess the State’s assets based on their potential for driving value-added collaboration rather than through the traditional stovepipes. Simply, Nevada has an opportunity to advance its competitiveness by adopting a multi-faceted innovation-driven and commercialization-intensive economic recovery by focusing on those opportunities that leverage several disciplines and market-needs.

**Targets of Opportunity**

Several different data sources describing current industrial activity, employment, and occupational trends were used in developing the recommendations below. Appendix B includes a number of charts depicting occupation and workforce trends in Nevada. In addition, we reviewed investment activity by academic, business and government interests in Nevada against the backdrop of global trends and forecasts. Finally, we also examined the output from research, development, applied technologies and industry operations, identifying current and emerging intellectual property and commercialization potential for Nevada.

In our analysis, we examined not only the internal asset base and existing intellectual capital within and around these targets, but sought to define national and global market potential including firms, companies, and industry partners to recruit to Nevada. This approach seeks to form a ‘value chain’ of economic and workforce development activities necessary to strengthen current capacities as well as promote and attract the world’s best talents and enterprises to our State because we have organized the commercialization intensity for profitability and immediate results.

There are obvious linkages, overlap, and collaboration among the five targets: any number of people, assets, and facilities identified could serve the requirements needed to accelerate commercialization outcomes. That is the simplicity of this approach; form interchangeable partnerships, relationships, and networks that respond to market demand and commercial expectation as required to either start new firms or assist global corporations remain competitive.
The analysis of “Nevada’s Research and IP Portfolio” generated five distinct targets of opportunity which are discussed in considerably more detail in Section VII, including:

1. **Simulation, Modeling & Imaging**

**Description:**
Defense and gaming industries have conducted on-going research, filed for patent rights and assignments, and required continuous product development for both assisting soldiers on the battlefield and in driving billions of dollars in gaming receipts. These demands are expected to rise with additional uses of drones and other unmanned aircraft as well as expanded gaming response to competition and global consumer demand.

**New Opportunities:**
By applying simulation, modeling and imaging to environmental and energy related assessments, reducing theft and fraud through facial recognition, and diagnosing disease and human structure, Nevada is positioned to compete globally.

2. **High Performance Computational Analysis**

**Description:**
With the commitment of SWITCH, located in the south, Nevada has attracted the next generation of high throughput computing and information services bandwidth that has historically existed to the sole benefit of the U.S. Departments of Defense and Energy. Based on Nevada’s role in critical test-evaluation programs for weapons systems, reduced nuclear arsenals, and on-going monitoring of operations requiring massive computational analytics, the State has significant depth in the skills and competencies for emerging applications.

**New Opportunities:**
Engineering is the underpinning to the innovation and commercialization strategies of any new product in the marketplace today. The majority of these skills and competencies are found not only on the state’s academic campuses, but, in the military, energy-related, and entertainment facilities where critical materials, filters, and event staging require constant upgrades, maintenance, and innovative techniques for the safety of personnel and the reliable operation of sophisticated facilities and equipment.

3. **Targeted Mechanical & Electrical Engineering**

**Description:**
Industry on the whole, the defense community, and the overall mining and energy sectors have amassed significant skills and competencies in mechanical and electrical engineering for decades throughout Nevada. And yet, overlooked are the engineers that design and launch the most widely regarded entertainment venues in the world for the staging of multi-million dollar performances. The technologies and knowledge behind compression valves and fluid power units to lift tons of heavy machinery in the geothermal fields of Northern Nevada are similar to the staging that lifts actors and acrobats in Cirque du Soleil’s KA.

**New Opportunities:**
New demands for product design, advanced and complex manufacturing, toxic waste storage and/or reuse, and related scenarios in live demonstrations and field tests can be scaled in Nevada immediately and successfully. The formation of contract testing and evaluation operations in partnership with industry and government customers can take advantage of Nevada’s unique capabilities.
4. Energy Assessment, Generation, Transmission & Operations

Description:
The capacity for Nevada to be a net-exporter of energy has already been proven through numerous U.S. Department of Energy reports and analyses conducted by nationally distinguished federal laboratories in Berkeley, Boulder and Pittsburgh, for example, and through the U.S. Department of Energy’s analyses placing the State in the forefront of geothermal and solar deployment potential. The California and the Intermountain West region look to Nevada as a significant enabler in developing the electric generation and transmission capacity to meet current and future energy demand.

New Opportunities:
From its important role in enabling the harnessing of nuclear energy for military use, Nevada has a rich and robust capacity to examine and assess energy-related generation and operations through both basic and applied research, as well as to define the technological solutions required to deploy and manage alternative sources of energy beyond fossil fuels. These technologies include a wide range of products and services to convert the State’s vast solar, geothermal, and to a lesser degree, wind-sourced power into traditional energy grids and evolving ‘smart grids,’ along with technology solutions for control and monitoring of homes and offices to improve energy efficiency.

5. 21st Century Mining & Materials

Description:
The oldest industrial sector of Nevada cannot be overlooked for its continued importance to the economy and its global reach of expertise and knowledge—mining and extraction of minerals. Though often focused on gold, silver and copper, the Nevada mining sector has identified a number of base minerals for additional benefit to manufacturing, health-care, and materials. These include diatomite, gypsum, lithium, magnesia, and zinc. Millions of acres of open land provide the ‘laboratory’ for locating processing facilities along with experimentation and testing of minerals for new applications.

New Opportunities:
Base mineral research has been somewhat overshadowed by the focus on renewable and alternative energy in Nevada, though research institutions both within and outside Nevada have a positive outlook on the next generation of mineral uses, and therefore a renewed perspective on Nevada’s potential contributions. The use of advanced materials for electronics, consumer goods, and packaging have begun to accelerate as have the realities of minerals in diet and nutrition strategies for both human and animal consumption.

We believe the foregoing five unique competitive advantages—targets of opportunity—described above, organized as centers of innovation and commercialization excellence, could spark immediate and longer-term job creation, investment, and new revenues for both public and private-sector interests.

Recommendations

There is admittedly much to be praised about the innovation-driven and commercialization-intensive successes from other states. What cannot be taken for granted, however, is that many of these programs were built upon significantly higher levels of academic research and development spending and greater public and private investment capacities than the current Nevada landscape affords.

We therefore caution the State from attempting to replicate any other state’s economic transformation model without addressing the fundamental and underlying challenges, barriers, and limitations specific to Nevada. To go from ‘zero to sixty’ through a whole-cloth adoption of the Georgia or Utah models, for example, is likely to be fraught with unintended consequences and unmet expectations.

Nevertheless, as Governor Brian Sandoval stated in his State of the State address on January 24, 2011,
“Innovation will drive tomorrow’s economy, and so it must drive our decision-making as we rebuild our economic development infrastructure.”

The challenge for Nevada is how best to deliver against three enabling objectives after giving realistic consideration to its related opportunities and constraints, including:

- Driving more public and private innovation in the State.
- Improving the State-wide commercialization ecosystem.
- Accelerating entrepreneurial activity throughout the Nevada.

Literally billions of dollars of Federal research funds as detailed in Appendix C, along with additional monies from other public and private sector entities, have shaped the five targets of opportunity over the past ten years. These are the seeds that have already been planted throughout Nevada. Successfully cultivating these seeds and harvesting the benefits will require significantly more collaboration than ever before seen in Nevada. The systematic sharing of information and expertise across numerous boundaries will be critical to the success of the ‘SILVER’ Spark.

Collaboration at this level can be achieved by actively engaging and enabling five different categories of organizations in a statewide innovation ecosystem, including:

- Existing Federal, private-sector and academic research institutions and facilities across the State
- A newly created statewide innovation intermediary
- The statewide risk capital network
- All of the other relevant public and private-sector organizations with a presence in the State
- The economic development organizations throughout the State

Nevada is uniquely positioned to become an ‘Open Source Innovation State’ by more closely connecting its statewide innovation and commercialization assets around the five targets of opportunity and actively engaging with a wider range of relevant public and private sector entities to accelerate the formation of new companies and create jobs for Nevadans. If we choose to capitalize on it, this is the moment to create nothing less than a 21st century engine for change which is built to operate like a real-time incubator of ideas and new entrepreneurial ventures across the entire State.

**Sparking Lift-off**

The ‘SILVER’ Spark will lead to a vital economic renaissance in Nevada over a period of time by essentially repositioning Nevada as a reenergized hub of innovation and commercialization. To spark lift-off now and begin the journey to a more diversified, innovation-based economy, the following seven immediate actions are recommended:

1. Provide state budgetary support to retain existing intellectual property producers within the Nevada System of Higher Education (NSHE) as well as to recruit faculty luminaries to vastly increase the production of commercializable research.

2. Appoint and sponsor a public-private “Innovation Intermediary” that will develop, launch and manage a statewide “Innovation Network” to coordinate and leverage the capabilities of the many individuals and organizations—including public and private educational institutions such as Sierra Nevada College—working in the State to accelerate the commercialization of ideas into sustainable enterprises.

3. Exploit short-term opportunities within industry and Federal government applied research laboratories (especially the Department of Defense) to accelerate existing innovations and competencies into new commercializable products and services.

4. Increase the economic development spend on attracting intellectual property, risk capital and management talent into Nevada, especially from California, by better leveraging and exploiting Nevada’s competencies, supply chains and market opportunities.

5. Pursue the development and support of physical or virtual technology “Accelerators” within “Centers of Innovation and Commercialization”
located throughout the State to facilitate innovation, commercialization, company formation and the profitable growth of new industries.

6. Support the attraction of private sector risk capital (including seed, venture and other forms of private equity) through the creation of one or more State—seeded financing vehicles. Recognizing current constitutional constraints, pursue alternative funding sources (outside of the State’s General Fund) such as the Nevada Public Employees Retirement System, Permanent School Fund, and the Unclaimed Property Fund.

7. Support the attraction of Federal, private sector, and philanthropic research and development dollars through the formation of a research leveraging program to organize, draft, apply, and provide required cost-share funds to win these programmatic dollars throughout the State.

The aspiration of the foregoing is to position Nevada as the go-to location for innovative startups, as well as for any ensuing relocation and expansion activity of companies and consortium seeking to leverage our plentiful assets and resources. Further encouraging the Governor, State Administrators and Legislators to enact the policies which will underpin the above seven (7) recommendations thereby transforming the economic model of the State, will spark the growth engines for investment and employment by branding Nevada as the location of choice for innovation and commercialization within the five targets of opportunity and beyond.

Conclusion

Nevada has a challenge. It needs to create more jobs, and preferably new economy jobs that can offer Nevadans higher salaries and better benefits. Jobs that generate incomes sufficient for Nevadans to buy new houses and cars, shop at local stores and eat at local restaurants, use local service providers, help ensure that families can send their children to good schools and colleges and save for retirement. Jobs that generate the tax revenues desperately needed to support State and local government.

As U.S. Senator Harry Reid stated in his address to a joint session of the Nevada Legislature on February 22, 2011:

“I didn’t come here to talk about the past ... I’m here to talk about our future: how we will move Nevada forward. How we will seize this unique, rare and critical opportunity to lead not just the nation’s economy, but the world’s.” He further added that “the question is whether we will direct our destiny, or forfeit our future ... The day to grow new jobs, attract new business, raise a strong generation and breathe life into our economy is today, if we take it”.

There is admittedly no silver bullet to accomplish what Senator Reid has suggested, but there is a ‘SILVER’ Spark. A pragmatic initiative in which sustainable innovation can lead a vital economic renaissance in Nevada by better leveraging an impressive array of assets positioned throughout the State. The seeds have already been planted for a better future throughout Nevada. We must, however, seize the moment and muster the political will to take the immediate steps recommended in the ‘SILVER’ Spark to ignite “lift-off” and begin the journey to a more diversified, innovation-based economy.

That being said, innovation is not about technologies or products, not just cool ideas and awestruck bumper-stickers. Innovation is about unleashing the capabilities of Nevadans to solve national and global problems, to create a set of solutions for society’s greatest challenges in health and energy, for instance. Commercialization is the means to have any Nevanian link their ideas to markets, to connect with another Nevanian to form a company that could be purchased outright by a global corporation, or to leverage Federal investments at military bases to the
needs of industries seeking to find something that will improve their margins and profitability.

Innovation and commercialization, as outlined in the ‘SILVER’ Spark, has the promise to accelerate national and even global companies’ profit growth by tapping Nevada’s best minds, teams and infrastructure.

From previous reports, analyses, and forums, a small band of leaders have already defined the need to engage a new form of economic development strategy—one that is based increasingly on knowledge, innovation and the commercialization of ideas, people, products, and services. We further recognize that there are several important and significant initiatives and projects underway at both the State and local levels throughout Nevada. With the adoption of the innovation and commercialization strategies as described in the ‘SILVER’ Spark, there is an opportunity to connect the entire range of interests and participants across the State into a strategic discussion regarding assets, investments and a portfolio of outcomes.

The ‘SILVER’ Spark seeks to focus this discussion on a set of “commercializable” opportunities and the recommended actions that acknowledge where Nevada has been, where it is currently, and where it must give attention in the future to be a competitive economic engine for all Nevadans. No other region, state, or country is waiting for Nevada. The advances in competitiveness through scientific, technological and business transformation have created a constant form of turbulence in the economic cycles of profitability and prosperity. However, if Nevadans focus on those actions and implementation steps suggested herein, such turbulence can be leveraged into opportunity.

As shown throughout this report, Nevada has the robust individuals, institutions and assets with significant capacities to innovate. And yet we have focused for far too long on the traditional application of economic and workforce development practices. We have the capacities to network our ‘brain-power’ if we will only look through a new lens and perspective about what Nevada can truly be in comparison to the rest of the nation. Simply, it is time for Nevadans to design, implement and manage their own future rather than letting the future happen to them.

As Governor Sandoval concluded in his State of the State address,

“We are leading the Nevada family onto a new path, and I submit that it is one of progress and ultimate prosperity. If we have the courage to make the tough decisions, and there will be many, we will succeed.”
Acknowledgements

The completion of the ‘SILVER’ Spark would not have been possible without the contribution of a number of Nevadans, both directly and indirectly.

As mentioned in the ‘SILVER’ Spark, this assessment and its resulting recommendations were driven by conversations, interviews and feedback from a number of Nevada’s private and public thought leaders. Some were structured, but many were anecdotal. These contributions are greatly appreciated and were invaluable to the completion of this report.

There are too many sources to list all of them individually herein, but there are those who made themselves readily available to the authors and whose contribution demands mentioning and special thanks, including:

Li Han Chan  
NIREC

Chandler Marrs, Ph.D.  
Lucine Biotechnology, Inc.

David Garcia  
Holland and Hart

Kate Marshall  
State Treasurer - Nevada

Jason Geddes, Ph.D.  
Nevada System of Higher Education

Susan K. Moore, Ed.D.  
Office of the Lieutenant Governor

Steve George  
Office of the State Treasurer - Nevada

Ian Rogoff  
NIREC

Alan W. Gertler, Ph.D.  
Desert Research Institute

John C. Ruckdeschel, M.D.  
Nevada Cancer Institute

Bob Goff  
NIREC

Mike Skaggs  
Nevada Commission on Economic Development

Walter Goldstein, Ph.D.  
TransCyte, Inc.

Ronald W. Smith, Ph.D.  
University of Nevada, Las Vegas

Robert C. Hooper  
Northern Nevada Development Authority

Stanley D. Smith, Ph.D.  
University of Nevada, Las Vegas

Chris Howard  
NorthStar Investors

Randolph J. Townsend  
Nevada Gaming Commission

Marc A. Johnson, Ph.D.  
University of Nevada, Reno

Darik Volpa  
Understand.com

Brian K. Krolicki  
Lieutenant Governor - Nevada

Frank Woodbeck  
Nevada Commission on Economic Development

Finally, the twenty-five previously completed reports referenced throughout the ‘SILVER’ Spark provided a wealth of information to the authors. These relevant insights would have been impossible to capture again without spending an inordinate amount of time and money, if such duplication were even possible. We would therefore like to extend our personal appreciation to all those involved.
About NIREC

The Nevada Institute for Renewable Energy Commercialization (NIREC) is a 501(c)3 independent nonprofit organization integrating researchers, experienced entrepreneurs, business executives and financial capital to identify, fund and accelerate the development and deployment of clean energy solutions.

With a focus on renewable energy, energy conservation and energy efficiency technologies, NIREC works with its research partners and early-stage companies nationwide to drive innovation, commercialization and technology-based economic development. www.nirec.org

About Regionnovate, LLC

Richard Seline has been in the forefront of analysis, debate and implementation of strategies to address opportunity gaps and leverage strengths around strategic partnerships amongst academic, business, civic, government, industry, and philanthropic entities as a consultant focused on innovation, commercialization and technology-driven economic development.

The spark of Richard’s experiential learning was his service as Special Assistant to the President of the University of Texas’ M.D. Andersen Cancer Center in the Texas Medical Center. In this role he bridged policy-making, research, commercialization and economic outreach at the state and Federal levels on behalf of the $500 million academic clinical research and patient institution.

Through over 100 ensuing engagements at global, national, regional and state levels, Richard has examined, benchmarked, and facilitated a number of forums, explorations and dialogues on the emergence of innovation in the public and private sectors, leading to new methodologies and implementation tactics. Richard has shifted the traditional thinking from “Clusters of Industry” over time to focus instead on clusters of knowledge, competency and skills - thereby transforming models of linking know-what, know-how, and know-whom.

Richard formed Regionnovate to focus on repurposing, rebuilding and reinventing assets for increased innovation capacity, commercialization and economic success. More on Richard and Regionnovate can be found at www.regionovate.com.