

## **A Decade of Distinction: State of the University 2014**

Ten years ago, James B. Milliken was named the sixth president of the modern University of Nebraska – the first native Nebraskan and the first NU graduate to serve as president. He stepped down this year to become chancellor of the City University of New York, the nation’s leading public urban university. Under Milliken’s leadership, the University of Nebraska experienced tremendous success and growth – not only in numbers but in scope, ambition and reach – which has truly transformed NU into a global university. Today the University of Nebraska is well-positioned for continued success on behalf of the people of Nebraska.

Here we summarize a decade of accomplishments that have positioned the University of Nebraska for achievement in the coming years.

Begun as a land-grant institution and still Nebraska’s only public university, the University of Nebraska has helped hundreds of thousands of Nebraskans achieve the myriad personal benefits and advantages made possible by higher education. The university’s success in increasing educational attainment has huge benefits for the state as well; with more of its people holding college degrees, a state enjoys a more engaged citizenry, a more competitive workforce and more stable and vibrant communities.

The university also contributes significantly to the state’s economy – in agriculture and food production, business, medicine, manufacturing, transportation and technology, among many other areas. The university enriches Nebraska’s cultural life, helps build a talented workforce, strengthens families, improves health care and serves as a launch pad for entrepreneurs and innovators.

What began almost 150 years ago as a single institution with a handful of students has become a major public university with four campuses serving 50,000 students, each campus a hub of scholarly activity, innovation, regional economic activity and community engagement. By focusing on challenges that face Nebraska as well as the world, the University of Nebraska has emerged as a leader in areas such as food security and early childhood development, and is building a growing global presence.

At his installation ceremony, President Milliken quoted Willa Cather’s description of the early university: “There was an atmosphere of endeavor, of expectancy and bright hopefulness about the young college that had lifted its head from the prairie only a few years before.”

That atmosphere endures today.

### **First things first: Establishing priorities**

Among President Milliken’s first areas of focus when he came back to Nebraska a decade ago was rekindling the relationship between the university and the state – to demonstrably focus the institution’s attention on how the university could best serve Nebraska. University leadership set a fundamental goal

– one that is hard to measure, but key to how the university thinks about itself: to be the best university in the country as measured by its impact on the people of the state, and through them, the world. From that overarching goal, five clear priorities emerged for a 21<sup>st</sup>-century public university: providing affordable access and improving student success, increasing educational attainment, creating and sharing new knowledge, serving as a catalyst for economic growth, and maintaining both a local and a global perspective in taking on some of the critical challenges facing the state and the world.

University leaders recognized the importance of building on NU’s land-grant heritage and on the core mission of expanding access to a high-quality education to Nebraskans. This could only be accomplished by re-establishing a sustainable level of state support and recommitting to affordable access and student success – major challenges at a time of significant national public disinvestment in higher education.

In 2005, Thomas Friedman’s *The World Is Flat* made a strong case that education beyond high school is a critical advantage in the increasingly global competition for jobs. His book and other analyses of the 21<sup>st</sup>-century global economy highlighted the risks posed by the decline of U.S. dominance in educational attainment. The need to re-establish the value proposition of higher education in the U.S. and invest in human capital was clear, and increasing affordable access to a quality education was a key component.

In addition to providing access to education, the land-grant mission also encompassed the creation of new knowledge that was shared broadly with the people of the state – a model of research, engagement and outreach that is at the core of Nebraska’s remarkable success in agriculture and food production. As technology made the world flatter and smaller, university leaders recognized the importance of expanding that mission beyond the borders of the state and thinking in terms of how public universities can help create solutions to the challenges facing people throughout the world, and how they can connect the work and experience of students, faculty and communities globally. The university’s ongoing work in areas such as water and food security, cancer research and early childhood development evolved from that expanded 21<sup>st</sup>-century view of a land-grant institution.

Another priority was to establish the university as a center of economic energy, both geographically and intellectually. Universities are natural hubs of intellectual activity, creativity and innovation. Through the work of their faculty, engagement with the community and partnerships with the private sector, universities serve as catalysts for regional economic growth and success. University-led research and innovation in areas such as agriculture, science and medicine are increasingly important in the quest for breakthroughs that will boost the economy and create jobs. It’s critical for universities to embrace their role in fostering innovation, encouraging entrepreneurship and building partnerships that create economic energy.

For the University of Nebraska, each of these priorities underscored the increasing importance of viewing itself in a global context – building partnerships internationally to address major issues, recruiting talent on a global basis, and preparing students to compete in a global economy – and of having a clear strategy for global engagement.

Those priorities were the foundation of key strategies adopted by the Board of Regents and senior university leadership in the Strategic Framework, which guides the work of the Board. They are also reflected in the funding priorities or “pearls” of the incredibly successful Campaign for Nebraska and more recently in the strategic plan for global engagement.

The Strategic Framework, adopted in 2005, identified six overarching goals that reflect the University of Nebraska’s priorities as a 21<sup>st</sup>-century public research university. They are:

1. To provide the opportunity for Nebraskans to enjoy a better life through access to high quality, affordable undergraduate, graduate and professional education.
2. To build and sustain undergraduate, graduate and professional programs of high quality with an emphasis on excellent teaching.
3. To play a critical role in building a talented, competitive workforce and knowledge-based economy in Nebraska in partnership with the state, private sector and other educational institutions.
4. To pursue excellence and regional, national and international competitiveness in research and scholarly activity, as well as their application, focusing on areas of strategic importance and opportunity.
5. To serve the entire state through strategic and effective engagement and coordination with citizens, businesses, agriculture, other educational institutions, and rural and urban communities and regions.
6. To be cost-effective and accountable to the citizens of the state.

Within each major goal, the university established specific and measureable objectives, strategies and accountability measures that serve as an ongoing assessment of progress. Much of the important progress in the last decade has its roots in the strategic framework, including expanded student financial aid; a 10-year history of moderate and predictable tuition increases (including a freeze on resident tuition from 2013-2015); a comprehensive distance education offering from high school through advanced degrees; improved college-going, retention and graduation rates; new educational programs that are closely aligned with the needs of the workforce; greatly expanded facilities for research; greater collaboration within and among campuses; more efficient and cost-effective business practices; and a far more ambitious and comprehensive strategy for global engagement – to name just a few.

Shortly after the strategic framework was developed, the university established campus and university-wide priorities for the Campaign for Nebraska, which entered its public phase in 2009 with a goal of \$1.2 billion. Campaign goals included broad emphasis on student and faculty support and global engagement, but also identified six key areas in which the strengths of the university could be leveraged to make a difference in Nebraska and beyond: water for food; agriculture and life sciences; cancer care and research; information technology and business; early childhood development; and architectural

engineering and construction. With a few months remaining, the campaign has already exceeded its original goal by nearly 50 percent, with major gifts received in support of every priority, and is expected to raise \$1.8 billion by the end of the year.

In 2009, President Milliken delivered the George W. Norris Scholarship Lecture, in which he identified four goals that form the foundation of the university's strategic plan for global engagement: doubling international student enrollment; giving every undergraduate student the opportunity to study abroad or participate in other international experiences; increasing international opportunities for faculty; and building platforms for international collaborations with universities, NGOs, governments and businesses on areas important to Nebraska. By focusing on four priority countries – China, India, Brazil and more recently Turkey – the university has been able to create a number of important new partnerships that have significant potential for addressing global challenges while also revitalizing long-standing relationships with other nations.

### **Collaboration and partnership**

These priorities could not be achieved without creating, renewing or strengthening a number of strategic partnerships over the past 10 years. These include:

- Partnership with the people of Nebraska, who provide financial support, entrust the university with the intellectual and social education of their sons and daughters, and benefit from the research that NU faculty conduct and the practical knowledge the university shares. Nebraskans have a deep appreciation for their only public university and the role it plays in improving their quality of life, an appreciation clearly seen in research the university conducts regularly across the state to measure the value Nebraskans place on the university.
- Partnerships with the Governor and the Legislature, who also appreciate the role the university plays in economic competitiveness and workforce development. They have provided a relatively stable base of state support, and have shared and supported the university's vision through such initiatives as Nebraska Innovation Campus, LB 605 deferred maintenance initiative, and Building a Healthier Nebraska. The university has benefited from the leadership over the past 10 years of Gov. Dave Heineman, speakers Sen. Greg Adams and Sen. Mike Flood, and chairs of the Appropriations Committee, Sen. Heath Mello, Sen. Lavon Heidemann, Sen. Don Pedersen and Sen. Roger Wehrbein, who have thoughtfully considered the needs of the university each session. Sen. Galen Hadley, Sen. Danielle Conrad and Sen. John Nelson also were valuable advocates for Building a Healthier Nebraska projects.
- Partnerships with more than 30 education, business and government organizations in a revitalized P-16 Initiative, which has a goal of increasing educational attainment and student success in Nebraska. The university has provided important leadership and staff support to the P-16 Initiative, and bringing together all segments of Nebraska's educational community will continue to be a priority.

- Partnerships with the private sector, which are an essential component of the university's role as a center of economic activity and a hub of innovation. Some, like Nebraska Innovation Campus, create collaborations among university research faculty, students and private companies like ConAgra to accelerate economic development by advancing knowledge, developing new technologies and new products. Others, like Ak-Sar-Ben Village and the UNK University Village project, create new social and business intersections between the university and the community. Still others, like a new integrated clinical enterprise associated with UNMC, position the university and its partners for the future and allow them better meet the needs of their stakeholders.

In 2005, the university helped establish a key partnership in the biosciences arena, BioNebraska, which brings together life sciences researchers in academia, business and government and works to advance research in medicine, agriculture and the environment. And through the University Technology Development Corp. and its technology transfer and business development subsidiaries – UNeMed at UNMC, NUTech Ventures at UNL, Nebraska Innovation Campus, the Peter Kiewit Institute and the National Strategic Research Institute – the university has taken a more strategic approach to bringing university research into the marketplace, assisting faculty members in building relationships and transferring intellectual property from the laboratory to commercial use. Those efforts have paid off, with nearly \$17 million in license income in the most recent report, 20<sup>th</sup> among all major research universities.

- Each of NU's major new institutes represents partnerships among the campuses and with outside entities.
  - The National Strategic Research Institute, founded in 2012, is a strategic partnership with USSTRATCOM to conduct research essential to national security. Former U.S. Sen. Ben Nelson was a great advocate in the university's selection as one of just 13 University-Affiliated Research Centers (UARCs) in the U.S.
  - The Buffett Early Childhood Institute includes faculty from across the university in a wide range of disciplines related to children from birth to age 8. Partners include the Nebraska Department of Education, Educare and private foundations focused on early childhood.
  - The Rural Futures Institute envisions a more vibrant and economically viable rural economy and brings together networks of community, business and organizational leaders, subject matter experts, educators and thought leaders who are invested in positive rural futures.
  - And the Robert B. Daugherty Water for Food Institute has long-standing relationships with Monsanto and other major companies in water, agriculture and food production, as well as the Bill & Melinda Gates Foundation, which has made food security a major priority. The institute also has a number of research agreements with partners in government and the private sector.

- On an international level, the University of Nebraska has built significant and lasting relationships with global partners, including companies, non-profit organizations, academic institutions and government agencies, both in the U.S. and abroad. It is a tribute to the excellence of the university's faculty, a commitment to established priorities and the trajectory of the research enterprise that the university is a highly sought-after partner in both research and academic collaborations.

The substantive gains the University of Nebraska has enjoyed over the past decade are due to an outstanding faculty and staff, strong leadership on each of the campuses and at the University of Nebraska Foundation, a supportive state and generous donors.

It would be impossible to overstate how important private support has been in allowing the university to build the kind of institution it is today. The Foundation has provided record levels of support this decade, funding student scholarships, faculty fellowships and endowed chairs, academic programs, research, facilities and athletics. The gifts of tens of thousands of alumni and other friends, and the countless hours of work from hundreds of volunteers, including an exceptionally dedicated and talented Campaign Advisory Committee, have made possible many of the accomplishments described in this report.

The past 10 years have been a time of tremendous growth and progress. The university and all of its partners have much to be proud of.

### **Financial stability**

At a time when many states are struggling to cope with massive reductions in funding for higher education, the University of Nebraska is fortunate to have a relatively stable base of state support. The university has become a much smaller part of the state's budget in the last 25 years, moving from 21 percent in 1985 to 13 percent today as funding for other priorities – especially Medicaid and K-12 education – has grown. However, since 2005 the university has been able to achieve a key goal of moderate, predictable tuition increases averaging just over 4 percent per year, including a two-year freeze on resident tuition in 2013 and 2014. And, by keeping a sharp focus on its priorities and implementing measures to increase efficiency and reduce costs, the university has been able to make the most of a relatively flat budget.

For example, the university has made significant investments in high-priority academic programs through the Programs of Excellence (POE) initiative. Among these is the Nebraska Center for Research on Children, Youth, Families and Schools at UNL, which includes 23 faculty. Over the past decade NU has invested about \$275,000 of POE funds in this center, and they have received nearly \$43 million in external awards. Their work is an important part of the new Buffett Early Childhood Institute and helped lead to its creation. Similarly, the investment of POE funds in research relating to water and food security formed the research core that led to the creation of the Daugherty Water for Food Institute, and those funds have been leveraged with additional research dollars in water and food security. Early investments

also helped expand the inter-campus Nebraska Center for Materials and Nanoscience and create the UNMC College of Public Health.

The university has consistently provided salary increases that are modest but have helped it remain successful in the highly competitive quest for talent. Employees also have been provided a competitive benefits package, including a well-managed and successful self-insured health insurance plan, “plus-one” benefits for employees’ partners, and a comprehensive wellness plan that is in development.

Even in an era of uncertainty in federal funding, the university also has been increasingly successful in the competition for research funds. R&D expenditures have grown by 53 percent over the past decade, from just under \$200 million to just over \$300 million. Major grants in diverse areas – nanotechnology, digital manufacturing, rural literacy, agriculture, childhood obesity, concussions and brain injuries and many others – have raised the university’s research profile significantly, and the campuses have ambitious goals for growth. UNL’s entry into the Big Ten in 2011 created additional opportunities for research collaboration through the Committee on Institutional Cooperation, a prestigious consortium of Big Ten universities and the University of Chicago.

Collectively, with state support, private support, revolving funds and research funding the University of Nebraska’s budget has grown from \$1.4 billion in 2004 to \$2.35 billion today.

### **Increased access, affordability and student success**

Over the past decade the university has made good progress toward increasing access to a college education in Nebraska. In 2004, Nebraska ranked 17<sup>th</sup> in the nation in college-going rate, with under 60 percent of high school graduates going directly to college. One of the major goals of the Nebraska P-16 Initiative was to be in the top 10 nationally in college-going – and today, the state ranks 7<sup>th</sup> with almost 70 percent going on to college. Nebraska’s high-school graduation rate is also one of the highest in the nation, almost 90 percent. However, more students and parents must be persuaded that a college degree is essential in today’s economy.

Before he left the University of Nebraska, President Milliken participated in a White House summit on access and affordability, and made a commitment on behalf of NU that it would expand access through three programs: summer scholars, which provides an on-campus experience for high school students, especially low-income and first-generation students who might otherwise not believe that college is in their future; virtual scholars, which provides access to online courses, including advanced placement and higher-level STEM (science, technology, engineering and mathematics) courses, for high school students who may not have access to them; and an expanded outreach program to middle school students across the state to encourage college participation and help ensure college readiness.

Those commitments complement programs that have been in place for a number of years in Grand Island, Kearney, North Platte and Omaha, through UNK and UNL. Promising first-generation, low-income students who might otherwise have not considered themselves “college material” have the opportunity

to participate in a four-year high school academy that offers mentoring, academic assistance and visits to college campuses. Those who successfully complete the program can attend the university on a scholarship that includes tuition, books and room and board. The programs are relatively new, but last December the first alumna of the Omaha North High School academy program graduated from UNL – in three and one-half years. She is now planning to pursue a master’s degree at UNO. Both retention rates and academic performance are strong; the overall GPA of UNK students who participated in a Kearney Bound academy program is 3.14 – higher than the average for the student body as a whole.

The Board of Regents and Legislature also have extended the opportunity to attend college at resident tuition rates to undocumented students who were brought into the U.S. as children and have graduated from high school here. Although the number of students taking advantage of this program is small, it makes an important statement about the value of education in rising above one’s circumstances to succeed.

The university’s commitment to access is also reflected in its history of consistently increasing the amount of financial aid available to students. Since 2004, the amount of need-based financial aid available through the university has more than doubled, from \$5.2 million to \$10.8 million. That amount is supplemented by generous private support. Last year, the University of Nebraska Foundation transferred \$21 million to the university for scholarships; over the past decade, donors have provided \$170 million for student support.

One of the university’s most notable financial aid programs is Collegebound Nebraska, which promises Nebraska students that if they qualify for a Pell Grant and meet NU’s admission standards, they can attend the University of Nebraska, earn a bachelor’s degree and pay no tuition. It is one of the most far-reaching tuition assistance programs in the country, and this year, almost 7,000 students meet those criteria – compared to about 1,800 who were eligible to participate in the program when it began in 2004. The university has stepped up its efforts to make sure that young people know about the program by using high-profile, highly successful former NU student-athletes such as Prince Amukamara (who played on the winning Super Bowl team in his rookie season) and Jordan Larson (who played on the silver medal-winning U.S. Olympic volleyball team) as spokespersons. Further increasing awareness of the program will continue to be a high priority.

Other programs focused on access and student success include the Buffett Scholars and Thompson Learning Community programs, provided through the Susan T. Buffett Foundation. Eligible students can receive a scholarship to attend any public college or university in the state. Those who attend the University of Nebraska are eligible for a scholarship of \$4,250 per semester and have the opportunity to participate in a Thompson Learning Community. Students in these communities live in the same residence halls and participate in special academic programs and social activities, have greater interaction with faculty mentors and advisors, and receive other support that contributes to higher retention rates from freshman to sophomore year, and greater academic success. In 2007, 275 students participated in the program; this year, more than 2,500 students are attending the university through this generous program.

University leaders have set ambitious enrollment growth goals for the university, with the belief that bigger *is* better and that growth is important to the future success of the university and the state. A larger student population is key to scaling up the number of graduates NU provides for the workforce, the amount of research faculty conduct and bring to the marketplace, and the university's ability to compete for top talent. Both UNL and UNO intend to increase their student populations by 5,000 in this decade, and while increases will be important across the board, growing the number of distance, non-resident, graduate and international students will contribute most significantly. The University of Nebraska has a great story to tell. It is an excellent value, and can continue to raise its profile and be ever more competitive in regional and global markets.

The university is making great progress. Enrollment in 2013 was more than 50,000, a 20-year high and an increase of nearly 13 percent compared to 2004. NU is home to record numbers of international students, minority students and non-resident students, and the campuses are recruiting more aggressively and in an ever-larger footprint, thanks in part to new athletic conference affiliations. UNMC is expanding programs in two high-demand medical fields, nursing and allied health, to help meet growing shortages of health care workers in the state. A new campus of the College of Nursing opened in Norfolk in 2008, and new facilities in Omaha, Kearney and Lincoln will allow the university to grow those nursing programs as well. The Building a Healthier Nebraska initiative also includes the addition of allied health programs for the first time in Kearney.

The University of Nebraska's increasing presence in the distance education market is both a strategy to increase access and a strategy for enrollment growth. Online Worldwide, a single platform for all University of Nebraska distance education programs, was created in 2009 and now offers more than 1,000 courses online and more than 130 degree and certificate programs ranging from a fully online bachelor's degree to Ph.D. programs. Collaborations among campuses have resulted in new academic programs, such as a criminal justice degree offered jointly by UNO and UNK. And speaking with a single, credible voice in an increasingly crowded marketplace is an essential and effective strategy.

The university has seen significant increases in the number of distance students, both those who are taking programs entirely online and those who are on campus and find that online courses give them increased flexibility. Since 2008, the number of credit hours delivered via distance technology has increased 90 percent, from 30,000 to nearly 57,000. One of the most important audiences for distance education programs is the nearly 300,000 Nebraskans who have taken some college courses but do not have a bachelor's degree and the additional 111,000 who have earned an associate's degree. Increasing our state's overall level of educational attainment will position Nebraska far more strongly in the competition for business development and job creation than any other program.

Online efforts even extend to high school students. In 2012, the University of Nebraska High School, which had its origins more than 100 years ago, became part of Online Worldwide. The high school is fully accredited and offers a complete curriculum, more than 300 courses, to students throughout the world. Many are in Nebraska, in communities that may not be able to offer a full range of upper-level and advanced placement courses, especially in the STEM disciplines. Others are athletes, performers, children

of military families, home-schooled students and others for whom an online high school expands their educational options. Students can take a single class or earn a diploma entirely online.

The university also is exploring MOOCs – massive open online courses that are offered at no charge. Much remains to be resolved about this new delivery system, including credit for courses taken and evaluating student achievement. However, this is an important trend and the university has joined one of the leading MOOC providers, Coursera, to explore the potential for these courses to increase awareness of the university and increase access to education. The University of Nebraska’s first MOOC, focusing on health literacy and communication, will begin this fall.

### **Student success**

There has been extensive debate and conversation nationally about student success and the value of a college education relative to its cost. Critics points to low retention and graduation rates, extended time to degree completion, rapidly increasing costs of attendance that lead to student debt loads that are often characterized as “crippling,” high default rates on student loans, and the inability of students to find jobs after graduation.

University of Nebraska leaders are well aware of, and share, the concerns of prospective students and their parents. And while much work remains in improving graduation rates and time to completion, the university is making steady progress. These important metrics are a focus of the Board of Regents and of strategies being developed by academic officers on each campus. One such strategy is the recent adoption by the Board of Regents of a 120-credit-hour requirement for graduation. This will allow more students who take a full course load to graduate in four years, reducing their total cost of college and positioning them to move more quickly into the workforce.

Retention and graduation rates have remained fairly steady over the past decade, although the way that data is reported creates some misperceptions. Under the current IPEDS data reporting system, students who start at one university and transfer to another are counted as if they had dropped out of college; the data shows how many students return to and graduate from their original institution, but not the percentage of students who are still attending college or who have graduated from another institution – which represents up to 40 percent of public university students. A new effort by public four-year universities to provide clear and comparable information to prospective students and their families is the Voluntary System of Accountability – an effort that the University of Nebraska supports and participates in. The VSA “student success and progress rates” will provide a more relevant and useful analysis of student success. Programs like the aforementioned Thompson Scholars program and the academies are examples of successful retention strategies, and other mentoring, early warning and intervention systems are being tested to identify and assist at-risk students.

With regard to student debt, University of Nebraska students graduate with average debt that is, in most cases, lower than graduates of peer institutions. UNL graduates have the lowest average student loan debt among all of their peers and all Big Ten institutions and UNK graduates are also well below peer

averages. Default rates on student loans, which range from 0.6 percent to 4.6 percent, are the lowest of all Nebraska public institutions and are closely aligned with national peer averages.

That is not to suggest that student loan debt isn't an issue. However, given the significant difference in earning capacity for an individual with a college degree compared to those with a high school diploma or some college but no degree, college should still be considered a sound investment. In its 2013 report, *Education Pays*, the College Board said: "Compared to a high school graduate, the median four-year college graduate who enrolls at age 18 and graduates in four years can expect to earn enough by age 36 to compensate for being out of the labor force for four years, as well as for borrowing the full amount required to pay tuition and fees without any grant assistance."

### **Outstanding academic programs**

Educating students to be competitive in a global, technology-driven job market requires high quality academic programs that take into account the needs and opportunities in the workforce, especially in STEM and health care fields. Among the University of Nebraska's many successful programs are the Peter Kiewit Institute and the Jeffrey S. Raikes School of Computer Science and Management. Both programs prepare students for the intersection of business and technology, and provide interaction with business leaders, internships and the opportunity to solve real-world problems.

University leadership has ambitious growth plans for the Peter Kiewit Institute, which offers a unique combination of UNL engineering and construction sciences and UNO information science and technology courses. PKI is committed to meeting the needs of the engineering and information technology business community in Omaha and throughout the state. The charter was revised in 2008, and a bold new strategic plan has now been adopted for the institute that envisions increasing undergraduate enrollment in the College of Engineering from 780 to 1,200 and in the College of Information Science and Technology from 1,000 to 1,500; adding 30 new engineering faculty and 20 new IS&T faculty positions in Omaha; increasing retention and graduation rates to 90 percent and 70 percent respectively in both colleges; expanding a Master of Engineering degree for working professionals; and increasing research expenditures from \$3.6 million to more than \$10 million.

The Raikes School – thanks in part to its outstanding national board of directors who serve as mentors to students in the program – has an excellent track record of inspiring young entrepreneurs who want to develop innovative businesses. Several have built thriving companies in Nebraska that employ NU graduates in impressive numbers; others have gone on to lead teams at Microsoft and Google. The Raikes School continues to attract top talent, with a pool of candidates consistently in the top 1 percent of their peers. The unique curriculum includes courses on innovation, design thinking, technical communications and leadership, while the capstone Design Studio project gives students the chance to solve real-world problems.

The growing interest in entrepreneurship across all disciplines has been very evident in Nebraska – a Gallup study showed that 70 percent of young Nebraskans want to start their own business. One of the

university's newer programs is directed to the segment of this audience that wants to build a business related to agriculture. The Engler Agri-business Entrepreneurship Program was created in 2010 to provide training, scholarships and mentoring to students who want to build businesses in rural America. The university has also offered an annual conference on entrepreneurship that regularly draws 500+ would-be entrepreneurs, an entrepreneur-in-residence program and support for programs like Pipeline Entrepreneurs and Big Omaha that offer networking and exposure to successful start-ups.

Another noteworthy academic program is the new College of Public Health at UNMC, the only one in the Great Plains and an important resource in dealing with a wide range of public health issues, including obesity, drug abuse, cancers that particularly affect rural residents, water quality, early childhood and others. The college is off to a strong start and will play a key role in each of the major university-wide institutes.

## **Global engagement**

The university also has created or renewed a number of important international partnerships over the past several years under the leadership of Tom Farrell, former vice provost for global engagement. While NU has important and long-standing partnerships in many parts of the world, the focus of its global engagement strategy has been on China, India, Brazil and Turkey. In addition to the faculty exchanges, research partnerships and student exchanges that have been developed in each country, several major initiatives will have a lasting and positive impact on the university far into the future.

The university continues to attract students from a diverse range of countries – a tremendous educational and cultural benefit for Nebraska students who can gain a deeper understanding of the world around them without even leaving campus. More than 100 talented Japanese students are enrolled at UNK alone, a testament to the university's quality and reputation abroad and to our commitment to providing students in the middle of the country with a global perspective.

In China, the university established the American Exchange Center at Xi'an Jiao Tong University, with initial funding from the U.S. State Department. The center serves as a resource for Chinese students to develop skills in English and learn more about Nebraska and the university, and supports Nebraska students and faculty who are studying abroad or conducting research. It's also a platform to help Nebraska government and business leaders make connections in Shaanxi Province China. The university also developed a great connection with East China Normal University in Shanghai, a leading teaching and research institution, to work on reciprocal research and student exchanges in the area of early childhood development and education. UNMC recently celebrated a decade of successful engagement in China that has resulted in expanded student and faculty exchanges and productive, mutually beneficial research collaborations in cancer, public health and many other critical areas of medicine. We're looking forward to another 10 years of success.

In India, the university has developed partnerships with two of India's leading institutions, both in Delhi. The Daugherty Water for Food Institute will work with the India Council of Agricultural Research, one of

the world's leading agricultural research institutes, in drought forecasting, water sustainability and irrigation and development of drought tolerant crops. Faculty from both UNO and UNL also will collaborate with the Indian Institute of Technology Delhi, the leading engineering and technology institute in India, to enhance information assurance and management and cyber security.

The university also worked with Jain Irrigation Systems, one of the world's largest irrigation companies, to create the Jain Irrigation-University of Nebraska Water for Food Research and Education Program, which focuses on enhancing water productivity; educating scientists, students and others in water management, water policy and human capital development; and other joint efforts in water and irrigated agriculture that will be beneficial to Nebraska, India and other regions around the world. And the Mumbai-based Tata Institute of Social Sciences, a premier Indian higher education institution, is partnering, along with universities in six other nations, with the University of Nebraska on the UNL College of Education and Human Sciences' Global Family Studies master's program and cooperating on early childhood education and development.

In Brazil, NU's collaboration with the Brazil Ministry of Education's foundation "CAPES" is bringing top-flight Brazilian undergraduates in science and technology fields to UNL, UNO and UNK under the Brazil Scientific Mobility program. In the last three years more than 150 scholarship students have studied at Nebraska as undergraduates, strengthening NU's relationships with rising leaders in Brazil; in the first year, the university was the leading host institution for these students and now is third in the nation in the number of top Brazilian undergraduates.

These are just a few examples of what the university has been able to accomplish by making global engagement a priority and focusing its resources wisely. NU also has renewed its relationship with Ataturk University, the first U.S.-style land-grant institution in Turkey and one that the University of Nebraska was instrumental in starting nearly 60 years ago. There are so many other large and small collaborations that engage faculty and students around the world, and each enriches the individuals involved and the university.

### **The 21<sup>st</sup>-century land-grant university**

There is no question that traditional higher education institutions face enormous challenges today, and that addressing those challenges will require stakeholders to think differently about how education is priced, packaged and delivered. Those who are products of traditional, campus-based four-year residential undergraduate universities may be skeptical that that unique social and educational experience can be duplicated in a virtual or other streamlined environment. The question, however, isn't "Can the experience be duplicated?" but "Can the experience – and the outcomes – be improved?" – and if so, will traditional universities be the ones to improve it, or will they fall victim to what Clayton Christensen calls "disruptive innovation," in which market leaders are gradually displaced by more nimble, forward-thinking players with improved technologies who understand and anticipate the needs of 21<sup>st</sup>-century learners.

Change may not come easily in higher education. As land-grant universities seek to deliver on the promises of their heritage, they must embrace change as well as tradition. They can build on what has been so successful for more than 150 years, retain what is vital and what works, and identify a new, more globally focused land-grant model for the 21<sup>st</sup> century. A successful 21<sup>st</sup> century public university has to do a number of things well:

**Maintain affordable access** – the promise that is at the heart of the Morrill Act. Bill Gates said, “Private universities can boast about their selectivity if they choose to do so, but as public institutions, your prestige comes from a commitment to equity, opportunity and excellence.” The United States once led the world in educational attainment – and still does when considering the population as a whole. But in the educational levels of people ages 25 to 34 – the next workforce – the U.S. has slipped to 15<sup>th</sup>. Attainment levels are stagnant. The country is losing its edge. More young Americans need to enter the education pipeline to ensure they reap the benefits of higher education – and that America reaps the benefits of a more educated workforce.

The country must continue to look for new strategies to increase access and at the same time be more frank with students, teachers and families about how much college costs, how long it takes, what they need to do to be adequately prepared and what outcomes they can expect. Increased access will depend in part on finding ways to increase student financial aid, but also on keeping tuition increases moderate and predictable, maintaining a stable base of public support, operating as cost-effectively as possible and making it a priority to help students finish their degree in a timely way.

**Reinforce the value proposition of higher education** and educational attainment, both to the individual and to our nation’s economy. An educated citizenry is essential to American competitiveness.

The benefits of a college education to the individual are clear. Individuals with a post-secondary degree continues to earn significantly more than those with just a high school diploma -- \$1 million more over a lifetime – and the gap is widening. A new report from the Pew Center, *The Rising Cost of NOT Going to College*, shows that among the millennial generation (ages 25-32), college graduates earn, on average, \$17,500 more per year than their peers who did not go on to the college, in part because more jobs require a college education but in larger part because of “the collapse of economic opportunity for people who do not continue their education beyond high school.” This was most apparent in the recent economic downturn, starting in 2007. In its 2012 report *The College Advantage*, the Georgetown University Center on Education and the Workforce noted that workers with only a high school education lost 5.8 million jobs from 2007 to 2012. Those with an associate degree or better had no net job loss.

In its 2013 report, *Recovery: Job Growth and Education Requirements Through 2020*, the Georgetown center noted that by 2020, 65 percent of jobs in the U.S. will require education beyond high school, and in the high-demand fields of health care professional, STEM, education and community services, more than 80 percent of jobs will require post-secondary education. Nebraska is no exception, ranking 8<sup>th</sup> nationally, at 71 percent, in the percent of jobs that will require post-secondary education by 2020. The report also states, “Without major changes to the U.S. postsecondary education system, the economy

will fall short 5 million workers with postsecondary degrees by 2020.” That is a disadvantage the United States cannot afford in a global economy in which there are far more job-seekers than jobs.

The value proposition for higher education isn’t just about money and jobs. There is ample evidence that individuals with a bachelor’s degree are more likely to vote and to volunteer in their community, to pay more taxes, to enjoy better health and to receive health insurance benefits from their employer, and less likely to be incarcerated, unemployed or on public assistance – all critical components of building strong communities. They are also better equipped to compete for jobs in the global economy, having participated in study abroad, learned to think critically, had an internship or other first-hand experience with business, and built relationships with faculty, alumni and peers that they can draw on for life as a support network.

**Reinforce the value of research conducted at America’s public universities** in driving the nation’s economy. One of the key tenets of the original land-grant concept is that of a university as a place where knowledge is created and shared to address the critical needs of the state and nation. That idea is not only still valid, it is more important than ever. University research expenditures have grown from just \$31 million in 1940 to \$66 billion in 2012. And while private institutions such as MIT, Stanford and Johns Hopkins are leaders, six of the top 10 research institutions are public universities – and public institutions account for about two-thirds of the total research expenditures.

The results have been transformational, with thousands of innovations coming from America’s research universities – from GPS to knee replacements and other medical breakthroughs, computers, lasers and the algorithm for the Google search engine. Research breakthroughs are critical drivers of the national economy and, as Jim Clifton says in his landmark book *The Coming Jobs War*, those breakthroughs are likely to originate in and around the top 100 universities.

**Tackle the grand challenges facing the world** – by leveraging their strengths and applying talent and innovation to issues that are important to the people they serve. University research has already had a profound influence on the health and prosperity of the nation and world, but huge challenges remain: disease, climate change, environmental degradation, global security, achievement gaps among children, and food security, to name a few. Finding solutions to these pressing challenges is the foundation of much of the great research being conducted throughout the university and the premise behind institutes in water for food, early childhood, rural futures and national defense.

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Under President Milliken, the University of Nebraska experienced one of the most successful periods in its history. He worked with university stakeholders to focus on NU’s strengths, build critical international and inter-disciplinary partnerships, invest in talent, and connect the university to the people it exists to serve. Now, as the University of Nebraska approaches its 150<sup>th</sup> anniversary at the end of this decade, it is exceptionally well-positioned to build on that momentum. The next president has an outstanding opportunity to continue the University of Nebraska’s development as a nationally renowned and globally relevant 21<sup>st</sup>-century public research university.