

# Bright Minds for a New Economy

*Rory Reid's plan for making Nevada's higher education system an economic engine*

***It's time we made our universities and colleges among the best places in the nation to study and learn, to innovate and invent.*** We need a state government that makes attracting and retaining the best minds and the most cutting-edge technology a fundamental state policy.

## ***The workforce of the future***

It is clear that in addition to investing in business, we must invest in the human capital needed to support the companies we want to grow. Within the next 10 to 15 years, nearly two-thirds of all jobs will require at least some post-secondary education. Yet, in the last three years, we have cut state funding for higher education by 31 percent.<sup>1</sup>

Those with only a high school diploma are experiencing unemployment at double the rate of college graduates. We also know that in regions with a higher percentage of college graduates, wages are higher for all workers, regardless of education level.<sup>2</sup>

## ***A resource for business, a partner for innovation***

As Nevada moves forward, our universities will need to create new technology businesses. Research and development institutions are among the most critical elements in developing new start-up companies. The anchors of fast growing, technology-oriented economies are major research universities interacting with a robust technology oriented private sector. A study of growing companies in Seattle found that 70 percent of the companies had a "direct, active role in the operation of the University of Washington."

Our universities can and should be economic drivers. As governor, Rory will reward Nevada universities for technology transfer and commercialization programs that move innovations from Nevada universities into the marketplace. Rory will encourage technology transfer from our research institutions to create new companies and new jobs.

Rory will refashion our higher education system to make it more entrepreneurial – generating more commercial spin-offs that can fund educational expansion and allowing our colleges and university campuses to keep the revenues they generate, especially from non-Nevadans.

## **Strengthening Support for Higher Ed Institutions**

We need to change how our higher education operates, spends, and generates money in Nevada today *without* undermining or stunting the programs that are best positioned to be engines of economic growth and high-performing profit centers for the state in the long term.

We need to make higher education more efficient and more effective at generating the revenues needed to support it, so that we can make the investments necessary to turn Nevada's colleges and universities into first-rate centers of learning and innovation. This will require forward-thinking leadership and innovative thinking in Carson City. As governor, Rory will:

- **Make a commitment to a stable level of state appropriations that will be allocated to higher education.** In the 2009 state budget, General Fund spending on higher education was cut by 24 percent from 2007 levels – which were only 86 percent of the calculated required level of funding, to begin with. In 2010, higher education funding was cut by another 6.9 percent<sup>3</sup> – resulting in the elimination of entire departments and degree programs, and closing the doors of opportunity for many young Nevadans.<sup>4</sup>

Rory believes that strategic investments in our future will attract the kinds of businesses we need to rebuild Nevada's economy on stronger footing. Rory will achieve that through the following steps to increase the resources available for education:

- **Identify and incentivize cost-saving efficiencies in administrative and business practices to make our higher education dollars go further.** Rory supports increased flexibility for NSHE institutions, such as localizing capital project management so that it is no longer under the auspices of the State Public Works Board – a highly inefficient process. As governor, Rory will push for:
  - **Comprehensive performance reviews.** Every budget cycle, Rory will require NSHE institutions and administration to undertake a comprehensive performance review. Using benchmarks and performance measures developed with institution and system officials, the review process will look for cost savings in administrative and maintenance expenses with the following objectives:
    - **Improving financial management and accountability.** Increased accountability at the institutional level is key to making flexibility and greater localization of budgeting decisions work.
    - **Increasing faculty productivity by shifting spending priorities toward instruction and research.** We must empower faculty to drive research at UNLV and UNR while providing excellent student learning opportunities at all levels. Data from 2008 shows that less than 40 percent of spending at the two universities was devoted to instruction - these percentages can and should be improved. Benchmarks should also be set to significantly increase support for research.
    - **Better defining each institution's mission.** Mission differentiation between schools is important to ensuring that capacity is available at all levels - from vocational and technical training to advanced postgraduate research.

Texas offers monetary incentives for performance. The University of Texas (UT) has established benchmarks in four critical areas: Affordability (tuition and financial assistance); Student Success and Outcomes (graduation rates, licensure exam pass rates, learning outcomes); Impact of Research and Teaching on Economic Development (technology transfers and collaborations with industry); and Efficiency and Service (classroom space per student; energy savings student/faculty ratios).

Texas also publishes a regular UT System Accountability and Performance Report so the public and other schools understand the progress that is being made.

- **Streamlining NSHE administration.** System administration should be subject to the same belt-tightening that has been imposed on college and university campuses. Efficiencies such as consolidating the system's two offices should be considered to ensure more money is invested in instruction and research.
- **Partnership, not competition, between institutions.** In the past our colleges and universities have been set up at odds in a zero-sum competition for funding. However, there are efficiencies to be achieved in sharing resources and facilities that will stretch dollars. We must provide fiscal incentives to share facilities and/or offer joint programs. Colleges that undertake cost-saving initiatives should be permitted to benefit from those savings, not penalized for them with less funding. Our institutions should not be forced compete for funding based on head count. Eliminating this competition would allow our schools to provide objective advice about which campus and degree program will best suit each student's needs and goals.
- **Expand performance funding,** whereby money is tied directly to campus-wide performance in benchmarks such as graduation rates and technology transfers. Right now, our campuses are incentivized for enrolling as many students as possible – not graduating as many students as possible. Rory will work with the Board of Regents and the legislature to eliminate obstacles such as obsolete legislation that penalizes our colleges for being more efficient. Instead of penalizing institutions that *save* money by giving them *less*, Rory will provide incentives to universities that identify cost savings.
- **Funding formulas should be reviewed for equity,** ensuring that differences in enrollment growth are accounted for – and also that schools are incentivized to meet agreed-upon higher education goals, including specific goals and drivers for research. Numerous other states have adopted, or are exploring performance-based funding formulas.
- **Allow campuses to keep increased tuition and fee revenues, and allow them to raise tuition and fees for *non-resident students*.** Under the current system, student tuition dollars are treated as tax dollars that feed the state's General Fund – but not the colleges where students attend. Since additional revenues generated by colleges are of no benefit to them, there is no incentive to recruit full-paying non-residents to help with the cost of educating Nevada students. Rory will work with the Board of Regents to enact a policy change to allow fees from out-of-state students to benefit the institutions and campuses that generate them, as part of a strategy for making our system of higher education more self-sustaining.
- **Allow institutions to charge differential tuition.** Campuses should have the option of charging market-based prices for competitive programs that cost more to provide, such as nursing, engineering and other high-demand areas.
- **Increase revenue from patents and royalties on university-derived technological advances,** by encouraging company formation by faculties and employees of Nevada educational and research institutions, ensuring state equity ownership (which will require us to change the state

constitutional prohibition on ownership of stock by publicly-supported institutions), and simplifying the laws governing transfer rights.

- **Increase commercialization of research at Nevada universities.** Nevada has the opportunity to leverage its entrepreneurial strength, as well as the state's technology, science, and research, and logistics capacity, to launch successful enterprises from university campuses.
- **Forge partnerships between our university faculty and private industry to pursue entrepreneurial ventures and commercialize research results.** The various incentives, grants, and capital programs that Nevada already has in place should be "supercharged" at higher levels for businesses in our targeted hub industries (*outlined in the next section*) and companies that establish research and commercialization partnerships with our colleges and universities in those disciplines.
- **Make our universities and colleges hubs for cultural and arts activities.** If we are to attract new business and investment to our state to diversify the economy, our campuses must be thriving centers for cultural and arts activities that support a high quality of life for all Nevadans.
- **Endow the Millennium Scholarship program to ensure access for future generations of Nevada students.** Establish a state-sponsored endowment that attracts private investment to fund scholarships for outstanding students – keeping many of our brightest scholars in the state. This public-private partnership would ensure the Millennium Scholarship program could continue without dependence on state revenues or limited special funds.

In Michigan, the state government and university administration worked together to endow a venture fund matching state funds with private dollars the universities raise, to be paid off by the royalties of the fund. The University of Michigan's Wolverine Venture Fund has been making strategic investments in early-stage technology companies since 1997. Rory believes that it's time that Nevada did this, too.

## Boosting the Quality of Our Universities – and Making Them Economic Generators

Many businesses are especially interested in high-quality colleges and universities, both for their role in workforce training, as well as their ability to generate startup and spin-off activity.<sup>5</sup>

Once Rory has ensured that every higher education dollar goes as far as it can, and that the system is generating the additional resources necessary to make the investment, **Rory will turn our higher education system into an economic generator by:**

- **Making our institutions of higher education hubs for growing industries.** We need to spend smarter by making sure that state dollars go to building our universities' capacity in areas with the greatest potential for economic growth in our state, such as those identified in Rory's *Virtual Crossroads* plan, including:

- **Transportation, shipping, and logistics**
  - **Renewable energy development and investment in the green workforce**
  - **Urban sustainability and green architecture**
  - **Medicine and biomedical research**
- **Attracting top-tier professors and research faculty.** Many states actively engage in faculty recruitment, not only for the value in developing a university's intellectual infrastructure, but also to increase an institution's capacity for innovative research that is central to building the economy of the future.
  - **Boosting research and development hand-in-hand with strategic economic growth.** Discoveries made through research translate directly into jobs and business opportunities. In the last five years, the Georgia Research Alliance has evaluated the commercial potential of more than 260 inventions or discoveries, awarded grants to 165, and as a result, 70 start-up companies have been formed that have attracted \$350 million in private investment and currently employ more than 450 people. Utah and Oregon have had success with similar programs designed to drive university research. Investment in serious research and development at Nevada's universities, with an emphasis on commercialization, is essential for our long-term competitive outlook, but even more so for the immediate-term recovery of our state's economy.
  - **Transforming our colleges and community colleges into the workforce generators businesses need.** Nevada's colleges produce what is still the most important resource to any business: our human resources. The job of our colleges and technical schools must be to prepare today's young people to be tomorrow's world-class workforce for the cutting-edge jobs we want in Nevada. To build this workforce, our system of higher education must be re-focused on the following priorities:
    - **Increasing postsecondary training across the board.** Rory Reid will focus on increasing Nevada's college-educated workforce while at the same time emphasizing training opportunities at technical and two-year colleges for high-demand technical skills.
    - **Establishing closer ties between employers and educational institutions** by reaching out to industry groups and regional economic development associations to ensure alignment between degrees and training programs offered and anticipated employment needs. This planning should also be used to develop new, shorter and faster pathways to degrees and credentials of value in the labor market.

In Kentucky, endowments were established specifically to recruit world-class researchers to the state who will attract critical resources to their institutions. Federal commitments for research directly attributed to "Bucks for Brains" faculty has exceeded \$210 million at the University of Louisville alone – and economists estimate that each \$1 in federal funding for research generates an additional \$2.20 for local and state economies.

## Promoting Technology Research and Commercialization

Enhancing technology transfer and commercialization opportunities from our colleges and universities is an important part of Rory's catalyzing strategy: Promoting research and development at world-class universities and research institutions, and then making it easy and efficient to transfer that knowledge to commercial production, will help to develop the high-growth anchors we need.

As governor, Rory will leverage the innovations of our colleges and universities to establish technology partnerships with Nevada businesses. He will:

- **Create an entrepreneurial culture within our system of higher education.** Universities that are successful in technology transfer provide incentives for faculty who participate in technology transfer and commercialization activities and have hiring practices favoring industry and entrepreneurial experience. Successful universities also often have strong entrepreneurship programs that offer specialized courses and activities for engineering and science students, as well as business students – such as business plan competitions, internships with start-ups and mentoring by successful entrepreneurs.
- **Create a Nevada Research Commercialization Matching Grant Program.** Rory will create a program similar to Florida's State University Research Commercialization Assistance Grant program. Under the program, a state university, or a cooperative of state universities, may apply for early stage capital funding for the purpose of developing products and services resulting from university research.
- **Create a Nevada Innovation Incentive Fund.** In 2007-2008, Florida's \$450 million Innovation Incentive Fund helped entice the Max Planck Institute, the University of Miami Institute for Human Genomics, the Charles Stark Draper Laboratory, the Torrey Pines Institute for Molecular Studies, SRI International, and the OSHU Vaccine and Gene Therapy Institute to locate in their state. We need to attract world-class institutions like these to Nevada to facilitate the growth of new technology research and industry clusters.
- **Form a Governor's Grants Office to help the state better maximize federal and foundation support for advances in life science technologies.** When Maryland established a Governor's Grants Office to identify federal grant opportunities, the result was to increase allocations from \$5.5 billion in 2005 to \$7.5 billion in 2007. Competition for federal and private grants is increasing in the current economic climate. Nevada must maximize available funding to accelerate our technology economy.
- **Provide state matching funds for grants from corporations and federal sources** including the National Institutes of Health (NIH), the National Science Foundation (NSF), and the Small Business Innovation Research (SBIR) program.

We can do more to encourage high-tech businesses that will form the backbone of the 21<sup>st</sup> Century economy to settle in Nevada and utilize the cutting-edge research coming from our universities.

Rory sees Nevada's future in a wide range of small businesses in fields from Internet retailing to data warehousing, from server support to new media. Our university and college system can feed these businesses the workers and technology they need to prosper.

**To do this, we need a governor who will call the higher education community together to forge bold changes.** Within Rory's first month as governor, he will hold a higher education summit with the chancellor, members of the Board of Regents, the university and college presidents, and faculty and student leaders, to work with them on a vision for a new and different higher education system in Nevada.

Nevada needs system-wide, strategic planning that is done out in the open in order to unlock the potential of our higher education system – and our economic growth.

## NOTES

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<sup>1</sup> "Nevada Regents Approve Cuts to Higher Education." Associated Press. 4 Jun 2010.

<sup>2</sup> "The Completion Shortfall. " Complete College of America. Washington DC.

[http://www.completecollege.org/completion\\_shortfall/](http://www.completecollege.org/completion_shortfall/)

<sup>3</sup> "Nevada Regents Approve Cuts to Higher Education." Associated Press. 4 Jun 2010.

<sup>4</sup> [www.savenevadastudents.org](http://www.savenevadastudents.org)

<sup>5</sup> Robison, Jennifer. "Economic Diversification: Nevada needs more than low taxes to lure business." *Las Vegas Review-Journal*. 8 Aug 2010.