BOARD OF REGENTS
BRIEFING PAPER

1. **Agenda Item Title:** Institutional Strategic Plan and *Handbook* Revision, Revised Mission Statement, UNLV

   Meeting Date: March 3-4, 2016

2. BACKGROUND & POLICY CONTEXT OF ISSUE:

UNLV's Strategic Plan was last updated and approved by the Board of Regents in 2008. The new strategic plan was developed in alignment with the previous academic strategic plan and the Top Tier Initiative.

UNLV has always been an ambitious university with a longstanding mission to serve its growing and dynamic region. The UNLV Top Tier Initiative (formerly called the Path to Tier One) is an extension of our vision of entering the top 100 American research universities, as designated by the Carnegie Foundation as a "Research University/Very High" (RU/VH) institution. The best way to envision the difference is that becoming a RU/VH institution is a necessary, but not sufficient, condition of becoming a fully-functioning, Top Tier university. Top Tier means (1) faculty members engaged in high-quality research, scholarship, and creative activity, whether or not that research, scholarship, or creative activity leads to increases in research expenditures or the graduation of more Ph.D. students (both of which are necessary for RU/VH status); (2) a superb student educational experience; (3) an academic health center that has a fully accredited medical school that is integrated with the other health science units as well as with faculty members whose research overlaps with the health science division; (4) a clearer gateway to facilitate community partnerships with UNLV; and (5) a significantly better functioning infrastructure that provides meaningful opportunities for shared governance.

During 2014-2015, Academic Leadership Associates (ALA) consultants and UNLV leadership worked to develop a comprehensive, data-driven plan that further defined our vision, assessed our current environment, identified needs and the associated costs, and then set forth strategies and tactics for addressing those needs. ALA and UNLV leadership solicited ideas from numerous campus and community constituents through regularly scheduled executive committee and subcommittee meetings, public forums, and web communications and feedback. The University was formally assessed and strategically analyzed in order to determine what it takes to become a Top Tier Institution through examining our organizational structure, our policies and culture, and our leadership and staffing. The process resulted in agreed-upon, transparent, and measurable goals for moving forward.

The planning process led to amending our mission as we defined our vision, mission, goals, and strategies. There are five major goal areas: Research, Scholarship, and Creative Activity; Student Achievement; Academic Health Center; Community Partnerships; and Infrastructure and Shared Governance. Each goal area has a committee tasked with developing and implementing actions. Based on each goal area and the associated goals and key measures of success, tasks have been defined in order to determine what can be accomplished over the next year and to develop a long-term plan for the next several years.

3. SPECIFIC ACTIONS BEING RECOMMENDED OR REQUESTED:

UNLV President Len Jessup and Provost Nancy Rapoport will present for approval the 2015-2022 UNLV Strategic Plan *(Title 4, Chapter 14, Section 3 and Section 4(2))*, and the revised UNLV mission statement *Title 4, Chapter 14, Section 4(1)).*

4. IMPETUS (WHY NOW?):

Title 4, Chapter 14, Section 3 (1)(c) and 2 of the Board of Regents Handbook outlines a schedule of review for institutional strategic plans, and UNLV will provide the updated strategic plan for review and to follow procedures. In addition, Title 4, Chapter 14, Section 4(1) requires the revised UNLV mission statement to be presented for approval in order to revise the *Handbook*.

Revised: June 2010

5. BULLET POINTS TO SUPPORT REQUEST/RECOMMENDATION:

- The plan has been created, reviewed, and approved by campus constituents and UNLV leadership.
- The Vision, Mission, and Goals have been established and action plans have been developed and implemented in order to achieve goals through the Key Measures of Success.
- Funding sources have been identified.

6. POTENTIAL ARGUMENTS AGAINST THE REQUEST/RECOMMENDATION:

- UNLV has had a prior strategic plan in place that differs from Top Tier. That strategic plan, however, had not had significant progress since its adoption.

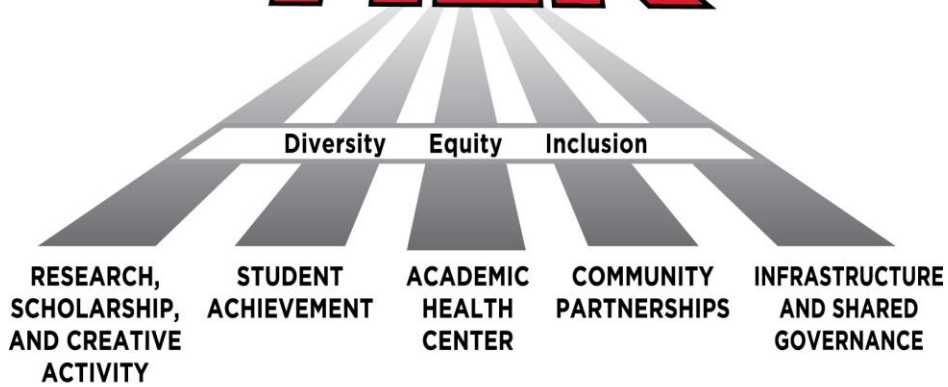**7. ALTERNATIVE(S) TO WHAT IS BEING REQUESTED/RECOMMENDED:**

- Provide the strategic plan at a later meeting.

8. COMPLIANCE WITH BOARD POLICY:

X   Consistent With Current Board Policy: Title # 4   Chapter # 14   Sections # 3 (1)(c) and # 2

X   Amends Current Board Policy: Title # 4   Chapter # 14   Section # 4(1)

❑   Amends Current Procedures & Guidelines Manual: Chapter #_____   Section #_____

❑   Other:_____

X   Fiscal Impact: Yes_____   No **X**

    Explain:_____

Revised: June 2010

Institutional Strategic Plan

TOP TIER

Diversity   Equity   Inclusion

RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITY | STUDENT ACHIEVEMENT | ACADEMIC HEALTH CENTER | COMMUNITY PARTNERSHIPS | INFRASTRUCTURE AND SHARED GOVERNANCE

BECOMING A TOP TIER PUBLIC UNIVERSITY IN THE COUNTRY FOR RESEARCH, TEACHING, AND COMMUNITY IMPACT

UNLV

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UNLV Institutional Strategic Plan
Executive Summary[1]

UNLV's Top Tier Vision

UNLV will be recognized as a top tier public university in research, education, and community impact.

UNLV's Top Tier Mission

UNLV's diverse faculty, students, staff, and alumni promote community well-being and individual achievement through education, research, scholarship, creative activities, and clinical services. We stimulate economic development and diversification, foster a climate of innovation, promote health, and enrich the cultural vitality of the communities that we serve.

We will evaluate our success as a leading research university by our progress on these key measures:
- Impact of our research, scholarship, and creative activities.
- Student achievement of learning outcomes.
- Placement into preferred employment or post-graduate educational opportunities.
- Student, faculty, and staff diversity, including maintaining UNLV's Minority Serving Institution (MSI) status and Hispanic Serving Institution (HSI) status.
- Intellectual activity, patents, startups, and entrepreneurial activity fostered by UNLV.
- Quality and impact of our clinical services.
- Alignment of our physical infrastructure and organizational effectiveness with our Top Tier mission.
- A deeper engagement of UNLV with Las Vegas and our region to ensure ongoing alignment with our diverse community's needs and interests.
- Carnegie Classification criteria (research expenditures; doctoral degrees granted per year; number of non-faculty research staff, such as postdocs; and Carnegie Community Engagement status).

As a measure of overall university effectiveness and progress, UNLV will prepare, implement, and disseminate a progress card.

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[1]The Executive Summary highlights the Top Tier Plan specific through 2022, with the complete Top Tier Plan (through 2025) provided in Section 3.

UNLV Institutional Strategic Plan
Top Tier Goals[2]

Research, Scholarship, and Creative Activity Goal:
UNLV will foster a climate of innovation in which faculty and students produce high-quality, widely disseminated, and influential research, scholarship, and creative activities.

Key measures of our success:
- At least $80M/year of research expenditures by 2022.
- Increase commercially sponsored research, where appropriate, to at least five percent of total research expenditures by 2022.
- At least 150 doctoral degrees granted annually by 2022.
- At least 106 non-faculty researchers with PhDs employed by UNLV by 2022.
- Impact of scholarship and creative activities in the academic and artistic communities, e.g.:
    - Publications in journals with significant impact, such as those tracked by the Web of Science or equivalent indices.
    - Citations.
    - Invited or peer-reviewed presentations at premier academic conferences and symposia.
    - Books published with scholarly, peer-reviewed presses.
    - Commissioned and/or invited artistic exhibitions or performances.
    - Philanthropic support for our research, scholarship, and creative activities.
- Increase breadth and depth of graduate and undergraduate student participation in research, e.g.:
    - Articles (single-authored or co-authored with faculty members).
    - Presentations at academic conferences (singly or with faculty members).
    - Number of students working in laboratories.
    - Patents, startups, and other intellectual property developed by students or students jointly working with faculty.
- Increase breadth and depth of economic and cultural impact of the university's activities on our community, as measured by impact of campus/community cultural events, increased engagement with K-12 education, partnerships with non-profits and public institutions to address social issues, invention disclosures, patents applied for (67 in 2022) and granted, licensing deals (both exclusive and nonexclusive), number of startups, other intellectual property, revenues, and jobs created from innovations initiated at UNLV by 2022.
- Increase the number of master's and professional degrees granted per year, as appropriate for individual academic units by 2022.

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[2]Key Measures of Success identified are specific to a seven year timeframe (2015 – 2022).

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Student Achievement Goal:
UNLV will be a national leader in education and will promote excellence in teaching undergraduate, graduate, and professional school students. We will recruit, retain, and graduate a diverse body of motivated students through the strength of our innovative learning experiences, access to mentoring and research opportunities, and our vibrant campus community. Our highly qualified master's students, doctoral students, and professional students will distinguish themselves and UNLV through their contributions to research, the professions, and the arts.

Key measures of success:
- Metrics that demonstrate that UNLV is a school of choice, by tracking yield statistics.
- A freshmen to sophomore retention rate of 85 percent by 2022.
- An increase in the six-year graduation rate to 48 percent by 2022.
- Increase student engagement to 78% by 2022, as measured by the National Survey of Student Engagement and the Student Satisfaction Inventory.
- Decrease in student-to-faculty ratios, as appropriate by discipline, pedagogical needs, and online course delivery options.
- Improvement in the quality of student educational experiences in teaching and learning, as measured by the Student Satisfaction Index.
- Student athletes who continue to meet and exceed Academic Progress Rate (APR) requirements.
- Employer satisfaction with our graduates (local UNLV employers' survey and the Employers' Survey done by Hart Research Associates for Association of American Colleges and Universities).
- Student satisfaction survey related to student services, campus environment, and safety.

Academic Health Center Goal:
UNLV's School of Medicine, in collaboration with other health-related units on campus and with external partners, will foster cutting-edge research, use a creative curriculum, and provide top-notch clinical programs.

Key measures of our success:
- Preliminary accreditation during 2016, provisional accreditation during 2019, and full LCME accreditation during 2021.
- Graduate 60 students a year by 2022.
- Develop and plan an infrastructure to generate external research grants and contracts.
- Build out faculty to meet accreditation standards.
- Continue the fundraising trajectory.
- Develop processes and track student metrics: nationally competitive applicant pool, percentage of students from Nevada or with Nevada ties, diversity of student body, and the number of graduates who remain in the region or return to Nevada post-residency training.
- Develop PhD programs.
- Track community's perceived satisfaction with new health care opportunities.

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Community Partnerships Goal:
UNLV will stimulate economic development and diversification in, and enrich the cultural vitality of, our community by deepening and expanding reciprocal connections with our partners and leveraging our unique strengths to collaborate locally, nationally, and internationally.

Key measures of success:
- Establishment of a Community Engagement Center at UNLV.
- Effective partnerships, collaborations, and pipeline programs with our partner educational systems.
- Community engagement tracking and satisfaction surveys.
- Workforce development and diversification derived from UNLV's highly qualified graduates who readily gain employment in their preferred careers, particularly in STEAM fields (Science, Technology, Engineering, the Arts, and Mathematics).
- Start-up activities stemming from discoveries made at UNLV and by UNLV alumni.
- Success in UNLV's major athletic programs.
- Creation of a mentoring network of UNLV alumni (both in terms of mentoring UNLV students and in terms of providing a lifelong UNLV connection to UNLV alumni).
- Development of a community dashboard and other ways of communicating UNLV's successes to key constituencies.
- As with the Research, Scholarship, and Creative Activities Goal, the breadth and depth of economic and cultural impact of the university's activities on our community, as measured by impact of campus/community cultural events, increased engagement with K-12 education, partnerships with non-profits and public institutions to address social issues, invention disclosures, patents applied for (67 in 2022) and granted, licensing deals (both exclusive and nonexclusive), number of startups, other intellectual property, revenues, and jobs created from innovations initiated at UNLV.

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Infrastructure and Shared Governance Goal:
To accomplish the other four goals, UNLV will continually develop and leverage the conditions necessary for success, which will include an effective organizational structure, a state-of-the-art infrastructure, a service-oriented culture, meaningful faculty engagement in shared governance, and the capacity for informed decision-making and informed risk-taking.

Key measures of success:
- Annual satisfaction surveys demonstrating progress toward:
  - A climate typified by diversity and inclusion and the development of, or proposed changes to, necessary policies to promote such diversity and inclusion.
  - The quality, quantity, and flexibility of university facilities for educational, research, and creative activity, as well as the full range of "campus life" activities.
  - The extent to which UNLV fosters a positive culture of collaboration, trust, respect, empathy, camaraderie, and mutual success.
  - The extent and efficacy of faculty and staff training for leadership development.
  - Positive assessments of faculty and staff effectiveness in performing their jobs/tasks well, and having the necessary leadership, management direction, support, and resources to perform their job responsibilities successfully.
  - Student, faculty, and administrators' satisfaction with university facilities and processes.
  - Recognition of UNLV as a great place to work, with sterling customer service both inside UNLV and in the broader community.
  - Measurable improvements in university business processes.
- The effectiveness, efficiency, and coordination of data collection, data governance, and data delivery to appropriate constituencies for use in university decision-making.
- Depth and diversity of faculty participation in shared governance.
- Development and implementation of an effective leadership organizational structure.

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UNLV

Top Tier
Resource Plan to Support the UNLV Top Tier Plan

Updated: 1/20/16

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Initial assumptions developed for major revenue streams are outlined below, but these are subject to adjustment. A steering committee has been formed to develop a much more detailed analysis, which would include much of the excellent information produced by UNR in their "Capacity Study." It is expected to have this detailed analysis/model completed no later than April 2017.

Broad Revenue Opportunities:

Enrollment Related:

- We are projecting long-term enrollment growth at both Undergraduate and Graduate level, but there will be shorter term negative financial impact as we reduce the number of alternative admits. UNLV is still discussing with Clark County School District (CCSD) how UNLV can help as CCSD prepares college-ready graduates. UNLV is considering approximately a 4,300 – 4,500 FTE growth over a 10-year horizon. The total cumulative incremental student fee growth may be in the $17-$20M range (net in the state supported operating budget (SSOB), after accounting for Financial Aid, etc.).
- We assume that non-resident undergraduate enrollment may have some modest increases over time, but we do not see major revenue increases in this area, long-term.
- Registration fee increases over time will be projected after we are further in to the 4-year, 4% per year (UG) fee increase proposal, which runs through FY19. Although our registration fees are relatively low compared with other institutions of our type, we know that our students have difficulty with even the existing fee levels. We have a very large proportion of students who are first-generation students and/or economically disadvantaged. Many of these students have not had sufficient information and/or experience to be able to do a cost-benefit analysis on the acquisition of additional debt with respect to the benefits of earning a degree.
- Strategically focus on high-demand programs, both for growth of existing and starting new ones. Have a financial incentive for Colleges to grow these programs and share in the revenue stream. We hope to grow overall enrollment to 33,100.

State General Fund Support:

- Assume that the State is willing and able to return some investment in Higher Education lost during the Great Recession, including salary and benefits (specifically health care). Assume support for formula funding dollars based on the enrollment model. Total cumulative incremental state general fund support through the funding formula could be in the $28-32M range.
- Assume support for near-term Health for Nevada initiative to leverage these funds for additional faculty and GA growth and overall grant and contract growth for UNLV. Total base request in the $21M range, with the highest priority on research faculty positions.

Grant and Contract/State Economic Development Related:

- Assume support of Health for Nevada initiative, with a strong preference for permanent funding (instead of bridge funding) so as to leverage these funds for additional faculty and GA growth, and overall grant and contract growth for UNLV. Goal is to reach $120M in research funding in 10 years, off current base of about $40M. F&A growth expected to be $20M range, which would be invested in research infrastructure and support, startup for faculty, and support of long-term debt for additional needed research facilities.

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Donor/Private Funding:
- Assume a major new capital campaign, focused on providing extra support for key programs to allow them to reach a level of excellence not feasible without such support. The capital campaign will focus on student scholarships/financial support; academic and research specific programs; and facilities.

Capital Funding/Facilities:
- UNLV hopes the state will be able to start investing in core campus facilities to support students and faculty, but we understand that we will have to use other revenue streams to fund additional required facilities.
- Additionally, we understand the need to focus on optimizing our use of existing space, which includes Monday-Saturday uses of academic space; on-line delivery of instruction; productivity-based allocation of research space; and other avenues to increase efficiency and effectiveness.
- We project additional space for the campus to include: the old JMA building recently purchased, the return of the EPA space to the main campus, the completion of the Hotel College academic building, and the new academic building for the School of Medicine (and the fact we will be able to reprogram the space being vacated at the Shadow Lane Campus for other priorities).

Broad Expenditures Priorities:
- Salary and benefit adjustments, with a focus on Health Care programs in the benefits area.
- Faculty positions in order to support a reasonable student faculty ratio (work towards 18:1 from current 22:1), support student success, and provide support for our research and state economic development agenda. Health for Nevada would support 101 faculty lines, which we would leverage into 156 over time. We would add another 100 tenure/tenure track faculty from SSOB growth, along with 50 non-tenure track faculty positions. Total faculty positions would go from existing 918 to 1,224.
- Direct student support positions that would help with student success (advisors, financial aid staff, support staff in student labs, on-line education delivery and support, etc.).
- GA support at both the level of stipends and fee support, but also a need to support a significant increase in GA numbers (with funding coming in part from the SSOB and in part from Grants and Contracts). State supported GAs would support classroom and academic needs for the campus. Health for Nevada would support 101 new GA lines, which we would leverage into 445 over time. A total of 200 GA positions would be added from the SSOB growth (in addition to GA stipend/support levels to be competitive) and our total GA positions would go from 900 to 1200.
- Student Financial Aid, both through an allocation of registration fee income but also through a focus on this area for donor/private funds.
- Library and Information Technology funding: Both are critical to our vision, and in the library area we have a very strong foundation. Additional investment in IT infrastructure and supporting this growth and development going forward will be required, and OIT is analyzing their costs and efficiency.
- Business and transaction support staff to make up for losses during the Great Recession and support the faculty at a level that is at least "average" for our peers.
- Increase efficiency of use of existing space significantly; however, additional facilities will be required, through both state support and debt financing (some which may be in partnerships with private entities).

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Background Data to Support State Re-Investment in Higher Education in Nevada

The chart below shows that while there have been recent reinvestment into UNLV by the state, the cuts during the Great Recession were severe in Nevada and full recovery is still very far off.
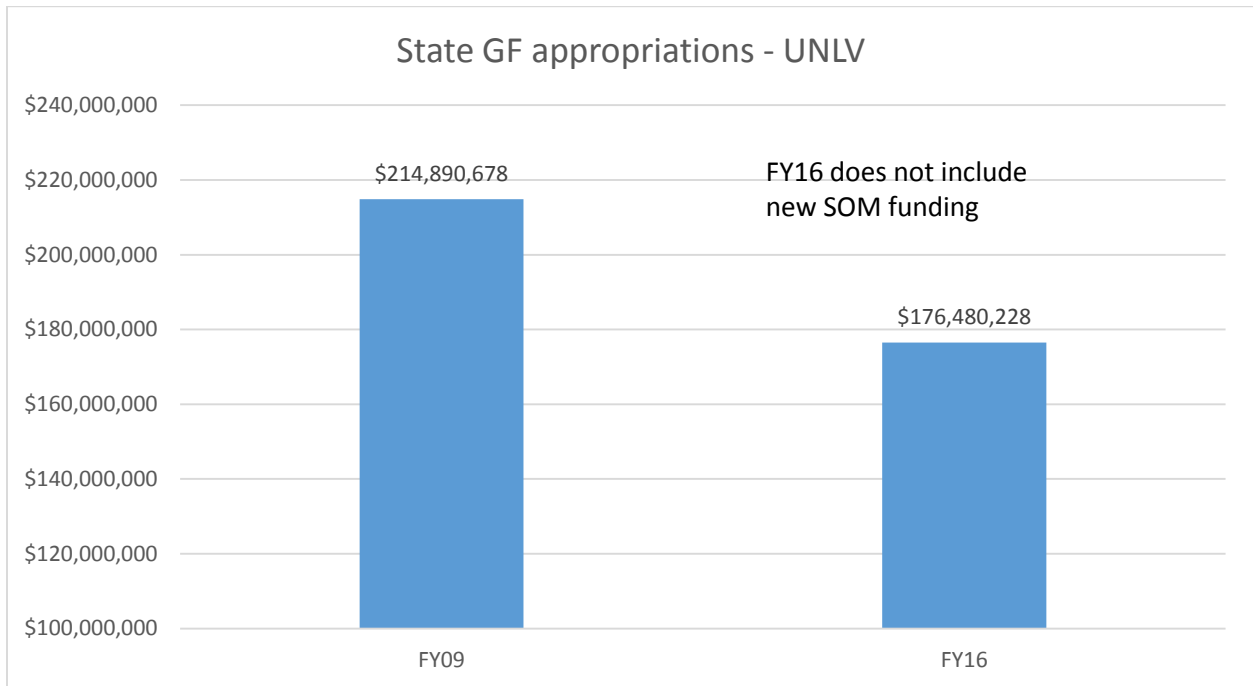
The chart below shows that our administrative overhead is going down, and we already are very low comparted with any metrics used for other peer institutions.

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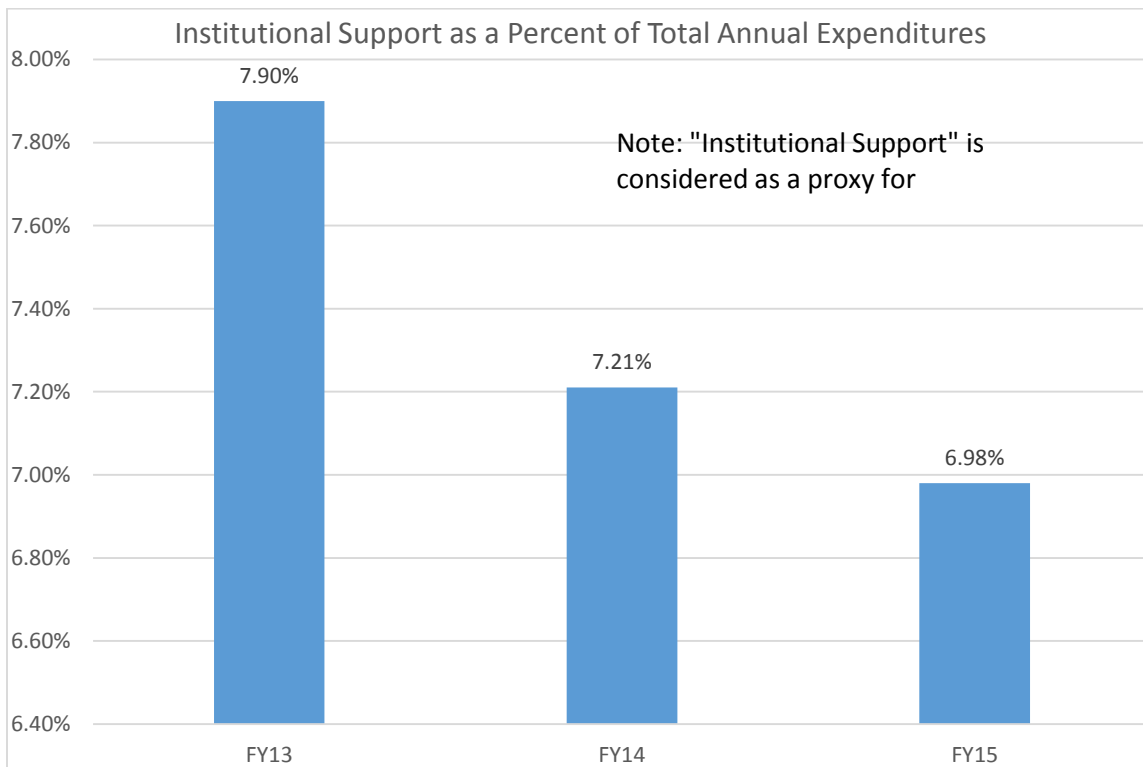
There are numerous national data comparisons that can be used to put public higher education funding in Nevada into a national context. Some of this data is listed below. There is also significant data showing that state economic returns are in fact tied with healthy and strong very high research institutions in those states. We believe that an investment in higher education offers great returns to the state in the form of increased economic activity.

National Data on Higher Education:
Grapevine: 5 year change in state support for higher education (FY10 – FY15). Latest data reveals that Nevada ranks 48th.

	Rank	**State**	**Percent Change**
•	50	Louisiana	-24.3%
•	49	Arizona	-21.1%
•	48	Nevada	-15.2%

2016 State Report Cards - Young Invincibles Student Impact Project, January 2016.
- Largest cuts to Higher Education since Recession (FY08-FY14).
- Nevada ranks 42nd, at -31%.
- Nevada overall Grade: F (19 total states with F grade).

Postsecondary Education Opportunity: Latest rankings for State
- Bachelors Degree or Higher: Rank is 48 at 23% (dropped from 26.5% in previous ranking).
- High School Graduation Rate: Rank is 51 (has been consistent at this level).
- College Participation Rate: Rank is 50 (% of 18-24 year olds enrolled in college).
- College Continuation Rate: Rank is 45 (# of fall 1st time freshmen enrolled anywhere vs 9th graders 4 years earlier).
- Higher Education Expenditures as Percentage of Gross Domestic Product: Rank is 50.

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UNLV

Top Tier Vision, Mission, Goals, and Strategies

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UNLV

Top Tier Vision, Mission, Goals, and Strategies
May 4, 2015[1]

UNLV's Top Tier Vision

By 2025, UNLV will be recognized as a top tier public university in research, education, and community impact.

UNLV's Top Tier Mission

UNLV's diverse faculty, students, staff, and alumni promote community well-being and individual achievement through education, research, scholarship, creative activities, and clinical services. We stimulate economic development and diversification, foster a climate of innovation, promote health, and enrich the cultural vitality of the communities that we serve.

We will evaluate our success as a leading research university by our progress on these key measures:

- Impact of our research, scholarship, and creative activities. **[VM K1]**
- Student achievement of learning outcomes. **[VM K2]**
- Placement into preferred employment or post-graduate educational opportunities. **[VM K3]**
- Student, faculty, and staff diversity, including maintaining UNLV's Minority Serving Institution (MSI) status and Hispanic Serving Institution (HSI) status. **[VM K4]**
- Intellectual activity, startups, patents, and entrepreneurial activity fostered by UNLV. **[VM K5]**
- Quality and impact of our clinical services. **[VM K6]**
- Alignment of our physical infrastructure and organizational effectiveness with our Top Tier mission. **[VM K7]**
- A deeper engagement of UNLV with Las Vegas and our region to ensure ongoing alignment with our diverse community's needs and interests. **[VM K8]**
- Carnegie Classification criteria (research expenditures; doctoral degrees granted per year; number of non-faculty research staff, such as postdocs; and Carnegie Community Engagement status). **[VM K9]**

As a measure of overall university effectiveness and progress, UNLV will prepare, implement, and disseminate a progress card.

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[1]Re-evaluated January 15, 2016

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Top Tier Goals

Research, Scholarship, and Creative Activity Goal:
UNLV will foster a climate of innovation in which faculty and students produce high-quality, widely disseminated, and influential research, scholarship, and creative activities.

Key measures of our success:
- At least $120M/year of research expenditures by 2025. **[RSC K1]**
- Increase commercially sponsored research, where appropriate, to at least five percent of total research expenditures by 2025. **[RSC K2]**
- At least 200 doctoral degrees granted annually by 2025. **[RSC K3]**
- At least 120 non-faculty researchers with PhDs employed by UNLV by 2025. **[RSC K4]**
- Rankings by the Carnegie Foundation for Advancement of Teaching, federal agencies, and other organizations (i.e., NSF, National Research Council, etc.), particularly Research University/Very High status. **[RSC K5]**
- Impact of scholarship and creative activities in the academic and artistic communities, e.g.: **[RSC K6]**
    - Publications in journals with significant impact, such as those tracked by the Web of Science or equivalent indices. **[RSC K6A]**
    - Citations. **[RSC K6B]**
    - Invited or peer-reviewed presentations at premier academic conferences and symposia. **[RSC K6C]**
    - Books published with scholarly, peer-reviewed presses. **[RSC K6D]**
    - Commissioned and/or invited artistic exhibitions or performances. **[RSC K6E]**
    - Philanthropic support for our research, scholarship, and creative activities. **[RSC K6F]**
- Increase breadth and depth of graduate and undergraduate student participation in research, e.g.: **[RSC K7]**
    - Articles (single-authored or co-authored with faculty members). **[RSC K7A]**
    - Presentations at academic conferences (singly or with faculty members). **[RSC K7B]**
    - Number of students working in laboratories. **[RSC K7C]**
    - Patents, startups and other intellectual property developed by students or students jointly working with faculty. **[RSC K7D]**
- Increase breadth and depth of economic and cultural impact of the university's activities on our community, as measured by impact of campus/community cultural events, increased engagement with K-12 education, partnerships with non-profits and public institutions to address social issues, invention disclosures, patents applied for (67 in 2022) and granted, licensing deals (both exclusive and nonexclusive), number of startups, other intellectual property, revenues, and jobs created from innovations initiated at UNLV. **[RSC K8]**
- The number of master's and professional degrees granted per year, as appropriate for individual academic units. **[RSC K9]**

To accomplish this goal, we will:
- Promote a productive, vibrant, diverse, and collaborative faculty and a robust administrative support system to enhance the productivity of our research, scholarship, and creative activity across university and academic units by: **[RSC A1]**

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- Increasing successful competitive grant applications and program-level funding resulting in externally funded research, as well as other competitive and entrepreneurial research funding opportunities. **[RSC A1A]**
- Developing an enhanced reward structure for highly productive researchers, including research incentives (either as a bonus or as an award added to base salary). **[RSC A1B]**
- Expanding seed funding for faculty research, scholarship, and creative activity at both the university and academic unit level. **[RSC A1C]**
- Providing appropriately flexible teaching loads for research-productive faculty by ensuring the availability of release time from teaching when the release time supports significant research and publishing productivity. **[RSC A1D]**
- Increasing the number and graduation rate of a diverse group of doctoral students who are supporting research, as well as monitoring the quality of the graduates' post-UNLV careers (e.g., tracking academic and other appropriate institutions where PhDs are employed in their respective areas and tracking the amount and quality of research produced). **[RSC A1E]**
- Increasing the number of terminal degrees and/or professional doctorate degrees in congruence with relevant market demands and UNLV's mission. **[RSC A1F]**
- Increasing the number of non-faculty research PhDs and post-docs. **[RSC A1G]**
- Developing the university-wide infrastructure to support research, scholarship, and creative activity. **[RSC A1H]**
- Create and sustain an environment that rewards high-impact scholarly publications and creative activity by: **[RSC A2]**
  - Aligning promotion and tenure standards with the Top Tier initiative through: **[RSC A2A]**
    - Employing consistent, transparent promotion and tenure language, policies, and procedures across campus and within departments. **[RSC A2Ai]**
    - Placing appropriate emphasis, as part of a faculty member's overall portfolio, on rigorous, highly selective, and impactful research, scholarship, and creative activity standards in promotion and tenure and in merit guidelines, recognizing the challenges of publishing in multidisciplinary, interdisciplinary, and emerging field research. **[RSC A2Aii]**
    - Recognizing how faculty diversity can affect assessment and evaluation tools and developing support structures that work around any inadvertent roadblocks to success. **[RSC A2Aiii]**
  - Allocating the merit pool based on the total compensation for each unit or college, thus allowing the unit or college to determine how best to allocate the merit money to faculty, with appropriate oversight from the Provost's Office. **[RSC A2B]**
  - Developing procedures for determining merit raises for those faculty participating in centers that cross departments and schools and other interdisciplinary collaborations. **[RSC A2C]**
  - Increasing the number of faculty members serving in prestigious academic and professional societies and associations, editorial boards, and grant selection panels for federal agencies by providing funding on a competitive basis for research-active faculty members to support conference presentations and other scholarly activities. **[RSC A2D]**
  - Increasing doctoral enrollments in order to double the number of doctoral degrees conferred per year by 2025. **[RSC A2E]**

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- o Increasing (to the extent possible) the amount of state funding for graduate assistant stipends (with a priority for increasing the number and amount of PhD graduate student stipends and strategic use of graduate assistant workload assignments). **[RSC A2F]**
  - o Increasing private support for graduate stipends. **[RSC A2G]**
- Identify and develop UNLV's strength in selected areas to enhance access to competitive research funding and/or lead to national and international recognition by: **[RSC A3]**
  - o Identifying university-wide (and, where possible, multidisciplinary) research themes/clusters/centers of excellence. **[RSC A3A]**
  - o Incentivizing and supporting faculty hiring and retention in areas that support these themes/centers of excellence, including cluster hiring of key faculty members as a hiring and retention initiative. **[RSC A3B]**
  - o Strategically developing new, targeted PhD programs in which future growth and faculty demand look promising. **[RSC A3C]**
- Consistent with our MSI and HSI missions, recruit and retain a diverse body of high-impact faculty members, excellent staff members, and promising students by: **[RSC A4]**
  - o Identifying and addressing barriers to hiring and retaining high-impact faculty members by providing competitive, market-driven compensation. **[RSC A4A]**
  - o Making UNLV more attractive by providing a welcoming, supportive environment for underrepresented faculty, students, and staff. **[RSC A4B]**
  - o Sustaining a successful mentorship program targeted at assistant and associate professors as well as administrative faculty and classified staff as appropriate. **[RSC A4C]**
  - o Developing a strong mentorship program for graduate students and undergraduate students who are involved in research. **[RSC A4D]**
  - o Hiring, retaining, and supporting high-impact research faculty members who contribute to our research clusters. **[RSC A4E]**
  - o Providing seed grants for early-stage researchers to help new faculty members launch their research and publishing agendas and prepare to apply for early career awards. **[RSC A4F]**
- Ensure that research infrastructure, processes, and services support the needs of research-oriented faculty and students by: **[RSC A5]**
  - o Increasing the level of institutional support for principal investigators pursuing grants. **[RSC A5A]**
  - o Increasing and improving space dedicated for use in research and creative activities. **[RSC A5B]**
  - o Enhancing the customer service experience of the purchase and maintenance of research equipment. **[RSC A5C]**
  - o Enhance library collections and infrastructure to support evolving methods of research, scholarship, and creative activity across UNLV's disciplines. **[RSC A5D]**
  - o Establishing a President/Provost fund to support research innovation, research excellence, and the development of UNLV's research themes/clusters. **[RSC A5E]**

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Student Achievement Goal:
UNLV will be a national leader in education and will promote excellence in teaching undergraduate, graduate, and professional school students. We will recruit, retain, and graduate a diverse body of motivated students through the strength of our innovative learning experiences, access to mentoring and research opportunities, and our vibrant campus community. Our highly qualified master's students, doctoral students, and professional students will distinguish themselves and UNLV through their contributions to research, the professions, and the arts.

Key measures of success:
- Metrics that demonstrate that UNLV is a school of choice, by tracking yield statistics. **[STA K1]**
- A freshmen to sophomore retention rate of 85 percent by 2025. **[STA K2]**
- An increase in the six-year graduation rate to 50 percent by 2025. **[STA K3]**
- Increase student engagement to 84% by 2025, as measured by the National Survey of Student Engagement and Student Satisfaction Inventory. **[STA K4]**
- Decrease in student-to-faculty ratios, as appropriate by discipline, pedagogical needs, and online course delivery options. **[STA K5]**
- Improvement in the quality of student educational experiences in teaching and learning, as measured by the Student Satisfaction Index. **[STA K6]**
- Student athletes who continue to meet and exceed Academic Progress Rate (APR) requirements. **[STA K7]**
- Employer satisfaction with our graduates (local UNLV employers' survey and the Employers' Survey done by Hart Research Associates for Association of American Colleges and Universities). **[STA K8]**
- Alumni satisfaction, as measured by the Dartmouth University alumni survey. **[STA K9]**
- Student satisfaction survey related to student services, campus environment, and safety. **[STA K10]**

To accomplish this goal, we will:
- Become a national leader in undergraduate, professional, and graduate education, with an emphasis by all academic units on effective teaching and the achievement of measurable learning outcomes, as well as by undergraduate engagement in research and creative activities and with the community, as measured by accepted benchmarks and implemented through: **[STAA 1]**
    - o Motivating teaching excellence through teaching incentives (either as a bonus or an award added to base salary). **[STA A1A]**
    - o Incentivizing the adoption of teaching methods that promote learning among socially and culturally diverse students. **[STA A1B]**
    - o Incentivizing the nascent and promising collaborations among student services units and instructional/faculty development units by aligning unit-specific goals and resources more directly with shared student-success goals. **[STA A1C]**
    - o Gathering and analyzing university-wide learning assessment and outcomes data, including achievement of University Undergraduate Learning Outcomes, and using those data to make appropriate programmatic changes. **[STA A1D]**

- Increase the quality and quantity of UNLV graduates: **[STA A2]**
  - At the undergraduate level by: **[STA A2A]**
    - Reviewing and changing, as appropriate, financial aid and use of merit awards to attract those students whom UNLV particularly wants to recruit and retain. **[STA A2Ai]**
    - Re-evaluating key student recruiting geographic areas, especially those in the Western region (including Hawaii) and internationally. **[STA A2Aii]**
    - Reviewing and changing, as necessary, student mentoring and advising to ensure satisfactory retention, time-to-degree progress, and graduation rates. **[STA A2Aiii]**
    - Developing and implementing a comprehensive retention strategy and appointing a "retention czar" empowered to oversee and manage the implementation of and adherence to UNLV's overall undergraduate program,[1] including systematic review of general education requirements to ensure that they are educationally sound and consistent across undergraduate-serving academic units). **[STA A2Aiv]**
    - Making the registration process more user-friendly and efficient, as measured by student feedback, registration waiting times, class waitlists, and similar measures. **[STA A2Av]**
    - Setting enrollment targets for the next five and 10 years, including in-state and out-of-state metrics. **[STA A2Avi]**
    - Increasing international student-recruitment efforts that result in increased matriculation, retention, and graduation of international students. **[STA A2Avii]**
    - Deepening our collaboration with CCSD, Nevada State, and the College of Southern Nevada to ensure seamless transitions into UNLV for qualified students: **[STA A2Aviii]**
      - By developing pipeline programs.
      - Through the use of contingent admission programs.
    - Expanding the Honors College to increase the number of, and the UNLV opportunities for, outstanding undergraduate students. **[STA A2Axi]**
    - Developing a tracking metric for becoming the "university of choice" for Clark County School District graduates. **[STAA 2Ax]**
  - At the graduate and professional student level by: **[STA A2B]**
    - Increasing doctoral stipends (cash amount, benefits, and duration), especially in those areas of targeted research strengths and competitive necessity. **[STA A2Bi]**
    - Developing a plan for strategic increases in master's-level enrollment, both on-site and online, where appropriate. **[STA A2Bii]**
    - Using academic unit financial aid and merit to recruit and retain high-quality master's-level and other professional degree students. **[STA A2Biii]**
- Ensure that all student-related offices provide superior responsiveness to the needs of individual students by: **[STA A3]**
  - Enhancing professional development, with an emphasis on customer service. **[STA A3A]**
  - Rewarding and recognizing superior customer service. **[STA A3B]**
  - Implementing an evaluation system to gauge customer service and providing sufficient incentives to secure participation in these evaluations. **[STA A3C]**

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[1] The Provost, through the "retention czar," will hold deans accountable for retention in their units.

- Enhance the campus environment through a range of social and cultural opportunities on campus to promote an active 12-month/year, seven-day/week campus community—in part by increasing on-campus student housing and related facilities. **[STA A4]**
- Implement a consistent set of tools to evaluate teaching effectiveness, such as student surveys of teaching performance, pass/retention rates by course, and alumni surveys five years after graduation, and specify how teaching excellence counts toward promotion and tenure. **[STA A5]**

Academic Health Center Goal:
UNLV's School of Medicine, in collaboration with other health-related units on campus and with external partners, will foster cutting-edge research, use a creative curriculum, and provide top-notch clinical programs.

Key measures of our success:
- Preliminary accreditation during 2016, provisional accreditation during 2019, and full LCME accreditation during 2021. **[AHC K1]**
- Graduate 60 students a year to start, growing to 90 students by 2030. **[AHC K2]**
- Generate up to $48 million of external research grants and contracts per year by 2025. **[AHC K3]**
- Recruit 120 new faculty physicians and scientists by 2030. **[AHC K4]**
- Generate 5,300 new jobs by 2025, growing to 8,000 jobs by 2030. **[AHC K5]**
- Generate an economic impact of $800 million per year by 2025, growing to $1.2 billion by 2030. **[AHC K6]**
- Generate $4 of non-state funds for every $1 of state funds. **[AHC K7]**
- Secure $350 million of philanthropic support by 2025. **[AHC K8]**
- Student metrics: nationally competitive applicant pool, percentage of students from Nevada or with Nevada ties, diversity of student body, and the number of graduates who remain in the region or return to Nevada post-residency training. **[AHC K9]**
- Number of PhD programs developed. **[AHC K10]**

To accomplish this goal, we will:
- Establish a fully accredited School of Medicine recognized for its innovative curriculum by: **[AHC A1]**
  - Teaching and demonstrating to students the special needs and health care issues of an urban population that includes an unusually large youthful demographic, an increasing number of retirees, and a community that hosts approximately 40 million visitors annually, while recognizing and understanding the unique demands of the region. **[AHC A1A]**
  - Teaching students through problem- and team-based learning so that they understand the best practices of addressing medical issues. **[AHC A1B]**
  - Developing educational space that will facilitate the ability of interdisciplinary teams to study and work together. **[AHC A1C]**
  - Educating students thoroughly in how best to take a patient's history and conduct a physical examination as well as how to use genomic information and advanced technology. **[AHC A1D]**

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- o Developing graduate medical education programs that include, at a minimum, all types of primary specialty residencies and the major subspecialties of internal medicine and pediatrics. **[AHC A1E]**
- o Establishing as a hallmark of the School six core blocks within the graduate medical education curriculum, focused on: **[AHC A1F]**
  - Community and Public Health **[AHC A1Fi]**
  - Bioethics **[AHC A1Fii]**
  - Clinical Research **[AHC A1Fiii]**
  - Business and Finance **[AHC A1Fiv]**
  - Leadership and Community **[AHC A1Fv]**
  - Mental Health and Addiction; and **[AHC A1Fvi]**
- o Developing a next-generation health sciences library consisting of the highest level of technology while remaining "high-touch" among students, faculty, librarians, and the community. **[AHC A1G]**
- Develop strong research groups in five key areas: mental health and addiction, neuroscience, oncology, cardiovascular, and orthopedics—all of which will be interdisciplinary in nature and will engage clinical health professionals, basic scientists, and public health professionals by: **[AHC A2]**
  - o Building on areas of current strength within UNLV and throughout the region to address the community's greatest needs. **[AHC A2A]**
  - o Developing a model that includes team science research. **[AHC A2B]**
  - o Developing clinical trials opportunities. **[AHC A2C]**
  - o Optimizing use of technology in health care. **[AHC A2D]**
- Recruit and retain an excellent and diverse student body by: **[AHC A3]**
  - o Implementing a medical school recruitment plan to reflect the region and engage the interest of targeted students—with an emphasis on selecting and educating students who will stay in Nevada (or return to Nevada after residencies) to practice and teach. **[AHC A3A]**
  - o Raising funds for scholarships that will support all or a significant portion of student educational expenses. **[AHC A3B]**
  - o Developing pipeline programs for underrepresented students. **[AHC A3C]**
- Develop new PhD programs in biomedical sciences by combining clinical and research programs. **[AHC A4]**
- Lead the region in the quality of, and access to, superior health care and clinical services for Southern Nevada's diverse population by: **[AHC A5]**
  - o Building strong general medical education offerings and interdisciplinary strengths aligned with community needs. **[AHC A5A]**
  - o Partnering with at least four hospitals in Las Vegas and with key physicians in the community to educate our medical students, medical residents, and fellows. **[AHC A5B]**
  - o Having a visible presence in all of Clark County, starting with key partners in Las Vegas, North Las Vegas, and Henderson. **[AHC A5C]**
  - o Working collaboratively with existing Las Vegas institutions to establish our city as a world-class medical destination providing the highest levels of clinical care. **[AHC A5D]**

Community Partnerships Goal:
UNLV will stimulate economic development and diversification in, and enrich the cultural vitality of, our community by deepening and expanding reciprocal connections with our partners and leveraging our unique strengths to collaborate locally, nationally, and internationally.

Key measures of success:
- Establishment of a thriving Community Engagement Center at UNLV. **[CMP K1]**
- Effective partnerships, collaborations, and pipeline programs with our partner educational systems. **[CMP K2]**
- Community engagement tracking and satisfaction surveys. **[CMP K3]**
- Workforce development and diversification derived from UNLV's highly qualified graduates who readily gain employment in their preferred careers, particularly in STEAM fields (Science, Technology, Engineering, the Arts, and Mathematics). **[CMP K4]**
- Start-up activities stemming from discoveries made at UNLV and by UNLV alumni. **[CMP K5]**
- Success in UNLV's major athletic programs. **[CMP K6]**
- Creation of a mentoring network of UNLV alumni (both in terms of mentoring UNLV students and in terms of providing a lifelong UNLV connection to UNLV alumni). **[CMP K7]**
- Development of a community dashboard and other ways of communicating UNLV's successes to key constituencies. **[CMP K8]**
- As with the Research, Scholarship, and Creative Activities Goal, the breadth and depth of economic and cultural impact of the university's activities on our community, as measured by impact of campus/community cultural events, increased engagement with K-12 education, partnerships with non-profits and public institutions to address social issues, invention disclosures, patents applied for (67 in 2022) and granted, licensing deals (both exclusive and nonexclusive), number of startups, other intellectual property, revenues, and jobs created from innovations initiated at UNLV. **[CMP K9]**

To accomplish this goal, we will:
- Establish a sustainable Community Engagement Center at UNLV to serve as a one-stop entry point for individuals and organizations seeking to partner with UNLV. **[CMP A1]**
- Create and sustain an environment, both on and off campus, where community members and UNLV faculty, staff, and students work together to improve the economic environment and quality of life in Nevada through entrepreneurship, innovation, and an enhanced workforce by: **[CMP A2]**
    - Incentivizing commercialization of research/tech-transfer and developing an internal support structure for such commercialization efforts. **[CMP A2A]**
    - Increasing outreach to the business community to promote collaborative research and tech-transfer/commercialization activities. **[CMP A2B]**
    - Hosting roundtables with selected stakeholders to focus on expanding UNLV's contributions to the regional economy, the key needs of the city and state, and opportunities for UNLV and the community to collaborate in meaningful ways (with participants drawn from the faculty, staff, and students, as well as from the business, non-profit, and arts communities). **[CMP A2C]**

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- o Partnering with organizations throughout Southern Nevada and beyond to provide executive education, continuing education, and lifetime learning opportunities in support of community needs and individual aspirations. **[CMP A2D]**
  - o Identifying students with entrepreneurial potential and finding ways to coach and mentor those students by connecting them with the business community. **[CMP A2E]**
- Communicate UNLV's strengths to promote the link between progress toward Top Tier and the benefit to the community, the region, the state, the Legislature, and other groups by: **[CMP A3]**
  - o Creating and sustaining advocacy partnerships with the Chamber of Commerce, the Las Vegas Global Economic Alliance, and the broader Southern Nevada community to promote the benefits of the Top Tier initiative. **[CMP A3A]**
  - o Increasing connections with Southern Nevada's media to ensure that the media is aware of the benefits of the Top Tier initiative and UNLV's efforts to connect in more and better ways (see the community dashboard below). **[CMP A3B]**
  - o Creating and sustaining ways for current and new members of the UNLV community (faculty, staff, and students) to interact with community leaders on a regular basis. **[CMP A3C]**
  - o Applying for Carnegie Community Engaged University status. **[CMP A3D]**
  - o Developing better branding and promotional materials. **[CMP A3E]**
- Deepen transparency and accountability by providing a community dashboard containing specific metrics, including: **[CMP A4]**
  - o Community satisfaction survey data. **[CMP A4A]**
  - o Incoming admission statistics, student learning outcomes, and graduation rate success. **[CMP A4B]**
  - o The diversity of our student body, our faculty, and our staff. **[CMP A4C]**
  - o Hiring and retention of faculty members whose research and teaching are demonstrably excellent. **[CMP A4D]**
  - o Number and types of community partnerships formed. **[CMP A4E]**
  - o Number of patents filed, startups created and sustained, and other significant intellectual property developed (other than the standard faculty research, scholarship, and creative activity). **[CMP A4F]**
  - o The progress in UNLV's development of a world-class medical school and the availability and quality of its clinical health services as well as the availability and quality of UNLV's other clinical services. **[CMP A4G]**
  - o Success of athletic programs and academic success among UNLV's student athletes. **[CMP A4H]**
  - o Employment data for UNLV graduates. **[CMP A4I]**
- Establish three to five key partnerships keyed to identify areas of focus in research in a manner similar to what other benchmark institutions have done. **[CMP A5]**
- Develop a plan for supporting economic diversification and globalization relevant to the communities that we serve. **[CMP A6]**

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Infrastructure and Shared Governance Goal:
To accomplish the other four goals, UNLV will continually develop and leverage the conditions necessary for success, which will include an effective organizational structure, a state-of-the-art infrastructure, a service-oriented culture, meaningful faculty engagement in shared governance, and the capacity for informed decision-making and informed risk-taking.

Key measures of success:
- Annual satisfaction surveys demonstrating progress toward: **[ISG K1]**
  - A climate typified by diversity and inclusion and the development of, or proposed changes to, necessary policies to promote such diversity and inclusion. **[ISG K1A]**
  - The quality, quantity, and flexibility of university facilities for educational, research, and creative activity, as well as the full range of "campus life" activities. **[ISG K1B]**
  - The extent to which UNLV fosters a positive culture of collaboration, trust, respect, empathy, camaraderie, and mutual success. **[ISG K1C]**
  - The extent and efficacy of faculty and staff training for leadership development. **[ISG K1D]**
  - Positive assessments of faculty and staff effectiveness in performing their jobs/tasks well, and having the necessary leadership, management direction, support, and resources to perform their job responsibilities successfully. **[ISG K1E]**
  - Student, faculty, and administrators' satisfaction with university facilities and processes. **[ISG K1F]**
  - Recognition of UNLV as a great place to work, with sterling customer service both inside UNLV and in the broader community. **[ISG K1G]**
  - Measurable improvements in university business processes. **[ISG K1H]**
- The effectiveness, efficiency, and coordination of data collection, data governance, and data delivery to appropriate constituencies for use in university decision-making. **[ISG K2]**
- Depth and diversity of faculty participation in shared governance. **[ISG K3]**
- Development and implementation of an effective leadership organizational structure. **[ISG K4]**

To accomplish this goal, we will:
- Foster a university environment that is inclusive, welcoming, and supportive for all by: **[ISG A1]**
  - Fostering diversity, equity, and inclusion of students, faculty members, and staff members through improved policies and procedures guiding recruitment, retention, promotion, mentoring, and continued development of university personnel. **[ISG A1A]**
  - Ensuring that UNLV's faculty, staff, and students reflect the broader community that UNLV represents. **[ISG A1B]**
- Increase the quantity and quality of faculty participation in shared governance to secure the faculty's role as a meaningful partner in leading the campus community by surveying the entire faculty to find out what methods best enable faculty members to provide input to the UNLV administration on issues touching upon shared governance and then acting on the data provided by that survey. **[ISG A2]**
- Instill a culture of customer service throughout the university by: **[ISG A3]**
  - Further developing and maintaining a service-oriented culture and a high level of performance in all campus activities and services. **[ISG A3A]**
  - Streamlining and clearly communicating UNLV's processes and procedures, with regular user feedback loops to facilitate improvement. **[ISG A3B]**

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- o Regularly connecting with members of the campus community, formally and informally, to receive input and feedback on improvements needed for superior internal functioning and infrastructure. **[ISG A3C]**
- Provide high-quality, service-oriented internal functioning and infrastructure that fosters, stimulates, and nurtures academic excellence, discovery, creative activities, entrepreneurship, job creation, and economic vitality throughout the region by: **[ISG A4]**
    - o Providing a high-quality, fully featured, and inclusive campus physical and virtual environment. **[ISG A4A]**
    - o Further investing in and maintaining core campus assets so that these assets best achieve UNLV's Top Tier goals. **[ISG A4B]**
    - o Advancing staff development and excellence by hiring and retaining excellent staff members; recognizing their talent, above-and-beyond efforts, and success; and creating pathways for staff members to excel and grow. **[ISG A4C]**
    - o Managing risk appropriately and supporting reasonable risk in the process of improving and expanding the ability to deliver goods and services efficiently within UNLV. **[ISG A4D]**
    - o Implement new automated administrative systems in Human Resources, Payroll, and Financial areas for the campus (including budget, general accounting, AP/Travel, Purchasing, Sponsored Programs, etc.) under the Workday product and, with that product, create new "best practice" transaction steps and consolidate all data reporting in a centralized manner that interfaces with the current automated student system. **[ISG A4E]**
    - o Determining which functions, if any, should be outsourced to businesses better positioned to deliver superior service. **[ISG A4F]**
    - o Securing sources of funding for effective organization and staffing for internal functioning and campus infrastructure, for both upfront and long-term costs. **[ISG A4G]**
    - o Developing a list of three to five key infrastructure changes that can be made within three months of adopting this plan and then accomplishing those changes no later than October 2015. **[ISG A4H]**
- Facilitate effective data collection, data governance, and data reporting throughout the university to support informed decision-making by: **[ISG A5]**
    - o Engaging in a continuous quality review of the best practices to improve data collection, data governance, and reporting on a university-wide level and at the unit level. **[ISG A5A]**
    - o Effectively distributing data to the appropriate academic and administrative units. **[ISG A5B]**
    - o Authorizing, training, and empowering UNLV's faculty and staff to transform publicly available data into actionable information in support of data-driven decision-making and informed risk-taking. **[ISG A5C]**
    - o Designating a single office or entity to identify and define the data elements needed to support the Top Tier process. **[ISG A5D]**
- Review the IT master plan and make revisions as necessary to support the Top Tier vision and mission. **[ISG A6]**
- Assess the effectiveness of the university's organizational structure and, to the extent necessary, reorganize that structure to promote achievement of the Top Tier vision and mission within the UNLV culture as informed by best practices and benchmarks from aspirational and peer institutions. **[ISG A7]**

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UNLV

University of Nevada, Las Vegas

The Path to Tier One

September 2014

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Executive Summary

The University of Nevada, Las Vegas, experienced dramatic change over the last generation, including significant enrollment growth and entry into the second-highest tier of universities designated by the Carnegie Foundation as "Research University/High." This year UNLV launches a concerted planning effort focused on its next goal: joining the top level of American higher education, which the university refers to as "Tier One" status and which involves becoming a Carnegie Research/Very High university. This working document examines the benefits of achieving that goal, the challenges that UNLV faces in accomplishing these changes, and concludes by posing a set of questions intended to guide discussions of this initiative across the university and throughout Nevada.

Tier One refers to the most prestigious group of universities in the country, where extensive, rigorous research and innovations can stimulate entrepreneurship, job creation, and economic vitality throughout the surrounding region. These higher education institutions attract and retain the best professors and students, as well as large amounts of competitive research grant funding from the federal government and other sources. They also create more value for the communities in which they reside. The Carnegie Foundation for the Advancement of Teaching produces a classification that categorizes every college and university in the country based on their missions, the students that they serve, the research that they conduct, and a wide variety of other measures. Under the leadership of President Carol C. Harter, UNLV entered the second highest tier of universities in the 2000 Carnegie classification through the strength of its research and the scope of academic programs. The *Path to Tier One* focuses on moving the university into the highest category in this classification: "Research University/Very High," or "RU/VH," indicating the most extensive level of research activity. The 108 universities in this RU/VH classification represent the highest level of American higher education—often referred to as Tier One universities.

Almost every large, economically robust metropolitan region in the United States is home to a Tier One university—with the exception of Las Vegas. When a host city and its local Tier One university collaborate effectively, they leverage the learning and discovery on the campus as a source of economic development. Inventions and discoveries made in university laboratories turn into new businesses—particularly in high technology fields—and these knowledge spillovers also stimulate growth in existing enterprises. Highly-productive universities also attract, train, and graduate skilled workers who tend to remain in the region after graduation. Students benefit from learning alongside other well-qualified degree candidates who challenge each other to meet the rigorous expectations of their faculty and themselves. Students also benefit from strong job placement and graduate school opportunities associated with Tier One universities and the valuable degrees they confer.

UNLV's Tier One goal is ambitious. Comparisons between UNLV and aspirant institutions on the Research University/Very High list show both the extent of the challenge ahead and the feasibility of reaching the target level of research productivity in the coming years. To achieve the Tier One goal, UNLV must significantly increase the level of competitively funded research it conducts as well as the number of research doctorates it confers each year.

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This working document concludes with a series of questions for consideration by everyone in the UNLV community and in communities throughout Nevada. How does the Tier One vision relate to the other important work underway at UNLV? What kinds of success metrics, goals and objectives, core strategies, and action plans will guide the Tier One initiative? What kind of organizational structure, people, and support structures will UNLV need? What will UNLV's report card include to enable the University to assess its progress toward implementing these changes? These questions will launch discussions on campus and around the state as UNLV charts the *Path to Tier One* in the coming year.

Why Does Las Vegas Need a Tier One University?

One of the hallmarks of a great community is a great university, and almost every dynamic city or region in America benefits from the vitality of one or more major research universities. Nevada, however, "is the only state of over 2 million people that is not home to a top-tier Carnegie-ranked research university," where extensive research leads to discoveries and inventions that generate entrepreneurial activity and where highly esteemed programs attract and retain dynamic students. In fact, several less populous states (Delaware, Hawaii, Montana, and New Hampshire) are home to Tier One research universities and the economic dynamism that they promote.[i] According to a 2011 study by Brookings Mountain West and the non-profit research institute SRI International, Nevada enjoys many advantages that fuel its economic competitiveness, but 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."[ii] The report concludes that "the state currently suffers from its lack of a top-tier Carnegie-ranked doctoral research university; its low overall levels of R&D activity; and its low per capita production of PhDs, scientific publications, and patents."[iii]

Why is this absence of a Tier One university a problem? A report commissioned by the State of Nevada "to inform the creation of a State Economic Development Plan" found that "most of Nevada's neighboring states (Arizona, California, Colorado, New Mexico, and Utah) all have at least one research university in the top-tier Carnegie ranking."[iv] One consequence of the absence of a university at the highest level of research intensity is that "Nevada generally falls in the bottom ten of all states for the ability of its research universities to commercialize their research outputs."[v]

Nevada, Clark County, and Las Vegas need to maximize their ability to attract and retain dynamic people as students, workers, and employers. Diversifying the economy and thus fully leveraging the region's strengths requires increased levels of entrepreneurial activity. A recent article published by the Las Vegas Chamber of Commerce on "why we need a tier 1 university, and how UNLV will get us there" argued that becoming a top-level research university would boost the regional economy by:

- Attracting new and emerging industries by providing research and educational support, as well as a valuable community partnership, to their employment and workforce needs.

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- Producing a highly-qualified workforce, helping to attract new businesses to the area and providing them with employees that will fit their needs.
- Expanding the Las Vegas area's export economy.
- Bringing in large federal grants and private industry contracts.
- Creating patents and business startups.
- Drawing in highly competitive students from around the world.[vi]

The economic impact of research-intensive universities is well documented and discussed in detail below.

Economic Benefits for Nevada, Clark County, and Las Vegas

Research universities play an integral role in dynamic, knowledge-based economies. Almost every metro area in the United States with high levels of technology-related business activity is also home to a Tier One research university.[vii] When highly-productive universities align with regional strengths, they can generate significant startup activities from their discoveries and inventions, as well as graduate highly-skilled people equipped to work in those enterprises. With a concerted effort that includes a broad range of constituencies—including state and local government, the business community, and the university—Tier One status at UNLV can stimulate economic growth throughout the region.

The research capacity of a Tier One university can stimulate entrepreneurship and business development in two critical ways. Most directly, the research products from the university may be commercialized into new businesses, and these businesses almost always locate in the same region as the university.[viii] In addition, as a study from the Massachusetts Institute of Technology has demonstrated, universities also help the local business community leverage discoveries made elsewhere by adapting knowledge to the local context and integrating "previously separate areas of technological activity" in the region. For example, a 2007 study found that the University of Rochester fostered increased entrepreneurial activity in the city by connecting existing companies and their technologies in new ways through a network of companies engaged with researchers at the university.[ix]

One challenge that Las Vegas and the rest of Nevada now face is a low percentage of residents with college degrees, compared to the rest of the United States. Las Vegas has a lower percentage of the population with a Bachelor's degree than most other cities of similar size (or larger), and Nevada also suffers from "brain drain"—a net loss of students to higher education in other states (and those students are unlikely to return upon graduation).[x] One recent study examining "smart cities," or "metropolitan areas with a large share of the adult population with a college degree" found that these locales "are often centers of higher education" where students move to the region to attend a university and "stay in the city after completing their education." The capacity of such cities to attract talent buoys their economic success and feeds on itself to produce growth because "the stock of human capital in a metropolitan area, measured as the share of the adult population with a college degree, is a strong predictor of future population growth."[xi] Even beyond increasing the number and skill level of workers, research-intensive universities foster activities in the local economy that raise the demand for more skilled labor.[xii]

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Much of the capital necessary to fund the research that generates these discoveries and attracts talented students comes from federal government agencies, such as the National Institutes of Health, the National Science Foundation, and the Department of Defense. The vast majority of these funds go to Tier One universities, and the benefits of this funding accrue to their surrounding communities. Federal research data from 1991 to 2009 shows that, while federal research expenditures grew by approximately 70% during that period, the top universities consistently dominate, controlling around 90% of the share of federal dollars. Increasing a university's level of federally sponsored research is central both to increasing its standing as a research university and to bringing the benefit of those funds to the region.[xiii] Once the funding is at the university, the research activity has a tangible effect on the local economy. A 2014 study of the effects of universities on wages showed that research activity generates persistent spillovers to local firms and workers. For example, a 10% increase in university expenditures increases local labor income by 0.8%. Spillover effects are as much as 10% to 100% larger when universities are more intensively focused on research and when research universities are technologically closer to local firms.[xiv]

Large-scale research activities of this nature also provide lasting benefits to the local economy. A recent study examined the long-term effects of university-based research activity over the phases of the latest business cycle. Findings suggest that the presence of research universities has a positive effect on local economies that goes beyond cyclical economic changes. This effect correlates to the scale of academic research expenditures; more prominent research universities have a stronger impact on their regional economies.[xv] One particularly encouraging set of findings for Las Vegas and UNLV is that the economic benefits of research-intensive universities are greatest in small and medium-sized communities.[xvi] Unlike Los Angeles or New York where the impact of a Tier One university may be smaller relative to overall economy, the size of Las Vegas is well suited to fully leveraging the benefits of a highly research-intensive university.

One of the most sought-after benefits of having a Tier One university in a community is the high-tech startup activity associated with such intuitions. Silicon Valley, with its close link to Stanford University, is the most high-profile example of this synergy, but other noteworthy hubs of startup activity may be found in the Southern California "Biotech Corridor" (from Thousand Oaks to San Diego, building on activities at UCLA, USC, Caltech, UC Irvine, and UC San Diego), the "128 Tech Corridor" in Massachusetts (building on Harvard, MIT, and Brandeis), and the "Research Triangle" in North Carolina (based on activities at Duke University, North Carolina State University, and UNC-Chapel Hill). As these and other similar regions show, proximity to one or more research-intensive universities is a strong factor influencing the performance of young companies, particularly high-tech firms.[xvii] A 2013 study examining the conditions that stimulate "high-productivity industries," particularly in technology-related fields, found that "an exogenous change in a region's research capacity (through the development of a university) boost[s] both patents and labor productivity."[xviii] A different 2013 study focused on startups emerging from research universities found that 89 of 100 companies profiled remained in business after more than five years, which compares very favorably to a national average in the U.S. where only half of new businesses remain in business five years after opening.[xix]

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Successful research-intensive universities tend to develop specific areas of expertise, and this strategy of excellence in niche areas is most beneficial when aligned with local industries and resources. A 2014 study confirmed previous research that knowledge spillovers from universities tend to focus on specific local industries and that the "longer-term effects that universities have on their local economies may grow over time as the composition of local industries evolves to take advantage of … knowledge spillovers."[xx] Nevada has a wealth of resources and strengths on which to build these kinds of research-based connections between industry and a Tier One university. For example, Brookings Mountain West identified seven "recommended industries and target opportunities for Nevada" developed through "an objective and systematic analysis of the state's assets and industries … carried out to assess the growth potential of dozens of Nevada's industrial sectors and sub-clusters in the light of several key strategic needs for the state." The study also sought to identify sectors of the economy that would "mitigate the extreme economic volatility of its consumption-oriented economy by diversifying toward an increasingly export-oriented" economy. The same list of key industries appeared in *Moving Nevada Forward: A Plan for Excellence in Economic Development*, a 2012 report produced by the Nevada Board of Economic Development.[xxi] More recently, the Nevada Governor's Office of Economic Development adapted that list into a set of nine "key industries" of focus for the state:

- Aerospace and Defense;
- Agriculture;
- Information Technology;
- Energy;
- Health Care;
- Logistics and Operations;
- Manufacturing;
- Mining; and
- Tourism, Gaming, and Hospitality.[xxii]

This list provides one example of the range of industries that might benefit from links to a local Tier One university. Such linkages are also a vital means by which the local economy can connect with technologies and markets found outside the region. A 2013 study examined the role of research in growing Nevada's economy and found that a research university would foster a larger regional economy supporting a greater breadth of products and services. The authors argued that a research university "may be the critical difference in attracting and maintaining economic muscle to compete in global markets."[xxiii]

What does the *Path to Tier One* Mean for Students?

Beyond the impact on the state and local economy, the changes inherent in the *Path to Tier One* Initiative must benefit students while they attend UNLV and throughout their careers. Without careful attention and planning, an increased focus on research and graduate education could come at the expense of the undergraduate student experience. A key facet of the *Path to Tier One* must be to increase the overall academic excellence of the University. UNLV is fully committed to promoting student learning and success at all levels, and a focus on undergraduate

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teaching and pedagogical innovation is a vital complement to the research excellence inherent in Tier One status.

For undergraduate students to benefit from the research activities of their faculty, UNLV must engage in a sustained, purposeful effort to become a leader in undergraduate education. The principal hallmark of highly esteemed research universities is a faculty with leading thinkers in their fields. The engagement of faculty in research can infuse their teaching with the most current knowledge and connect these scholars and their students to the latest thinking at universities and in industry. To ensure that these benefits accrue to students, rigorous standards of instructional quality will promote positive student learning outcomes and serve to increase the university's overall academic reputation.

With added rigor, students expect more from themselves and their peers—and they benefit from greater opportunities upon graduation. For example, a 2014 study found that the options available to graduates are closely linked to the status of the degree-granting college or university. Students' access to competitive graduate schools and earnings throughout their careers are closely linked to the institutional prestige of their undergraduate alma mater. Increasing academic prestige bolsters the long term earning potential of graduates.[xxiv]

A similar connection between institutional prestige and career outcomes may be seen on the graduate level. As the research profile of the university increases, so too will the professional prospects for graduate students. A 2013 study of 551 Ph.D. graduates found that the strongest predictor of employment was school rankings and department-level rankings, even while controlling for individual accomplishments such as publications and teaching experience.[xxv]

The campus environment also plays a role in the *Path to Tier One*, where improvements to the atmosphere on campus should work in concert with the rising academic reputation of the institution. Part of making UNLV a world-class institution must include ensuring that the campus is literally *built for success*, where the facilities and co-curricular offerings attract and retain students. This issue is partly about physical infrastructure and partly about the ethos of the institution—and, in both cases, the goal is to create and sustain attributes that bring people to the university and create a lasting bond.

Competitive, successful intercollegiate athletics can play a role in this as well, as seen in the combined academic and athletic success of many Tier One research universities, such as Stanford, UC Berkeley, UCLA, USC, Arizona State University, and many, many others. One important role that athletics can play is in student recruitment. One recent study measured the impact of intercollegiate athletics on the quality and quantity of applications. Referred to as the "Flutie effect," the findings suggest that overall athletic success has a significant effect on future applications in terms of both quantity and quality. The study also found that athletic success positively impacts applications even among academically stronger students.[xxvi] Another study found that winning among sports teams at Division I universities reduced acceptance rates by increasing the overall number of applications.[xxvii] The same study found a correlation between athletic success and increases in donations, academic reputation, in-state enrollment, and incoming SAT scores.[xxviii] As noted above, increasing the academic preparation of students and

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their expectations of themselves, their peers, and the university serve to enhance the atmosphere of the university and the learning it promotes.

Is Tier One Status Attainable?

Yes, but UNLV must first decide how to measure its success. The Carnegie Foundation for the Advancement of Teaching produces a classification of all colleges and universities in the United States, and the highest category in the ranking is for "Research Universities (very high research activity)," abbreviated as "RU/VH."[xxix] This top tier—or Tier One—group of universities includes 108 institutions with the most robust academic research activities, as measured by levels of research funding, the number of researchers on staff, and the number of research-oriented doctorates that the university confers. UNLV currently ranks in the High rather than Very High classification. RU/H institutions are respected research universities, but they generally secure a smaller portion of competitive research funding, produce fewer actionable discoveries and inventions, and therefore create a smaller economic impact. Entry into the most productive group of research universities is UNLV's goal, and the RU/VH designation is a critical measure of the scope of the University's research activities. The precise methodology for producing the Carnegie Classification changes over time (most recently in 2005), and that index does not measure the full breadth of a university's impact on its students and the communities it serves, so it cannot be the only factor in the Tier One initiative. Achieving overall academic excellence—such as the academic reputation of degree programs, the academic preparation of students, the graduation rate, and job placement outcomes after graduation—are also critically important for UNLV.

The hallmarks of a Tier One research university include prestigious faculty, well-prepared students with the potential to be the next generation of societal leaders, esteemed academic programs whose graduates are sought after in their respective fields, and research and creative activities that yield important discoveries and inventions.[xxx] These attributes develop over time through purposeful recruitment and retention of students, faculty, and staff, along with strategic investments in infrastructure and robust engagement with employers, community organizations, and benefactors. UNLV prides itself on recruiting faculty from a diverse range of institutions focused on excellence in teaching and research; and the vast majority of the University's faculty members attended RU/VH universities steeped in the culture of excellence that characterizes those institutions. Thus, UNLV's faculty is well-positioned to foster the necessary changes within the university as it increases its research profile and overall academic excellence.

As part of the *Path to Tier One,* UNLV has identified several benchmark institutions to serve as points of comparison. Several of these are large public universities in neighboring or nearby states, including Arizona State University and the universities of Colorado, Oregon, and Utah. Although each of those institutions has been a Tier One, Carnegie RU/VH university for decades, two other universities are more recent entrants to that top-tier list. The University of Houston was classified in the second tier of research universities in 1994 but emerged into the top tier by the next ranking in 2000. Houston provides an intriguing institutional comparison because of that city's central role in the oil industry, which is akin to the role of Las Vegas as a hub for hospitality and gaming. Both the University of Houston and UNLV host academic

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strengths aligned with those local industries.[xxxi] The University of Central Florida appeared in the Carnegie classification's second tier in 2000 and 2005, but moved to Tier One status in 2010.[xxxii] Like Houston, Central Florida is a useful comparator not only based on its recent entry into RU/VH status but also given its location. Like Las Vegas, Orlando is one of the country's other main tourism destinations. Moreover, the University of Central Florida established a medical school in 2006, just a few years before it gained a place in the top level of the Carnegie classification. The ascent of both institutions in a relatively short time demonstrates the viability of achieving the Tier One goal. One aspect of the Tier One initiative will be to gain a full understanding of the means by which these institutions successfully increased their research capacity and to determine the extent to which similar efforts would be suitable at UNLV.

The research-related successes at the University of Houston were examined in a 2013 study on the role of "research clusters" in improving research productivity and securing federal grant funding. The authors studied activities at the University of Houston from 2006 to 2010, where major research expenditures grew 74%. The "cluster-based approaches" examined in the study "focus on developing points of excellence that raise the stature" of research universities and "increase the capabilities of the surrounding community."[xxxiii] Houston began by identifying "existing or emerging strengths" in the regional economy and then used "a mapping process… to look for areas of synergy and concentrations of research activities across the university."[xxxiv] This analysis identified six "clusters" on which the university focused its research activities. Less than five years later, the University of Houston appeared on the Carnegie RU/VH list for the first time, and the study attributes much of the increase in research funding to the cluster strategy. The study also notes that a similar strategy is in place at Arizona State University and several other research-intensive institutions.

Each Tier One university is different, and there is a limited extent to which an institution can copy its way to success. Rather, UNLV must look to its own strengths and the assets in place in Las Vegas, Clark County, and Nevada. The *Path to Tier One* will be charted on that basis and for the benefit of the communities UNLV serves.

UNLV's strengths provide opportunities on which the University can build. The William F. Harrah College of Hotel Administration is world-renowned and well aligned with the "Tourism, Gaming, and Hospitality" area of focus identified by the Governor's Office of Economic Development. UNLV seeks to be the intellectual capital of global gaming and hospitality research and education—an ambition that complements regional economic strengths. The new UNLV School of Medicine will align with the "Health Care" industry focus for economic development, and UNLV already enjoys a strong foundation, with its School of Allied Health Sciences, School of Community Health Sciences, School of Dental Medicine, and School of Nursing. "Energy" is another focus industry for Nevada, and the second place finish by UNLV Engineering students in the 2013 U.S. Department of Energy Solar Decathlon serves as an indicator of the University's strengths in renewable energy. Similarly, the innovative work of Skyworks Aerial Systems, whose CEO and COO are both UNLV students with close ties to the Mechanical Engineering faculty, demonstrates the University's strengths in the "Aerospace and Defense" sector. During the Presidency of Robert C. Maxson, UNLV began to make reference to "watering the green spots" to underscore the benefits of building on existing strengths. This is precisely the ethos that must underpin the *Path to Tier One*, where the university can identify

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areas of alignment between intellectual strengths on campus and industry needs in the region and thereby focus its way to success.

One of the greatest assets available to UNLV as it embarks on the Tier One Initiative is the economic vitality of Nevada, Clark County, and Las Vegas in particular. Despite the great adversity associated with the recent economic downturn, the region is host to a dynamic set of industries. As discussed above, the nexus between these industries and research activities at UNLV will be of critical importance going forward. One such partnership links UNLV to the Las Vegas-based super-scale technology solutions company, Switch. Led by Founder, CEO, and Chief Inventor Rob Roy, Switch is the developer of the groundbreaking SUPERNAP data center and Internet ecosystems. SUPERNAP has been acknowledged as the world's leading and highest rated co-location data center. Switch will connect UNLV via a high-speed fiber optic network to Intel's new Cherry Creek supercomputer, housed at the SUPERNAP. Intel will dedicate 60% of the supercomputer's computational capacity to UNLV. Access to high-performance computing of this nature enhances the efficiency of research output in a range of key fields.[xxxv] A 2010 study showed that access to high performance computing is positively and significantly associated with increases in federal research funding and increases in publications at Carnegie "High" and "Very High" research institutions.[xxxvi] Accessing computational capacity of this magnitude typically necessitates a significant financial investment on the part of a university. Switch will cover the connection costs over a ten-year contract. This donation will result in dramatic savings to UNLV. The combination of this savings, the high-speed connectivity, and the Cherry Creek supercomputer represent an important competitive advantage.

The relationship between UNLV and Switch is doubly important, given the identification of "Information Technology" as one of nine high potential growth areas for the state of Nevada by the Governor's Office of Economic Development.[xxxvii] Southern Nevada is home to numerous other organizations with similar potential as partners for UNLV. For example, the Governor's Office of Economic Development also highlighted the defense sector as area of focus, and the Nevada National Security Site hosts numerous nuclear security initiatives for the federal government. In both the private sector and the public sector, the region around UNLV affords many opportunities for mutually-beneficial research collaborations.

Another potential advantage stems from UNLV's plans to develop a medical school. Nevada is unable to meet the current health care needs of its citizens, and Las Vegas is the largest urban area in the United States without a public medical school. The UNLV School of Medicine will be an innovative center for teaching that is built on areas of current strength within UNLV and around Clark Country; including neuroscience, cardiology, and cancer research. For example, the UNLV School of Medicine will develop early research programs that will coordinate with the Cleveland Clinic/Lou Ruvo Center for Brain Health, whose focus is to care for patients with Parkinson's, Alzheimer's and multiple sclerosis and provide high-level clinical trials research. Two existing areas of strength within UNLV—radio-pharmacology and computational science with large databases—will be leveraged as the UNLV School of Medicine develops.

Many of the top-performing research universities have medical schools, and highly competitive research-oriented medical schools make significant contributions to the success of

many Tier One universities. Not all research-intensive universities have medical schools, and the research contribution that medical schools make to their universities also varies widely.[xxxviii] However, high-performing medical schools can make a very significant contribution to the research activity at a university, and this addition to UNLV holds great promise for enhancing the university's academic profile.

One other hallmark UNLV enjoys is its status as a Minority Serving Institution (MSI) and an emerging Hispanic Serving Institution (HSI), based on significant enrollments of students from diverse backgrounds. This level of diversity is very rare for a RU/VH university, with only four Tier One universities meeting these standards (the University of Houston, the University of New Mexico, and two University of California campuses: Santa Cruz and Riverside). MSI status provides preferential access to many federal grants and exemption from matching costs associated with some federal programs, both of which are beneficial to UNLV in a very competitive environment for funding.

Tier One status would situate UNLV amongst the top 2.3 percent of higher education institutions in the United States (as a Research University/High institution, UNLV is currently ranked in the top 4.5 percent). There are currently 75 public universities in the Tier One, Carnegie Research University/Very High category. When UNLV shares the attributes of these highly productive research universities economic benefits will accrue for the state and local economies. Similarly, increased academic rigor and an improved graduation rate will attract and retain the best students—and when they become alumni the value of their UNLV degrees will grow. For graduate students, increased sponsored research will improve levels of stipend support and grow the pool of world-class doctoral candidates. UNLV's goals for itself and its contributions to the community hold great promise and also pose a significant set of challenges for the coming years.

The Challenge Ahead

The Tier One goal is highly ambitious. It is also achievable, but it is important for the UNLV community and people throughout Nevada to understand the scope of the challenge ahead. Many criteria could be used to assess the distance between UNLV's profile in 2014 and the attributes that would garner Tier One status. However, the Carnegie Foundation's classification is the key indicator, and the criteria used to produce that index provide a good initial indication of the work to be done.

As noted above, the Carnegie classification methodology uses three main types of data in producing its classification: the number of research doctorates awarded per year, the "level of research activity" at the institution, and the number of researchers on staff.[xxxix] Looking at how UNLV compares to Tier One institutions in each of these categories is illustrative. There are 108 RU/VH institutions, ranging from extremely large universities with massive research capacity to relatively small, specialized institutions. UNLV's Tier One benchmark institutions vary in size: from Arizona State University, with over 68,000 students, to the University of Oregon, with just over 22,000 students. Their research expenditures also vary, although student population is not necessarily a major factor. For example, Table 1 (see below) shows that Arizona State (ASU) and the University of Colorado at Boulder have nearly identical research expenditures, but ASU

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is more than twice the size of Boulder. Similarly, Utah has the highest total R&D expenditures, but its student population is even smaller than Colorado (and nearly identical in size to UNLV).

Table 1: Research Expenditures[xl]

University	STEM R&D Expenditures	Non-STEM R&D Expenditures	Total R&D Expenditures
University of Utah	$425,558,000	$4,498,000	$430,056,000
University of Colorado at Boulder	$373,512,000	$18,492,000	$392,004,000
Arizona State University	$344,611,000	$41,348,000	$385,959,000
University of Central Florida	$107,324,000	$14,329,000	$121,653,000
University of Houston	$105,844,000	$10,444,000	$116,288,000
University of Oregon	$87,656,000	$17,374,000	$105,030,000
University of Nevada-Las Vegas	$33,130,000	$1,413,000	$34,543,000

The data in Table 1 are from 2012 and are the most up-to-date available for comparisons among all seven universities. UNLV's *Path to Tier One* benchmark institutions may be seen as two sub-sets in terms of the scope of their research activities. Arizona State, Colorado, and Utah have the highest level of research activity, with expenditures 11-12 times those of UNLV; whereas Central Florida, Houston, and Oregon have a relatively lower level of research activity; roughly three times that of UNLV. Prior to the recession that began in 2008, research expenditures at UNLV totaled over $53million, compared to $78million at Oregon—which was a less daunting gap.[xli] While UNLV suffered a decline its research profile during the recession, Oregon and the other benchmark institutions increased their funding. Research activity is now on the rise at UNLV. The number of competitive grants awarded increased 20% between FY2013 and FY2014, and the total grant funding increased by 12%. However, securing an increasing share of grant funding poses a particularly daunting challenge, because overall research funding is relatively static and existing RU/VH institutions are particularly well positioned to secure and retain those monies.

Building additional research capacity will require a significant investment in time to become competitive for grants in new fields, but research expenditures can grow significantly over a period of years. For example, the University of Houston increased its research expenditures by 74% between 2006 and 2010 through the "research cluster" strategy discussed above.[xlii] Although the task of dramatically increasing funded research at UNLV is formidable, it is not unobtainable.

Another key criterion is the number of research doctorates awarded, and the benchmark institutions also range widely in this area (see Table 2 below). Given its very large size, Arizona State University awards by far the most doctorates in this group (more than six times as many as UNLV). However, Oregon and the University of Central Florida confer only about twice as many doctorates as UNLV. As with research expenditures, a university can greatly increase its productivity in this area, but growth of this nature requires a significant amount of time to accomplish. Existing Ph.D. programs need to grow, often requiring an investment in additional faculty members, and new programs need to be created and enroll students—and students take

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several years to earn their degrees. The number and scale of doctoral programs are closely linked to the grant activity analyzed above, and the two generally grow in tandem.

Table 2: Research Doctorates Awarded[xliii]

Arizona State University	580
University of Utah	311
University of Colorado at Boulder	299
University of Houston	222
University of Central Florida	192
University of Oregon	173
University of Nevada-Las Vegas	91
Median for all RU/VH universities[xliv]	*344*

The third main factor in the Carnegie classification is non-faculty research staff. These Ph.D.s play key roles on research teams, either as research faculty or as postdoctoral fellows, and their numbers serve as another indicator of the scope of research activity at a university. As Table 3 shows, some institutions host vastly larger numbers of non-faculty researchers. For example, Utah has nearly ten times the number at UNLV. On the other hand, Oregon employs roughly 75% more research staff than UNLV. As with the number of doctoral degrees conferred, the size of the non-faculty research staff closely corresponds with grant-funded research and grows accordingly. But, these researchers can be recruited in a shorter timeframe and with a smaller initial investment than tenure-track faculty.

Table 3: Non-Faculty Research Staff (including Postdoctoral Fellows)[xlv]

University of Utah	412
University of Colorado at Boulder	370
University of Houston	298
Arizona State University	210
University of Central Florida	112
University of Oregon	77
University of Nevada-Las Vegas	45
Median for all RU/VH universities	336

Although the size of the full-time faculty is not a factor in the Carnegie classification, it is a useful point of comparison alongside the data included above (see table 4 below). Not all full-time faculty members are research-active or seek competitive grant funding for their work, but the number of full-time faculty is a useful indicator of the long-term intellectual resources at a university. As Table 4 shows, UNLV's full-time faculty numbers roughly half the median faculty size found at RU/VH institutions. The size of the full-time faculty at UNLV is 88% of the faculty at Oregon and 80% of the Houston faculty—and thus is a manageable difference in scale. The student/faculty ratios at UNLV and Oregon vary greatly, with far more faculty at Oregon relative to the size of the student body. However, the student/faculty ratio at Houston is nearly identical to UNLV's, and Central Florida has a higher ratio. Overall, the student/faculty ratio at UNLV is twice that of the median for all RU/VH universities, and that variance highlights one of the key challenges ahead for UNLV as it expands its research profile, pursues overall academic excellence, and deepens its focus on undergraduate education.

Table 4: Full-Time Faculty, Total Enrollment, and Student-Faculty Ratios[xlvi]

University	Full-Time Faculty	Enrollment	Students/Faculty
Arizona State University	2510	68,064	27.1
University of Utah	2280	29,284	12.8
University of Colorado at Boulder	1868	33,010	17.7
University of Central Florida	1282	53,401	41.7
University of Houston	1126	37,000	32.9
University of Oregon	1019	22,335	21.9
University of Nevada-Las Vegas	897	29,080	32.4
Median for all RU/VH universities	*1760*	*26,198*	*15.4*

The benchmark institutions each serve as important points of comparison for various criteria in the *Path to Tier One,* and as the initiative proceeds detailed analysis of UNLV's position vis-à-vis these institutions will need to occur. But the data above show that the University of Oregon serves as a particularly useful comparator for use in understanding the scale of the challenge ahead for UNLV. Unlike the many very large institutions on the Tier One list, Oregon is smaller than UNLV (with roughly 22,000 students versus the roughly 29,000 at UNLV) and has a faculty similar in size. Despite its smaller size, Oregon produces more doctoral students and hosts more faculty and non-faculty researchers than UNLV—and it therefore has roughly 50% more research activity. Oregon shows that scale is not necessarily a driving factor in achieving Tier One, and that although the *Path to Tier One* will require significantly increased research activity, that designation is attainable for an institution the size of UNLV.

The Carnegie Foundation RU/VH criteria are important, but there are many other attributes that UNLV must also develop to reach the broader academic excellence inherent in the Tier One goal (and to secure that designation regardless of subsequent changes to the Carnegie methodology). The final section below presents a set of questions designed to raise many of the critical issues that UNLV must examine as it embarks on the *Path to Tier One* status.

Questions to Consider

As Nevada, the greater Las Vegas area, and the UNLV community consider the *Path to Tier One,* these questions provide a starting point. These and other similar questions will guide discussions among the many stakeholders involved with the university as details of the Tier One Initiative takes shape.

1. How do the goals of the Tier One Project intersect with other critical UNLV priorities, such as student success, access and affordability, community engagement, and regional economic development?

2. Given finite resources, UNLV will likely need to focus on developing capacity in some number of specific areas of research. If so, how should we select these areas? In what disciplines does UNLV currently produce the most publications? What attributes are needed at the university and in the community to build and sustain research excellence in key areas?

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For each area, what number of tenured and tenure-track, research faculty, and graduate students would be necessary to create the necessary research activity? What hiring, promotion, tenure, and reward systems need to be in place to support such efforts?

3. What facilities, organizational structures, and human resources need to be in place to enhance the faculty's ability to seek outside funding for their research and creative activity? Similarly, at what level will UNLV need to support graduate students to attract top-level doctoral candidates? What role should undergraduate research activity play in the Tier One process?

4. What constitutes high-quality research at UNLV? What units within the University have the most high-profile research presence? How can UNLV best leverage these areas of strength?

5. What can UNLV do to ensure that it is a leader in undergraduate education? How are master teachers rewarded, and how can their success be harnessed to improve teaching throughout the University?

6. To what extent will research excellence necessitate interdisciplinary work? To the extent that UNLV's capacity for interdisciplinary research needs to be bolstered, what hiring, promotion, tenure, and reward systems need to be in place to support such efforts?

7. To achieve the broader Tier One Goals, UNLV will have to develop a stronger organizational structure that includes an appropriate leadership structure, faculty governance system, a correct deployment of the people (faculty, staff, and leadership personnel) in the right positions, and critical resource and support systems, among others. What strategies need to be developed to achieve an overall organizational structure to support the Tier One agenda?

8. How can the university maximize its ability to recruit and retain diverse students, faculty, and staff, and how does it maintain a campus that is open to a diversity of experience, beliefs, and viewpoints, expressed in a civil manner?

9. Various research metrics are essential to achieving Carnegie RU/VH status, including the number of research doctorates awarded and research productivity. What specific metrics should the university track in its pursuit of Tier One status, and what goals should UNLV seek to attain for each metric? How can UNLV develop sustainable ways of compiling and maintaining the necessary data on itself and on peer institutions?

10. What is the relationship between obtaining Tier One status and the development of the medical school, and how critical is the establishment of the medical school to achieving Tier One status?

11. Achieving Tier One Status, including a RU/VH classification, will require significant additional funds from public and other sources. What strategies should UNLV use to obtain these resources?

12. Achieving Tier One Status, including a RU/VH classification, depends on support from the local, regional, and state community. How can we become the university of choice in terms of providing solutions to problems facing the community?

13. What role will intercollegiate athletics play in the *Path to Tier One*? How can the University foster success on its fields and courts and leverage that visibility in service of academic excellence?

14. What are the foreseeable barriers to UNLV achieving (and maintaining) Tier One status?

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xv Iryna Lendel, "The impact of research universities on regional economies: The concept of university products," *Economic Development Quarterly 24*, no. 3 (2010): 210–230.

xvi Harvey Goldstein and Joshua Drucker, "The economic development impacts of universities on regions: do size and distance matter?" *Economic development quarterly* 20, no. 1 (2006): 22-43.

xvii Note: This phenomenon is international in nature and may be seen in many countries. For example, one recent study examined this same connection in Germany. See: David B. Audretsch, Marcel Hülsbeck, and Erik E. Lehmann. "Regional competitiveness, university spillovers, and entrepreneurial activity." *Small Business Economics* 39, no. 3 (2012): 587-601.

xviii Jonathan T. Rothwell, Jose Lobo, and Deborah Strumsky, "The Role of Invention in US Metropolitan Productivity," *Available at SSRN 2175310* (2013) 6.

xix *Sparking Economic Growth 2.0*, 6.

xx Kantor and Whalley, "Knowledge spillovers from research universities," 171-188.

xxi *Unify, regionalize, diversify,* 7, 28-61; and *Moving Nevada Forward: A Plan for Excellence in Economic Development* (Nevada Board of Economic Development, 2012) 32-33.

xxii Nevada Governor's Office of Economic Development, http://www.diversifynevada.com/key-industries

xxiii Alan Schlottmann, Marcus Conklin, and John Restrepo, *Leaving a Legacy of a Research University to Enhance Nevada's Future* (Unpublished report, 2013) 4.

xxiv Joni Hersch, "Catching Up is Hard to Do: Undergraduate Prestige, Elite Graduate Programs, and the Earnings Premium." *Vanderbilt Law and Economics Research Paper* 14-23 (2014).

xxv Douglas M. Stenstrom, Mathew Curtis, and Ravi Iyer. "School Rankings, Department Rankings, and Individual Accomplishments What Factors Predict Obtaining Employment After the PhD?." *Perspectives on Psychological Science* 8, no. 2 (2013): 208-217.

xxvi Doug J. Chung, "The Dynamic Advertising Effect of Collegiate Athletics." *Marketing Science* 32, no. 5 (2013): 679-698.

xxvii One of the key ways academic institutions demonstrate the quality of their students and the rigor of their offerings is through selectivity in admissions. By increasing the number of applications colleges and universities can lower the percentage of applicants they accept, thereby increasing selectivity and the prestige associated with enrolling the most highly-qualified students available. For a detailed discussion of this see: Dominic J. Brewer,

Susan M. Gates, and Charles A. Goldman, *In Pursuit of Prestige: Strategy and Competition in U.S. Higher Education* (Piscataway, NJ: Transaction Publishers, 2002).

xxviii Michael L. Anderson, *The benefits of college athletic success: An application of the propensity score design with instrumental variables*, No. w18196 (National Bureau of Economic Research, 2012).

xxix See: http://classifications.carnegiefoundation.org/descriptions/basic.php

xxx John Lombardi, Elizabeth Phillips, Craig Abbey and Diane Craig, *The top American research Universities: 2012 Annual Report* (The Center for Measuring University Performance, Tempe, AZ, 2012).

xxxi Bo J. Bernhard and Mikael Ahlgren, "Las Vegas and Houston: Global Command Centers in the Sun Belt," *UNLV Gaming Research & Review Journal* 15.2 (2012): 3.

xxxii See: http://classifications.carnegiefoundation.org/resources/

xxxiii Donald Birx, Elizabeth Anderson-Fletcher, and Elizabeth Whitney, "Growing an emerging research university." *Journal of Research Administration* 44, no. 1 (2013): 12.

xxxiv Ibid., 19.

xxxv Amy Apon, Linh Ngo, Michael Payne, and Paul Wilson, "Assessing the effect of high performance computing capabilities on academic research output," *Empirical Economics,* June 2014.

xxxvi Amy Apon et al., "High performance computing instrumentation and research productivity in U.S. universities," *Journal of Information Technology Impact* 10, no. 2 (2010) 87-98.

xxxvii Nevada Governor's Office of Economic Development, http://www.diversifynevada.com/key-industries

xxxviii John Lombardi, Elizabeth Capaldi, Denise Mirka, and Craig Abbey, *Deconstructing university rankings: Medicine and engineering, and single campus research competitiveness, 2005*. (Gainesville, FL: The Lombardi Program on Measuring University Performance, 2005).

xxxix To be specific, an institution must confer "at least 20 research doctorates" in a specific set of disciplines in the humanities, the social sciences, and STEM fields (Science, Technology, Engineering and Mathematics). Professional doctoral "degrees such as M.D., J.D., Pharm.D.," and others are excluding from this metric. Research expenditures are another key factor, as they give an indication of the overall research activity and vast majority of that funding comes from competitive grants. The classification tracks research expenditures in the sciences and Engineering in one category and in other fields in a separate category. The other main criterion is the size of the research staff in the sciences and in Engineering. These "postdoctoral appointees and other non-faculty research staff with doctorates" play a key role in the research enterprise, and most appointments of this nature are funded by competitive grants. As such, they also indicate the scope of the research activities on a campus.

xl National Science Foundation, *Higher Education Research and Development Survey, Fiscal Year 2012: Higher education R&D expenditures, ranked by all R&D expenditures, by R&D field: FY 2012*. http://ncsesdata.nsf.gov/herd/2012/html/HERD2012_DST_21.html

xli Carnegie Foundation for the Advancement of Teaching, *Carnegie Classifications Data File*, 2012. http://classifications.carnegiefoundation.org/resources/

xlii Birx, Anderson-Fletcher, and Whitney, "Growing an emerging research university," 11-35.

xliii Carnegie Foundation for the Advancement of Teaching, *Carnegie Classifications Data File*, 2012. http://classifications.carnegiefoundation.org/resources/ Note: The data gathered by the Carnegie Foundation exclude research doctorates in clinical health fields (Audiology, Occupational Therapy, Physical Therapy, and Clinical Psychology).

xliv The median is a particularly useful metric in this regard because outliers amongst the 108 RU/VH institutions may distort the mean.

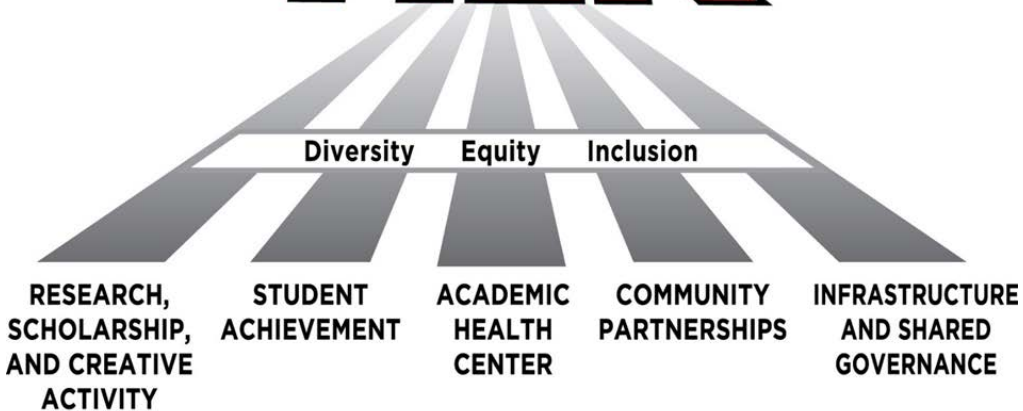xlv Carnegie Foundation for the Advancement of Teaching, *Carnegie Classifications Data File*, 2012. http://classifications.carnegiefoundation.org/resources/

xlvi Carnegie Foundation for the Advancement of Teaching, *Carnegie Classifications Data File*, 2012. http://classifications.carnegiefoundation.org/resources/

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(BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 46 of 102

TIER ONE VS. TOP TIER

(BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 47 of 102
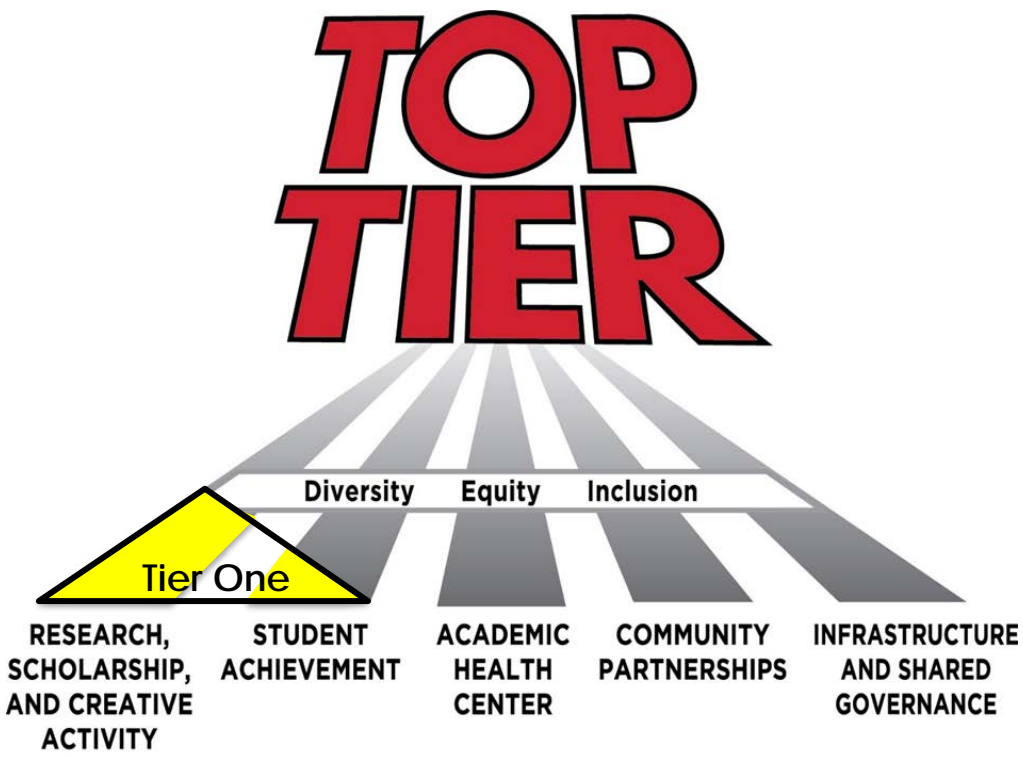
HOW DID WE GET HERE?

2013:

- Research/Internal Analysis of Tier One

2014-2015:

- Path to Tier One and Top Tier

2015-2016:

- Year 1 Implementation for Top Tier

PLANNING PROCESS INPUT

Top Tier Vision, Mission, Goals, and Strategies

- Website Feedback
- Cabinet
- Students
- ALA Consultants
- Campus Forums
- Academic Faculty
- Community Forums
- Administrative Faculty
- Community Members
- Faculty Senate
- Research Council
- Classified Staff
- Deans
- Center Directors
- Alumni Forums

OUR COMPARISON SCHOOLS

PRIMARY

- University of Houston
- University of Central Florida
- Arizona State University

SECONDARY*

- University of Hawaii
- University of Colorado-Boulder
- University of Arizona
- University of Utah
- Utah State University
- University of Oregon
- University of Nevada, Reno
- University of Wyoming
- San Diego State University
- University of Idaho

* Secondary comparison schools to be used for some comparisons but not all

EXAMPLES OF EXTERNAL DATA COLLECTION

- EAB research
- Salary data from CUPA-HR
- Campus visits to three aspirant schools
- Benchmarking of comparison schools
- White paper by ALA
- NSF
- IPEDS
- APLU
- FICM
- h-index
- Web of Science

TOP TIER VISION

UNLV will be recognized as a top tier public university in research, education, and community impact.

TOP TIER MISSION

UNLV's diverse faculty, students, staff, and alumni promote community well-being and individual achievement through education, research, scholarship, creative activities, and clinical services. We stimulate economic development and diversification, foster a climate of innovation, promote health, and enrich the cultural vitality of the communities that we serve

GOALS

TOP TIER

Diversity   Equity   Inclusion

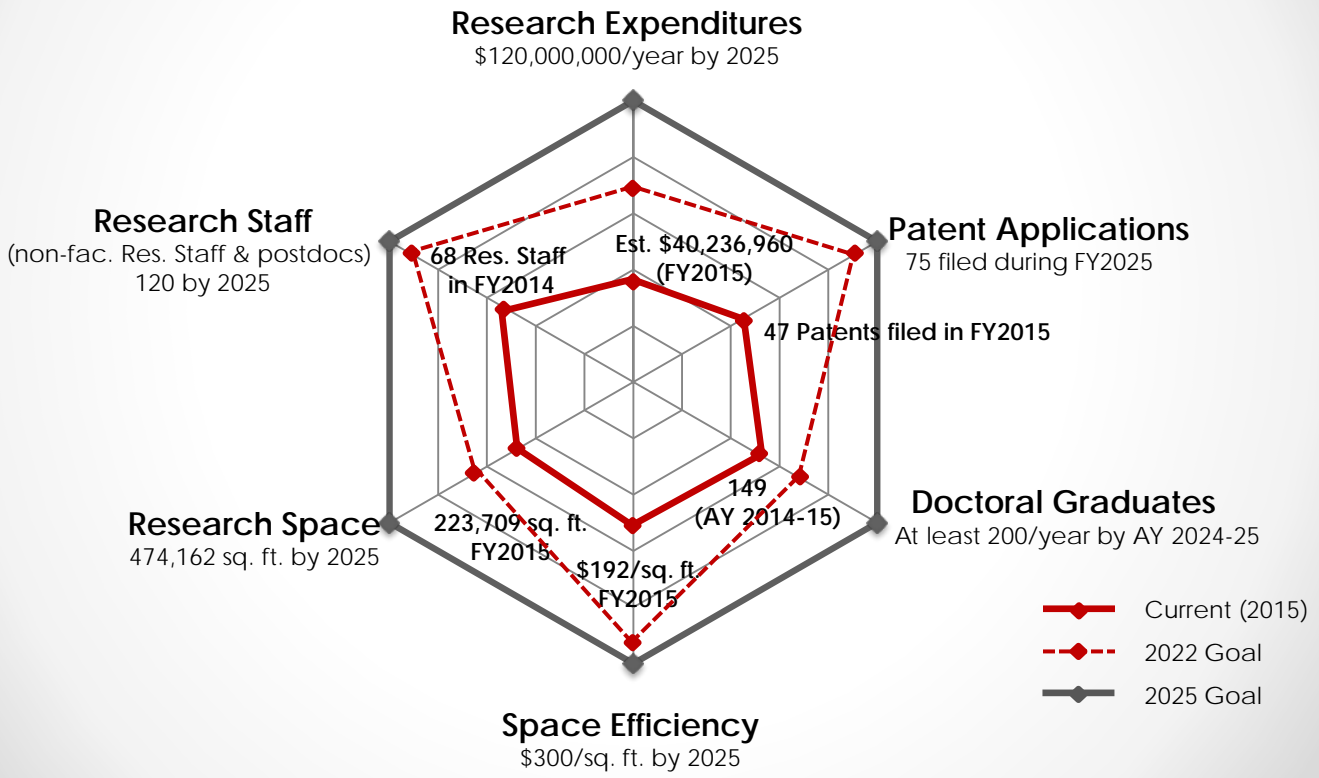RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITY | STUDENT ACHIEVEMENT | ACADEMIC HEALTH CENTER | COMMUNITY PARTNERSHIPS | INFRASTRUCTURE AND SHARED GOVERNANCE

(BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 54 of 102

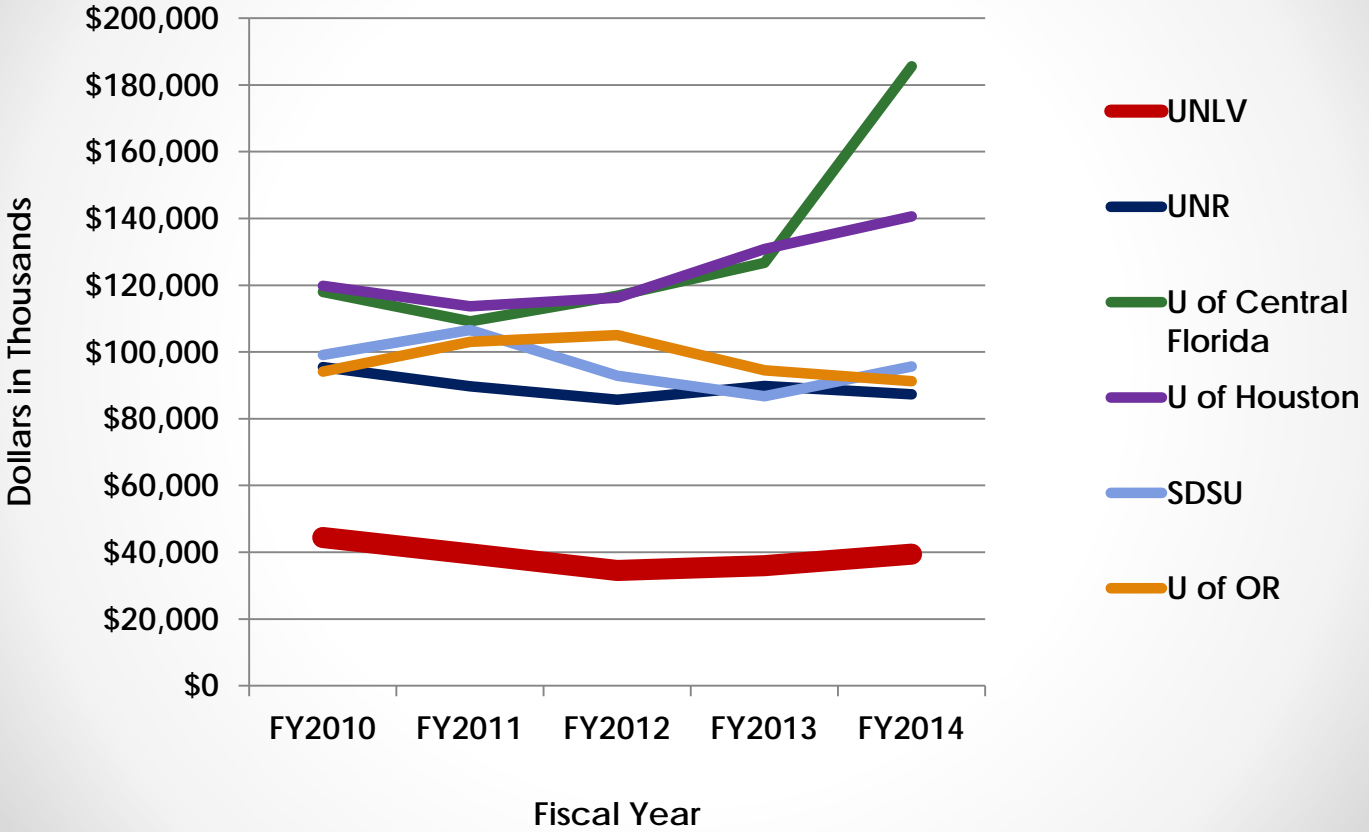**RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITY**

UNLV will foster a climate of innovation in which faculty and students produce high-quality, widely disseminated, and influential research, scholarship, and creative activities.
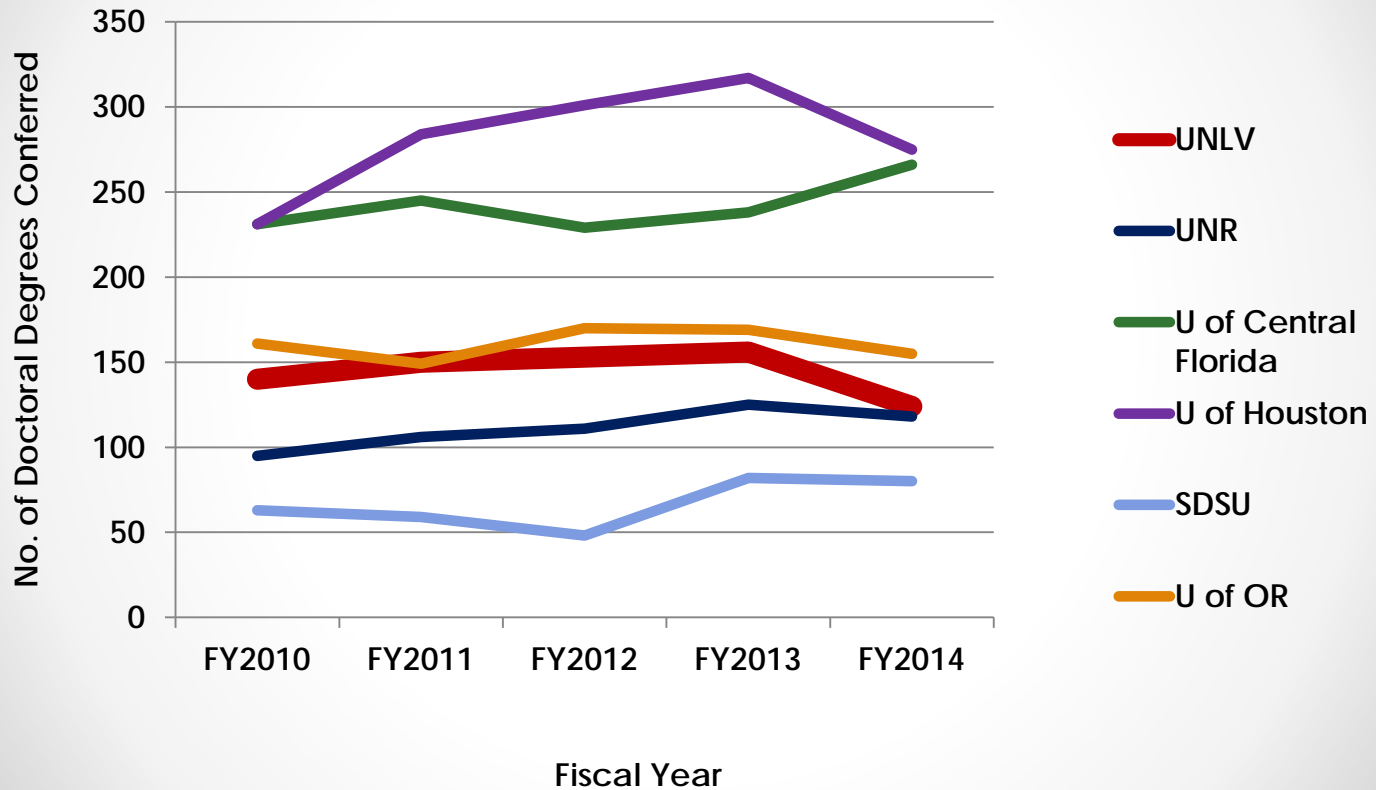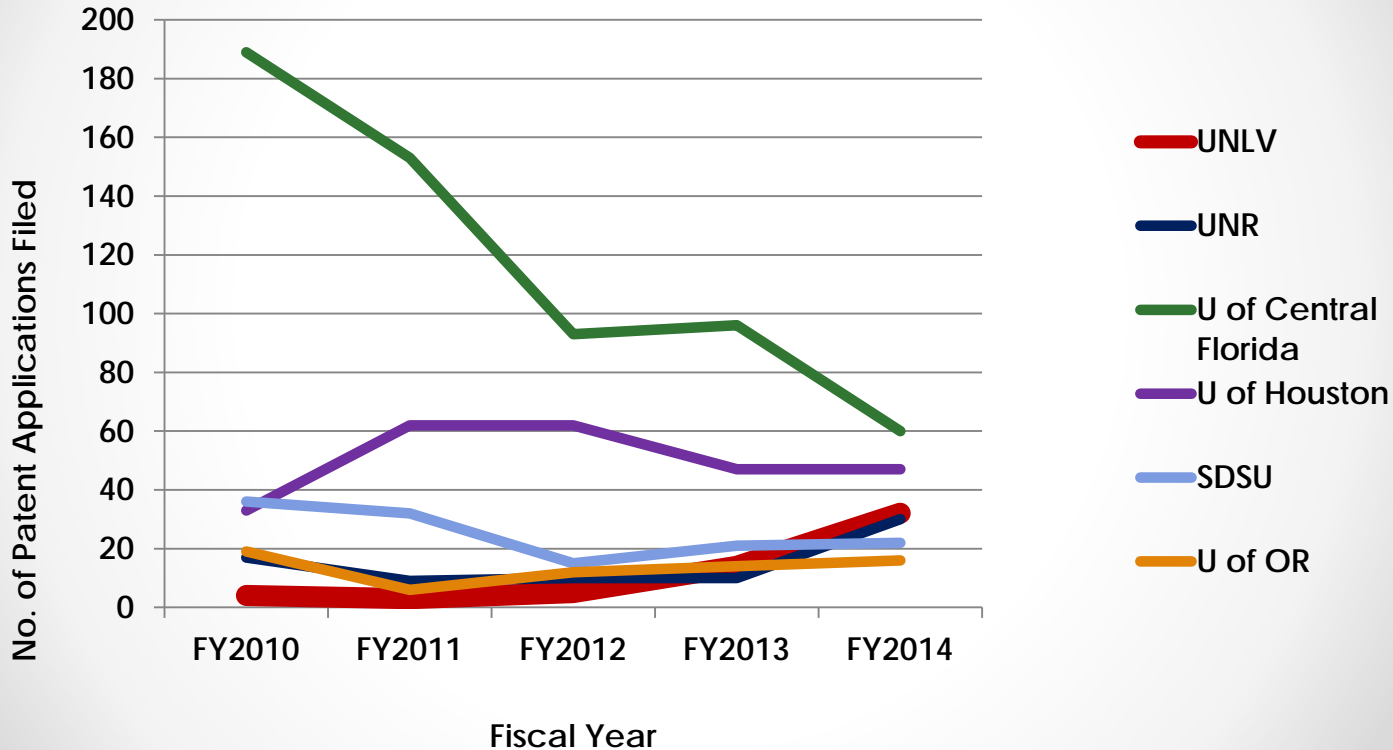
TOP TIER RESEARCH METRICS

Research Expenditures
$120,000,000/year by 2025

Patent Applications
75 filed during FY2025

47 Patents filed in FY2015

Est. $40,236,960 (FY2015)

Research Staff
(non-fac. Res. Staff & postdocs)
120 by 2025

68 Res. Staff in FY2014

Doctoral Graduates
At least 200/year by AY 2024-25

149 (AY 2014-15)

Research Space
474,162 sq. ft. by 2025

223,709 sq. ft. FY2015

$192/sq. ft. FY2015

Space Efficiency
$300/sq. ft. by 2025

Current (2015)
2022 Goal
2025 Goal

(BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 56 of 102

TOTAL R&D EXPENDITURES

Chart: Dollars in Thousands (y-axis) vs Fiscal Year (x-axis, FY2010–FY2014)

Legend:
- UNLV
- UNR
- U of Central Florida
- U of Houston
- SDSU
- U of OR

*Data source is www.nsf.gov, Data Table 17. Higher education R&D expenditures, ranked by FY2014 R&D expenditures: FYs 2010-14.

DOCTORAL DEGREES AWARDED*

No. of Doctoral Degrees Conferred vs **Fiscal Year**

Legend:
- UNLV
- UNR
- U of Central Florida
- U of Houston
- SDSU
- U of OR
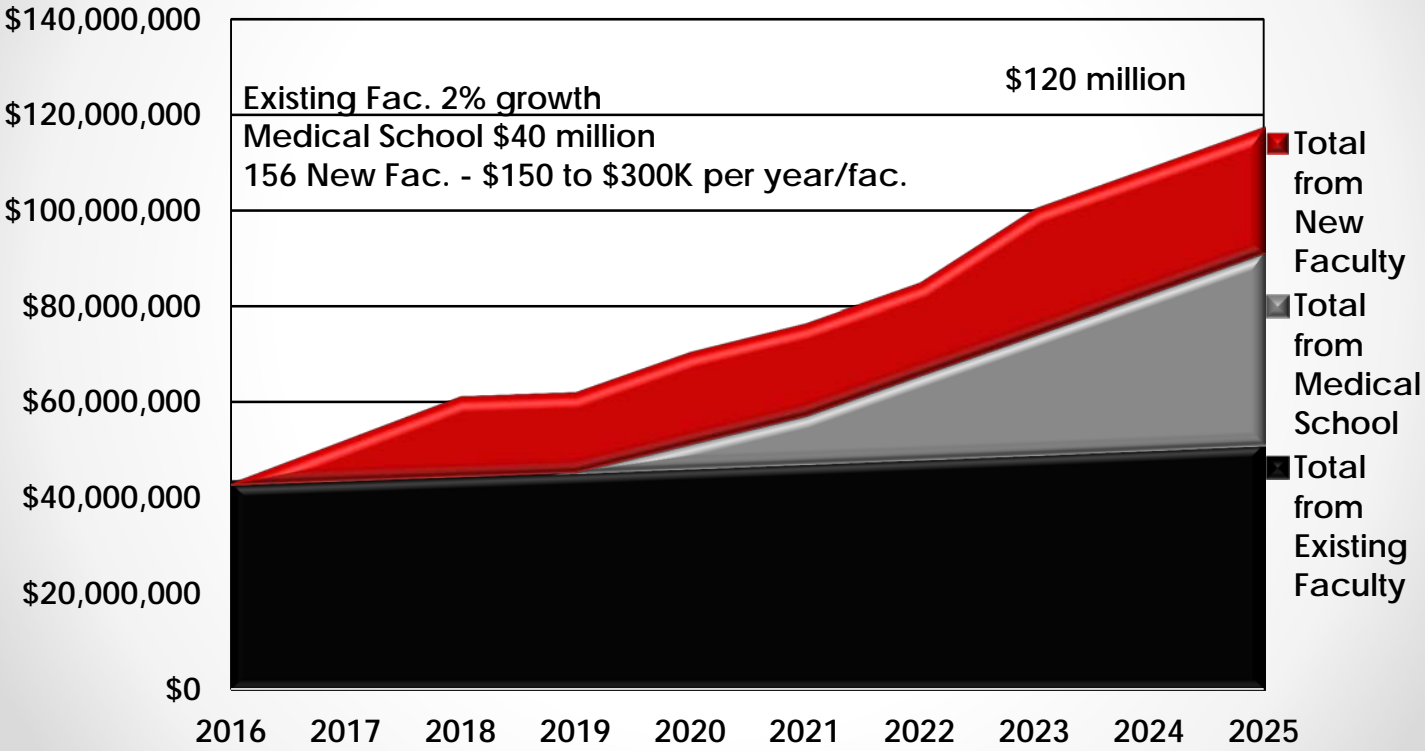
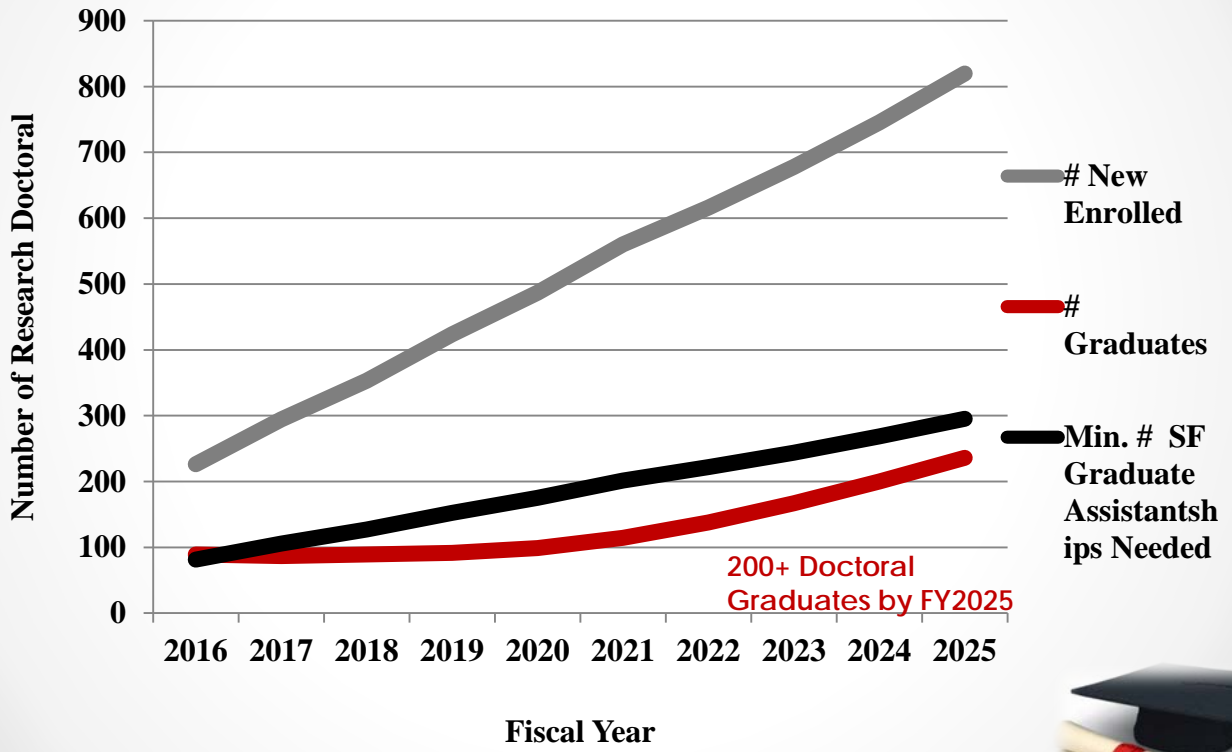*Excluding UNLV Law, Dental and Medical Degrees (BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 58 of 102

PATENT APPLICATIONS FILED

(BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 59 of 102

RESEARCH EXPENDITURES FROM FACULTY

Existing Fac. 2% growth
Medical School $40 million
156 New Fac. - $150 to $300K per year/fac.

$120 million

Total from New Faculty
Total from Medical School
Total from Existing Faculty

(BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 60 of 102

DOCTORAL GROWTH

- # New Enrolled
- # Graduates
- Min. # SF Graduate Assistantships Needed

200+ Doctoral Graduates by FY2025

Number of Research Doctoral

Fiscal Year

2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

PROGRESS ON TOP TIER RESEARCH

- Growth in research and economic development
  - +17% research expenditures since 2012
  - 3 startups in 2015
  - Tripling of Patents over the last three years

- Expansion of Economic Development Office (Research Foundation, SBDC, Tech Transfer)

(BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 62 of 102
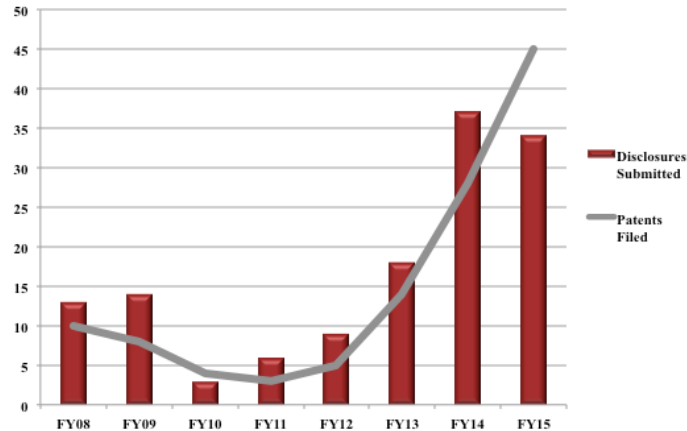
RESEARCH PARTNERSHIP OUTCOMES

- Cleveland Clinic Lou Ruvo Center
  $11.1 million federal grant for Alzheimer's and Parkinson's

- Varian Medical Systems
  product development, research, and training for students, supporting the growing biomedical industry workforce in Nevada

- Tesla
  advances in the battery manufacturing process

- Switch
  dedicated research network

- NSTec
  Approximately $1.5 million in grants per year

TOP TIER IMPLEMENTATION – RESEARCH

Strategic areas and Centers/Institutes

- International Gaming Institute (IGI) now a university-level Institute

- Nevada Institute of Personalized Medicine (NIPM)

Research Infrastructure

- Space efficiency planning

- Grant development office and writers

GA stipends

- Market-based stipends starting in Spring 2016

Collaboration opportunities (e.g., water Network)

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STUDENT ACHIEVEMENT

UNLV will be a national leader in education and will promote excellence in teaching undergraduate, graduate, and professional school students. We will recruit, retain, and graduate a diverse body of motivated students through the strength of our innovative learning experiences, access to mentoring and research opportunities, and our vibrant campus community. Our highly qualified master's students, doctoral students, and professional students will distinguish themselves and UNLV through their contributions to research, the professions, and the arts.

FRESHMEN TO SOPHOMORE RETENTION RATE OF 85 PERCENT BY 2022

Freshmen Retention
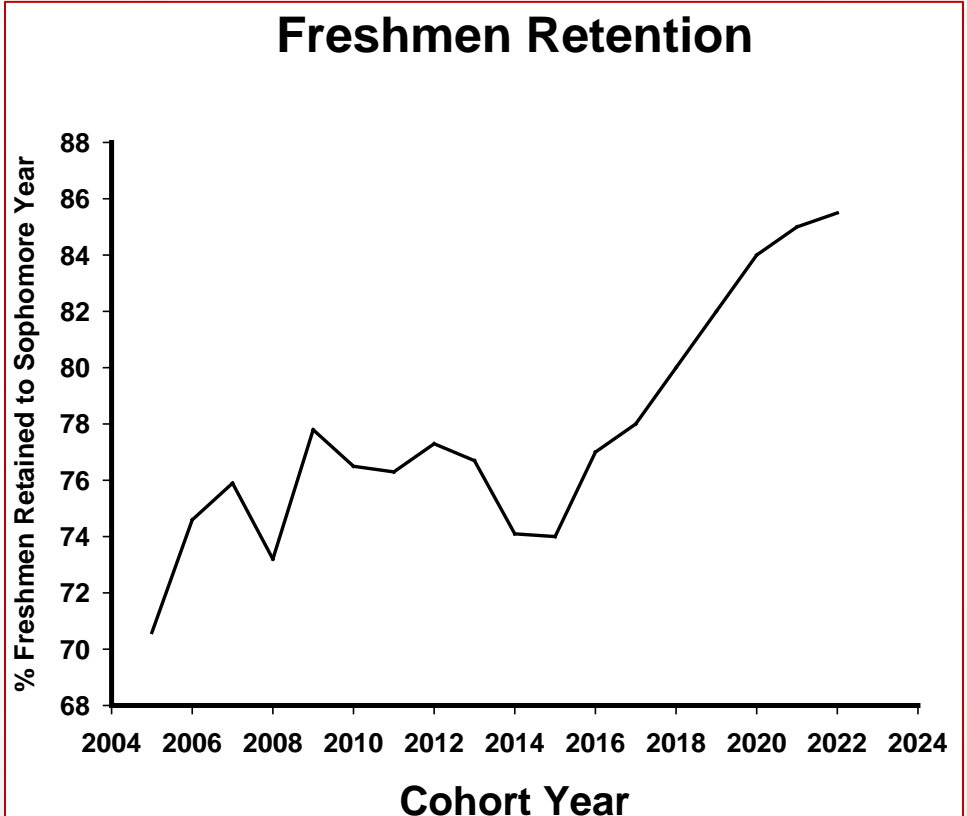
(BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 66 of 102

INVESTMENT INTO STUDENT SUCCESS

- Significant investment for student recruitment

- Entering Honors College class quadrupled in past four years

- Freshmen retention rate for 2013 cohort increased to 76.7% (up 5 percentage points since 2005)

- Graduation rate for 2009 cohort shows a 1 percentage point increase to 40.5% (6-Year Graduation Rate to 48% by 2022)

- Culture of completion

INVESTMENT INTO STUDENT SUCCESS

- MOU with CSN for at-risk students

- Completed block scheduling and enrollment optimization

- Increased academic advisor positions

- Implemented General Education Curriculum and Student Success Collaborative

- Increased on-line education capacity

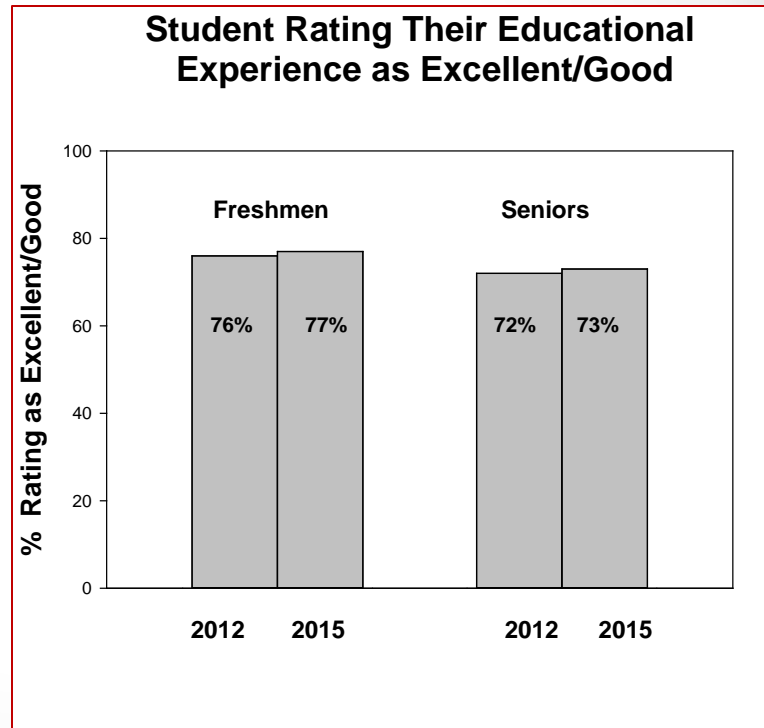# DECREASE IN STUDENT-TO-FACULTY RATIO
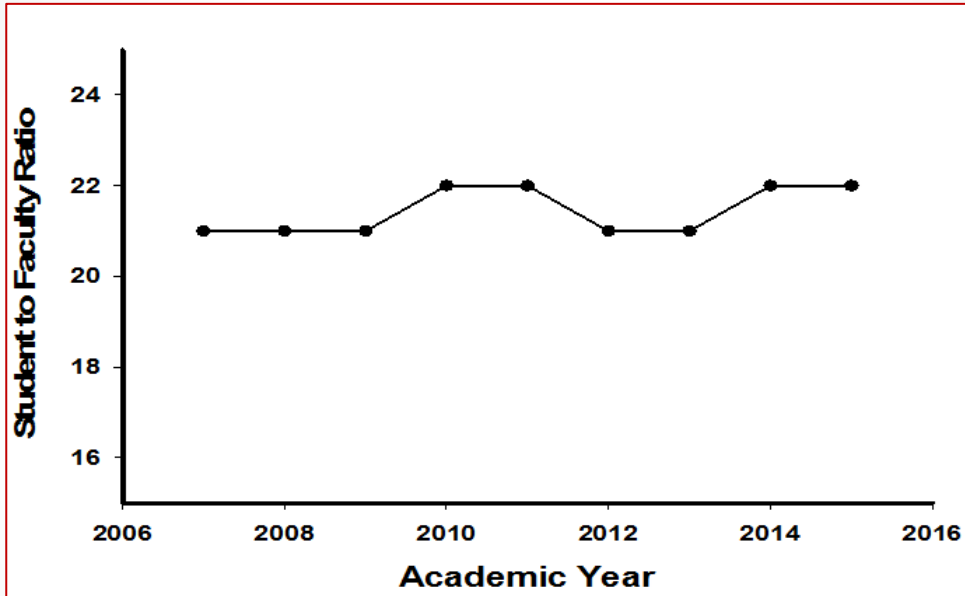
- First choice hires
- Research intensive faculty
- Teaching intensive faculty
- Faculty mentoring
- Retain quality faculty

- Recognize/reward quality research
- Recognize/reward quality teaching
- Promote innovative thinking
- Professional development
- Expand online education

IMPROVEMENT IN THE QUALITY OF STUDENT EDUCATIONAL EXPERIENCES
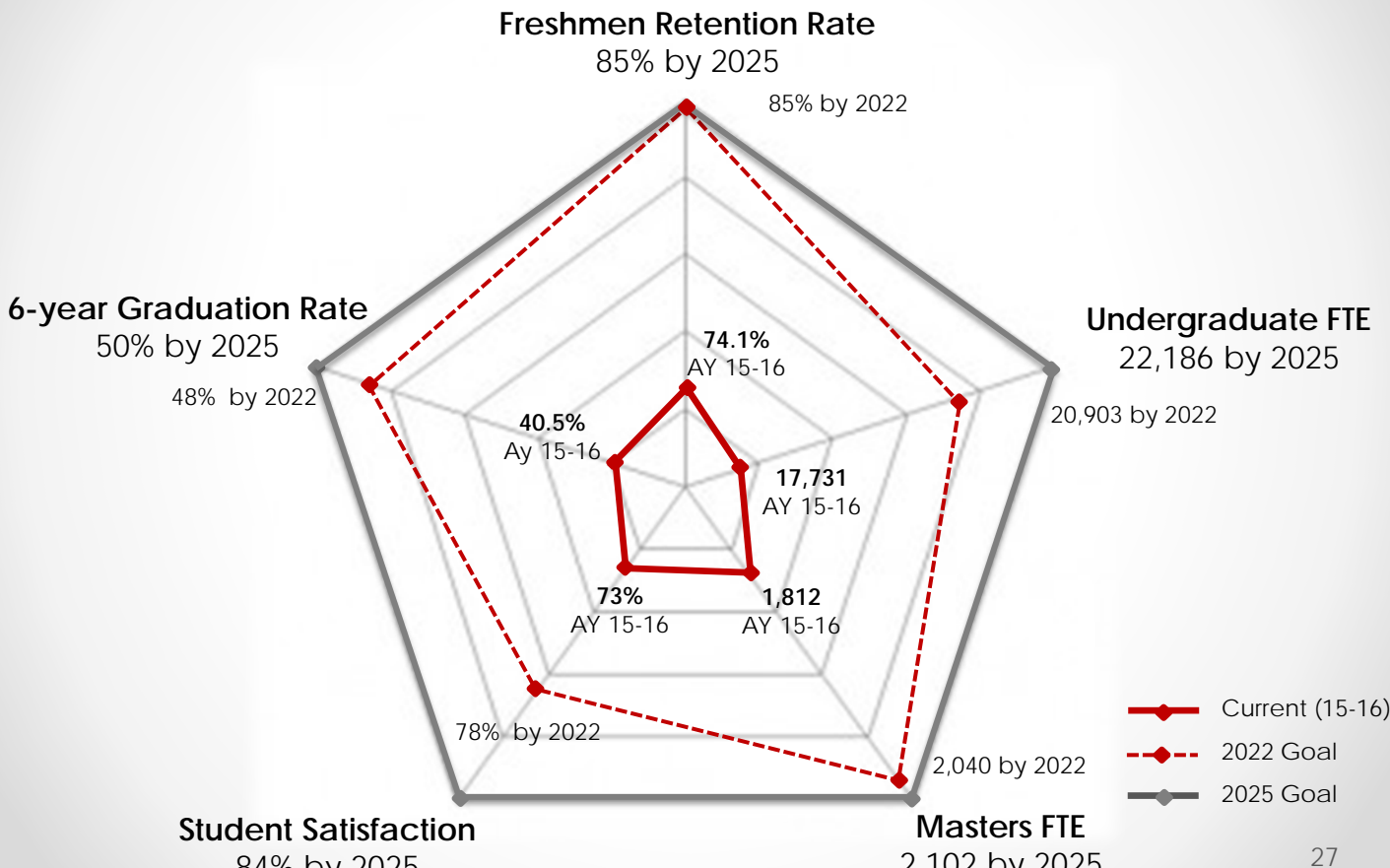### (as measured by both the NSSE and SSI)

- Quality and innovative teaching
- Student engagement
- High-impact educational practices
- Undergraduate research
- Education Council
- Transparency Project

Student Rating Their Educational Experience as Excellent/Good

Freshmen: 2012 — 76%, 2015 — 77%
Seniors: 2012 — 72%, 2015 — 73%

% Rating as Excellent/Good

INCREASE EMPLOYER SATISFACTION WITH UNLV GRADUATES

- Employer satisfaction survey
- Engage local and regional employers in focus group discussions
- What does the college graduate "look like" in 2022?
  - Hard skills
  - Soft skills
- Curricular alignment with employer expectations
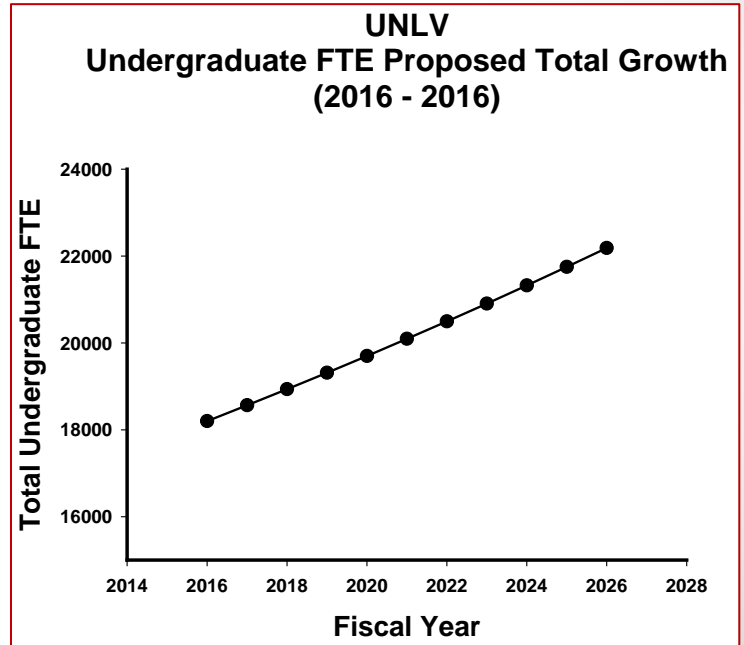- New program development

TOP TIER STUDENT ACHIEVEMENT METRICS

Freshmen Retention Rate
85% by 2025

85% by 2022

74.1%
AY 15-16

Undergraduate FTE
22,186 by 2025

20,903 by 2022

17,731
AY 15-16

6-year Graduation Rate
50% by 2025

48% by 2022

40.5%
Ay 15-16

73%
AY 15-16

1,812
AY 15-16

78% by 2022

2,040 by 2022

Student Satisfaction
84% by 2025

Masters FTE
2,102 by 2025

Current (15-16)

2022 Goal

2025 Goal

UNLV REVENUE GROWTH MODEL
PROPOSED 2% PER YEAR UNDERGRADUATE FTE GROWTH

- 2% per year UG FTE growth

- 2016 base year:
  - 18,200 projected

- 2026:
  - 22,186 UG FTE

UNLV
Undergraduate FTE Proposed Total Growth (2016 - 2016)

(BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 73 of 102

UNLV REVENUE GROWTH MODEL
PROPOSED 1% PER YEAR MASTERS FTE GROWTH

- 1% per year Masters FTE growth

- 2016 base year:
  - 1,903 projected
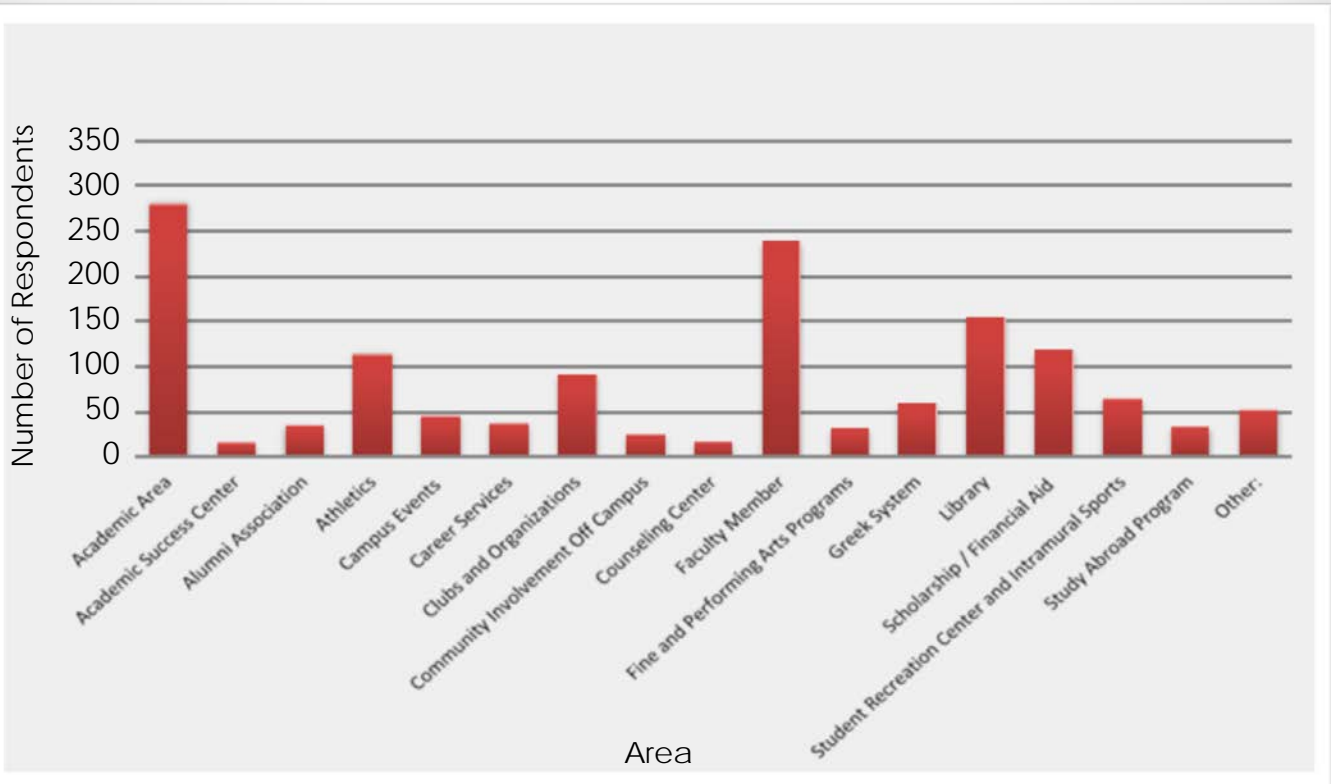
- 2026:
  - 2,102 Masters FTE

*growth plans to be discussed

UNLV Master FTE Projected Total Growth (2016 - 2026)

Total Masters FTE vs Fiscal Year
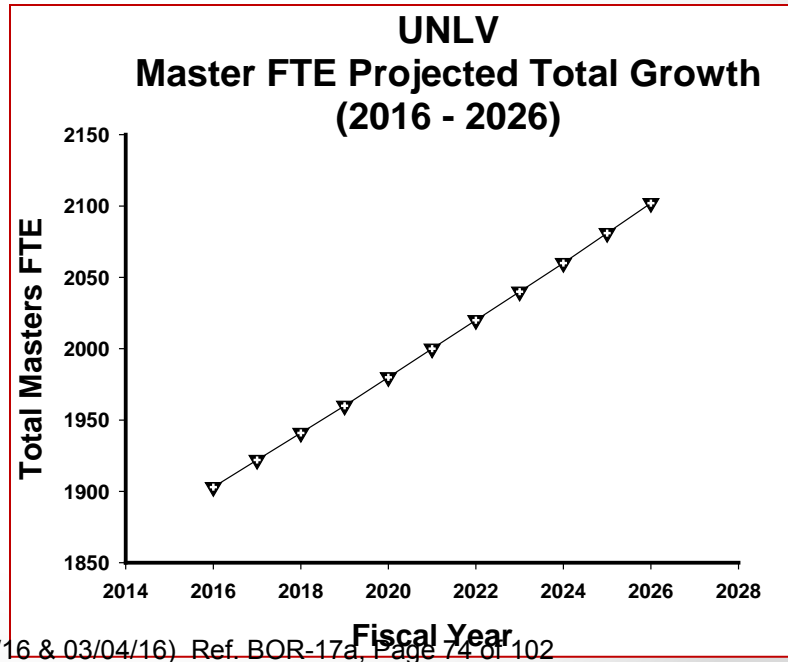
MONITOR ALUMNI SATISFACTION IN THE QUALITY OF THEIR EDUCATIONAL EXPERIENCES

- Young Alumni survey data

- Informal opportunities with alumni (focus groups, engagement opportunities)

WHAT WOULD HELP INCREASE YOUR AFFINITY AS AN ALUMNUS/A TO UNLV?
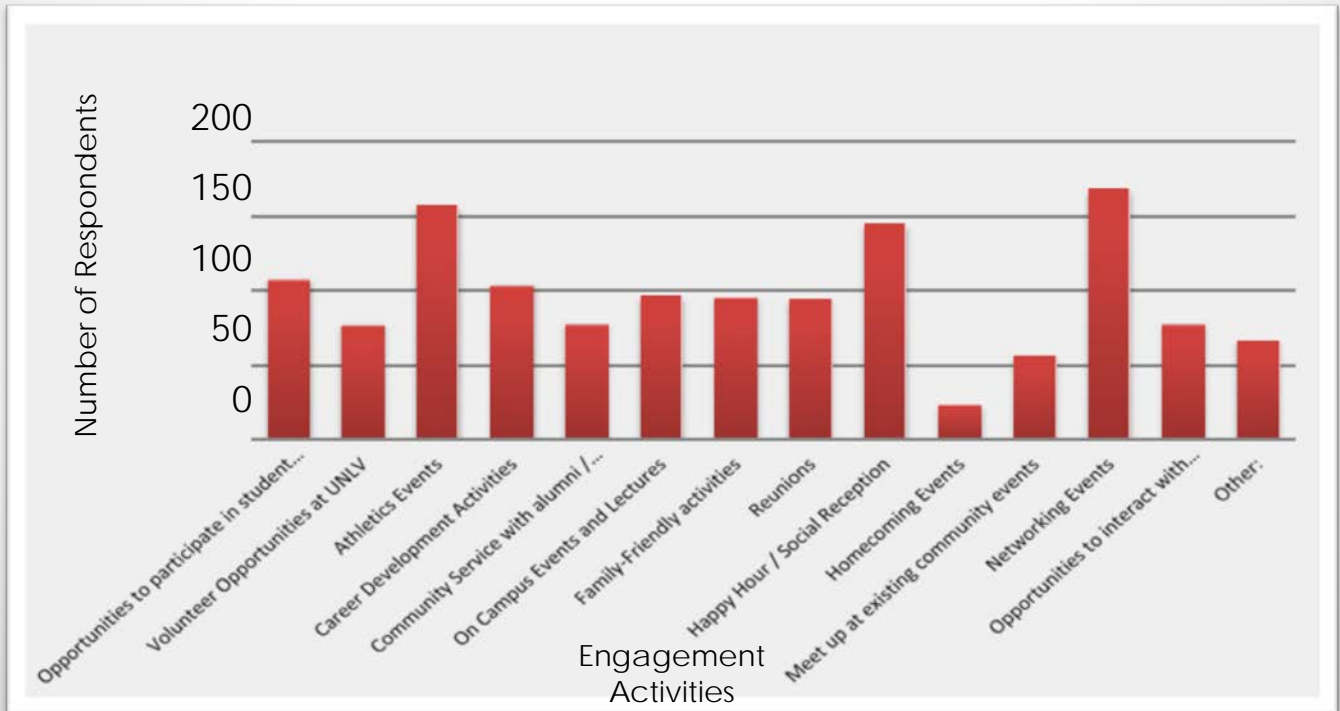
ADADEMIC HEALTH CENTER

UNLV's School of Medicine, in collaboration with other health-related units on campus and with external partners, will foster cutting-edge research, use a creative curriculum, and provide top-notch clinical programs.
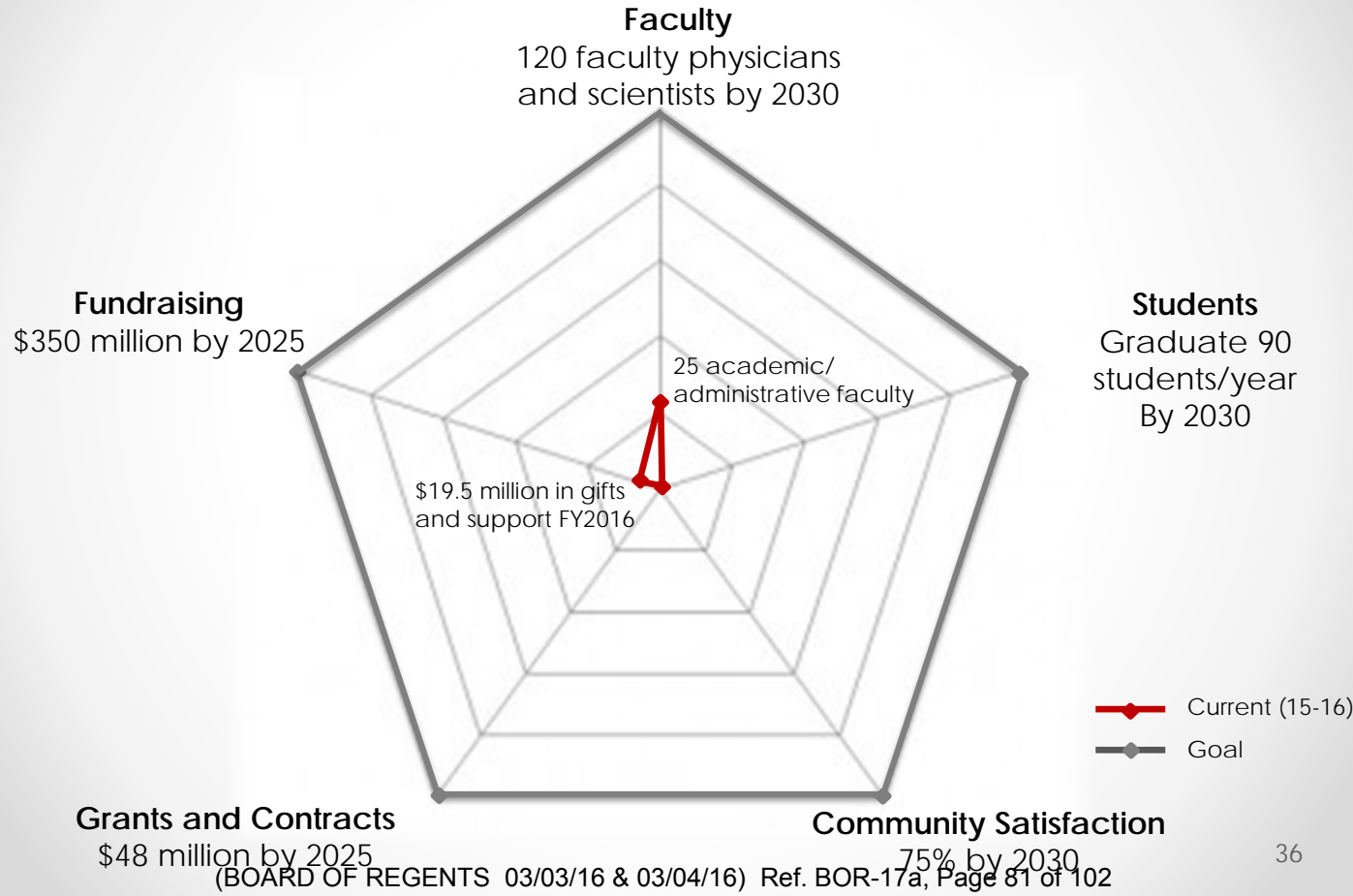
ACCOMPLISHED

- Received approval for school's organizational structure -- 24 teaching departments

- Submitted LCME accreditation documents Nov. 30, 2015

- Hired 27 academic faculty and administrative staff (Feb. 22, 2016)

- Named Dr. Atkinson Founding Dean in November 2015

- Raised more than $5.9 for curriculum development and GME; and $13.6 for student scholarship

ULTIMATE OBJECTIVES

- Achieve full LCME accreditation in 2021

- Establish an Academic Health Center

- Develop PhD programs

- Onboard students in 2017

- Determine building location

- Acquire naming gift(s)

ACADEMIC HEALTH CENTER METRICS

Faculty
120 faculty physicians
and scientists by 2030

Students
Graduate 90
students/year
By 2030

Fundraising
$350 million by 2025

25 academic/
administrative faculty

$19.5 million in gifts
and support FY2016

Grants and Contracts
$48 million by 2025

Community Satisfaction
75% by 2030

Current (15-16)
Goal

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COMMUNITY PARTNERSHIPS

UNLV will stimulate economic development and diversification in, and enrich the cultural vitality of, our community by deepening and expanding reciprocal connections with our partners and leveraging our unique strengths to collaborate locally, nationally, and internationally.

COMMUNITY PARTNERSHIPS

Key Measures

- Establish an Office of Community Partnerships
- Increase economic and cultural Impact
- Develop partnerships
- Increase community engagement
- Further startup activities
- Enhance workforce development
- Develop mentoring network

Metrics

- Tracking percentage change
- Survey data
- Carnegie Community Engagement (CCE) Classification

- Success in Athletics

Graduation Rates; Scholar Athletes; APR; MW Performance

COMMUNITY RESEARCH PARTNERSHIPS

- NV Energy
- MGM Resorts
- Mountain View Hospital
- Global Medical Isotope Systems
- First Solar Inc.
- LVCVA
- Switch

- Wynn Resorts
- Tetra Tech Inc.
- The Periogen Company
- Utah Green Energy Technologies
- Cleveland Clinic
- Radian Chemicals
- Tesla

UNLV generates more than $12.5 million from partnerships

COMMUNITY PARTNERSHIPS OUTCOMES

- October 2016 Presidential Debate Site

  - LVCVA collaboration - projected to generate a minimum of $50 million in publicity

- Establishing an Office of Community Partnerships

- Collaborating with CCSD and developing new programs
  - EPL program for aspiring Principals
  - Troops to Teachers
  - Project NEXUS
  - Teach for America

ATHLETICS ACADEMIC ACHIEVEMENTS

- All 17 UNLV sport programs possess a multi-year APR score that exceeds the NCAA requirement of 930

- A UNLV-record 56 student-athletes were honored with the Mountain West Scholar-Athlete Award in 2014-15

- UNLV had 119 student-athletes – 112 Mountain West and seven WAC – earn either Fall or Spring Academic All-Conference recognition (AY 2014-15)

- 50 percent of UNLV student-athletes have a cumulative GPA of 3.0 or greater

- Six of UNLV's sports programs earned a perfect single-year APR score of 1,000 in 2013-14 (the most recent reporting year) and seven set or tied their all-time record for single-year APR

- Fall 2015 found an increase of nine percent of UNLV student-athletes with a cumulative GPA of 3.0 or greater and a two percent increase in graduation rates

ATHLETICS ACHIEVEMENT

- Four teams advanced to NCAA postseason competition during the 2014-15 school year

  - men's golf team - 27th consecutive appearance which is a national record
  - women's golf team - fourth trip in 14 years
  - men's swimming and diving team -10 conference championships in 11 years
  - men's soccer - first appearance in 17 years

- Six student-athletes drafted into the professional ranks

- Men's soccer has claimed back-to-back WAC Offensive Player of the Year recipients

- Coach of the year honoree - Jim Reitz (2015 WAC)

ATHLETICS – WHERE ARE WE HEADED?

Football and Basketball Success

- Overall athletic success
- Financially self-sustaining
- Athletics with academics (and medical school) makes UNLV attractive for potential league expansion
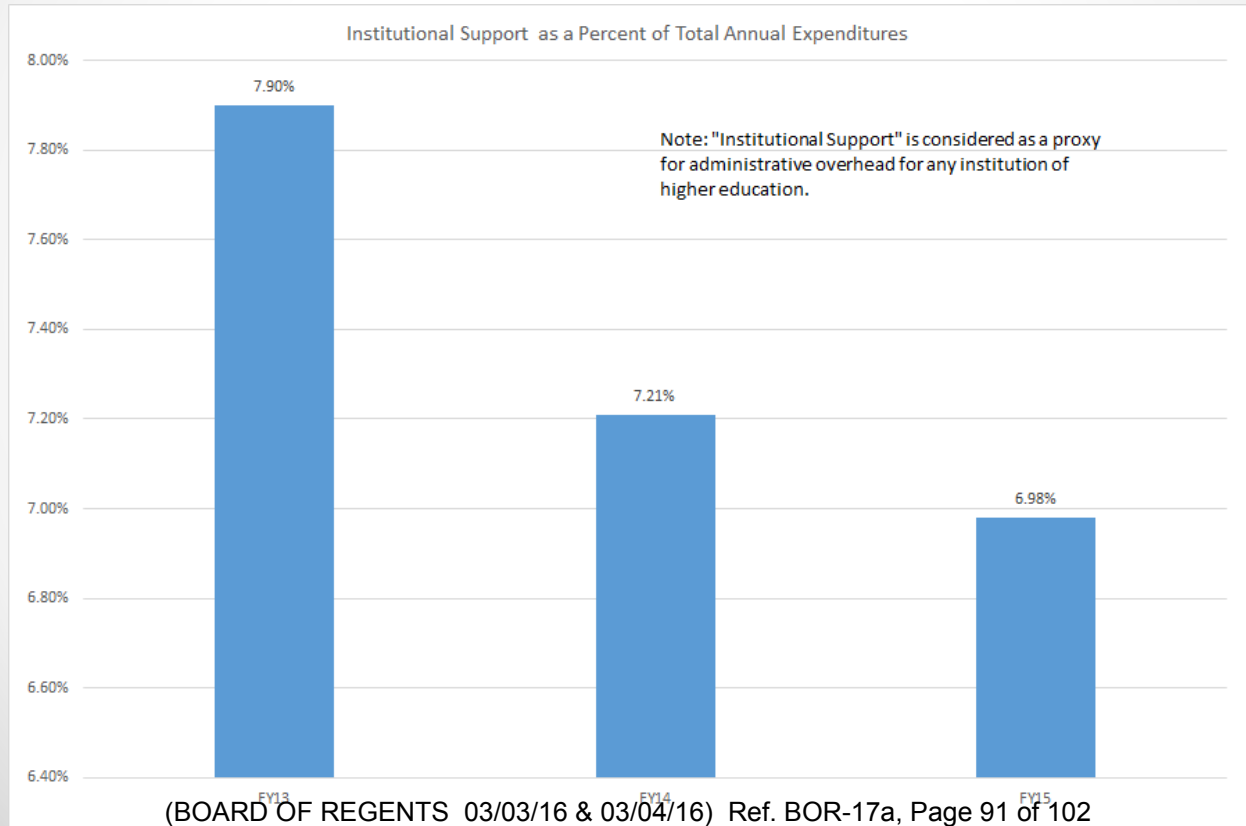
INFRASTRUCTURE AND SHARED GOVERNANCE

To accomplish the other four goals, UNLV will continually develop and leverage the conditions necessary for success, which will include an effective organizational structure, a state-of-the-art infrastructure, a service-oriented culture, meaningful faculty engagement in shared governance, and the capacity for informed decision-making and informed risk-taking.

INFRASTRUCTURE AND SHARED GOVERNANCE

- Space
- Facilities
- Business processes
- Organizational structure
- Shared governance

INSTITUTIONAL SUPPORT AS A PERCENT OF TOTAL ANNUAL EXPENDITURES

Institutional Support as a Percent of Total Annual Expenditures

Note: "Institutional Support" is considered as a proxy for administrative overhead for any institution of higher education.

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FUNDING THE TOP TIER PLAN

- Enrollment and Growth

- State Funding

- Grants and Contracts

- Capital Funding and Fundraising

- Research Partnerships

ENROLLMENT AND GROWTH

Enrollment growth between 4,300-4,500 FTE over 10 years yielding $17-20 million in student registration fees and tuition

Growth Programs
Seed funding:
- grow programs
- grow revenue
- further Top Tier progress

Approved to date:
- *Masters of Health Care Administration*
- *Physical Therapy (expansion)*
- *Education: Teacher Licensure*

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STATE FUNDING

- $28-32 million in state funding formula dollars*

- Health for Nevada initiative
  - Leverage funds for additional faculty and GA growth
    - Faculty from 101 to 156
    - GAs from 101 to 445
  - Base request approximately $21 million

*assuming state fully funds enrollment growth (BOARD OF REGENTS 03/03/16 & 03/04/16) Ref. BOR-17a, Page 94 of 102

GRANT AND CONTRACT/STATE ECONOMIC DEVELOPMENT

- Grow grants
- F & A growth $20 million
  - Invest in Research infrastructure
  - Support of long-term debt for additional research facilities
- Grow research partnerships
- Increase tech transfer

CAPITAL FUNDING AND FUNDRAISING

- Launch Comprehensive Capital Campaign
- Help top identify possibilities (projects, donors)
- Frank discussion of planning/possibilities
- Donor Funds/Capital Campaign priorities:
  - Program enhancement
  - Scholarships
  - Facilities
- Increase alumni participation to 10%
- $100 million/year

NEAR TERM CAPITAL PROJECTS

- Approval to purchase 42 acres
- New $2.75 million baseball clubhouse
- Football Athletic Training Facilities Plan
- New Hotel College academic building
- University Park Apartments Project
- University Gateway Project
- Thomas & Mack Center modernization
- Rogers Literature and Law Building Renovation

NEXT PROJECT

- Engineering
- New Research Facility

BROAD EXPENDITURES PRIORITIES

- Student Financial Aid
  Student Achievement; Academic Health Center

- Faculty positions
  - move student/faculty ratio from 22:1 to 18:1
  Student Achievement; Academic Health Center Research, Scholarship, and Creative Activity

- Student support positions
  Student Achievement

- GA support

  Student Achievement; Academic Health Center Research, Scholarship, and Creative Activity

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BROAD EXPENDITURES PRIORITIES

- Salary and benefit adjustments (Health Care)
  All areas

- Business and Transaction support staff (recover)

  Infrastructure and Shared Governance

- Library and Information Technology funding
  All areas

- Space use efficiency
  Infrastructure and Shared Governance

NEXT STEPS

- Continued implementation through action plans
- Pro forma financial planning
- Developing detailed Capacity Study
  - Steering Committee formed
- Continued monitoring of metrics and readjustment

WHAT DOES UNLV LOOK LIKE IN 10 YEARS?

- Climate of innovation, e.g., spin out activity

- School of choice, e.g., top choice for local students

- Medical school established and expanding, e.g., 120 new physicians and scientist and an economic impact of $800 million per year

- Improved community relations and furthered economic development and diversification, e.g., $3-4 billion overall economic impact and capital campaign completed

- Improved infrastructure, e.g., known as a great place to work by Forbes or other national ranking

QUESTIONS?